

The Effect of Political Corruption on IPO Initial Return: A Long-Term Country Analysis

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We investigate the effect of political corruption on IPO (Initial Public Offering) initial return using a long-term country level data. Using country-level variables spanning 55 countries over a period of more than 10 years, we find a positive relationship between the average political corruption index and the equally weighted average IPO initial return. Country characteristic variables, such as country size, GDP, or the number of IPO firms within each country, do not have a significant effect on the IPO initial return. The result implies political corruption is an important factor affecting IPO initial return.

Keywords: political corruption, IPO initial return, country characteristic variables

INTRODUCTION AND RELATED LITERATURE

Since Murphy, Shleifer and Vishny (1993) show the rent seeking behavior, i.e. corruption or political connection, hinder economic growth in their model, corruption became an important issue in finance research. For example, the probability of firms getting their IPO approval from the regulatory body increases if the firm has a strong political connection (Chen et al., 2017). Moreover, political uncertainty during the election years in the United States leads to lower IPO offer prices (Colak et al., 2017). If there is a political alignment between local politicians and the federal government, the overall IPO underpricing is higher in the United States market (Colak et al., 2021). For international evidence, aggressive firms, i.e., firms that bribe, lead to lower IPO initial returns in China (Huang et al., 2021). Finally, firms originating from regions with higher corruption tend to exhibit greater IPO underpricing.

Globalization and international IPO market has been a key issue in finance research. As an example, the importance of financial integration and its impact on IPO markets and IPO decisions have been discussed in previous research (Doidge et al., 2013; Caglio et al., 2016). Since Loughran et al. (1994) show international insights on IPO markets, many other researchers show the importance of regulatory and legal framework on IPO firms lead to cross-country variation in IPO underpricing (Banerjee et al., 2011; Engelen and Essen, 2010; Hopp and Dreher, 2013; Marcato et al., 2020).

HYPOTHESIS

There are previous researches of the effect of political corruption on IPO initial return. However, they focus on individual countries with relatively short-term periods. So, we focus on the multiple countries with long-term data periods. Based on previous literature regarding political corruption, initial returns of IPOs,

and the international IPO market, we investigate the effect of political corruption on IPO initial returns using international IPO data.

Based on previous literature, political corruption leads to greater IPO underpricing due to increased information asymmetry and market uncertainty, resulting in higher initial IPO returns. So, we set up a following hypothesis.

Hypothesis: *There is a positive relationship between political corruption and IPO initial return.*

DATA AND METHODOLOGY

We used the equally weighted average IPO initial return (Return (%)) and the number of IPO firms data from Professor Jay Ritter's website. Following is the website link (<https://site.warrington.ufl.edu/ritter/ipo-data/>). Sample period is from 1960 to 2024 spanning 55 countries. Each country has at least 10 years of data to calculate the initial return. We used political corruption index data from Our World in Data website. The website link for the data is as follows (<https://ourworldindata.org/grapher/political-corruption-index>). Sample period is from 1789 to 2024 spanning 55 countries. Each country has at least 48 years of data to calculate the political corruption index. Finally, we used country size and average GDP data for the sample period from 55 countries on the World Bank Open Data website. Following is the website for the country size and the average GDP data (<https://data.worldbank.org/indicator/NY.GDP.MKTP.CD>). We match the average GDP data period with the equally weighted average initial return period. We use equally weighted average initial return (*Return(%)*) as dependent variable. We use political corruption index (*corruption*) as our explanatory variable. We use the natural log of number of IPO firms for 55 countries (*lnIPOfirms*), the natural log of country size for 55 countries (*lnCountrySize*), and the natural log of average GDP for 55 countries (*lnGDP*) as our control variables. We run OLS regressions of the dependent variable (*Return*) on explanatory variable (*corruption*) and control variables (*lnIPOfirms*, *lnCountrySize*, and *lnGDP*). The regression equation is as follows.

$$Return = \alpha + \beta_1 * corruption + \beta_2 * lnIPOfirms + \beta_3 * lnCountrySize + \beta_4 * lnGDP + \varepsilon \quad (1)$$

EMPIRICAL RESULTS

TABLE 1 shows the descriptive statistics of our variables. The mean value of IPO initial return is 34.71% with the median value of 19.8%. Also, the mean value of political corruption index is 0.374 with the median value of 0.34. The political corruption index ranges from 0 to 1, 1 being the highest corruption value. The mean value of the natural logarithm of the number of IPO firms is 5.69 with the median value of 5.53. The largest IPO firm sample within a country is 13883, while the lowest IPO firm sample within a country is 9. On average, there are 295 IPO firms within a country for our sample. The mean value of the natural logarithm of country size is 11.57 with the median value of 11.76. The largest country is Russia, with an area of 6,602 square miles, while the smallest country is Singapore, with an area of 284.1 square miles. On average, the country size is 105874 square miles. The mean value of the natural logarithm of average GDP during the sample period is 26.5 with the median value of 26.34. The USA has the highest average GDP during the sample period, at \$ 13.18 trillion, while Mauritius has the lowest average GDP during the same period, at \$ 7.74 billion. On average, the average GDP during the sample period is 322.7 billion dollars.

Descriptive Statistics of Regression Variables for 55 countries

TABLE 1
DESCRIPTIVE STATISTICS OF REGRESSION VARIABLES

Variables	N	Mean	Median	Std. Dev.	Min	Max
<i>Return(%)</i>	55	34.71	19.8	43.71	2.6	243.2
<i>corruption</i>	55	0.37	0.34	0.25	0.01	0.82
<i>lnIPOfirms</i>	55	5.69	5.53	1.57	2.20	9.54
<i>lnCountrySize</i>	55	11.57	11.76	2.22	5.61	15.70
<i>lnGDP</i>	55	26.50	26.34	1.43	22.77	30.21

The sample consists of 55 countries. The sample period is from 1960 till 2024 for *Return(%)*. The sample period is from 1789 till 2024 for *corruption*. We used the equally weighted average initial return and number of IPO firms data from Professor Jay Ritter's website. Following is the website link (<https://site.warrington.ufl.edu/ritter/ipo-data/>). We used political corruption index data from Our World in Data website. The website link for the data is as follows (<https://ourworldindata.org/grapher/political-corruption-index>). *Return(%)* is equally weighted average initial return in percentage. *Corruption* is political corruption index. *lnIPOfirms* is the natural log of number of IPO firms for 55 countries. *lnCountrySize* is the natural log of country size for 55 countries. *lnGDP* is the natural log of average GDP for 55 countries.

TABLE 2 shows the correlation analysis. There is a positive correlation between political corruption index (*Corruption*) and IPO initial return (*Return(%)*) (0.26). However, there are negative relationships between the initial return of IPOs (*Return(%)*) and the natural logarithm of the number of IPO firms (*lnIPOfirms*), country size (*lnCountrySize*), or average GDP (*lnGDP*). The negative correlations are lower than the positive correlation between political corruption index (*Corruption*) and IPO initial return (*Return(%)*). The result implies a strong positive relationship between the political corruption index (*Corruption*) and the IPO initial return (*Return(%)*) after controlling for the number of IPO firms, country size, and average GDP.

TABLE 2
CORRELATION OF VARIABLES

	<i>Return(%)</i>	<i>Corruption</i>	<i>lnIPOfirms</i>	<i>lnCountrySize</i>	<i>lnGDP</i>
<i>Return(%)</i>	1				
<i>Corruption</i>	0.26	1			
<i>lnIPOfirms</i>	-0.04	-0.18	1		
<i>lnCountrySize</i>	-0.07	0.25	0.25	1	
<i>lnGDP</i>	-0.07	-0.15	0.73	0.55	1

TABLE 2 shows the results of correlation analysis. The relation between IPO initial return (*Return(%)*) and political corruption index (*Corruption*) is positive. The correlation between IPO initial return (*Return(%)*) and other control variables (*lnIPOfirms*, *lnCountrySize*, and *lnGDP*) are negative. The magnitude of correlation value between IPO initial return (*Return(%)*) and political corruption index (*Corruption*) is greater than that between IPO initial return (*Return(%)*) and other control variables (*lnIPOfirms*, *lnCountrySize*, and *lnGDP*).

TABLE 3 presents the effect of the political corruption index on the equally weighted IPO initial return for IPO firms in 55 countries. The dependent variable is return on equity change (*Return(%)*). The explanatory variable is political corruption index (*Corruption*). The control variables are the natural log of number of IPO firms for 55 countries (*lnIPOfirms*), the natural log of country size for 55 countries (*lnCountrySize*), and the natural log of average GDP for 55 countries (*lnGDP*). The ordinary least squares

regression analysis has been used. T-statistics are in parentheses. *, **, *** represents ten, five, or one percent significance level, respectively.

TABLE 3
THE EFFECT OF POLITICAL CORRUPTION INDEX ON IPO INITIAL RETURN

Dependent Variable	<i>Return</i> (%)	<i>Return</i> (%)	<i>Return</i> (%)	<i>Return</i> (%)
<i>Corruption</i>	44.71** [1.97]	45.13* [1.93]	50.88** [2.17]	55.64** [2.18]
<i>lnIPOfirms</i>		0.37 [0.08]		0.64 [0.11]
<i>lnCountrySize</i>			-2.88 [0.29]	-3.90 [-1.10]
<i>lnGDP</i>				2.17 [0.29]
Intercept	Yes	Yes	Yes	Yes
# of Observations	55	55	55	55
Adjusted R ²	0.05	0.03	0.05	0.02

TABLE 3 presents the effects of political corruption index (*corruption*) on the equally-weighted IPO initial return. We use OLS regression in TABLE 3. The dependent variable is equally-weighted IPO initial return for IPO firms in 55 countries. (*Return*(%)). The explanatory variable is political corruption index (*Corruption*) for 55 countries. OLS regression is run of equally-weighted average IPO initial return of 55 countries from 1960 to 2024 on average political corruption index of 55 countries from 1789 to 2024. The control variables are the natural log of number of IPO firms for 55 countries (*lnIPOfirms*), the natural log of country size for 55 countries (*lnCountrySize*), and the natural log of average GDP for 55 countries (*lnGDP*). Numbers in the brackets are t-statistics. ***, **, and * denote the statistical significance of the parameter estimates at the 1%, 5%, and 10% levels, respectively.

We find a positive relationship between political corruption index (*Corruption*) and equally-weighted IPO initial return (*Return*(%)) for 55 countries after controlling for the natural log of number of IPO firms for 55 countries (*lnIPOfirms*), the natural log of country size for 55 countries (*lnCountrySize*), and the natural log of average GDP for 55 countries (*lnGDP*). One standard deviation increase in political corruption index (*Corruption*) increases equally-weighted IPO initial return (*Return*(%)) by 44.71 within five percent significance level. However, one standard deviation increase in political corruption index (*Corruption*) increases equally-weighted IPO initial return (*Return*(%)) by 45.13 within a ten percent significance level after controlling for the number of IPO firms. So, the significance level decreases from five percent to ten percent after we control for the natural log of number of IPO firms for 55 countries (*lnIPOfirms*). Further, one standard deviation increase in political corruption index (*Corruption*) increases equally-weighted IPO initial return (*Return*(%)) by 50.88 within a five percent significance level after controlling for the natural log of country size for 55 countries (*lnCountrySize*). Finally, one standard deviation increase in political corruption index (*Corruption*) increases equally-weighted IPO initial return (*Return*(%)) by 55.64 within a five percent significance level after we control for the natural log of number of IPO firms for 55 countries (*lnIPOfirms*), the natural log of country size for 55 countries (*lnCountrySize*), and the natural log of average GDP for 55 countries (*lnGDP*). Overall adjusted R-squared is between 2% and 5% for four regressions in TABLE 3. The regression results are consistent with previous literature and correlation results from TABLE 2 that political corruption positively impacts the IPO initial return across 55 countries using more than 10 years of data. Our findings are meaningful in that the results from the previous literature hold using multiple countries and long-term data.

Chowdhury et al. (2023) find that there is a strong negative relationship between corruption and developed stock market. When corruption level is relatively high, stock market is less developed among developed stock market countries according to Chowdhury et al. (2023). We verify this finding using 55

countries with our long-term data. TABLE 4 shows the effect of financially developed countries on equally-weighted IPO initial return for IPO firms in 55 countries. The dependent variable is return on equity change (*Return(%)*). The explanatory variable is financial development dummy variable (*FINDEVDUM*). The dummy variable is equal to 1 if the country belongs to financially developed countries according to MSCI index and 0 otherwise. The control variables are the natural log of number of IPO firms for 55 countries (*lnIPOfirms*), the natural log of country size for 55 countries (*lnCountrySize*), and the natural log of average GDP for 55 countries (*lnGDP*). The ordinary least squares regression analysis has been used. T-statistics are in parentheses. *, **, *** represents ten, five, or one percent significance level, respectively. The regression equation is as follows.

$$Return = \alpha + \beta_1 * FINDEVDUM + \beta_2 * lnIPOfirms + \beta_3 * lnCountrySize + \beta_4 * lnGDP + \varepsilon$$

TABLE 4
THE EFFECT OF FINANCIALLY DEVELOPED COUNTRIES ON IPO INITIAL RETURN

Dependent Variable	<i>Return(%)</i>	<i>Return(%)</i>	<i>Return(%)</i>	<i>Return(%)</i>
<i>FINDEVDUM</i>	-20.89* [-1.81]	-22.43* [1.81]	-30.17** [0.05]	-31.14** [-2.05]
<i>lnIPOfirms</i>		1.46 [0.71]		-1.86 [0.75]
<i>lnCountrySize</i>			-3.44 [0.31]	-3.79 [0.29]
<i>lnGDP</i>			6.52 [0.30]	8.49 [0.34]
Intercept	Yes	Yes	Yes	Yes
# of Observations	55	55	55	55
Adjusted R ²	0.04	0.02	0.03	0.01

TABLE 4 presents the effects of financially developed countries (*FINDEVDUM*) on the equally-weighted IPO initial return. We use OLS regression in TABLE 4. The dependent variable is equally-weighted IPO initial return for IPO firms in 55 countries. (*Return(%)*). The explanatory variable is financially developed countries dummy variable (*FINDEVDUM*) for 55 countries. The dummy variable is equal to 1 if the country belongs to financially developed countries according to MSCI index and 0 otherwise. OLS regression is run of equally-weighted average IPO initial return of 55 countries from 1960 to 2024 on financially developed countries dummy variable. The control variables are the natural log of number of IPO firms for 55 countries (*lnIPOfirms*), the natural log of country size for 55 countries (*lnCountrySize*), and the natural log of average GDP for 55 countries (*lnGDP*). Numbers in the brackets are t-statistics. ***, **, and * denote the statistical significance of the parameter estimates at the 1%, 5%, and 10% levels, respectively.

We find a negative relationship between financially developed countries dummy (*FINDEVDUM*) and equally-weighted IPO initial return (*Return(%)*) for 55 countries after controlling for the natural log of number of IPO firms for 55 countries (*lnIPOfirms*), the natural log of country size for 55 countries (*lnCountrySize*), and the natural log of average GDP for 55 countries (*lnGDP*). The negative relationship is statistically significant within five percent significance level. Specifically, a one-standard-deviation increase in the financially developed countries dummy (*FINDEVDUM*) decreases the equally weighted IPO initial return (*Return(%)*) by 20.89, within a 10% significance level. Further, one standard deviation increase in financially developed countries dummy (*FINDEVDUM*) decreases equally-weighted IPO initial return (*Return(%)*) by 22.43 within a ten percent significance level after controlling for the natural log of number of IPO firms for 55 countries (*lnIPOfirms*). When we control for the natural log of country size (*lnCountrySize*) and the natural log of average GDP (*lnGDP*) for 55 countries, a one-standard-deviation increase in the financially developed countries dummy (*FINDEVDUM*) decreases the equally weighted

IPO initial return (Return(%)) by 30.17, within a 5% significance level. Overall adjusted R-squared is between 1% and 4% for four regressions in TABLE 4. The regression results are consistent with the previous literature, which suggests that financial development has a negative impact on the initial return of IPOs across 55 countries, using more than 10 years of data. Our findings are meaningful in that the results from the previous literature are applicable across multiple countries and span long-term data.

CONCLUSION

Using international IPO and political corruption data from 55 countries spanning over 10 years, we analyze the relationship between political corruption and the initial return of IPOs. We find a positive relationship between political corruption and IPO initial return. Furthermore, we find a negative relationship between financial development and IPO initial return. The paper's contribution to the prior literature is that the positive relationship between political corruption and IPO initial return remains robust when using international IPO data with a long-term sample period. Further, we find a negative relationship between financial development and IPO initial return using international IPO data with long-term sample period.

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