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International Studies Program
Andrew Young School of Policy Studies

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Are Government Policies More Important than Taxation in Attracting FDI?

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Abstract:

This paper attempts to broaden the existing empirical literature on foreign direct investment by incorporating government expenditure policies, such as investment in infrastructure, and institutional factors that may impact business investment, such as corruption, along with other conventional determinants such as taxes, location factors, and agglomeration effects. We do so in an unbalanced panel data setting, where we use fixed effects to control for country specific idiosyncrasies and also year dummies in some specifications. Our data include both developing and developed countries in different regions of the world. The regression results indicate that better infrastructure and lower taxes attract FDI, with weaker evidence suggesting lower corruption also increases FDI. These results are robust and hold after controlling for fixed country effects, common year effects of FDI, and agglomeration effects. The magnitude of the response of FDI to infrastructure changes is similar to that of taxes in elasticity terms. The results add evidence to previous cross-sectional results and emphasize the importance of a range of government policies in addition to taxation in attracting foreign direct investment.

I. Introduction

Foreign direct investment (FDI) can provide a number of benefits to countries that need capital including higher growth, greater exports, higher wages, and greater productivity through technology spillovers to local firms. While the evidence of the impact of FDI is somewhat mixed,[1] a big question for government officials in developing and developed countries alike is the impact of tax, regulatory, and public expenditure policies on foreign investors. Wheeler and Mody (1992) conducted an early and important study of foreign investment determinants and found that agglomeration – measured by infrastructure quality – is an important determinant while taxes are not a significant determinant. In contrast, a growing set of studies on taxation has arisen in the public finance literature that generally find significant tax effects, though the estimated elasticity varies significantly between them depending on the data set used and whether the study is cross-sectional or panel.[2] Given these contrasting results, it is somewhat difficult for policymakers to know what to make of this literature. In addition, a large literature in regional public economics suggests that government spending that is beneficial to investors (such as public investment in infrastructure for foreign investors) should have positive effects on investment in a region. In this paper we try to provide

[1] Lipsey (2002) surveys this literature and finds that the evidence indicates that FDI increases exports, sometimes increases growth (especially in developing countries with export promotion policies), has a somewhat ambiguous impact on local wages, and also has an unclear impact on technology spillovers to local firms.

[2] This literature starts with a set of papers from the 1980s, including Hartman (1984), Boskin and Gale (1987), and Young (1988). These papers use a time series of aggregate BEA data and find significant effects of taxation on FDI with an elasticity of about -0.6. Others, such as Swenson (1994) find significant effects when disaggregating the data by industry. A second set of studies, such as Hines and Rice (1994) and Grubert and Mutti (1991), use the cross-sectional depth of the BEA data to examine FDI across countries for a given year. These studies also find significant effects, though with more variation in the point estimate of the effect of taxes. A third set of studies uses firm-level data, usually in a panel. Studies such as Auerbach and Hassett (1993) and Cummins and Hubbard (1995) use Compustat data, Ondrich and Wayslenko (1993) use a Commerce Department survey, and Altshuler, Grubert, Newlon (2001) use U.S. Treasury data. Hines (1996) also uses a panel, but exploits state-level tax differences using BEA data.

evidence that both reconciles the international and regional tax literatures concerning foreign direct investment and gauges the relative importance of different public sector policies on foreign investment by examining both taxation and government spending and investment policies in a panel data set.

The idea that government spending and investment decisions as well as taxes influence location decisions is a central theme of studies that examine regional or within-country location of mobile factors and is embodied in Tiebout (1956) models of location. A very large body of theoretical and empirical work has developed around this model which is too lengthy to cite here, but the basic insight is that owners of mobile factors of production consider the benefits from government spending as well as the costs of taxation in location decisions.[3] Importantly, the omission of the expenditure side of the budget will bias estimates of the effect of taxes and other variables.[4]

The role of non-tax government policies on FDI has been previously analyzed in several papers.[5] The earliest study is by Wheeler and Mody (1992) who use infrastructure quality as one measure of agglomeration effects. An alternative interpretation is that infrastructure quality measures government investment spending since roads and many forms of infrastructure are in fact publicly provided. Wheeler and Mody (1992) also include a taxation measure, but find no impact of taxation. However, their findings may be problematic because in spite of using a pooled data set, these authors fail to control for country fixed effects due to the fact that by doing so much of the variation in their data

[3] A recent review of many aspects of this literature is found in Oates (1999).
[4] A recent OECD working paper, Hajkova, Nicoletti, Vartia, and Yoo (2006) finds that government policies other than taxes are important determinants of FDI location, a finding that is consistent with our results. Dharmapala and Hines (2006) documents the importance of governance for tax havens.
[5] In addition to public sector policies, FDI location decisions can result in part from historical accident (Markusen, 1991) through agglomeration effects.

would have been lost. A more recent study by Cheng and Kwan (2000) examines FDI in China and finds a positive impact of infrastructure, but they do not include a tax measure.[6]

Institutions that provide a good environment for conducting business are also important potential determinants of FDI. The level of corruption is one measure of the business environment. The impact of corruption has been studied most carefully by Wei (2000a, 2000b). He finds significant negative effects using several definitions of corruption.

There is also a literature in development economics that examines FDI flows. For instance Loree and Guisinger (1995), Kumar (2001), and Asiedu (2002) study the impact of infrastructure on FDI but do not use country fixed effects. A recent study by Dollar et al. (2004) uses a firm-level data set for eight countries to estimate the effect of some "investment climate" indicators (days to clear goods through customs, days to get a telephone line and sales lost to power outage) on FDI. Their study is cross-sectional in nature and they find that FDI is larger in those countries where these indicators are better.

Our study uses a panel data set, includes fixed country and year effects for some specifications, and also includes taxes, an infrastructure measure, and a corruption index in the same specification. This makes our study more comprehensive than previous studies and allows us to compare the relative impact of taxes, infrastructure, and corruption. In addition, the use of fixed country effects controls for any other observed or unobserved cross-sectional variation since the regression coefficients will be reflecting variation within a country.

[6] Despite using a regional panel data set, these authors do not control for fixed effects or include regional dummies. Instead, they include the lagged FDI stock to account for agglomeration effects.

Our findings indicate that lower taxes and better infrastructure attract FDI, with somewhat weaker evidence for our corruption measure. An improvement in our infrastructure index and a lowering of tax rates result in changes in FDI that are of similar magnitude in elasticity terms. The rest of the paper is organized as follows. In section II we present our empirical approach and the data set. In section III we discuss our estimation results. Section IV concludes.

II. Data and Empirical Approach

Our data set is an unbalanced panel. Our three main variables of interest, the tax rate, the infrastructure index, and the corruption index, are available for varying numbers of years and countries. In all, 53 countries are covered for our tax rate, 47 for our corruption index, and 37 for our infrastructure index. The years covered are 1984 - 2002 for the tax rate, 1995 - 2002 for the corruption index, and 1996 - 2002 for the infrastructure index. The sample includes both developing and developed countries in different regions of the world. Much of our data are from the World Development Indicators (WDI) 2005, although information on taxes is obtained from the Bureau of Economic Analysis (BEA) and other sources. A list of the countries and missing data, definition of the variables, data sources, and summary statistics are presented in Tables A-1, A-2, and A-3 in the appendix.

The basic empirical model used in our regression analysis takes the following form:

$$\text{Log } FDI_{it} = a_0 + a_1 X_{it} + a_2 C_{it} + a_3 T_{it} + a_4 I_{it} + u_{it}$$

where X_{it} represents a vector of control variables discussed below, C_{it} is a measure of corruption, T_{it} is a tax rate measure, I_{it} is a measure of government infrastructure quality, and u_{it} is the error term. We can decompose the error term u_{it} as follows

$$u_{it} = \mu_i + \lambda_t + \nu_{it} \qquad i = 1,...,N_t \qquad t = 1,...,T \tag{23}$$

where μ_i denotes the unobservable country specific effect, λ_t is the unobservable time effect and ν_{it} is the remainder stochastic disturbance term. We assume that λ_t is country-invariant and it accounts for any time specific effect that is not included in the regression.[7] The semi-log specification, used heavily in labor economics studies of the return to education, implies a non-linear, exponential relationship between FDI flows and our tax rate, infrastructure index, and corruption measures. As mentioned previously, cross-country results have been emphasized in many previous studies of FDI. However, a common criticism of empirical work using cross-country data is that it is difficult to control for unobserved country differences that are correlated with the variables of interest – and so one might attribute significance to a variable that is really due to some unobserved country factors. For this reason we use a panel data set and employ fixed country effects estimation.[8] Our estimates therefore are to be interpreted as the impact of changes of a variable within a country on FDI inflows to that country. We also include year dummies in some specifications to control for shocks that are common across countries in a given year. This would be important if FDI flows surged or ebbed worldwide in a given year.

[7] See, for example, Baltagi (1995).
[8] Hausman tests indicate that fixed effects are consistently preferred to random effects in the specifications presented.

As mentioned previously, one focus of the international literature has been on agglomeration effects. We therefore include in some specifications the lag of our FDI variable to get at the notion that FDI flows to where it is already. To the extent that agglomeration effects are country-specific and invariant over time for our sample, fixed country effects would also help to control for agglomeration.

Our tax rate measure is the lower of the tax rate calculated from BEA data and the statutory tax rate, where the tax rate calculated from BEA data is foreign income taxes/(foreign income taxes + net income) of all affiliates for U.S. firms operating abroad in each country and year. To measure infrastructure, we use a general index that quantifies the extent to which resources and systems are adequate to serve the basic needs of business and is calculated with rankings from various issues of the World Competitiveness Yearbook. This measure includes basic infrastructure (such as roads, other transportation infrastructure, health infrastructure, and others), technological infrastructure (telecommunications, computers, and so forth), energy self-sufficiency, and environmental infrastructure (waste treatment and so forth). Corruption is measured by a corruption perception index from Transparency International, with a higher number implying less corruption.

Several other important determinants are included in our vector of control variables, X_{it}. These are the unemployment rate, population, GDP per capita, government consumption expenditures, and exports. The unemployment rate controls for business cycle effects. Population can have two interpretations, as a proxy for market size or as a reflection of how the marginal product of labor changes within a country. While the first interpretation could be associated with an expected positive sign, the second suggests that

higher populations imply lower marginal product of labor and hence less investment for a given cost of labor and given marginal product of capital. The variable "exports" is included since one reason that multinationals might invest in a country is to export to other countries. Government consumption expenditure is included to control for non-investment government spending.[9]

III. Analysis of Data and Regression Results

The growth in FDI and the spectacular increase for high-income countries in the late 1990s is illustrated in Chart 1, where we plot FDI inflows from 1984 to 2002 separately for high-, middle-, and low-income countries. High income countries on average receive more FDI inflows, with considerably less going to middle-income and low-income countries. Average FDI inflows rose steadily from 1984 until the late 1990s for all three country income categories. For high-income countries, FDI inflows spiked in the late 1990s, peaked in 2000, and declined thereafter. For low- and middle-income countries, FDI inflows leveled off (and declined slightly) in the late 1990s.

As a simple way to provide a first look at the relationship between FDI inflows and corruption, taxes, and infrastructure, we construct a series of charts for a single year, 1996. Each chart sorts countries into two groups, high and low, which are defined as those countries above and those below the median value of the variable of interest (corruption, taxes, or infrastructure). Chart 2 shows average FDI inflows for high and low corruption countries for 1996. There is a clear inverse relationship: high corruption

[9] According to the WDI, "general government final consumption expenditure" includes all government current expenditures for purchases of goods and services (including compensation of employees). It also includes most expenditure on national defense and security but excludes government military expenditures that potentially have wider public use and are part of government capital formation.

countries have less FDI inflows on average. Chart 3 shows average FDI inflows for high and low tax countries. Again a clear inverse relationship emerges: high tax countries have less FDI inflows on average. Charts 4 shows average FDI inflows for high and low infrastructure index countries, and indicates that better infrastructure is associated with greater FDI inflows.

The simple correlations between our primary variables of interest (the tax rate, infrastructure, and corruption variables) and FDI in the panel data set are high, as shown by the sparse regressions in Table 1. Besides the variable of interest, these regressions have only an intercept and do not have fixed country or time effects. The first column includes the tax rate, the second the corruption index, and the third the infrastructure index. We see that all three variables are significant with the expected sign: higher taxes, less corruption, and better infrastructure all lead to greater FDI inflows. Figures 1, 2, and 3 graph the relationships and the estimated regression lines.

While the simple cross-sectional relationships and the simple correlations in the panel data set are suggestive, they of course fail to control for several other important factors that can affect FDI inflows. Clearly one needs to control for other differences between countries that may impact FDI inflows as well as time series factors that are constant across countries. We turn to this next as we look at our unbalanced panel and take advantage of the time-series variation in our data set.

Table 2 takes each regression from table 1 and includes first, fixed country effects, and second, fixed country and time effects. For the tax rate regressions in columns 1 and 2, controlling for fixed country effects has little impact, but the inclusion of time dummies reduces significantly the point estimate and t-statistic of the tax rate

variable, though it remains highly significant. For the corruption regressions in columns 3 and 4, the inclusion of country and time fixed effects results in an insignificant coefficient for the corruption index. For the infrastructure regressions in columns 5 and 6, inclusion of fixed country and time effects has little impact on either the point estimate or the t-statistic of the infrastructure index coefficient. In fact, the coefficient on the infrastructure index is the most stable across these specifications.

Table 3 adds other control variables to these basic regressions. The other control variables as discussed above are the unemployment rate to control for business cycle effects, population, GDP per capita, exports, and government consumption expenditures. We report here the results including country and time fixed effects. We observe in the first column that the coefficient on the tax rate is significantly reduced, although it maintains its high significance. The coefficient on the infrastructure index in column 3 is little changed in either point estimate or significance; it remains highly significant. The coefficient on the corruption index in column 2 remains insignificant.

The fourth column of Table 3 combines all three of our variables of interest as well as fixed country and time effects and the other control variables. The significance of the coefficient on the tax rate is again greatly reduced, but is still significant at the 1% level. The point estimate of the tax rate rises slightly. The infrastructure index maintains a high level of significance and its point estimate falls slightly. The corruption index becomes significant and the point estimate for corruption increases somewhat.

The control variables that show significance across specifications are the unemployment rate, which is negatively related to FDI; population, which has a negative sign if the corruption and/or infrastructure variables are included; and exports, which are

positively related to FDI. When the infrastructure index and corruption are excluded in column 1, the coefficient on government consumption is negative and significant and GDP per capita is positive and significant. However, these variables are insignificant in columns 2, 3, and 4.

Our final specification, reported in Table 4, repeats that in Table 3 but it adds lagged FDI as a control variable. This is aimed at controlling for agglomeration, the tendency of FDI to go where there is already a lot of FDI. As mentioned earlier, this is often a focus of the international literature, such as Wheeler and Mody (1992) and Cheng and Kwan (2000). We do find a significant and positive impact of lagged FDI in columns 1 and 2, but this does not alter the significance of the tax variable in column 1. The coefficient on lagged FDI becomes insignificant in columns 3 and 4, and its introduction does not alter the significance of the infrastructure variable or the tax variable. The corruption variable becomes marginally insignificant in column 4 of Table 4 as compared to column 4 of Table 3, but its p-value is respectable. The point estimates of the tax and infrastructure variables are slightly lower in Table 4 relative to Table 3.

To summarize, we find that both tax and public infrastructure variables are significant determinants of FDI inflows. Our corruption measure shows some initial correlation and is significant across many but not all specifications. Which of our variables of interest are most important in attracting FDI? One way to shed light on this question is to compare the magnitude of changes in taxes and the infrastructure index on FDI inflows. In elasticity terms, the magnitude of the response of FDI to infrastructure changes is similar to that of tax changes. As an example, the coefficients in column 4 of Table 3 evaluated at their means (for the data of that regression) indicate an elasticity

with respect to the tax rate of -0.67 and with respect to the infrastructure index of 0.71. Calculations with respect to changes in standard deviations are also similar in magnitude. Thus, for column 4, an improvement in the infrastructure index on the margin is just as important in elasticity terms as a reduction in taxes in attracting FDI.

V. Conclusion

The main goal of this paper is to broaden the existing empirical literature on foreign direct investment by incorporating government expenditure policies, such as investment in infrastructure, and institutional factors that may impact business investment, such as corruption, along with other conventional determinants such as taxes, location factors, and agglomeration effects. We do this using an unbalanced panel data set, and fixed effects estimation to control for country specific idiosyncrasies and also time effects. Our data includes both developing and developed countries in different regions of the world.

The regression results indicate that lower taxes and better infrastructure attract FDI, with weaker evidence for corruption. These results are robust and hold for when controlling for fixed country effects, common year effects of FDI, and agglomeration effects. The results add strong evidence to previous cross-sectional results and emphasize the importance of other government policies in addition to taxation.

In conclusion, the adequate provision of infrastructure seems to be just as important in our data as low taxes in attracting FDI. From a policy perspective, it would appear that the right approach by governments concerned with attracting foreign direct investment is to keep taxes low but also to maintain investment in infrastructure rather

than using revenue for consumption expenditures. Keeping public revenues too low to adequately maintain or invest in infrastructure is unlikely to be a successful long run policy.

Chart 1 Average FDI Inflows in Countries by Income Categories

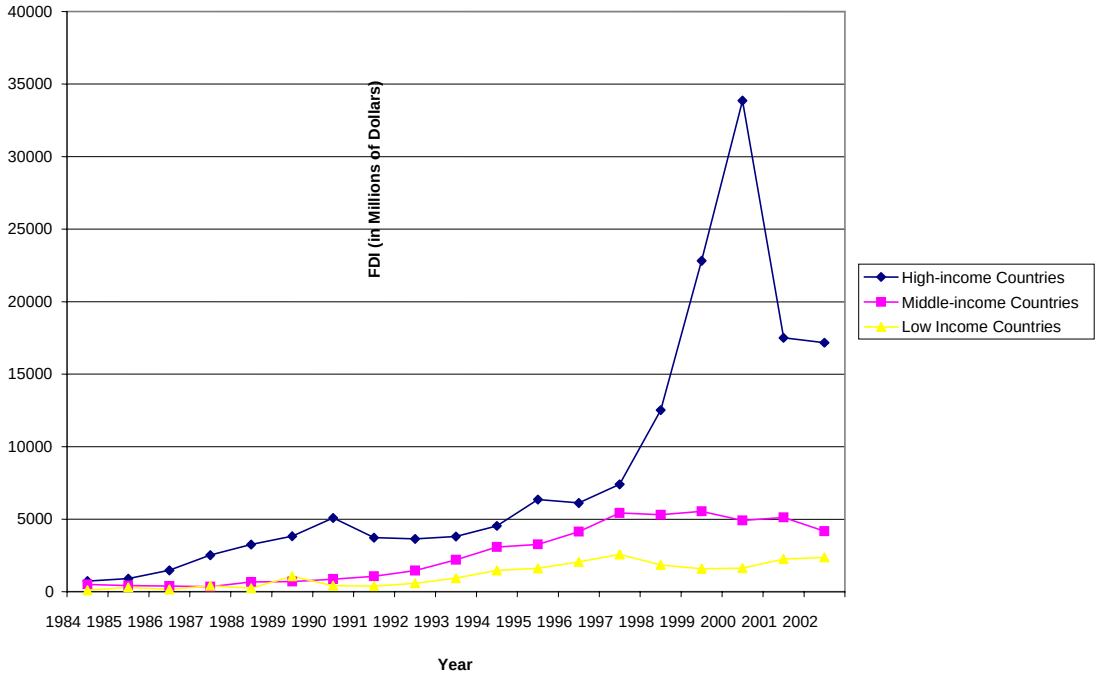
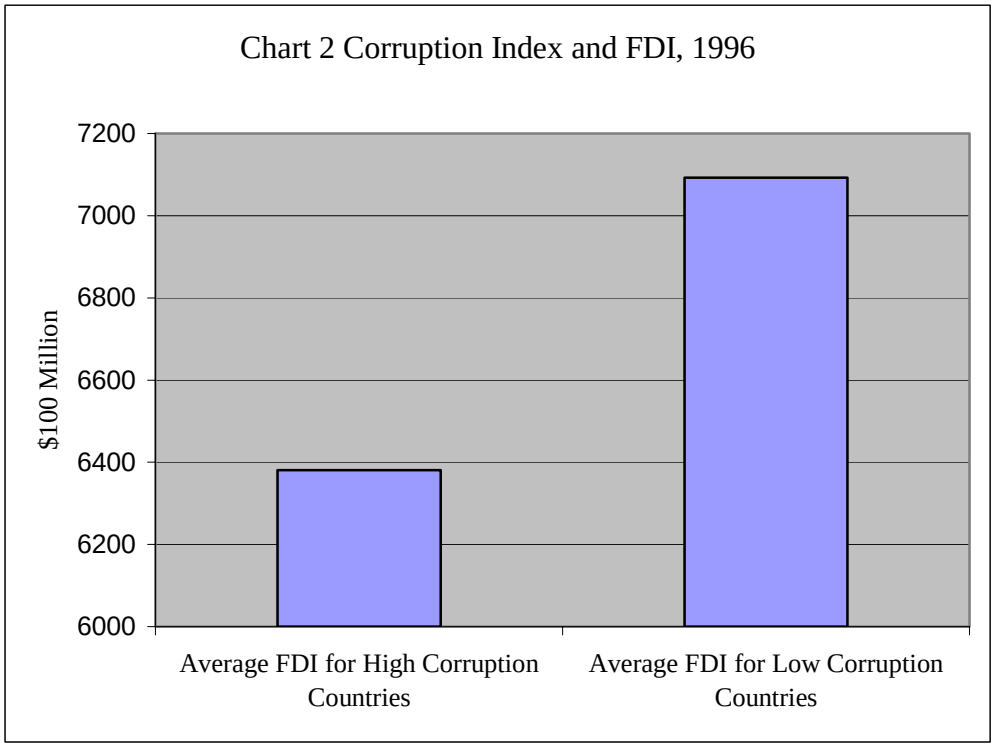


Chart 2 Corruption Index and FDI, 1996



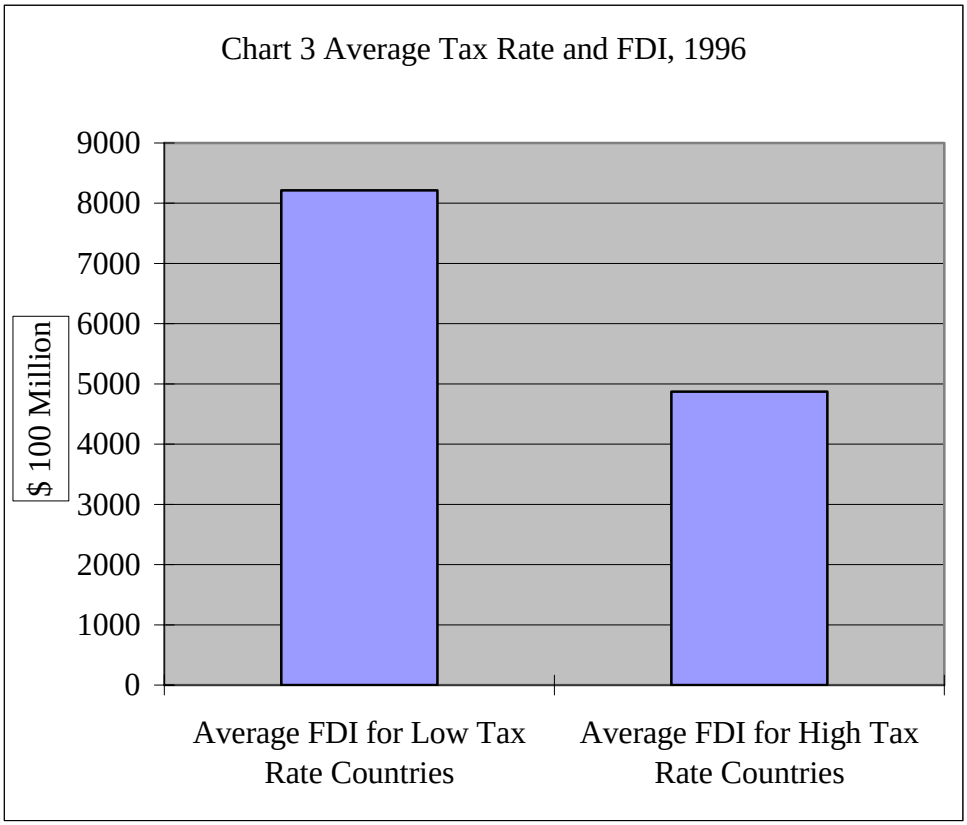


Chart 3 Average Tax Rate and FDI, 1996
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
$ 100 Million
Average FDI for Low Tax Rate Countries
Average FDI for High Tax Rate Countries

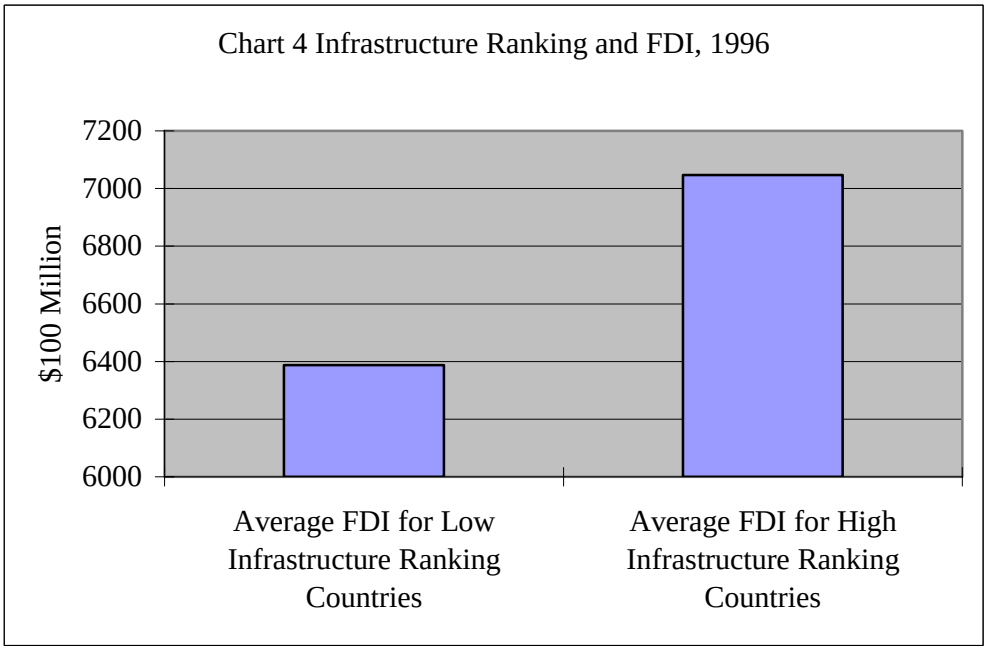


Chart 4 Infrastructure Ranking and FDI, 1996
7200
7000
6800
6600
6400
6200
6000
$100 Million
Average FDI for Low Infrastructure Ranking Countries
Average FDI for High Infrastructure Ranking Countries

Table 1 Simple Regressions

	(1)	(2)	(3)
	lfdi	lfdi	lfdi
Constant	8.494	7.391	7.883
	(36.95)***	(23.99)***	(27.15)***
trate	-0.044		
	(14.78)***		
cpi		0.148	
		(3.32)***	
infrev			0.033
			(3.67)***
Fixed Effects?	No	No	No
Time dummies included?	No	No	No
Observations	958	339	269
Number of countries	53	48	39

Absolute value of z-statistics in parentheses
* Significant at 10%; ** significant at 5%; *** significant at 1%

Figure 1
Infrastructure Index and FDI

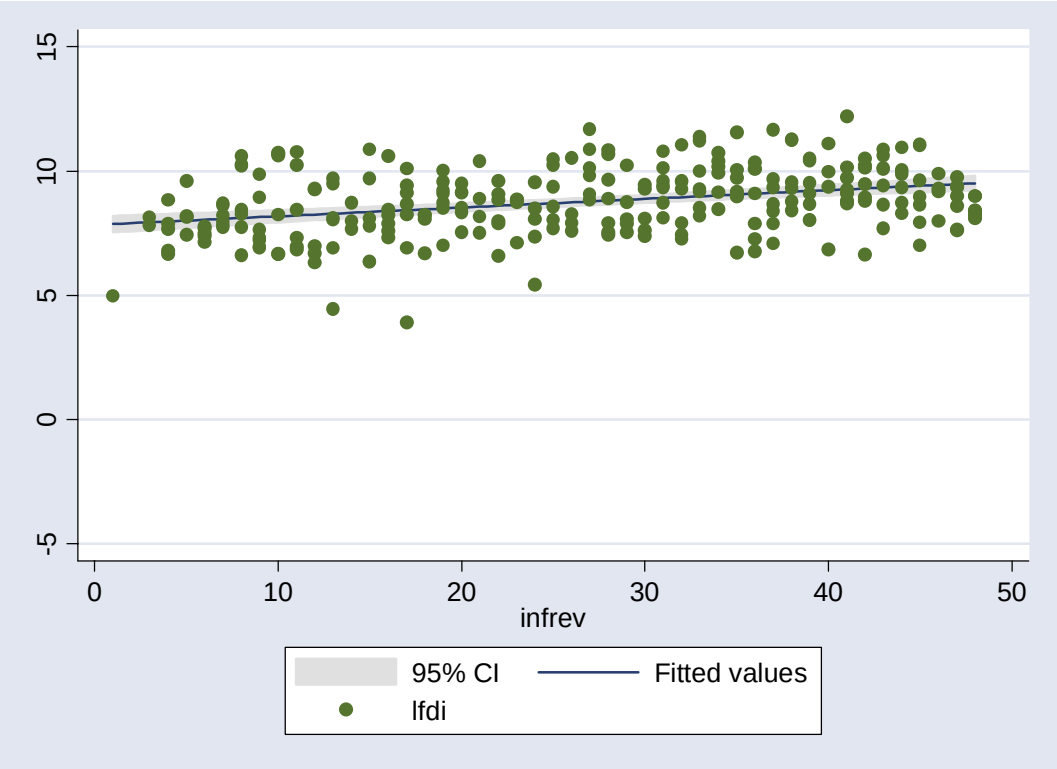


Figure 2
Tax Rate and FDI

Figure 3
Corruption Index and FDI

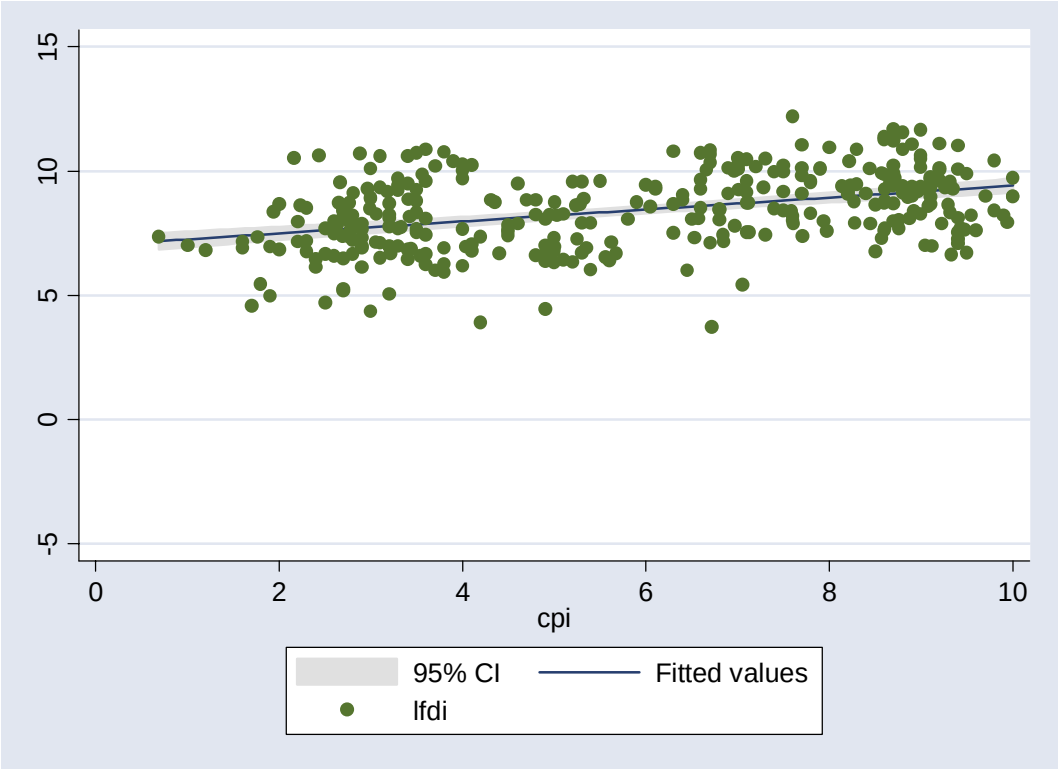


Table 2 Simple Regression Adding Fixed Country and Time Effects

	(1)	(2)	(3)	(4)	(5)	(6)
	lfdi	lfdi	lfdi	lfdi	lfdi	lfdi
Constant	8.540	7.126	8.090	7.626	7.972	8.453
	(84.66)***	(65.43)***	(24.97)***	(23.53)***	(24.78)***	(27.37)***
trate	-0.045	-0.018				
	(14.88)***	(6.42)***				
cpi			0.055	0.041		
			(1.00)	(0.80)		
infrev					0.030	0.033
					(2.49)**	(3.04)***
y1995		0.831		0.000		0.000
		(6.19)***		(.)		(.)
y1996		0.956		0.146		-1.081
		(7.12)***		(0.88)		(6.98)***
y1997		1.264		0.443		-0.734
		(9.44)***		(2.69)***		(4.75)***
y1998		1.397		0.524		-0.669
		(10.39)***		(3.23)***		(4.31)***
y1999		1.667		0.843		-0.262
		(12.08)***		(5.20)***		(1.69)*
y2000		1.863		1.080		0.000
		(13.53)***		(6.59)***		(.)
y2001		1.529		0.807		-0.335
		(11.35)***		(4.96)***		(2.15)**
y2002		1.181		0.384		-0.803
		(8.69)***		(2.38)**		(5.18)***
Fixed Effects?	Yes	Yes	Yes	Yes	Yes	Yes
Time dummies included?	No	Yes	No	Yes	No	Yes
Observations	958	958	339	339	269	269
Number of countries	53	53	48	48	39	39
R-squared	0.20	0.46	0.00	0.20	0.03	0.26

Absolute value of t-statistics in parentheses
* Significant at 10%; ** significant at 5%; *** significant at 1%

Table 3 Multiple Regressions with Fixed Country and Time Effects

	(1)	(2)	(3)	(4)
	lfdi	lfdi	lfdi	lfdi
Constant	6.095	9.866	9.591	10.099
	(25.66)***	(11.32)***	(8.48)***	(8.66)***
trate	-0.019			-0.027
	(6.31)***			(2.83)***
cpi		0.063		0.091
		(1.20)		(1.66)*
infrev			0.035	0.028
			(2.89)***	(2.22)**
unemploy	-0.012	-0.062	-0.061	-0.059
	(1.03)	(3.18)***	(2.89)***	(2.78)***
pop	0.000	-0.000	-0.000	-0.000
	(3.52)***	(1.98)**	(2.65)***	(2.60)***
Gdp per capita	0.000	-0.000	-0.000	-0.000
	(8.39)***	(1.14)	(0.31)	(0.30)
govconexp	-0.000	-0.000	-0.000	-0.000
	(4.05)***	(1.37)	(0.18)	(0.28)
export	0.000	0.000	0.000	0.000
	(2.48)**	(2.04)**	(2.33)**	(2.40)**
y1995	0.308	0.000	0.000	0.000
	(2.31)**	(.)	(.)	(.)
y1996	0.441	0.154	0.000	-0.153
	(3.27)***	(0.89)	(.)	(0.77)
y1997	0.754	0.374	0.337	0.109
	(5.54)***	(2.14)**	(2.14)**	(0.61)
y1998	0.889	0.527	0.495	0.265
	(6.54)***	(3.03)***	(3.09)***	(1.45)
y1999	1.158	0.897	0.904	0.620
	(8.40)***	(5.10)***	(5.63)***	(3.51)***
y2000	1.335	1.014	1.081	0.815
	(9.26)***	(5.22)***	(5.95)***	(4.75)***
y2001	1.075	0.743	0.746	0.521
	(7.59)***	(3.93)***	(4.17)***	(3.09)***
y2002	0.507	0.340	0.266	0.000
	(3.30)***	(1.71)*	(1.44)	(.)
Fixed Effects?	Yes	Yes	Yes	Yes
Time dummies included?	Yes	Yes	Yes	Yes
Observations	789	303	248	240
Number of countries	51	46	37	36
R-squared	0.56	0.30	0.35	0.37

Absolute value of t-statistics in parentheses
* Significant at 10%; ** significant at 5%; *** significant at 1%

Table 4 Multiple Regressions Adding Lagged FDI

	(1)	(2)	(3)	(4)
	lfdi	lfdi	lfdi	lfdi
Constant	1.611	6.421	8.508	8.031
	(2.44)**	(2.73)***	(3.24)***	(3.09)***
Lagged FDI	0.585	0.381	0.161	0.254
	(7.34)***	(1.67)*	(0.72)	(1.09)
trate	-0.016			-0.026
	(5.16)***			(2.69)***
cpi		0.061		0.082
		(1.13)		(1.45)
infrev			0.029	0.023
			(2.36)**	(1.82)*
unemploy	-0.015	-0.063	-0.062	-0.062
	(1.37)	(3.25)***	(2.97)***	(2.95)***
pop	0.000	-0.000	-0.000	-0.000
	(0.40)	(2.10)**	(2.62)***	(2.58)**
Gdp per capita	0.000	-0.000	-0.000	-0.000
	(3.77)***	(1.79)*	(1.16)	(1.22)
govconexp	-0.000	-0.000	0.000	0.000
	(4.22)***	(1.01)	(0.25)	(0.19)
export	0.000	0.000	0.000	0.000
	(2.34)**	(2.18)**	(2.50)**	(2.51)**
Fixed Effects?	Yes	Yes	Yes	Yes
Time dummies included?	Yes	Yes	Yes	Yes
Observations	722	289	234	227
Number of countries	49	44	35	34
R-squared	0.57	0.31	0.35	0.37

Absolute value of t-statistics in parentheses
* Significant at 10%; ** significant at 5%; *** significant at 1%

Appendix

Table A-1 Countries and missing data[10]

	Corruption Index 1995-2002		Infrastructure Index 1996-2002
1	Argentina	1	Argentina
2	Australia	2	Australia
3	Austria	3	Austria
4	Belgium	4	Belgium
5	Brazil	5	Brazil
6	Canada	6	Canada
7	Chile	7	Chile
8	China	8	China
9	Colombia	9	Colombia
10	Costa Rica[11]		
11	Denmark	10	Denmark
12	Ecuador [12]		
13	Egypt [12]		
14	Finland	11	Finland
15	France	12	France
16	Germany	13	Germany
17	Greece	14	Greece
18	Guatemala [13]		
19	Honduras[13]		
20	Hong Kong	15	Hong Kong
21	Indonesia[14]	16	Indonesia[14]
22	Ireland	17	Ireland
23	Israel [15]	18	Israel
24	Italy	19	Italy
25	Jamaica [16]		
26	Japan	20	Japan
		21	Korea, Republic
27	Luxembourg [11]	22	Luxembourg
28	Malaysia	23	Malaysia
29	Mexico	24	Mexico
30	Netherlands	25	Netherlands
31	New Zealand	26	New Zealand
32	Nigeria [15]		
33	Norway	27	Norway
34	Panama [17]		
35	Peru [12]		
36	Philippines	28	Philippines
37	Portugal	29	Portugal
38	South Africa	30	South Africa
39	Spain	31	Spain
40	Sweden	32	Sweden
41	Switzerland	33	Switzerland
42	Thailand	34	Thailand
43	Trinidad and Tobago [17]		
44	Turkey	35	Turkey
45	United Kingdom	36	United Kingdom
46	Venezuela [15]	37	Venezuela

[10] Stocks of FDI are missing for Belgium and Luxembourg, therefore were not included in Table 4.
[11] CPI is missing for 1995-1996.
[12] CPI is missing for 1995-1997.
[13] CPI is missing for 1995-1997, and 2000.
[14] FDI has negative entries for 1998-2001, and therefore were left out when taking logs.
[15] CPI is missing for 1995.
[16] CPI is missing for 1995-1997, 2000-2001.
[17] CPI is missing for 1995-2000.

Table A-2 Data Sources and Definitions

Variable	Definition	Source	Years
FDI[18]	See footnote	UNCTAD	1984-2002
Population	Population (10,000s)	World Development Indicator (WDI) 2006	1984-2002
GDP	In Current Dollars	World Development Indicator (WDI) 2006	1984-2002
Government Consumption Expenditure[19]	General government final consumption expenditure	World Development Indicator (WDI) 2006	1984-2002
Export	Exports of goods and services	World Bank	1984-2002
Tax Rate	The lower one of the BEA tax rate and statutory tax rate, where BEA tax rate= foreign income taxes/(foreign income tax + net income) of all affiliates for U.S. firms operating abroad in each country and year	Calculated with data from Bureau of Economic Analysis (BEA) and OTPR for statutory rate	1984-2002
Corruption Perception Index	Corruption Perception Index, ranging from 0-10, with 10 denoting least corrupt	Transparency International	1995-2002
Infrastructure Ranking	Ranking for infrastructure among factors of competitiveness, measured by the extent to which resources and systems are adequate to serve the basic needs of business	World Competitiveness Yearbook, World Competitiveness Center, IMD	1996-2002
Unemployment Rate	Total unemployment rate, % of total unemployed in total labor force	World Development Indicator (WDI) 2006	1984-2002

[18] According to the UNCTAD definition, for associates and subsidiaries, FDI flows consist of the net sales of shares and loans (including non-cash acquisitions made against equipment, manufacturing rights, etc.) to the parent company plus the parent firm´s share of the affiliate´s reinvested earnings plus total net intra-company loans (short- and long-term) provided by the parent company. For branches, FDI flows consist of the increase in reinvested earnings plus the net increase in funds received from the foreign direct investor.FDI flows with a negative sign (reverse flows) indicate that at least one of the components in the above definition is negative and not offset by positive amounts of the remaining components.

[19] General government final consumption expenditure includes all government current expenditures for purchases of goods and services (including compensation of employees). It also includes most expenditures on national defense and security but excludes government military expenditures that potentially have wider public use and are part of government capital formation.

Table A-3 Summary of statistics

Variable	Obs	Mean	Std.Dev.	Min	Max
FDI	1007	5332.839	13185.25	-4550	198276.5
Tax Rate	1007	31.52903	18.2782	0.25562	91.20715
Corruption Perception Index	343	5.779446	2.577954	0.69	10
Infrastructure Ranking	273	26.29304	13.40086	1	48
Unemployment Rate	842	7.973207	4.974676	0.5	29.5
Population	1007	6985.851	19774.57	25.3	128040
GDP	1007	290353.3	599011.1	1144.931	5283057
Government Consumption Expenditure/GDP	1007	15.92289	6.0048	3.0879	39.237
Export/GDP	984	37.20244	25.46691	5.316259	153.3906

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