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Investing in Democratic Countries: An Investigation of Democracy and FDI

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ABSTRACT

In this paper, the relationship between Foreign Direct Investment (FDI) inflows and democracy levels of upper-middle income nations using three different measures of democracy is investigated. An empirical analysis across the years 2010 through 2018 was conducted, using the democracy indicators and data from the United States Agency for International AID (USAID). These democracy indicators are the EIU Democracy Index, Polity5, and IDEA Global State of Democracy Indices. The importance of this research revolves around the benefits of FDI inflows and how countries may capitalize on these benefits. Additionally, FDI has increased rapidly in the past 20 years and democracy has wavered, possibly establishing a new relationship. The results found no statistically significant relationship between democracy and FDI inflows. Instead, GNI per capita was discovered to have a robust and significant correlation with FDI inflows. The policy implications are that countries seeking FDI should investigate ways to increase national income first, as it is seen as an attractive quality for a firm looking to invest abroad.

INTRODUCTION

Foreign direct investment (FDI) and democracy have a long-standing connection, demonstrated through prior research. There are several, independent determinants of FDI and democracy, which causes the relationship to vary throughout existing literature. The correlation between the two is generally seen as positive, meaning higher democracy levels (the independent variable) is generally seen with higher levels of FDI inflows (the dependent variable) (Busse, 2003). This correlation is seen in different areas of the world, strengthening the relationship (Asiedu and Lien, 2011). There are several possible reasons for this correlation, including democratic countries have more lucrative investment opportunities for entities looking to invest abroad, separate from their own economy. Additionally, it could result from the presence of corruption in non-democratic nations, where it is significantly more prevalent.

FDI has grown significantly since the late 1980s alongside benefits for the receiving nation. The most prominent benefit of FDI for a country is economic growth, as in increased FDI inflows for a country results in economic growth (Hansen and Rand, 2006). Economic growth is vital for many countries, particularly developing countries where organic growth is difficult due to a poor financial system, lacking infrastructure, or substandard education. High economic growth ultimately culminates in higher standards of living, which further perpetuates economic growth. Another benefit of receiving FDI is qualitative: knowledge (Pradhan and Singh, 2008). One reason for poor economic growth in developing nations is the lack of knowledge to provide goods and services needed by developed nations. When multinational firms invest in less developed countries, they provide capital and knowledge of how to efficiently and effectively manufacture the good or provide the service. This knowledge spreads from the single firm to the local economy, allowing other companies to utilize those same techniques.

This research will accomplish numerous objectives. Prior literature has found a connection with democracy and FDI, though that research has focused on older data sets and/or select geographical regions (Africa, European Union etc.) and has not considered worldwide FDI. Additionally, there has not been research on the most recent data points for any of the

democratic measures chosen, where democracies around the world are receiving different scores. For example, although not in the sample, the year 2020 saw significant declines in nearly every country in terms of the democracy rankings. In the prior five years, there has also been a slight decline in worldwide democracy measures, contrary to a slight, steady increase in the several years prior to that. It is important to continuously update existing research as new data comes in, especially with a variable such as democracy, which can fluctuate tremendously over a period of time. Also, the increase in FDI for the entire globe has been astounding in the past 30 years, making data and research performed 20 years ago susceptible to the new data and their findings incorrect. Much of the prior literature was published well over ten years ago, which leaves an opportunity for new connections to be made.

LITERATURE REVIEW

Definitions

Democracy and FDI are different in several ways; perhaps most noticeable as democracy is not an objective variable, while FDI is. Democracy is a form of government which has existed for thousands of years and yet difficult to define. Dalton et al. (2007) mentions several definitions which are widely accepted, from democratic governance to the outcomes of freedom and liberty for all citizens. Furthermore, Ronald Dahl "equate(s) democracy with the institutions and processes of representative government" (Dalton et al., 2007). On countries attempting to become democratic, O'donell (1994) asserts "governmental policies and the political strategies of various agents must embody the recognition of a paramount shared interest in democratic institution building." This concept of sharing a mindset and objective of democracy applies to actively functioning democracies as well. Democracies are the opposite of authoritarian regimes. However, the line between democracies and authoritarian regimes is a blurry one at best, in part due to the fact democracy cannot be defined precisely. Democracies heavily influence the countries in which they are practiced, even becoming interwoven within the culture of some nations. This influence is exerted everywhere from foreign policy to the economy. One niche aspect which is seen heavily is FDI, which combines foreign policy and the economy. FDI, described in the next paragraph, is important

to countries as it yields many benefits. One of its determinants, as established in literature below, is democracy.

FDI is one of the primary ways firms in one country invest their resources into another country. Described by Duce (2003), FDI is the investment by an entity in an economy which is not their own for the purpose of acquiring a long-term interest in a firm within the other economy. FDI has many positives for both the outside investor and the recipient country. The investor can diversify their investments, capitalize on profitable ventures outside of their home economy, and overall provide the potential for higher returns compared to an investor who is restricted to their own economy. As for the investee, the inflow of additional sources of capital allows for ample business growth, perhaps higher than what is normally expected. Furthermore, the economy of the investee is able to benefit as a whole, as more capital allows for businesses to experience a greater number of potential benefits. FDI has been growing at a steady rate as it becomes an increasingly popular medium to invest in foreign markets (Blonigen, 2005). Many countries are progressively becoming more attractive for inward FDI as their host countries are saturated with investment. Many investors, particularly domestic ones, tend to jump quickly at new opportunities in an effort to maximize return on investment (Kim, 2011).

FDI Determinants

FDI has numerous determinants, many of which have been established in research focused on various regions of the world. These factors influencing FDI fall into several different categories, which include developing and developed countries, different regions, and various socioeconomic factors unique to each country. To begin, Schneider and Frey (1985) find that in 54 developing countries with complete data, high per capita gross national product (GNP) and bilateral aid from Western countries were determined to be two of the leading factors which correlated with high FDI inflows in years 1976, 1979, 1980. These two factors, when favorable, indicate a robust economy that has the capability to absorb FDI inflows and experience the benefits to the highest degree. Schneider and Frey (1985) conclude increased bilateral aid specifically from Western countries was being receptive to democracy, as opposed to accepting communist aid, potential making these countries more desirable for Western nations to invest in. This research was conducted through four separate models,

although the politico-economic was found to be the most accurate as it accounted for more overall and relevant factors, suggesting FDI determinants fall into both political and economic factors. The politico-economic model combines the variables from both the economic and political models; specific variables included real GNP per capita, GNP growth, inflation rate, balance of payments deficit, political stability, and bilateral aid received from Western/communist nations.

In similar findings while studying 19 Latin American countries between the years of 1990 and 2010, Sanchez-Martin et al. (2014) found a stable and open government contributed significantly to inflows of FDI. Along with Schneider and Frey (1985), they find FDI determinants to be a mixture of political and economic factors in a given country, as firms looking to invest in other countries must consider the whole nation while deciding where to directly invest funds. Significant factors that were identified consist of government stability, investment profile, law and order, short-term debt, and trade-openness. Governments see FDI inflows as a benefit to their country and their economy in particular, as it can have many positive effects. Although referencing the United States and the individual states, Chintrakarn et al. (2012) found that states with higher FDI inflows from other nations in terms of gross state product had less income inequality, as the two variables are negatively related. While this relationship may not hold up in developing countries, it is crucial to note that inward FDI has this ability, as well as other economic benefits. It is of note these political and economic factors can vary across countries, particularly those in different economic stages (such as developing countries compared to developed ones).

Economic FDI Determinants

Although FDI historically has been concentrated in countries with developed economies and the ability to "absorb" FDI inflows in a useful way, increasing amounts of FDI is going to developing areas. A prime example which Asiedu (2002) points out is the 32 sub-Saharan Africa she observes, along with 39 non-sub-Saharan African countries for comparison during the time period of 1970-1999. Sub-Saharan African countries which possess better infrastructure and yield higher returns on investment do not see greater amounts of FDI inflows, contrary to the rest of the world, signifying potential issues firms have investing FDI into these countries. These potential issues center around the inherent riskiness of investing in

sub-Saharan-Africa compared to other areas of the world, a result of the governments in place. To further that idea, Alfaro et al. (2004) ran an empirical analysis using cross-country data and discovered economic growth and FDI are not strongly correlated, however countries encompassing developed financial systems experience substantial gains from FDI. The lack of overall relationship was attributed to the limit local conditions place on the FDI inflows, where undeveloped economies cannot properly utilize the capital in an effective way. Developed financial systems are a result of a developed economy, where the flow of surplus cash is provided to cash deficits which allows for increased business investment. Financial systems allow for an efficient allocation of resources within an economy, increasing overall economic growth.

Political FDI Determinants

Political factors perhaps have the most impact on determining FDI inflows. While economic characteristics are absolutely considered, many economic components are a result of political decisions by the government. Additionally, political elements are much more likely to be enduring compared to their economic counterparts. One example of a lasting political decision which directly impacts economies is trade agreements. In the case of the World Trade Organization (WTO), Büthe and Milner (2008) notice countries who are a member have higher FDI inflows to those who are not after performing a statistical analysis of 122 countries over a period of 30 years, from 1970 - 2000. To further the hypothesis of trade openness equates to higher FDI inflows in a developing country, Büthe and Milner (2008) discovered countries involved in a greater amount of preferential trade agreements also have a greater quantity of FDI inflows, calculated as a percentage of GDP for the receiving country. The trait of an open economy is desirable for potential FDI investors, particularly when the country's economy is still developing and has ample room to grow.

Furthering the political and economic connection, Mudambi et al. (2013) conclude that stricter economic regulation (a political decision) often leads to more corruption within the government and decreased FDI inflows in an analysis of 55 countries across four separate periods of time: 1985-86, 1990-91, 1995-1996, and 1999-2000. In that article, it was important to note corruption was not an exogenous factor in the model. Instead, corruption was a direct result of stringent regulation, with lower FDI inflows also being a result of

overregulation. Broadening on political factors in the form of government control, Pan et al. (2014) research the effects of government ownership and control on a corporation's outward FDI after analyzing 594 firms on the Shanghai Stock Exchange and the Shenzhen Stock Exchange using company reports from the year 2010. They find subsidiaries of governments are at less risk to potential adverse conditions presented in the country which they invest in. This connection could be due to the greater knowledge and resources a firm with government ownership has, where the government wishes to ensure financial prosperity. This implies that countries such as China and Saudi Arabia will see higher returns on FDI compared to firms from other countries making the same investment. The government may have classified knowledge about the nation or simply the resources of the government are great enough to compensate for any risk the firm making the investment will encounter.

Corporate Taxation on FDI inflows

As noted previously, the connection between FDI inflows and politico-economic factors is evident. However, one crucial component which determines the dollar value of FDI inflows is corporate taxation. Bénassy-Quéré et al. (2005) notes this robust relationship through 11 OECD countries over 1984-2000, particularly observing high corporate tax rates within a country discourage FDI inflows, as firms will look to other nations with more favorable tax laws. Perhaps of more significance, relatively lower tax rates do not help in attracting inward FDI. Simply, countries who lower their corporate tax rate will not attract FDI inflows, but countries that raise their corporate tax rate will discourage FDI inflows. Many firms, predominantly in the United States, end up paying a lower effective tax rate than the statutory one. Lowering it will yield only limited benefits.

In additional research, Becker et al. (2012) found the quality of FDI inflows are equal in importance to the quantity of FDI inflows while studying multinational firms in 22 countries from a time period of 2000-2006. Corporate taxation affects both quality and quantity of FDI. FDI which targets certain desirable industries will yield increased returns for FDI inflows. These industries vary among countries, however finding the best industries increases the quality of the FDI. As for the quantity of FDI, Becker found a 1% increase in corporate tax rates results in a 1.59% decrease in the quantity of FDI. That elastic relationship suggests the willingness and capability of firms to invest through FDI elsewhere. Specifically observing

German firms and their outbound FDI, Overesch and Wamser (2009) discover corporate taxation has varying effects on FDI when taking into account the industry; some businesses are much more tax sensitive than others. For example, Overesch and Wamser (2009) mention financial service subsidiaries are much more tax sensitive compared to the average German firm because of their high mobility and capability to shift their services to ideal taxation settings.

Considering the greater EU, Gorter and Parikh (2003) analyze the effects of lower corporate taxation countries (compared to the average) to high taxation nations in terms of FDI inflows in the years 1995 and 1996. Their results yield an elasticity of 4%, meaning a 1% decrease in the corporate taxation rate relative to the EU average, which increases the quantity of inward FDI to that country by 4%. Inbound FDI is disproportionately distributed to the nations with low corporate tax rates, which according to Gorter and Parikh (2003), negatively affects productivity in all countries, reducing the benefits associated with FDI. This is because as firms move their FDI to countries with lower corporate tax rates, which is possible through high capital mobility, the nations which they are moving to typically have lower pre-tax capital productivity. The shift towards low productivity nations due to their lower corporate tax rates reduces overall productivity within the EU countries considered.

The robust relationship between FDI and corporate taxation is quite evident, as noted above and by many other articles researching various areas of the globe. Many variables have been analyzed alongside FDI and corporate taxation, however, there is no research comparing the correlation when considering government structure of the country receiving FDI. Corporate taxation is simply one of many factors determining FDI inflows to a country, and many of the other characteristics are political. A nation's political environment is often decided by the type of government established. To categorize the types of government broadly, countries are either democratic or non-democratic. The type of government which a country operates on has an unknown relationship with FDI and corporate taxation. Research must be done about that topic to further identify key determinants in FDI, whether those elements are positive or negative.

Connection between FDI and Democracy

While FDI has many determinants, a factor which governs many other elements is democracy levels. Hence, determining the relationship between FDI inflows and democracy globally will yield explanations to other variables which will account for FDI. In essence, the structure of a government inherently decides other FDI determinants (corporate taxation, GNP per capita, and ease of doing business), as many fall under the control of the government or are heavily influenced by government decisions. In democracies, the general voting-eligible population either directly or indirectly determines the policies and regulations in the political sphere and economy, which in turn impact the amount of FDI inflows. Therefore, if there is a correlation between democracy rankings and FDI inflows, countries will theoretically attempt to adjust their governments to align themselves with other democratic nations if they desire to benefit from increased FDI inflows. Clearly there are several other factors to consider why a country chooses to be democratic or not, but in the vacuum of FDI inflows, finding the relationship between the two could truly establish a strong correlation and consequently add another advantage of democracy as defined above.

A relationship has been established previously. Asiedu and Lien (2011) observe FDI inflows and democracy through the lens of natural resource exporting, finding the relationship holds true only if countries export a critical amount of natural resources. Likewise, Busse (2003) finds a robust connection between democracy and FDI inflows through cross-sectional and panel data analysis from 1970 – 2000, using developing countries as defined by the World Bank. Interestingly, these findings both support and refute previous work, where the correlation tended to vary alongside other variables. An example of this is actually found in the research Busse (2003) performed, as it was determined the 1970s saw more FDI flowing to repressive regimes. Since that period, enough opposition and awareness has occurred against repressive regimes, leading towards FDI in more democratic countries for the rest of the time period observed.

RESEARCH HYPOTHESIS

Consistent with the existing literature, the hypothesis for this research centers around the relationship between democracy and FDI inflows. Given the use of three independent

measures of democracy, the relationship between a countries' democratic level and FDI inflows is expected to be positive. Furthermore, the relationship is predicted to be robust through the different measures of democracy. Democracy is a subjective variable, which perpetuates the need for multiple calculations. By running an empirical analysis through all three measures of democracy and FDI inflows, the results, if they are as hypothesized, will be much stronger.

The reasoning for the hypothesis that countries considered to be democratic by the chosen measures will receive higher FDI inflows from foreign entities is due to previous research and the overall economies of democratic nations. Democracy and capitalism have been intertwined since the introduction of democracy (Almond 1991). A democratic government promotes economic growth and prosperity through a variety of factors, including its ties to capitalism, reduced corruption, and more stability from the support of its population. The endorsement allows for ample opportunity for high returns on investment, both domestic and foreign investors. Therefore, entities choose to invest where they anticipate a high rate of return when adjusting for risk, with many of those chances coming in democratic nations due to the advocacy of economic growth. Therefore, the relationship between democracy and FDI inflows may also extend to a strong relationship between FDI inflows and capitalism, although only the preceding will be analyzed. That leaves more possible research to be performed.

METHOD

An empirical analysis determining the relationship between FDI inflows for upper-middle income countries and democracy was conducted. To ensure the subjectivity of the variable is reduced as much as it can and aid the robustness of the analysis, a multiple regression analysis is performed to investigate the relationship between FDI inflows and democracy, using three measures of democracy.

Sample

The initial sample was the 56 countries classified by the World Bank as upper-middle income, which means the gross national income (GNI) per capita is between $4,046 and $12,535.

However, due to missing data points, particularly smaller countries, only 39 countries were used in the final analysis. These countries were chosen as a sample because of the variety in democratic rankings. Data is also widely available for most of these nations, whereas other groups of countries, particularly those considered low-income by the World Bank, are missing significant points of data. In addition, those considered low income show little variation in terms of democracy rankings across many sources, which would provide little information on FDI inflows and democratic rating. Likewise, for high-income nations, most tend to be rather democratic, again skewing results and not providing enough information on non-democratic nations according to the selected democracy indexes.

The time range researched was limited by the democracy information available. The Economist Intelligence Unit, which publishes the yearly Democracy Index, has only done so since 2006 and does not have data points for 2007 and 2009. On the other hand, Polity5, the updated version of PolityIV, only has information up to 2018 for most countries. Therefore, the timeframe between 2010 and 2018 was used for analysis to ensure each country has all available information and there is no data bias.

The two primary variables for the present study are FDI inflows and democracy, where FDI inflows is the dependent variable and democracy serves as the independent variable. Other controlling variables, comprising of GNI per capita, average years of schooling, inflation, ease of doing business, financial system complexity, and the corporate tax rate. FDI is defined by Duce (2003) as the investment of a lasting interest by an entity in one economy to an enterprise situated in another economy. Inflows simply refer to the country receiving the FDI as opposed to making the outward investment. FDI inflows will be determined within the analysis as FDI inflows per capita, which is used as a measure by Nunnenkamp (2002) and Busse (2003). Democracy is measured using several different indicators. For example, Asiedu and Lien (2011) use three unique measures of democracy (free, polity, and icrg) from three different sources (Freedom House, Polity IV, and International Country Risk Guide (ICRG)). Yang (2007) uses Polity IV and PACL as democracy measures. Democracy is a subjective measure, as there are no defined standards which countries must meet to be classified as democratic. Therefore, as previous research has, using more than one measure of democracy is vital towards establishing a strong correlation. To both account for the variance between

democracy rankings and ensure robustness of the analysis, three separate regressions were performed, with each measure of democracy being run in a different regression.

DATA

The data being used in this empirical analysis consisted of three main categories: data determining FDI inflows, democracy rankings, and control variables. Data referring to FDI inflows per capita and other economic data being used as control variables was obtained from the United States Agency for International Development (USAID), specifically the International Data & Economic Analysis (IDEA). USAID is a reliable institution, publishing in-depth economic statistics for every country in the world. As for measures of democracy, the Economist Intelligence Unit's (EIU) Democracy Index, Polity5, and the International Institute for Democracy and Electoral Assistance's (IDEA) Global State of Democracy Indices will be used to determine democracy in each of the 39 countries. The EIU uses five categories (electoral process and pluralism, civil liberties, functioning of government, political participation, and political culture), which 60 total questions are answered by experts and public opinion surveys, then each category is assessed a score 0 – 10. The final score is a simple average of the five categories.

Polity5 is a score between -10 and +10 which considers six component measures including executive recruitment, constraints on executive authority, and political competition. It codifies all this information and provides breakdowns on individual scores for each "major country" (countries with constant populations over 500,000). Lastly, IDEA combines several existing data sets from reputable sources, all containing different types of data points (expert surveys, in-house coding, observational data, and composite measures).

FDI per capita, as the dependent variable, is transformed into logarithmic form, consistent with prior literature and due to the skewness of the data.

In addition to FDI per capita and democracy ratings, there are several other control variables on each country and year to understand the full extent of the relationship. These variables include corporate tax percentage, GNI per capita (in constant 2015 USD), consumer price

inflation percentage, average schooling years, ease of doing business[1], and financial development[2]. Table 1 summarizes the variables used in the analysis. Due to the manner the World Bank calculates FDI inflows, negative numbers are possible and are corrected for regressions.

Table 1 – Summary Statistics

Variable	Observations	Mean	Standard Deviation	Minimum	Maximum
EIU Rating	351	5.59	1.66	1.66	8.28
IDEA Rating	351	2.97	1.17	2.00	5.00
Polity5 Rating	351	4.76	5.50	-7.00	10.00
FDI Inflows per capita	351	286.34	284.83	-117.49	2,897.29
Corporate income tax	321	22.32	7.54	9.00	40.00
Ease of doing business	332	63.44	9.08	32.48	83.01
GNI per capita	319	6,936.49	2,665.94	2,413.67	13,839.14
Consumer price inflation	337	4.43	5.10	-4.30	59.22
Average years of schooling	351	9.24	1.83	4.30	12.80
Financial development	333	0.32	0.16	0.08	0.71

Model

There will be three separate models which have the same variables, except each has a different democratic rating. The model is shown below.

$$lnFDIcapita_{it} = \beta_0 + \beta_1 DEM_{it} + \beta_2 CIT_{it} + \beta_3 BUS_{it} + \beta_4 lnGNIcapita_{it} + \beta_5 Inflation_{it} + \beta_6 School_{it} + \beta_7 FIN_{it} + Time\ Fixed\ Effects + \varepsilon$$

[1] Ease of doing business is a simple average of the following statistics: starting a business, dealing with construction permits, getting electricity, registering property, getting credit, protecting minority investors, paying taxes, trading across borders, enforcing contracts and resolving insolvency.
[2] Financial development is a simple average of depth, access, efficiency for both financial institutions and financial markets.

Where DEM is the democracy ranking, CIT is corporate taxation percentage, lnGNIcapita is the logarithmic transformation of GNI per capita , Inflation is consumer price inflation, School is average years of schooling, FIN is financial development, and lnFDIcapita is the logarithmic transformation of FDI per capita. This model appropriately captures the control variables established in prior literature.

RESULTS

To examine the data, a panel regression was run using fixed effects, random effects, and a Hausman test to determine the appropriate model to observe the results. Panel regression was used due to the yearly basis of the data, as each of the 39 countries have 9 years of data, from 2010 to 2018 associated with them. Separate regressions were run for each measure of democracy for robustness purposes. Both random effects and fixed effects regressions were run, then Hausman tests to determine the proper model for each measure of democracy.

Due to the Hausman Tests (Appendices A, B, and C) indicating random effects are appropriate, only random effects models are included in the main body of the paper. In addition, FDI inflows were regressed incrementally, first against exclusively the democracy measure, then against the democracy variable and only objective economic variables, then finally against all variables. Hence, for each democracy measure, there are three separate regressions, progressively ordered. For all regressions, time fixed effects were utilized to account for the differences between years. Therefore, the regressions which the results and conclusions are derived from include these random effects and time fixed effects.

Table 2 – EIU Democracy Results

EIU Democracy Ratings using Random Effects and Time Fixed Effects

	(1) Regression1	(2) Regression2	(3) Regression3
EIU Rating	0.272***	0.137	0.030
	(0.077)	(0.095)	(0.067)
Corporate Income Tax		-0.018	-0.005
		(0.014)	(0.012)
Consumer Inflation		0.001	-0.001
		(0.007)	(0.007)
lnGNI per capita		1.242***	1.220***
		(0.345)	(0.284)
Business Ease			0.003
			(0.009)
Average Schooling			0.007
			(0.018)
Financial Complexity			-1.436*
			(0.735)
Constant	3.566***	-6.186**	-5.308**
	(0.470)	(3.048)	(2.483)
Time Fixed Effects	Yes	Yes	Yes
Observations	350	285	254
R-squared	.095	.103	.093

Standard errors in parentheses
* p<0.10, ** p<0.05, *** p<0.01

The first democracy measure tested was the EIU democracy rating. The coefficient is statistically insignificant once all control variables are included. The EIU democracy variable is significant at the 1% level when no covariates are added, however it becomes less statistically significant as more control variables are added. This implies that EIU democracy is not the best indicator for FDI inflows per capita. Many of the other control variables ultimately are statistically insignificant, with only GNI per capita being significant at the 1% level and financial development being significant on the 10% level, with a negative coefficient.

When the EIU democracy rating is statistically significant, it has a positive relationship with FDI inflows. However as more covariates are added, it is evident this relationship comes from GNI per capita, which despite a relatively weak correlation between the democracy rating and income. The GNI per capita coefficient indicates a 1% increase in GNI predicts a 1.22% increase in FDI inflows, a significant number.

Table 3 – IDEA Democracy Results

IDEA Democracy Ratings using Random Effects and Time Fixed Effects

	(1) Regression1	(2) Regression2	(3) Regression3
IDEA Rating	-0.287***	0.002	-0.001
	(0.086)	(0.092)	(0.077)
Corporate Income Tax		-0.017	-0.004
		(0.014)	(0.012)
Consumer Inflation		-0.000	-0.001
		(0.007)	(0.007)
lnGNI per capita		1.286***	1.217***
		(0.345)	(0.285)
Business Ease			0.003
			(0.009)
Average Schooling			0.006
			(0.018)
Financial Complexity			-1.404*
			(0.732)
Constant	5.915***	-5.827*	-5.176**
	(0.328)	(3.043)	(2.470)
Time Fixed Effects	Yes	Yes	Yes
Observations	350	285	254
R-squared	.091	.095	.091

Standard errors in parentheses
* p<0.10, ** p<0.05, *** p<0.01

The coefficient for IDEA democracy ratings is insignificant for the final regression. This holds true for the regressions run with control variables, however not for the first regression, where IDEA ratings are the only independent variable. Similar to EIU democracy ratings,

IDEA democracy ratings are statistically significant at the 1% when no control variables are introduced, however this significance disappears as more control variables are introduced incrementally. Like EIU, the only statistically significant variables when all control variables are included are GNI per capita at the 1% level and Financial Complexity at the 10% level.

Regardless of the democracy coefficient, GNI per capita and Financial Complexity maintain their significance and similar coefficients from the EIU democracy results, with Financial Complexity having a negative coefficient. The negative coefficient implies a more developed financial system reduces the FDI inflows for a given country, contradicting prior research. This coefficient is only significant on the 10% level.

Table 4 – Polity5 Democracy Results

Polity5 Democracy Ratings using Random Effects and Time Fixed Effects

	(1) Regression1	(2) Regression2	(3) Regression3
Polity5 Rating	-0.032	0.002	0.001
	(0.021)	(0.021)	(0.017)
Corporate Income Tax		-0.017	-0.004
		(0.014)	(0.012)
Consumer Inflation		-0.000	-0.001
		(0.007)	(0.007)
lnGNI per capita		1.289***	1.217***
		(0.346)	(0.285)
Business Ease			0.003
			(0.009)
Average Schooling			0.006
			(0.018)
Financial Complexity			-1.401*
			(0.731)
Constant	5.211***	-5.860*	-5.183**
	(0.231)	(3.074)	(2.475)
Time Fixed Effects	Yes	Yes	Yes
Observations	350	285	254
R-squared	.068	.095	.091

Standard errors in parentheses
* p<0.10, ** p<0.05, *** p<0.01

The Polity5 regressions have the least statistical significance, as the only statistically significant variables out of the three regressions are again GNI per capita and Financial Complexity, when all control variables are included. The statistical significance of the Polity5 variable is eroded, much like EIU and IDEA, when control variables are added to the regression, suggesting a correlation with the existing control variables. Contrary to EIU and IDEA, Polity5 is never considered a statistically significant variable in any of the incremental regressions. GNI per capita and Financial Complexity maintain their coefficient signs from the previous democracy rankings.

After incorporating all the control variables, no measure of democracy determined to be statistically significant. This insignificance does not hold true for all variables, where GNI per capita is found to be statistically significant for not only all measures of democracy, but also across all the incremental regressions run, all at the 1% level. The significance signifies GNI per capita is a robust indicator of FDI inflows for a country, to a greater extent than any other variable included in the analysis. Furthermore, Financial Complexity is determined to be significant at the 10% level across all three democracy measures with a negative coefficient, suggesting there may be a link between FDI inflows and countries with financial systems that require external investment.

CONCLUSION

There is no significant and robust relationship between FDI inflows and democracy ratings, despite an initial hypothesis and prior literature suggesting a correlation. Instead, GNI per capita is found to be a significant variable with all democracy measures and also in every incremental regression. It should be noted that for EIU and IDEA, democracy was found to be a statistically significant variable at the 1% when no other covariates were regressed. Furthermore, when EIU and IDEA were statistically significant, each had a different coefficient sign, signifying the inability of democracy to predict FDI inflows and the inherent subjectivity of creating a variable to measure the democracy levels in a country.

Unexpectedly, GNI per capita was significant in all regressions. The positive coefficient clashes with traditional economic theory which states that capital will flow to where capital stock is low, which tends to be lower income countries. A positive coefficient implies capital (in the form of FDI) is going to countries that currently have domestic wealth and therefore do not require the same level of foreign investment as lower income nations. This creates a cycle where entities choose to invest in established economies (in terms of income), creating more wealth, while poorer countries are unable to attract the investment needed to accumulate domestic wealth and have no viable path to obtaining needed capital. One reason for this is entities may choose to invest where a desired return on investment carries less risk than investing in a less developed nation, where the income levels are lower.

In addition to GNI per capita, Financial Complexity was found to be significant and negative, where less developed financial systems are predicted to receive more FDI inflows. This could be a result of investors attempting to achieve greater returns on investment through increasing risk. Investment risk is more likely to be present in countries where financial systems and the overall economy is not as developed.

Countries should focus on creating domestic wealth and income, as that in turn will attract FDI without the need to market or provide tax incentives to companies who decide to invest. Creating domestic wealth is difficult and limits the ability of nations to adjust themselves to attract higher levels of FDI if desired. The income of a country is a better predictor of FDI than democracy. Further research in this area should be focused on discovering more FDI determinants that focus on more subjective variables, such as democracy or ease of business. This will allow for countries to further understand the drivers of FDI and take proactive steps to achieve higher levels of FDI, if it is desired within the country.

APPENDICES

Appendix A – Hausman Test for EIU Democracy Ratings

	Coefficients (b) fixed	(B) random	(b-B) Difference	sqrt(diag(V_b-V_B)) Std. err.
EIURating	.2608155	.0296796	.2311359	.1620635
CorporateI~x	-.0321786	-.004697	-.0274816	.0129348
BusinessEase	.0064094	.0026203	.0037891	.0059709
ConsumerIn~n	.002269	-.0007841	.0030531	.0026403
AverageSch~g	.0019144	.0068117	-.0048973	.
FinancialC~y	-2.525505	-1.435695	-1.089811	1.87116
lnGNIperca~a	1.32973	1.219628	.1101016	.4749754
year2010	.2287079	.1945405	.0341673	.0808674
year2011	.4339446	.4217063	.0122383	.0743746
year2012	.3035908	.304045	-.0004543	.0586458
year2013	.1413079	.1653784	-.0240705	.0440875
year2014	.0846175	.1010424	-.0164249	.0385323
year2015	.0275462	.0493711	-.0218249	.0278202
year2016	-.0419688	-.0407609	-.0012079	.0127444
year2017	.0596498	.0440289	.0156209	.

b = Consistent under H0 and Ha; obtained from **xtreg**.
B = Inconsistent under Ha, efficient under H0; obtained from **xtreg**.

Test of H0: Difference in coefficients not systematic

chi2(**15**) = (b-B)'[(V_b-V_B)^(-1)](b-B)
= **6.66**
Prob > chi2 = **0.9664**
(V_b-V_B is not positive definite)

Appendix B – Hausman Test for IDEA Democracy Ratings

	Coefficients (b) fixed	(B) random	(b-B) Difference	sqrt(diag(V_b-V_B)) Std. err.
IDEARanking	.0294775	-.0008203	.0302978	.0881415
CorporateI~x	-.0302486	-.0044108	-.0258378	.0130267
BusinessEase	.0047371	.0033177	.0014194	.0061388
ConsumerIn~n	-8.66e-06	-.0010511	.0010425	.0023649
AverageSch~g	.0016212	.0063772	-.004756	.0019983
FinancialC~y	-2.719965	-1.403772	-1.316193	1.878922
lnGNIperca~a	1.37758	1.217387	.1601924	.4792299
year2010	.2333211	.200469	.0328522	.0845608
year2011	.4416338	.4276592	.0139747	.076645
year2012	.3124617	.3090789	.0033827	.0610674
year2013	.1594069	.1708697	-.0114627	.0459541
year2014	.1045925	.1071853	-.0025928	.040568
year2015	.0507385	.0537399	-.0030013	.0276052
year2016	-.0297153	-.0370397	.0073244	.0172775
year2017	.0595526	.0457942	.0137584	.0024844

b = Consistent under H0 and Ha; obtained from **xtreg**.
B = Inconsistent under Ha, efficient under H0; obtained from **xtreg**.

Test of H0: Difference in coefficients not systematic

chi2(**15**) = (b-B)'[(V_b-V_B)^(-1)](b-B)
= **2.04**
Prob > chi2 = **1.0000**
(V_b-V_B is not positive definite)

Appendix C – Hausman Test for Polity5 Democracy Ratings

	Coefficients (b) fixed	(B) random	(b-B) Difference	sqrt(diag(V_b-V_B)) Std. err.
Polity5Rat~g	-.0014824	.0006334	-.0021158	.0214352
CorporateI~x	-.0300578	-.004329	-.0257289	.0130385
BusinessEase	.0047853	.0032883	.001497	.0061415
ConsumerIn~n	-2.18e-06	-.0010305	.0010283	.0024201
AverageSch~g	.0013441	.006419	-.0050749	.001617
FinancialC~y	-2.725475	-1.401461	-1.324015	1.879639
lnGNIperca~a	1.387789	1.217422	.1703669	.4807473
year2010	.2368228	.1999834	.0368394	.0830262
year2011	.4422811	.4271901	.015091	.0762238
year2012	.3138609	.3086674	.0051935	.0604332
year2013	.1608298	.170553	-.0097232	.0453582
year2014	.1056464	.1069837	-.0013373	.040072
year2015	.050519	.0536994	-.0031804	.0275337
year2016	-.0291443	-.0370491	.0079048	.0183212
year2017	.0617271	.0457123	.0160149	.

b = Consistent under H0 and Ha; obtained from **xtreg**.
B = Inconsistent under Ha, efficient under H0; obtained from **xtreg**.

Test of H0: Difference in coefficients not systematic

chi2(**15**) = (b-B)'[(V_b-V_B)^(-1)](b-B)
= **2.16**
Prob > chi2 = **0.9999**
(V_b-V_B is not positive definite)

Appendix D – EIU Democracy Rating Random Effects Results

EIU Democracy Ratings using Random Effects

	(1) Regression1	(2) Regression2	(3) Regression3
EIU Rating	0.286***	0.186**	0.159
	(0.077)	(0.094)	(0.097)
lnGNIpercapita		0.482*	0.486
		(0.281)	(0.318)
Corporate Income Tax		-0.011	-0.009
		(0.014)	(0.015)
Consumer Inflation		0.012*	0.013*
		(0.006)	(0.007)
Business Ease			0.003
			(0.009)
Average Schooling			0.005
			(0.017)
Constant	3.581***	0.132	-0.028
	(0.466)	(2.544)	(2.728)
Time Fixed Effects	No	No	No
Observations	350	285	269
R-squared	.052	.029	.023

Standard errors in parentheses
* p<0.10, ** p<0.05, *** p<0.01

Appendix E – IDEA Democracy Ratings Random Effects Results

IDEA Democracy Ratings using Random Effects

	(1) Regression1	(2) Regression2	(3) Regression3
IDEA Rating	-0.295***	0.000	-0.018
	(0.086)	(0.094)	(0.080)
lnGNIpercapita		0.485*	0.844***
		(0.283)	(0.274)
Corporate Income Tax		-0.010	-0.001
		(0.014)	(0.013)
Consumer Inflation		0.011	0.008
		(0.006)	(0.007)
Business Ease			-0.001
			(0.009)
Average Schooling			0.009
			(0.017)
Financial Complexity			-1.578**
			(0.772)
Constant	6.058***	1.136	-1.558
	(0.313)	(2.504)	(2.299)
Time Fixed Effects	No	No	No
Observations	350	285	254
R-squared	.039	.013	.019

Standard errors in parentheses
* p<0.10, ** p<0.05, *** p<0.01

Appendix F – Polity5 Democracy Ratings Random Effects Results

Polity5 Democracy Ratings using Random Effects

	(1) Regression1	(2) Regression2	(3) Regression3
Polity5 Rating	-0.026	0.012	0.010
	(0.022)	(0.021)	(0.018)
lnGNIpercapita		0.510*	0.859***
		(0.286)	(0.276)
Corporate Income Tax		-0.009	-0.001
		(0.014)	(0.013)
Consumer Inflation		0.011*	0.008
		(0.006)	(0.007)
Business Ease			-0.001
			(0.009)
Average Schooling			0.009
			(0.017)
Financial Complexity			-1.563**
			(0.772)
Constant	5.303***	0.849	-1.788
	(0.207)	(2.555)	(2.329)
Time Fixed Effects	No	No	No
Observations	350	285	254
R-squared	.013	.013	.019

Standard errors in parentheses
* p<0.10, ** p<0.05, *** p<0.01

Appendix G – EIU Democracy Ratings Fixed Effects and Time Fixed Effects Results

EIU Democracy Ratings using Fixed Effects and Time Fixed Effects

	(1) Regression1	(2) Regression2	(3) Regression3
EIU Rating	0.418***	0.248*	0.261
	(0.108)	(0.147)	(0.175)
Corporate Income Tax		-0.031*	-0.032*
		(0.017)	(0.018)
Consumer Inflation		0.002	0.002
		(0.007)	(0.008)
lnGNIpercapita		1.121**	1.330**
		(0.446)	(0.554)
Business Ease			0.006
			(0.011)
Average Schooling			0.002
			(0.018)
Financial Complexity			-2.526
			(2.010)
Constant	2.757***	-5.481	-6.904
	(0.605)	(3.985)	(4.713)
Time Fixed Effects	Yes	Yes	Yes
Observations	350	285	254
R-squared	0.099	0.108	0.111

Standard errors in parentheses
* p<0.10, ** p<0.05, *** p<0.01

Appendix H – IDEA Democracy Ratings Fixed Effects and Time Fixed Effects Results

IDEA Democracy Ratings using Fixed Effects and Time Fixed Effects

	(1) Regression1	(2) Regression2	(3) Regression3
IDEA Rating	-0.355***	0.033	0.029
	(0.102)	(0.108)	(0.117)
Corporate Income Tax		-0.029*	-0.030*
		(0.017)	(0.018)
Consumer Inflation		0.000	-0.000
		(0.007)	(0.008)
lnGNIpercapita		1.183***	1.378**
		(0.449)	(0.558)
Business Ease			0.005
			(0.011)
Average Schooling			0.002
			(0.018)
Financial Complexity			-2.720
			(2.016)
Constant	6.112***	-4.727	-5.747
	(0.321)	(3.988)	(4.681)
Time Fixed Effects	Yes	Yes	Yes
Observations	350	285	254
R-squared	0.092	0.097	0.102

Standard errors in parentheses
* p<0.10, ** p<0.05, *** p<0.01

Appendix I – Polity5 Democracy Ratings Fixed Effects and Time Fixed Effects Results

Polity5 Democracy Ratings using Fixed Effects and Time Fixed Effects

	(1) Regression1	(2) Regression2	(3) Regression3
Polity5 Rating	-0.067**	-0.002	-0.001
	(0.028)	(0.026)	(0.027)
Corporate Income Tax		-0.029*	-0.030*
		(0.017)	(0.018)
Consumer Inflation		0.000	-0.000
		(0.007)	(0.008)
lnGNIpercapita		1.192***	1.388**
		(0.450)	(0.559)
Business Ease			0.005
			(0.011)
Average Schooling			0.001
			(0.018)
Financial Complexity			-2.725
			(2.017)
Constant	5.371***	-4.713	-5.750
	(0.170)	(4.040)	(4.742)
Time Fixed Effects	Yes	Yes	Yes
Observations	350	285	254
R-squared	0.073	0.097	0.102

Standard errors in parentheses
* p<0.10, ** p<0.05, *** p<0.01

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