

# Department of Economics Discussion Papers

ISSN 1473-3307

## Political risk and external finance: Evidence from cross-country firm-level data

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**Paper number 23/12**

# Political risk and external finance: Evidence from cross-country firm-level data

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September 2023

## Abstract

Drawing on the strands of literature on agency theory, institutions and financial development, this paper investigates whether, and how, political risk can explain access to external finance by 127,542 firms in 108 countries over the period 2006 to 2021. We do this by combining international firm-specific data with a globally representative political risk measure to explore variations in access to external finance for working capital and fixed investment by firms. Our results provide robust evidence of a strong positive impact of political risk on external finance. Specifically, we find that a one-standard-deviation increase in political risk leads to a 10.89% increase in access to external finance for working capital of sampled firms. We then examine which dimensions of political risk matter for external finance, finding that bureaucratic quality, corruption, government stability, socioeconomic conditions, investment profile, external conflict, and ethnic tensions are the relevant individual components. Further analyses show that the effects of political risk on external finance for working capital are amplified for firms that are either experiencing low growth, innovative, in the service sector, or small- and medium-sized enterprises. Our results survive a battery of robustness checks, including an alternative proxy for external finance (fixed investment), controlling for additional confounding factors and outliers. Given the central importance of firms as engines of growth, our paper makes an insightful contribution to the literature on the institutional determinants of access to entrepreneurial financing by firms.

JEL codes: G20; G30; O16; O50; L26

Keywords: Political risk; Institutions; Access to finance; External finance; Working capital; Firm-level evidence

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# 1 Introduction

Access to finance, especially by firms, is arguably the most significant driver of economic growth (Demirgüç-Kunt and Maksimovic, 1998; Guiso et al., 2004; King and Levine, 1993; Levine et al., 2000; Rajan and Zingales, 1998). Notwithstanding, financing constraints remain the most pervasive of obstacles, limiting the operations, growth, and profitability of several firms. As a result, a large literature exists that is dedicated to studying both the causes and consequences of constraints on access to entrepreneurial financing (e.g., Campello et al. (2010); Motta (2020); Oyekola et al. (2023); Oyekola and Odewunmi (2023); Santos and Cincera (2022); Starmans (2022); Stiglitz and Weiss (1981)). Furthermore, a key development in this stream of research involves the role of institutions in explaining access to finance (see, for example, Knack and Xu (2017)).<sup>1</sup> Consistent with this research theme, a growing number of scholars have investigated the interplay between political risk and inward flows of foreign direct investment (FDI) (Jensen, 2008), FDI exit decisions (Gonchar and Greve, 2022), distance-to-default (Islam et al., 2022), firm-level debt choice (Huang et al., 2023), stock liquidity (Das and Yaghoubi, 2023), state-controlled companies (Carvalho and Guimaraes, 2018), cross-border acquisitions (Cao et al., 2019), dividend payout (Ahmad et al., 2023), international valuation (Bekaert et al., 2016), gold market fluctuations (Ding et al., 2022), and investment decisions (Banerjee and Dutta, 2022), to mention but a few. However, there has been no study to date considering the impact of political risk on a firm’s access to external finance.<sup>2</sup>

In this paper, we fill this gap in the literature by investigating the effect of country-level political risk<sup>3</sup> on firm-level access to external finance. More specifically, we: (i) focus on how

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<sup>1</sup>The literature on the economic effects of institutions is very extensive, with important early contributions from North and Thomas (1973), North (1981), and North (1990).

<sup>2</sup>In this paper, access to finance refers to access to external financing, which could be sourced through trade credits, loans from banks and non-bank financial institutions, relatives and friends, and through the issuance of debt instruments, unlike internal financing, which could, for example, be generated through the sale of assets or retained earnings. See Knack and Xu (2017) and Section 3 for details.

<sup>3</sup>It is important to note that our study employs the ICRG *Political Risk Index* as a metric for assessing political risk. A higher value on this metric indicates a lower level of political risk in a country. Consequently, countries with lower political risk index values are linked with higher levels of political risk. This is discussed further in Section 3 and the Internet Appendix Table IA1. See also King et al. (2021) and Lehkonen and Heimonen (2015).

political risk affects external finance; (ii) investigate the sub-groups and components of political risk that matter for external finance; and (iii) examine the potential mechanisms through which political risk is impacting external finance. To do this, we use detailed firm-level, internationally representative, data from the World Bank Enterprise Surveys (WBES) covering 127,542 firms across 108 countries for the years 2006 to 2021. This database provides rich information on firm characteristics, including sources of internal and external financing for working capital and fixed investment (e.g., bank and non-bank borrowing, retained earnings, supplier credit, and issuing new equities), which enable us to construct our outcome variables of interest (see Section 3). All our firm-level control variables (e.g., firm size, age, and ownership patterns) are also derived from WBES. We combine these WBES variables with the widely explored country-level political risk measure from the International Country Risk Guide (ICRG) and employ a simple but transparent econometric analysis in Ordinary Least Square (OLS) (Wooldridge, 2010) to examine the link between political risk and access to external finance, while accounting for firm- and country-level characteristics, as well as country, industry, and year fixed effects.

We find that lower country-level political risk (i.e., higher values of ICRG's *Political Risk Index*, reflecting better-quality macro institutional environment) is positively related to firm-level access to external finance for working capital in our baseline analysis. To be specific, we find that a one-standard-deviation increase in political risk leads to an increase of 10.89% in access to external finance for working capital for a typical firm. This finding, which is both statistically and economically important, implies that firms located in a country with strong institutions are more likely to have access to external finance for working capital compared to firms in countries with weak institutions. Our result is robust to the inclusion of several firm- and country-specific control variables, as well as the inclusion of country, industry, and year fixed effects. Our finding is also robust to using access to external finance for fixed investment as an alternative dependent variable and to excluding influential observations. Our results add to and complement existing literature on the significance of institutions for economic outcomes

(Acemoglu and Johnson, 2005; Glaeser et al., 2004; Knack and Keefer, 1995; North, 1990), particularly in relation to corporate finance (Bekaert et al., 2014; King et al., 2021; Knack and Xu, 2017) and for potentially resolving agency (i.e., information and incentive) problems (Eisenhardt, 1989; Jensen and Meckling, 1976).

In search of a better understanding of the potential channels through which political risk affect external finance, we conduct further empirical tests. First, we examine what political risk factors are significant for access to external finance. More specifically, we find that the most relevant individual components of political risk are bureaucratic quality, corruption, government stability, socioeconomic conditions, investment profile, external conflict, and ethnic tensions. Overall, this result is consistent with the notion that better institutions predict better economic and financial outcomes, even at the firm level (Knack and Xu, 2017). Second, we explore two additional channels by focusing on the sources of external finance (labelled *finance* channels) and some firm heterogeneity (labelled *firm* channels). In terms of the finance channels, we find that the effect of political risk on access to external finance for working capital works more through access to supplier credit. Regarding the firm channel, we find, using an interaction model, that political risk affects access to external finance for working capital more if a firm is experiencing low growth, innovative, in the service sector or small- and medium-sized enterprises. These results are statistically significant and positive, thereby reinforcing the same story that better institutional quality is necessary for access to external finance.

Our paper makes an important contribution to the existing literature on political uncertainties and economic outcomes by providing a more focused assessment of the link between political risk and access to external finance. In this regard, Julio and Yook (2012) find that political uncertainties reduce firms' investment expenditure by 4.8%; ditto for King et al. (2021), who find that firms' investments are reduced in countries with higher political risk. Kelly et al. (2016) show that political uncertainties are priced in equity stock options, leading to price jumps. Similarly, Pham (2019) investigates the mediating role of political connections for the interplay

between political risk and the cost of equity, finding evidence in support of Julio and Yook (2012), on the one hand, and another evidence in support of variations in the cost of equity between the politically connected firms and the unconnected ones, on the other. Moreover, our analysis shows the importance of institutions for dealing with the principal-agent problem in the context of corporate finance.

The remainder of the paper is organised as follows. Section 2 provides the background theories to our study and develops the main hypothesis. Section 3 explains the data sources, sample construction, measurements of key variables, and reports summary statistics for the variables used for analysis. Section 4 introduces the model specification and summarises our empirical strategy. Section 5 presents the main results and robustness checks. We conclude the paper in Section 6.

## **2 Background and hypothesis development**

Of the 180,067 firms surveyed between 2006 and 2021 in the July 18, 2022, release of the WBES data, access to finance is ranked highest as the obstacle that most affects the operations and performance of firms, appearing 23,858 (or 14.18% of the) times (out of 168,310 responses) (see Figure 1). Financing constraints thus remain an ever-present challenge facing many firms around the world. Generally, lack of financing opportunities can arise from the difficulties in accessing both the internal and external sources of funding, and have the potential to impact on a firm's productivity and competitiveness, but could also lead to unwanted consequences for the aggregate economy, including affecting the level of employment, rates of job creation, the utilisation rates of other production inputs, and innovation activities (Ayyagari et al., 2014; Berger et al., 2001; Berger and Udell, 1998; Chan, 2019; Motta, 2020; Santos and Cincera, 2022). This is because of the pivotal role that firms play as a vehicle for economic growth. In the rest of this section, we frame our main hypothesis around a survey of the relevant literature.

Theoretically, our analysis is grounded in two strands of the literature. The first is the widely

explored agency literature, which suggests that financial market imperfections can account for financing constraints (Arrow et al., 1974; Auerbach, 1984; Eisenhardt, 1989; Fazzari et al., 1988; Hall and Lerner, 2010; Jensen and Meckling, 1976). From the agency theory perspective, there are benefits that accrue to separating the interests of external financiers and owners and/or managers of firms. In our context, the notion of this ubiquitous agency relationship can be seen in the fact that one party (an external financier) can gain from sponsoring a business venture despite not having an executive role to play in the day-to-day running of the firm's affairs, thereby having limited control over many critical decisions. Similarly, another party (the entrepreneur) can gain by running the firm in a most profitable way in the interests of all stakeholders, especially that of the external financier. The problems here are that: (i) the incentives of an external financier and the entrepreneur do not always align; (ii) their risk tolerance levels are often also at variance; and (iii) it usually is costly to monitor and sanction subpar decisions and activities of entrepreneurs or managers by external financiers (Eisenhardt, 1989; Jensen and Meckling, 1976).

Whilst the agency literature helps to theorise on why there may be a divergence between the demand for and the supply of external finance based on the principal-agent model structure (e.g., information asymmetry and adverse selection), our study follows the suggestion of Eisenhardt (1989) in that we seek “*to use agency theory with complementary theories*” (p. 71). More specifically, we propose to theorise on, and test in subsequent sections, how the challenge posed by political risk impact on the ability of firms to access external finance. This is important because, according to the pecking order theory (Myers and Majluf, 1984), uncertainties about information asymmetry, ensuing from political risk, have the tendency to increase the cost of securing external financing. Thus, our second theoretical viewpoint builds on the literature examining the role of aggregate uncertainties (see, for example, Baker et al. (2016), Bernanke (1983), Bloom et al. (2007), and Liu and Wang (2022)) on economy-wide outcomes. Collectively, our complementary theory can be interpreted in the spirit of the institutions literature

(Acemoglu and Johnson, 2005; Glaeser et al., 2004; Knack and Keefer, 1995; North, 1990), as applied from corporate finance perspective (King et al., 2021; Knack and Xu, 2017).

According to the uncertainty literature perspective, meanwhile, firms are sensitive to political risks (Huang et al., 2015). Notably, examples of uncertainties that businesses could face is encapsulated in the political risk measure, which is associated with changes in government policies, actions, events, and/or procedures, affecting all firms operating within a country (Beckman et al., 2004). Potentially, therefore, all these different features may either directly or indirectly impact on the goals of firms and how external financiers perceive risks (e.g., Bekaert et al. (2014), Pástor and Veronesi (2012, 2013), and Nettet et al. (2019)). Besides, political risk captures the idea that an action taken by the government may have a negative impact on the cash flow of firms, regardless of whether they are making (or receiving) an investment (Bekaert et al., 2014; Li, 2021). This suggests that a firm's source of finance could be impacted by political risk factors, such as government stability, laws and regulations, corruption, and bureaucratic quality (Amore and Bennedsen, 2013; Baker et al., 2016).

Furthermore, the techniques for the evaluation of financing undertaken through internal or external source would adjust the appraisal values to reflect the risk components (Francis et al., 2014; Gungoraydinoglu et al., 2017). This is consistent with the view that political risk will make firms to adjust their cost of finance (Pham, 2019). Moreover, the choice of finance has been linked to political risk, suggesting that the barriers against access to external finance are raised as political uncertainties rise in a country. Consequently, funds available for businesses to finance growth could be altered by the level of political risk, depending on institutional settings of countries and firm size (Huang et al., 2015). In addition, there is a connexion between institutional and behavioural uncertainties like corruption, a component of political risk, and the mix of finance that firms use (Sartor and Beamish, 2018). As a result, the political risk experienced in a country can exert an impact on the accessibility of external finance by firms. This is because frequent changes in policies within a country can prove destabilising for firms and



financiers alike, thereby affecting the demand for and supply of external finance. Investments, such as foreign direct investments, are also affected by the level of political risk, which reduces the ability of firms to access external funds, especially in countries where political risk has been identified as a major impediment to inward foreign investments (Nguyen et al., 2018).

Based on the above literature, it can be gleaned that political risk has an impact on firms' access to external finance. The policies and regulations enacted by the government, particularly with regards to access to external finance, affect the availability of funds and willingness of financiers to fund entrepreneurial activities. In principle, the actions of providers of external finance (e.g., banks and non-bank financial institutions, as well as supplier credits, etc.) are shaped by the policies put in place by the government and the degree of political uncertainty in a country (Julio and Yook, 2012). This is also in tandem with behavioural perspectives that political risk aversion influences external inflow of finance (Giambona et al., 2017). Motivated by the foregone discussion, we expect there to be a positive impact running from institutions to access to external finance of firms, thereby proposing to test the following hypothesis:

***H1:*** Lower political risk has a positive impact on a firm's access to external finance.

### **3 Sample and data construction**

Our analysis relies on data from various sources for firm- and country-specific variables. We provide below a brief description of the main data sources and the construction of the sample, as well as discuss the measurements of key variables employed in the regression analysis.

#### **3.1 Data sources and sample**

The construction of the firm-level variables used as our dependent variables and several control variables are based on data drawn from various WBES releases,<sup>4</sup> comprising of over 180,000 firms

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<sup>4</sup>For a fuller description of the WBES surveys, see <https://www.enterprisesurveys.org>.

surveyed by World Bank’s private contractors over the 2006-2021 period in 154 countries.<sup>5</sup> The focus of the WBES is to randomly sample firms in selected cities within each sampled country, asking respondents, who are mainly owners or top managers of businesses, questions regarding actual and perceived constraints on their firms’ operations, covering topics on productivity and business practices, amongst others. The key areas covered by the WBES questions concern fifteen probable obstacles that firms may face in carrying out their operations: access to finance, tax rates, electricity, informal competition, political instability, inadequately educated workforce, corruption, labour regulations, tax administration, transportation, crime, customs and trade regulations, access to land, business licensing and permits, and courts. Importantly, additional vital information on firm characteristics, such as age, size, ownership status, type of legal entity, top manager’s experience in the firm’s sector, and whether the firm exports, employs outside auditors, or is a holding company are also collected by WBES.

Our second group of variables are measured at the country-level, where our main independent variables are obtained from the International Country Risk Guide (ICRG) made available by the Political Risk Services (PRS) Group. The ICRG rating covers twenty-two components that are organised into three sub-categories, namely: economic, financial, and political risks.<sup>6</sup> The relevant sub-category for our paper’s objective is the political risk indicator, for which we provide additional description in a sub-section below. The ICRG data are available from 1984 to 2022 for 147 countries, albeit they are not free. In addition to the political risk measures from

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<sup>5</sup>Following other studies using the WBES data in recent years (e.g., Fang et al. (2022), Knack and Xu (2017), Leon (2015), Mertzanis (2019), Oyekola et al. (2023), Oyekola and Odewunmi (2023), and Pierce and Snyder (2018)), we focus on the WBES survey data gathered after 2006 since global sampling methodological approach brought in wide homogeneity in the format of the questionnaire, sectors examined, and surveyed firms are typically more representative of their universe of inference. We note, however, that the WBES data are not derived from annual survey of firms in countries around the world. Instead, data are collected at irregular intervals. As examples, Albanian firms were surveyed in 2007, 2013, and 2019, whilst Austrian firms were only surveyed once over the sample period, in 2021. Moreover, the survey consists of information on a cross-section of firms, where, for instance, all 858 firms in the three surveys conducted in Albania are unique firms, with no repeated sampling. Likewise, there is a wide variation in the number of firms surveyed in each country, with as few as 50 firms surveyed in Guinea Bissau and as many as 9004 firms in India. This variance can also be observed across the 2006-2021 sample period. For instance, no firms were surveyed in 2008, whereas as many as 19,555 firms were surveyed in 2013.

<sup>6</sup>See <https://www.prsgroup.com/wp-content/uploads/2012/11/icrgmethodology.pdf> for a fuller description of the ICRG data.

ICRG, we extract the remaining country-level variables from World Bank’s World Development Indicators (WDI) and Doing Business Report (DBR). Having retrieved all data from the above sources, and after merging them together, we are left with 127,542 unique firms in 108 countries, with cross-sectional survey data spanning 2006 to 2021, for our baseline dependent variable and regression analysis.<sup>7</sup> Below, we describe the dependent and main independent variables. The Internet Appendix Table IA1 gathers a fuller description of all variables.

### 3.2 Measuring external finance

Using the WBES survey data, we construct two variables to use as our dependent variables. The first is the proportion of a firm’s working capital that is financed from external sources: *External Finance (Working Capital)*.<sup>8</sup> Specifically, we use the responses to the WBES survey question K.3: “Over the last fiscal year, please estimate the proportion of this establishment’s working capital that was financed from each of the following sources?” with the interviewer displaying the following possible sources of working capital finance as target answers: (i) Internal funds or retained earnings; (ii) Borrowed from banks: private and state-owned; (iii) Borrowed from non-bank financial institutions, which include microfinance institutions, credit cooperatives, credit unions, or finance companies; (iv) Purchases on credit from suppliers and advances from customers; and (v) Other, moneylenders, friends, relatives, etc. Similar to Knack and Xu (2017), our measure of access to external finance for working capital consists of all the sources identified above except internal funds or retained earnings. Figure 2 portrays the spatial distribution of external finance for working capital, including only the 108 countries in our sample. Evidently, external finance for working capital has a large global dispersion. However, there exists limited variance within some regions of the world (e.g., Europe and Latin America), with sub-Saharan

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<sup>7</sup>We note that the number of firms/observations entering each estimating equation varies, depending on the model specification and the dependent variable under consideration; we provide additional details in the next sub-sections.

<sup>8</sup>We adopt this variable as our primary dependent variable because it allows us to maximize the number of observations that enter our regression analysis. Specifically, we are able to retain 127,542 observations for use in our baseline analysis after combining the measure of external finance for working capital with all other variables from other sources. However, the corresponding number of observations in the case of external finance for fixed investment is 57,762.

Africa exhibiting the most variation.

Our second dependent variable, *External Finance (Fixed Investment)*, is utilised mainly for robustness checks, based on the reason of the number of available observations as we already mentioned above. Specifically, we create this variable by summing up the estimated proportions of purchases of fixed assets that a firm financed through: (i) Owners' contributions or issued new equity shares; (ii) Borrowed from banks: private and state-owned; (iii) Borrowed from non-bank financial institutions, including microfinance institutions, credit cooperatives, credit unions, or finance companies; (iv) Purchases on credit from suppliers and advances from customers; (v) issued new debt; and (vi) Other, moneylenders, friends, relatives, bonds, etc. The average spatial distribution of external finance for fixed investment in the 108 countries in our sample is represented in Figure 3. It is noticeable that external finance for fixed investment has a wide variation across the world, although some regions are, again, exhibiting little variance.

To drill into the finance channels most impacted by political risk, we also use the different sources of external finance for both working capital and purchases of fixed assets (i.e., contributions by owners/new equity shares, banks, non-banks, suppliers' credit, new debt, and others) separately as our dependent variables. To do this, we follow the WBES approach in grouping the sources of external finance for working capital into banks, supplier credit, and other sources, and the sources of external finance for fixed investment into banks, supplier credit, equity or stock sales, and other sources.

### **3.3 Measuring political risk**

Our primary independent variable is the ICRG political risk rating (*Political Risk Index*) of a firm's country of operation. This measure of political risk has an established pedigree in related literature and has been widely used in several streams of research in social sciences, including economics, finance, and international business to study the effect of political risk on various subjects. Consequently, many published papers (e.g., (Bekaert et al., 2014, 2016),

Busse and Hefeker (2007), Hainz and Kleimeier (2012), King et al. (2021), and Lehkonen and Heimonen (2015)) have validated the reliability of this measure of political risk. The ICRG model for forecasting risk goes back to 1980, and utilising the framework, its staff collects available political information on each country to create a political risk assessment by employing subjective analysis. It has thus been argued that this is one of the reasons why this measure of political risk performs well in explaining performances of financial markets and investment opportunities (e.g., (Bekaert et al., 2014, 2016), Hainz and Kleimeier (2012), and Lehkonen and Heimonen (2015)).

More specifically, the political risk index is constructed from twelve components, namely: *Government Stability, Socioeconomic Conditions, Investment Profile, Internal Conflict, External Conflict, Corruption, Military in Politics, Religious Tensions, Law and Order, Ethnic Tensions, Democratic Accountability, and Bureaucratic Quality*,<sup>9</sup> where the first five components are assessed on a 0-12 risk points, the next six on a 0-6 risk points, and the last one on a 0-4 risk points. As a result, the minimum and maximum risk points that can be assigned to a country are 0 and 100, respectively. According to the interpretation offered by the ICRG, the higher the total of the risk points, the lower a country's political risk and the better the quality of its institutions. Meanwhile, for our empirical analysis, we re-scale the political risk index to lie on 0-1 interval; nonetheless, higher values continue to signal lower political risk ratings. Figure 4 illustrates the spatial distribution of the composite political risk index, which is plotted for the 108 sampled countries. Markedly, the political risk index shows a big cross-country diffusion, particularly in Latin America and sub-Saharan Africa.

Whilst the composite political risk index is used in the baseline analysis, we also examine the differential impacts that its components may have on our outcome variables. To this end, we follow Bekaert et al. (2014) in assembling the individual components into four subgroups, namely: (i) *Quality of Institutions* measured as the sum of *Law and Order, Bureaucratic Quality,* and

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<sup>9</sup>The twelve components are fully described in the Internet Appendix Table IA1.

*Corruption*; (ii) *Government Actions* measured as the sum of *Government Stability*, *Socioeconomic Conditions*, and *Investment Profile*; (iii) *Democratic Tendencies* measured as the sum of *Military in Politics* and *Democratic Accountability*; and (iv) *Conflicts and Tensions* measured as the sum of *Internal Conflict*, *External Conflict*, *Religious Tensions*, and *Ethnic Tensions*. In our empirical analysis, we have also used each of the twelve components separately.

### 3.4 Summary statistics

Table 1 presents the summary statistics for all variables used in our empirical analysis. In terms of outcome variables, the table displays that the mean working capital sourced from external finance in our sample is 0.28, with a standard deviation of 0.34, while the mean fixed investment from external finance is 0.32, with a standard deviation of 0.40. For both types of external finance, bank financing makes up the largest share, being 46.43% for working capital and 59.38% for fixed investment. With regards to firm-specific variables, the mean (log of) firm age is 2.72, with a standard deviation of 0.81 and, on average, around 52% of firms in the sample hire outside auditors. Additionally, 7.4% is the mean foreign ownership share, with 0.5% being the mean state ownership share and 25% of the firms have at least one internationally recognised quality certification. Besides, 13% of sampled firms are large with the remaining 87% consisting of micro, small, and medium enterprises. As for the main independent variable, the mean and standard deviation of *Political Risk Index* are 0.51 and 0.19, respectively. The mean values (standard deviations) for *Quality of Institutions*, *Government Actions*, *Democratic Tendencies*, and *Conflicts and Tensions* are 0.44 (0.18), 0.63 (0.18), 0.61 (0.25), and 0.57 (0.23), respectively.

Figure 5 displays the strength of the association between political risk and the two measures of external finance. In both panels, the correlation is positive. Specifically, the correlation coefficient between composite political risk and external finance for working capital (in panel a) is 0.218 with a  $p$ -value of 0.0236 for the sample of 108 countries. An analogous relationship

is established between composite political risk and external finance for fixed investment (in panel b): correlation coefficient = 0.286;  $p$ -value = 0.003;  $N = 108$ . This preliminary evidence indicates that institutional improvements can lead to higher access to external finance by firms.

## 4 Methodology

Our empirical framework for inspecting the effect of country-specific political risk on firm-specific external finance is given by the following basic estimating equation:

$$EF_{icjt} = \alpha + \beta PR_{ct} + \gamma FC_{icjt} + \delta CC_{ct} + \theta CD_c + \phi ID_j + \omega YD_t + \varepsilon_{it} \quad (1)$$

for firm  $i$  in country  $c$  operating in industry  $j$  during year  $t$ , where  $EF$  relates to either the share of a firm's working capital finance originating from external sources, *External Finance (Working Capital)*, or the share of a firm's fixed investment finance emanating from external sources, *External Finance (Fixed Investment)*. In the baseline analysis, we have focused on external finance relating to working capital to take full advantage of data coverage, while we use external finance for fixed investment in the robustness exercise. In further analyses, we treat the different sources of external finance (e.g., *Banks*, *Supplier Credit*, and *Equity*) as dependent variables separately.  $PR$  is *Political Risk* and relates to either a country's composite political risk rating, *Political Risk Index*, each of the four subgroups assembled following Bekaert et al. (2014) (described above), or each of the twelve components as made available by ICRG.<sup>10</sup> The political risk measures are the main variables of interest and thus imperative to our framework, as developed in Section 2. Our proposed hypothesis is that to the extent that better institutions (i.e., higher values of political risk measures, *Political Risk Index* or any of its components) can improve access to external finance,  $\beta$  is expected to be positive. This indicates that more working capital and fixed investment will be externally financed in countries with higher scores

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<sup>10</sup>Section 3 contains a fuller description of both the  $EF$  and  $PR$  measures, with the Internet Appendix Table IA1 providing longer definitions of all variables used for analysis in this paper.

of political risk rating (which is tantamount to having better quality institutions).

Our model specification in Equation (1) includes several control variables, which have been grouped under five headings. First,  $FC$  is a vector of firm-specific controls, which prior research (e.g., Knack and Xu (2017), Lee et al. (2015), Oyekola et al. (2023), Oyekola and Odewunmi (2023), and Qi and Nguyen (2021)) documents to be important for firms' access to (external) finance. Although we have pondered factors that are standard in the existing literature, we have also included supplementary firm-specific controls, to lower the potential bias that could arise from omitted variables. Particularly, we include the following firm-specific controls: firm age, dummy for audited firms, share of foreign ownership, share of state ownership, dummy for firms that engage in export, dummy for firms that are subsidiaries of larger ones, dummy for acquiring quality certification that is internationally recognised, legal ownership status (i.e., dummy variables for whether a firm is publicly listed, privately held, a sole proprietorship, or partnership, with the remaining classifications serving as the reference category), and firm size (for which we use dummy variables for whether a firm is micro, small, or medium, where large firms form the reference category). In a robustness test, we have also used a firm's employment growth, a dummy variable measure of female participation in ownership, and top manager's experience in the sector.

Second,  $CC$  is a vector of country-specific controls, which are also derived based on previous research, and includes real GDP per capita, its growth rate, inflation, and total population (from WDI) in the baseline analysis. Importantly, we have measured all time-varying country-specific controls with a lag of one year to limit contemporaneous bias. Other country-level variables that are exploited to establish the robustness of our baseline findings are additional financial sector-based institutional measures, including legal rights, credit information, public credit registry, and private credit bureau (from DBR). The remaining three groups of control variables,  $CD$ ,  $ID$ , and  $YD$ , are included to reflect the fact that access to external finance may be impacted by differences in country, industry, and year characteristics that are unobserved.  $\varepsilon$  is the residual



and, as in King et al. (2021), we use firm-based clustered standard errors; see also Cameron and Miller (2015).

Finally,  $\alpha$ ,  $\beta$ ,  $\gamma$ , and  $\delta$  (as well  $\theta$ ,  $\phi$ , and  $\omega$ , capturing the effects of country, industry, and year dummies, respectively) are parameters to be estimated in the relationship specified in Equation (1), where, as already stated, our primary interest lies with the sign, significance, and size of  $\beta$ . In the presence of dependent variables bounded between 0 and 1, we follow Knack et al. (2017), Motta (2020), and Fang et al. (2022) in applying OLS (for the empirical justification of this choice, see Angrist and Pischke, 2009, pp. 197-198). In the robustness section, we have utilised alternative estimation strategies to validate our findings.

## 5 Main results and robustness tests

### 5.1 Main results

#### 5.1.1 Can political risk explain access to external finance?

We begin the presentation of our findings by providing answers to the question above in Table 2, where our dependent variable is access to external finance for working capital, *External Finance (Working Capital)*. Throughout this paper, we note that all model specifications include country, industry, and year dummies. In column (1), we only add the *Political Risk Index*, and append our baseline firm-specific control variables in column (2). In addition to the composite political risk indicator and firm-level control variables, we incorporate country-specific control variables into the regression model in column (3). The results in all three columns demonstrate that the estimated coefficients on *Political Risk Index* are positive (0.2831, 0.2624, and 0.2922 in columns (1), (2), and (3), respectively) and statistically significant at the 1% level of confidence. These indicate that access to external finance for working capital is greater for firms located in countries with lower political risk (i.e., better quality institutions).<sup>11</sup> This

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<sup>11</sup>Remember that lower political risk is measured by higher values of political risk rating of ICRG.

outcome is thus as we hypothesised that there is a positive association between lower country-specific political risk and firm-specific access to external finance.

Using the results in column (3) of Table 2, we can gauge the economic importance of the impact of better institutions (higher values of political risk index) on access to external finance. More specifically, the coefficient on *Political Risk Index* implies that an increase of one standard deviation in this variable would lead to an increase in access to external finance for working capital of 0.0555 ( $= 0.19 \times 0.2922$ ), which amounts to an increase of 10.89% in obtaining more of the working capital finance required from external sources, compared to the mean (0.51). As a result of this observation, we conclude that the effect of reducing a country's political risk on its firms' chances of securing external finance is not only statistically significant, but also economically important.

To lessen the likelihood that the impact of political risk on external finance is suffering from omitted variables bias, column (3) controls for a broad set of firm- and country-specific controls, as previously mentioned. As displayed in Table 2, firms that are older (*Firm Age*), owned by foreigners (*Foreign*), registered as sole proprietors (*Sole Proprietorship*), and small (*Micro, Small, or Medium*), or that have cross-border recognition (*International Certification*) all have significantly less need or opportunity for financing their working capital using external sources. However, both being state-owned (*State*) and exporters (*Exporters*) are positively related to access to external finance for working capital. Besides, firms that have their accounts checked by independent auditors (*Audited*) enjoy more success in obtaining external finance, with the coefficient statistically significant at the 1% level of confidence. At the country-level, only *Inflation* is statistically significant with a positive coefficient, and we find that *GDP Per Capita*, *Income Growth*, and *Total Population* are insignificantly related to external finance.

### 5.1.2 Which subgroups and components of political risk matter for external finance?

The results shown in Table 2 are based on the relationship between the composite political risk measure and external finance for working capital. As suggested by the existing literature discussed in Section 2, there is a possibility that the various subgroups and individual components of political risk ratings, which we discussed in Section 3, may be exerting varying impacts on external finance. Thus, we next adjust our estimating equation by replacing the *Political Risk Index* with each of the four subgroups in the first columns—(1), (5), (9), and (12)—of panels A-D in Table 3. In each panel, the remaining columns report the estimated coefficients on the individual components of political risk. Our finding is that only the coefficients on the subgroups of *Government Actions* in column (5) and *Conflicts and Tensions* in column (12) achieve significance (and are positive as posited). On the other hand, *Quality of Institutions* in column (1) and *Democratic Tendencies* in column (9) are both insignificant.

Drilling down into the individual components, we find that half of the twelve political risk indicators generate significant coefficients, which are also positive at the 1% level of confidence; these components are *Bureaucratic Quality*, *Government Stability*, *Socioeconomic Conditions*, *Investment Profile*, *External Conflicts*, and *Ethnic Tensions*. Besides, we notice that each of the three elements of the subgroup relating to *Government Actions* is statistically and economically important for explaining external finance for working capital. Whereas neither of the elements of the subgroup concerning *Democratic Tendencies* is significant. Furthermore, *Corruption* is negative and significantly related with access to external finance for working capital at the 10% level of confidence. Meanwhile, *Law and Order*, *Military in Politics*, *Democratic Accountability*, *Internal Conflicts*, and *Religious Tensions* are not significant in accounting for external finance for working capital.

Therefore, our results mean that improvements in the quality of institutions deriving from the strength and expertise of bureaucrats, government unity, legislative strength, popular sup-

port, high employment rate, high consumer confidence, low poverty level, high contract viability, reduced risk of profit repatriation, non-engagement in external wars or cross-border conflicts, and minimal tensions within a country that can be attributed to, for examples, racial or language discords are the most fundamental political risk factors driving access to external finance for working capital.

### 5.1.3 Channels: how does political risk affect external finance?

This section provides an initial validation for our baseline results and explores channels by which political risk may be influencing external finance. More specifically, we evaluate the potential finance and firm-level channels through which the estimated effects in Tables 2 and 3 are realised.

**Finance channels.** Having established that political risk matters for understanding external finance, we next consider whether it is important for all the elements of external finance for working capital in Table 4, panel A. Doing this assists in shedding light on the precise financing channels through which political risk is shaping external finance for working capital. Towards this end, we utilise the same estimating equation in column (3) of Table 2, which represents our full baseline model specification. The difference is that, on this occasion, we use the three sources of external finance for working capital as proxies for  $EF$ , our dependent variable. More specifically, we investigate how political risk affects access to external finance through banks (*Banks*) as a formal source in column (1) of Table 4 and mostly informal sources (*Supplier Credit* and *Others*) in columns (2)-(3).

As can be seen in panel A of Table 4, higher values of political risk index, indicative of better-quality institutions, produce positive and significant coefficients in relation to supplier credit and working capital funding from money lenders, family, friends, and non-bank financial institutions. Although *Political Risk Index* is estimated to have a positive effect on access to external finance for working capital from banks, the coefficient is not significant. This leads us to conclude that

improvements in political institutions may not be material to how banks operate in granting working capital finance. Overall, our results are consistent with the proposed hypothesis that firms situated in countries with better institutions (measured by low political risk) are more likely to use external finance than internal finance for working capital. Furthermore, we have shown that the main finance channels for this effect is coming from access to supplier credit and other sources of external finance for working capital, rather than banks.

**Firm channels.** For this channel, we employ interaction models to carry out our analysis. In particular, we exploit interactions between *Political Risk Index* and the following four variables: *Low Growth* (a dummy variable that equals to 1 if a firm’s real annual percentage sales growth is less than the sample median; 0 otherwise), *New Product* (a dummy variable that equals to 1 if a firm has introduced a new product or significantly improved a product or service during the last three years; 0 otherwise), *Service Sector* (a dummy variable that equals to 1 if a firm operates in the service sector; 0 otherwise), and *SMEs* (a dummy variable that equals to 1 if a firm employs at most 50 full-time permanent workers; 0 otherwise). We display the results in panel B of Table 4.

As shown, the interaction of *Political Risk Index* with each of these four dummy variables yields statistically significant coefficients at the 1% level in columns (4)-(6) and at the 10% level in column (7). More specifically, these results are positive and imply that the positive effects of better quality institutions, as captured by higher values of *Political Risk Index*, on access to external finance for working capital, *External Finance (Working Capital)*, is significantly higher for firms that are experiencing low growth, innovative, in the service sector, and in the category of small- and medium-sized enterprises.

## 5.2 Robustness checks

In this subsection, we provide robustness checks for our main results by controlling for additional controls, accounting for outliers, utilising alternative estimation techniques, and employing al-

ternative measures for external finance.

### 5.2.1 Effect of additional control variables and outliers

Our baseline econometric approach controls for country fixed effects, which ensures that our estimates are not suffering from omitted variables bias that may arise from unobserved country characteristics. Besides, this empirical specification implies that the results presented reveal the effect of within-country changes in *Political Risk* on firms' access to external finance for working capital. In addition, we have controlled for an array of country observable factors both at the firm- and country-level.

Despite having already controlled for various important determinants of access to external finance, it is plausible that we have omitted some observable factors that may correlate with political risk and impact external finance. To address this concern, we now control for additional firm-specific control variables in column (1) of Table 5. The variables included are *Employment Growth*, *Female Participation*, and *Manager's Experience*. As shown, the estimated coefficient for *Political Risk Index* remains positive and highly statistically significant at the 1% level. As per country-level control variables, we augment our baseline model with *Legal Rights*, *Credit Information*, *Public Credit Registry*, and *Private Credit Bureau* and report the findings in column (2) of Table 5. Again, the effect of political risk on access to external finance remains virtually identical to the baseline. In column (3), we further control for other omitted variables, possibly time-varying at the country-level (e.g., policy uncertainty), using country $\times$ year fixed effects and industry fixed effects, similarly to Knack and Xu (2017) and Cumming et al. (2019). As with the baseline results, the estimated effect of lower political risk is higher access to external finance for working capital.

We then mitigate against the possibility that the results presented thus far are driven by outlier observations in columns (4)-(6) of Table 5. Specifically, we adopt three methods for excluding outliers. First, we compute DFBETA following Belsley et al. (1980) and report the

results from removing observations with  $|\text{DFBETA}| > 2\sqrt{N}$ , where  $N$  stands for the number of observations (firms) in the estimation in column (4). Second, we remove observations with  $|er| > 1.96$ , where  $er$  denotes standardized residuals in column (5). Third, we remove observations with  $cd > 4 \div N$ , where  $cd$  refers to Cook's distance in column (6). As can be seen, the importance of *Political Risk Index* for access to external finance for working capital by firms are retained using the different methods to expunge outliers.

### 5.2.2 Tobit and instrumental variable regressions

A further check of robustness that we conduct involves subjecting our main result to a functional form test. Specifically, we employ non-linear Tobit model in column (7) of Table 5. The main findings are identical when the econometric analysis is performed using this alternative estimation technique, confirming that our results are not driven by the choice of estimation methodology.

Meanwhile, one might suggest that endogeneity might be an issue with regards to our findings. Although highly improbable in our case, an argument for reverse causation may be made if, say, *External Finance* (*Working Capital*) can induce changes in political risk measures of a country. We, however, do not foresee a scenario where a single firm (mostly small- and medium-sized) will be able to initiate a countrywide incidence of political risk.<sup>12</sup> Besides, despite our best efforts, there may still remain an excluded hypothetically critical third factor that may be important for the relation between political risk and external finance. As discussed previously, several attempts have been employed to circumvent this, including country  $\times$  year fixed and controlling for various firm-, industry-, and country-level characteristics in our regression models.

Facing such econometric concerns, the ideal estimation technique is an instrumental variable (IV) regression method. However, we lack credible instruments for political risk. As a result, we

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<sup>12</sup>Specifically, our paper investigates the effects of country-level measure of political risk on an individual firm's access to external finance, which limits the possibility of endogeneity issues, when compared to archetypal cross-country empirical studies.

engage the IV methodology of Lewbel (2012) that relies on identification through heteroskedastic covariance restrictions, which is very useful in instances when the researcher lacks valid exclusion restrictions (Fumagalli and Fumagalli, 2019; Oyekola, 2021). The results from this exercise, which are similar to the baseline findings, are reported in column (8) of Table 5.

### 5.2.3 Alternative dependent variable and other sources of finance

We now check whether and how political risk affects access to external finance for fixed investment, *External Finance (Fixed Investment)*, which is the alternative dependent variable that we have previously described. To do this, we estimate Equation (1) using the full empirical model specification in column (3) of Table 2. The results of *External Finance (Fixed Investment)* as the dependent variable is shown in column (1) of Table 6. Similar to external finance for working capital, we find that *Political Risk Index* is positively and significantly associated with external finance for fixed investment.

In an exercise analogous to those in columns (1)-(3) of Table 4, we now consider how important the measured impact of political risk is for all the elements of external finance for fixed investment in columns (2)-(5) of Table 6. Again, the relevance of this is that it helps to ascertain the precise financing channels through which political risk may be fostering external finance, in this case, for fixed investment. Thus, we investigate how political risk affects access to external finance through *Banks* in column (2), *Supplier Credit* in column (3), *Equity* in column (4), and *Others* in column (5). As displayed, lower political risk, indicating better-quality institutions, produce positive and significant coefficients in relation to banks and supplier credit for fixed investment, whilst this association is negative for the Other category (funding from money lenders, family, friends, etc.). Also, the *Political Risk Index* is estimated to have a negative effect on access to external finance for fixed investment from *Equity*, albeit the coefficient is not significant.

We highlight two key findings from this additional estimation results. First, improvements in



political institutions are important to how banks operate in granting fixed investment finance (in Table 6), contrary to the finding in relation to working capital finance (see Table 4). Second, the positive effect of better political environment on external finance for fixed investment appears to have resulted from banks and supplier credits providing the needed funds, which again is in contradiction to how political risk affects external finance for working capital.

## 6 Conclusions

Given the crucial role of political stability for economic outcomes, many researchers have investigated the significance of political risk for financial, economic, and organisational outcomes, as highlighted in the introductory part of this study and in the review of the literature. However, the impact of political risk (factors) on access to external finance has not been systematically explored. This study fills an important gap in the literature by providing a novel evidence on the effects of political risk on access to external finance for both working capital and fixed investment over the period 2006 to 2021 for an extensive sample of 127,542 firms from 108 countries.

Our baseline regression results show statistically significant effects of political risk on firms' access to external finance for working capital, with the estimated coefficients indicating that lower political risk has a positive impact on access to external finance, as hypothesised. Remember that, by construction, higher values of political risk rating in this study translates to better-quality institutions, such that our findings provide support for the institutions hypothesis from the corporate finance perspective. We also examine the potential channels of transmission of political risk on access to external finance, finding that informal financing sources, experience of low growth, being an innovative firm, a service sector firm, and/or an SME are important channels. We also find evidence that bureaucratic quality, corruption, government stability, socioeconomic conditions, investment profile, external conflict, and ethnic tension are the important factors through which political risk influences a firm's access to external finance. Our

analysis yields robust findings, surviving the inclusion of several control variables (firm- and country-specific) and fixed-effects (country, industry, and year), the use of access to external finance for fixed investment as an alternative dependent variable, and checks for the influence of outliers.

In sum, this paper delivers a first insight into how country-specific political risk affects access to external finance by firms. An implication of this research finding is for policymakers to ensure corruption is reduced, external conflicts avoided, ethno-religious tensions curtailed, and the rule of law strengthened, as these altogether impact on access to external finance by firms in a country. Finally, there is an opportunity here for an extension, where a future study could investigate the influence of firm-level political risks (Hassan et al., 2019; Gad et al., 2022; Huang et al., 2023) on access to external finance, as the ICRG's measures of country-specific risk may be subject to the fallacy of composition at firm levels: the risk exposures for different firms may differ.

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Table 1: Summary statistics

	Observations	Mean	Standard deviation	Minimum	Maximum
<b>A. Outcome variables</b>					
<u>Working Capital</u>					
<i>External Finance</i>	127,542	0.28	0.34	0	1
<i>Banks</i>	127,542	0.13	0.24	0	1
<i>Supplier Credit</i>	127,542	0.11	0.22	0	1
<i>Others</i>	127,542	0.042	0.15	0	1
<u>Fixed Investment</u>					
<i>External Finance</i>	57,762	0.32	0.40	0	1
<i>Banks</i>	57,762	0.19	0.34	0	1
<i>Supplier Credit</i>	57,762	0.049	0.17	0	1
<i>Equity</i>	57,762	0.039	0.16	0	1
<i>Others</i>	57,762	0.042	0.17	0	1
<b>B. Independent variables</b>					
<i>Political Risk Index</i>	127,542	0.51	0.19	0	1
<i>Quality of Institutions</i>	127,542	0.44	0.18	0	1
<i>Government Actions</i>	127,542	0.63	0.18	0	1
<i>Democratic Tendencies</i>	127,542	0.61	0.25	0	1
<i>Conflicts and Tensions</i>	127,542	0.57	0.23	0	1
<i>Law and Order</i>	127,542	0.48	0.22	0	1
<i>Bureaucratic Quality</i>	127,542	0.53	0.22	0	1
<i>Corruption</i>	127,542	0.41	0.18	0	1
<i>Internal Conflict</i>	127,542	0.50	0.24	0	1
<i>External Conflict</i>	127,542	0.58	0.21	0	1
<i>Religious Tensions</i>	127,542	0.64	0.28	0	1
<i>Ethnic Tensions</i>	127,542	0.54	0.24	0	1
<i>Military in Politics</i>	127,542	0.60	0.26	0	1
<i>Democratic Accountability</i>	127,542	0.63	0.31	0	1
<i>Government Stability</i>	127,542	0.44	0.19	0	1
<i>Socioeconomic Conditions</i>	127,542	0.49	0.21	0	1
<i>Investment Profile</i>	127,542	0.65	0.15	0	1
<b>C. Firm-specific variables</b>					
<i>Firm Age</i>	127,542	2.72	0.81	0	5.83
<i>Audited</i>	127,542	0.52	0.50	0	1
<i>Foreign</i>	127,542	0.074	0.24	0	1
<i>State</i>	127,542	0.0052	0.058	0	1
<i>Exporter</i>	127,542	0.17	0.37	0	1
<i>Subsidiary</i>	127,542	0.17	0.38	0	1
<i>International Certification</i>	127,542	0.25	0.43	0	1
<i>Publicly Listed</i>	127,542	0.048	0.21	0	1
<i>Privately Held</i>	127,542	0.44	0.50	0	1
<i>Sole Proprietorship</i>	127,542	0.31	0.46	0	1
<i>Partners</i>	127,542	0.19	0.39	0	1
<i>Micro</i>	127,542	0.28	0.45	0	1
<i>Small</i>	127,542	0.42	0.49	0	1
<i>Medium</i>	127,542	0.17	0.37	0	1
<i>Large</i>	127,542	0.13	0.34	0	1
<i>Employment Growth</i>	117,389	3.81	15.7	-100	100



	Observations	Mean	Standard deviation	Minimum	Maximum
<i>Female Participation</i>	124,749	0.33	0.47	0	1
<i>Manager's Experience</i>	125,660	2.72	0.75	0	4.32
<i>Low Growth</i>	100,809	0.56	0.50	0	1
<i>New Product</i>	127,221	0.30	0.46	0	1
<i>Service Sector</i>	127,542	0.40	0.49	0	1
<i>SMEs</i>	127,122	0.70	0.46	0	1
<b><i>D. Country-specific variables</i></b>					
<i>GDP Per Capita</i>	127,542	8.39	1.22	5.71	11.6
<i>Income Growth</i>	127,542	2.54	3.62	-11.2	18.1
<i>Inflation</i>	127,542	6.35	5.65	-2.43	59.2
<i>Total Population</i>	127,542	17.4	1.70	12.8	21.0
<i>Legal Rights</i>	94,775	5.17	2.59	0	11
<i>Credit Information</i>	94,775	4.64	2.75	0	8
<i>Public Credit Registry</i>	94,775	14.4	23.6	0	100
<i>Private Credit Bureau</i>	94,775	31.5	33.6	0	100

Table 2: Effect of political risk on external finance

DV:	(1)	(2)	(3)
	<i>External Finance (Working Capital)</i>		
<i>Political Risk</i>	0.2831*** (0.033)	0.2624*** (0.033)	0.2922*** (0.038)
<i>Firm Age</i>		-0.0063*** (0.001)	-0.0063*** (0.001)
<i>Audited</i>		0.0316*** (0.002)	0.0315*** (0.002)
<i>Foreign</i>		-0.0673*** (0.004)	-0.0674*** (0.004)
<i>State</i>		0.0592*** (0.016)	0.0619*** (0.016)
<i>Exporter</i>		0.0422*** (0.003)	0.0422*** (0.003)
<i>Subsidiary</i>		0.0003 (0.003)	0.0000 (0.003)
<i>International Certification</i>		-0.0047* (0.002)	-0.0047* (0.002)
<i>Publicly Listed</i>		-0.0110 (0.008)	-0.0104 (0.008)
<i>Privately Held</i>		0.0052 (0.007)	0.0052 (0.007)
<i>Sole Proprietorship</i>		-0.0262*** (0.007)	-0.0265*** (0.007)
<i>Partnership</i>		0.0094 (0.007)	0.0085 (0.007)
<i>Micro</i>		-0.0661*** (0.004)	-0.0659*** (0.004)
<i>Small</i>		-0.0376*** (0.003)	-0.0375*** (0.003)
<i>Medium</i>		-0.0137*** (0.003)	-0.0136*** (0.003)
<i>GDP Per Capita</i>			0.0275 (0.021)
<i>Income Growth</i>			-0.0000 (0.001)
<i>Inflation</i>			0.0017*** (0.000)
<i>Total Population</i>			0.0314 (0.030)
Country dummies	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes
Adjusted R <sup>2</sup>	0.121	0.134	0.135
Observations	127,542	127,542	127,542

Notes: This table contains coefficient estimates for OLS regression models, with fixed effects, specified in Equation (1). The dependent variable (DV), *External Finance (Working Capital)*, is the share of working capital financed from external sources and is constructed as follows (based on WBES data): the sum of funds for working capital obtained by borrowing from banks, non-bank financial institutions, supplier credit, and other sources, excluding internal funds or retained earnings. The key explanatory variable, *Political Risk*, is represented by *Political Risk Index*, which provides an evaluation of a country's exposure to political risk by combining twelve individual components (*Government Stability, Socioeconomic Conditions, Investment Profile, Internal Conflict, External Conflict, Corruption, Military in Politics, Religious Tensions, Law and Order, Ethnic Tensions, Democratic Accountability, and Bureaucratic Quality*) from ICRG into a composite index. We provide the description of *Political Risk Index* and its components, and definitions for all control variables, in the Internet Appendix Table IA1. All time-varying independent variables are one-year lagged. The sample includes 127,542 firms from the universe of 180,067 firms in the WBES dataset released on July 18, 2022. Figures in parentheses are robust standard errors clustered at the firm-level. The intercept is included in all regressions, but are not reported for the sake of brevity. \*\*\* denotes significance at 1%, \*\* significance at 5%, and \* significance at 10%.

Table 3: Effect of political risk subgroups and components on external finance

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
DV:								
	<i>External Finance (Working Capital)</i>							
	<i>Panel A: Quality of Institutions, QI</i>				<i>Panel B: Government Actions, GA</i>			
Subgroups & components	<i>QI</i>	<i>LO</i>	<i>BQ</i>	<i>CO</i>	<i>GA</i>	<i>GS</i>	<i>SC</i>	<i>IP</i>
<i>Political Risk</i>	-0.0358 (0.049)	-0.0421 (0.028)	0.8762*** (0.089)	-0.0385* (0.023)	0.2012*** (0.022)	0.0399*** (0.010)	0.3101*** (0.030)	0.1340*** (0.025)
Adjusted R <sup>2</sup>	0.134	0.134	0.135	0.134	0.135	0.134	0.135	0.134
Observations	127,542	127,542	127,542	127,542	127,542	127,542	127,542	127,542
DV:								
	<i>External Finance (Working Capital)</i>							
	<i>Panel C: Democratic Tendencies, DT</i>				<i>Panel D: Conflicts and Tensions, CT</i>			
Subgroups & components	<i>DT</i>	<i>MP</i>	<i>DA</i>		<i>CT</i>	<i>IC</i>	<i>EC</i>	<i>ET</i>
<i>Political Risk</i>	0.0188 (0.033)	-0.0315 (0.041)	0.0196 (0.017)		0.0952*** (0.028)	-0.0049 (0.016)	0.0492*** (0.017)	0.0181 (0.053)
Adjusted R <sup>2</sup>	0.134	0.134	0.134		0.134	0.134	0.134	0.135
Observations	127,542	127,542	127,542		127,542	127,542	127,542	127,542
Firm characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: This table contains coefficient estimates for OLS regression models, with fixed effects, specified in Equation (1). The dependent variable (DV), *External Finance (Working Capital)*, is the share of working capital financed from external sources and is constructed as follows (based on WBES data): the sum of funds for working capital obtained by borrowing from banks, non-bank financial institutions, supplier credit, and other sources, excluding internal funds or retained earnings. The key explanatory variable, *Political Risk*, is represented by *Quality of Institutions (QI)* in column (1), *Law and Order (LO)* in column (2), *Bureaucratic Quality (BQ)* in column (3), *Corruption (CO)* in column (4), *Government Actions (GA)* in column (5), *Government Stability (GS)* in column (6), *Socioeconomic Conditions (SC)* in column (7), *Investment Profile (IP)* in column (8), *Democratic Tendencies (DT)* in column (9), *Military in Politics (MP)* in column (10), *Democratic Accountability (DA)* in column (11), *Conflicts and Tensions (CT)* in column (12), *Internal Conflict (IC)* in column (13), *External Conflict (EC)* in column (14), *Religious Tensions (RT)* in column (15), and *Ethnic Tensions (ET)* in column (16) from ICRG. Firm characteristics included are: *Firm Age, Audited, Foreign, State, Exporter, Subsidiary, International Certification, Publicly Listed, Privately Held, Sole Proprietorship, Partnership, Micro, Small, and Medium*. Country controls included are: *GDP Per Capita, Income Growth, Inflation, and Total Population*. We provide the description of *Political Risk Index* and its components, and definitions for all control variables, in the Internet Appendix Table IA1. All time-varying independent variables are one-year lagged. The sample includes 127,542 firms from the universe of 180,067 firms in the WBES dataset released on July 18, 2022. Figures in parentheses are robust standard errors clustered at the firm-level. The intercept is included in all regressions, but are not reported for the sake of brevity. \*\*\* denotes significance at 1%, \*\* significance at 5%, and \* significance at 10%.

Table 4: Effect of political risk on sources of external finance – channels of influence

DV:	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	<i>Banks</i>	<i>Supplier Credit</i>	<i>Others</i>	<i>Low Growth</i>	<i>External Finance (Working Capital)</i>		
Channel:	<i>Panel A: Finance</i>			<i>Panel B: Firm-specific</i>			
Interaction term:				<i>New Product</i>	<i>Service Sector</i>	<i>SMEs</i>	
<i>Political Risk</i>	0.0358 (0.025)	0.1836*** (0.025)	0.0728*** (0.018)	0.1548*** (0.053)	0.2883*** (0.038)	0.2781*** (0.038)	0.2764*** (0.039)
<i>Political Risk*Interaction term</i>				0.2749*** (0.071)	0.0482*** (0.004)	0.0359*** (0.010)	0.0183* (0.011)
Firm characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R <sup>2</sup>	0.132	0.111	0.0431	0.139	0.136	0.135	0.135
Observations	127,542	127,542	127,542	100,809	127,221	127,542	127,122

Notes: This table contains coefficient estimates for OLS regression models, with fixed effects, specified in Equation (1). The dependent variables (DV) are: *Banks*, share of a firm's external working capital finance derived from banks, in column (1); *Supplier Credit*, share of a firm's working capital external finance derived from suppliers' credit and advances from customers, in column (2); *Others*, share of a firm's working capital external finance derived from all other sources that are not banks, supplier credit, and customer advances, in column (3); and *External Finance (Working Capital)*, share of working capital financed from external sources and is constructed as follows (based on WBES data): the sum of funds for working capital obtained by borrowing from banks, non-bank financial institutions, supplier credit, and other sources, excluding internal funds or retained earnings, in columns (4)–(7). The key explanatory variable, *Political Risk*, is represented by *Political Risk Index*, which provides an evaluation of a country's exposure to political risk by combining twelve individual components (*Government Stability, Socioeconomic Conditions, Investment Profile, Internal Conflict, External Conflict, Corruption, Military in Politics, Religious Tensions, Law and Order, Ethnic Tensions, Democratic Accountability, and Bureaucratic Quality*) from ICRG into a composite index. Firm characteristics included are: *Firm Age, Audited, Foreign, State, Exporter, Subsidiary, International Certification, Publicly Listed, Privately Held, Sole Proprietorship, Partnership, Micro, Small, and Medium*. Country controls included are: *GDP Per Capita, Income Growth, Inflation, and Total Population*. We provide the description of *Political Risk Index* and its components, and definitions for all control variables, in the Internet Appendix Table IA1. All time-varying independent variables are one-year lagged. The sample includes 127,542 firms from the universe of 180,067 firms in the WBES dataset released on July 18, 2022. Figures in parentheses are robust standard errors clustered at the firm-level. The intercept is included in all regressions, but are not reported for the sake of brevity. \*\*\* denotes significance at 1%, \*\* significance at 5%, and \* significance at 10%.

Table 5: Effect of political risk on external finance – additional controls, outliers, and alternative estimation methods

DV:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Political Risk</i>	0.2423*** (0.041)	0.2662*** (0.040)	0.5959*** (0.201)	<i>External Finance</i> (Working Capital) 0.1979*** (0.030)	0.2543*** (0.033)	0.2836*** (0.034)	0.2922*** (0.038)	0.3021*** (0.037)
Firm characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Additional controls	Yes	Yes	Yes	No	No	No	No	No
Outliers excluded	No	No	No	Yes	Yes	Yes	No	No
Country dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo/Adjusted R <sup>2</sup>	0.136	0.147	0.144	0.191	0.216	0.18	0.217	-0.001
Observations	113,645	94,775	127,542	120,010	120,579	122,224	127,542	127,542

Notes: This table contains coefficient estimates for OLS regression models, with fixed effects, specified in Equation (1) in columns (1)–(6), Tobit regression model in column (7), and heteroskedasticity-based instrumental variable approach (Lewbel, 2012) in column (8). The dependent variable (DV), *External Finance* (*Working Capital*), is the share of working capital financed from external sources and is constructed as follows (based on WBES data): the sum of funds for working capital obtained by borrowing from banks, non-bank financial institutions, supplier credit, and other sources, excluding internal funds or retained earnings. The key explanatory variable, *Political Risk*, is represented by *Political Risk Index*, which provides an evaluation of a country's exposure to political risk by combining twelve individual components (*Government Stability, Socioeconomic Conditions, Investment Profile, Internal Conflict, External Conflict, Corruption, Military in Politics, Religious Tensions, Law and Order, Ethnic Tensions, Democratic Accountability, and Bureaucratic Quality*) from ICRG into a composite index. Firm characteristics included are: *Firm Age, Audited, Foreign, State, Exporter, Subsidiary, International Certification, Publicly Listed, Privately Held, Sole Proprietorship, Partnership, Micro, Small, and Medium*. Country controls included are: *GDP Per Capita, Income Growth, Inflation, and Total Population*. Additional controls included are: *Employment Growth, Female Participation, and Manager's Experience* at the firm-level in column (1); *Legal Rights, Credit Information, Public Credit Registry, and Private Credit Bureau* at the country-level in column (2), and country  $\times$  year fixed effects in column (3). In columns (4), (5), and (6), we exclude outliers based on  $|\text{DFBETA}| > 2\sqrt{N}$ ,  $|er| > 1.96$ , and  $cd > 4 \div N$ , respectively. We provide the description of *Political Risk Index* and its components, and definitions for all control variables, in the Internet Appendix Table IA1. All time-varying independent variables are one-year lagged. The sample ranges from 94,775 firms to 127,542 firms from the universe of 180,067 firms in the WBES dataset released on July 18, 2022. Figures in parentheses are robust standard errors clustered at the firm-level. The intercept is included in all regressions, but are not reported for the sake of brevity. \*\*\* denotes significance at 1%, \*\* significance at 5%, and \* significance at 10%.

Table 6: Effect of political risk on external finance (fixed investment) - alternative DV

	(1)	(2)	(3)	(4)	(5)
DV:	<i>External Finance</i>	<i>Sources of external finance</i>			
		<i>Banks</i>	<i>Supplier Credit</i>	<i>Equity</i>	<i>Others</i>
<i>Political Risk</i>	0.1237** (0.063)	0.1546*** (0.051)	0.0627** (0.030)	-0.0258 (0.026)	-0.0679** (0.028)
Firm characteristics	Yes	Yes	Yes	Yes	Yes
Country controls	Yes	Yes	Yes	Yes	Yes
Country dummies	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes
Adjusted R <sup>2</sup>	0.105	0.109	0.0427	0.0338	0.0289
Observations	57,762	57,762	57,762	57,762	57,762

Notes: This table contains coefficient estimates for OLS regression models, with fixed effects, specified in Equation (1). The dependent variable (DV) is: in column (1), aggregate *External Finance* for fixed investment, which is the share of fixed investment financed from external sources and is constructed as follows (based on WBES data): the sum of funds for fixed investment obtained by borrowing from banks, non-bank financial institutions, supplier credit, equity issues, and other sources, excluding internal funds or retained earnings; in column (2), *Banks*, share of a firm's fixed investment external finance derived from banks; in column (3), *Supplier Credit*, share of a firm's fixed investment external finance derived from suppliers' credit and advances from customers; in column (4), *Equity*, share of a firm's fixed investment external finance derived from issuing new equity shares; and in column (5), *Others*, share of a firm's fixed investment external finance derived from all other sources that are not banks, supplier credit, customer advances, and new equity. The key explanatory variable, *Political Risk*, is represented by *Political Risk Index*, which provides an evaluation of a country's exposure to political risk by combining twelve individual components (*Government Stability*, *Socioeconomic Conditions*, *Investment Profile*, *Internal Conflict*, *External Conflict*, *Corruption*, *Military in Politics*, *Religious Tensions*, *Law and Order*, *Ethnic Tensions*, *Democratic Accountability*, and *Bureaucratic Quality*) from ICRG into a composite index. Firm characteristics included are: *Firm Age*, *Audited*, *Foreign*, *State*, *Exporter*, *Subsidiary*, *International Certification*, *Publicly Listed*, *Privately Held*, *Sole Proprietorship*, *Partnership*, *Micro*, *Small*, and *Medium*. Country controls included are: *GDP Per Capita*, *Income Growth*, *Inflation*, and *Total Population*. We provide the description of *Political Risk Index* and its components, and definitions for all control variables, in the Internet Appendix Table IA1. All time-varying independent variables are one-year lagged. The sample includes 57,762 firms from the universe of 180,067 firms in the WBES dataset released on July 18, 2022. Figures in parentheses are robust standard errors clustered at the firm-level. The intercept is included in all regressions, but are not reported for the sake of brevity. \*\*\* denotes significance at 1%, \*\* significance at 5%, and \* significance at 10%.

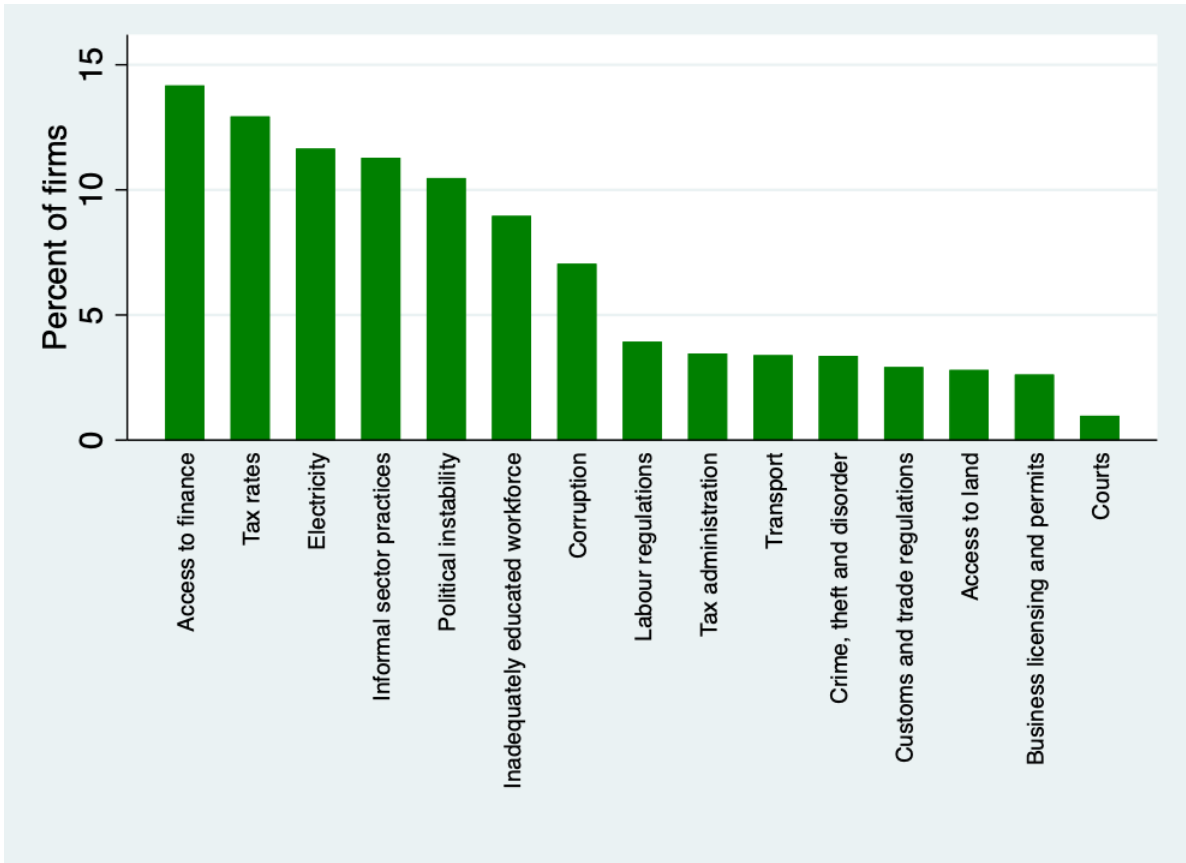


Figure 1: Biggest obstacles to the operations and growth of firms

Notes: This figure shows the biggest obstacles affecting the operations of firms based on data from the World Bank Enterprise Surveys (WBES). The numbers indicate the share of the 168,310 firms that rank each of the fifteen obstacles as a major constraint on the operations and growth of the firm.

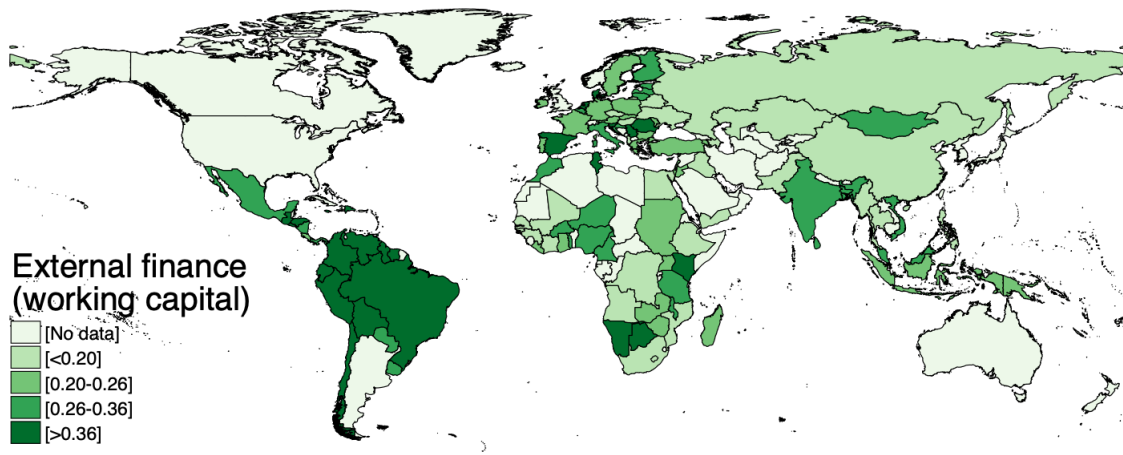


Figure 2: Distribution of external finance for working capital across 108 countries

Notes: This figure shows the quintile distributions of external finance for working capital for countries in our sample. Higher values (greater access to external finance) are indicated by darker regions.

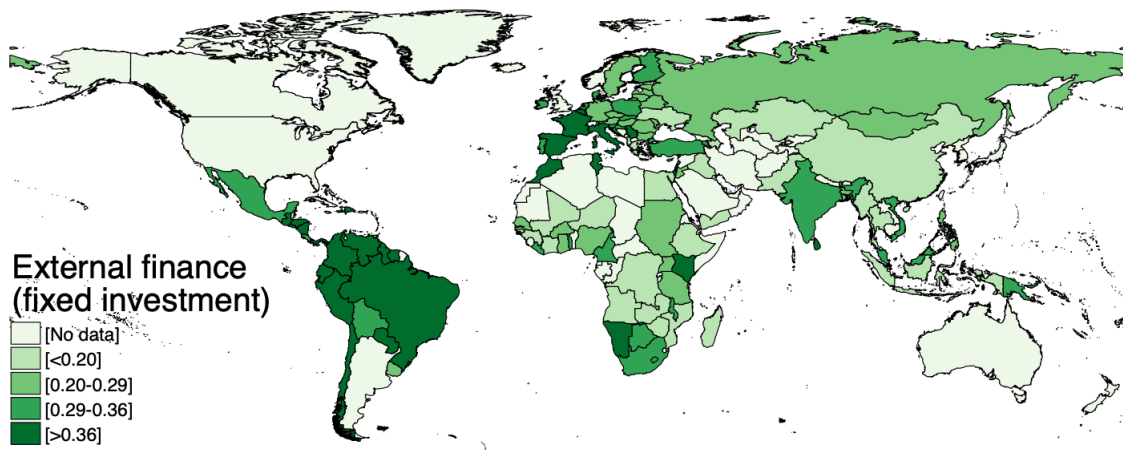


Figure 3: Distribution of external finance for fixed investment across 108 countries

Notes: This figure shows the quintile distributions of external finance for fixed investment for countries in our sample. Higher values (greater access to external finance) are indicated by darker regions.



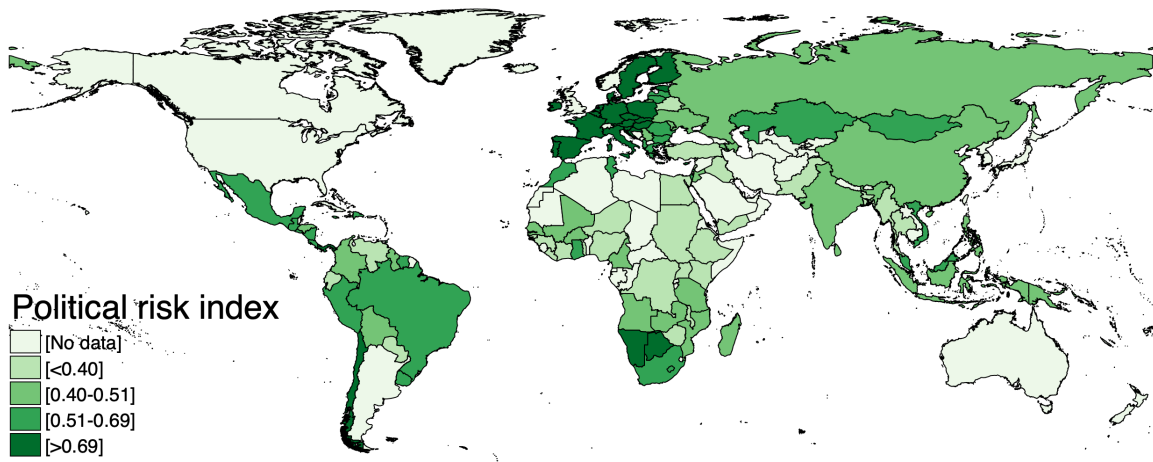


Figure 4: Distribution of political risk index across 108 countries

Notes: This figure shows the quintile distributions of political risk for countries in our sample. Higher values of political risk index (better institutions) are indicated by darker regions.



Figure 5: Bivariate correlations between political risk and external finance

Notes: This figure shows the correlations between political risk index and: (i) external finance for working capital in panel a; and (ii) external finance for fixed investment in panel b.

## Appendix A Internet Appendix

Table IA1: Definitions of variables and data sources

Variable	Description
<b>A. Outcome variables</b>	
<u>Working Capital</u>	
<i>External Finance</i>	Share of a firm's working capital finance derived from external sources. Source: World Bank Enterprises Surveys.
<i>Banks</i>	Share of a firm's external working capital finance derived from banks. Source: As above.
<i>Supplier Credit</i>	Share of a firm's working capital external finance derived from suppliers' credit and advances from customers. Source: As above.
<i>Others</i>	Share of a firm's working capital external finance derived from all other sources that are not banks, supplier credit, and customer advances. Source: As above.
<u>Fixed Investment</u>	
<i>External Finance</i>	Share of a firm's investment in fixed assets derived from external sources. Source: As above.
<i>Banks</i>	Share of a firm's fixed investment external finance derived from banks. Source: As above.
<i>Supplier Credit</i>	Share of a firm's fixed investment external finance derived from suppliers' credit and advances from customers. Source: As above.
<i>Equity</i>	Share of a firm's fixed investment external finance derived from issuing new equity shares. Source: As above.
<i>Others</i>	Share of a firm's fixed investment external finance derived from all other sources that are not banks, supplier credit, customer advances, and new equity. Source: As above.
<b>B. Independent variables</b>	
<i>Political Risk Index</i>	The total of the following twelve ICRG's components: Law and Order, Bureaucratic Quality, Corruption, Government Stability, Socioeconomic Conditions, Investment Profile, Military in Politics, Democratic Accountability, Internal Conflict, External Conflict, Religious Tensions, and Ethnic Tensions. The components are defined below. Source: International Country Risk Guide (ICRG).
<i>Quality of Institutions</i>	The total of the following three ICRG's components: Law and Order, Bureaucratic Quality, and Corruption. The components are defined below. Source: As above.
<i>Government Actions</i>	The total of the following three ICRG's components: Government Stability, Socioeconomic Conditions, and Investment Profile. The components are defined below. Source: As above.
<i>Democratic Tendencies</i>	The total of the following two ICRG's components: Military in Politics and Democratic Accountability. The components are defined below. Source: As above.
<i>Conflicts and Tensions</i>	The total of the following four ICRG's components: Internal Conflict, External Conflict, Religious Tensions, and Ethnic Tensions. The components are defined below. Source: As above.

Variable	Description
<i>Law and Order</i>	Law and Order form a single component, but its two elements are assessed separately, with each element being scored from zero to three points. To assess the Law element, the strength and impartiality of the legal system are considered, while the Order element is an assessment of popular observance of the law. Thus, a country can enjoy a high rating – 3 – in terms of its judicial system, but a low rating – 1 – if it suffers from a very high crime rate if the law is routinely ignored without effective sanction (for example, widespread illegal strikes). Source: As above.
<i>Bureaucratic Quality</i>	The institutional strength and quality of the bureaucracy is another shock absorber that tends to minimize revisions of policy when governments change. Therefore, high points are given to countries where the bureaucracy has the strength and expertise to govern without drastic changes in policy or interruptions in government services. In these low-risk countries, the bureaucracy tends to be somewhat autonomous from political pressure and to have an established mechanism for recruitment and training. Countries that lack the cushioning effect of a strong bureaucracy receive low points because a change in government tends to be traumatic in terms of policy formulation and day-to-day administrative functions. Source: As above.
<i>Corruption</i>	This is an assessment of corruption within the political system. Such corruption is a threat to foreign investment for several reasons: it distorts the economic and financial environment; it reduces the efficiency of government and business by enabling people to assume positions of power through patronage rather than ability; and, last but not least, introduces an inherent instability into the political process. The most common form of corruption met directly by business is financial corruption in the form of demands for special payments and bribes connected with import and export licenses, exchange controls, tax assessments, police protection, or loans. Such corruption can make it difficult to conduct business effectively, and in some cases may force the withdrawal or withholding of an investment. Although our measure takes such corruption into account, it is more concerned with actual or potential corruption in the form of excessive patronage, nepotism, job reservations, ‘favor-for-favors’, secret party funding, and suspiciously close ties between politics and business. In our view these insidious sorts of corruption are potentially of much greater risk to foreign business in that they can lead to popular discontent, unrealistic and inefficient controls on the state economy, and encourage the development of the black market. The greatest risk in such corruption is that at some time it will become so overweening, or some major scandal will be suddenly revealed, as to provoke a popular backlash, resulting in a fall or overthrow of the government, a major reorganizing or restructuring of the country’s political institutions, or, at worst, a breakdown in law and order, rendering the country ungovernable. Source: As above.

Variable	Description
<i>Internal Conflict</i>	This is an assessment of political violence in the country and its actual or potential impact on governance. The highest rating is given to those countries where there is no armed or civil opposition to the government and the government does not indulge in arbitrary violence, direct or indirect, against its own people. The lowest rating is given to a country embroiled in an on-going civil war. The risk rating assigned is the sum of three subcomponents, each with a maximum score of four points and a minimum score of 0 points. A score of 4 points equates to Very Low Risk and a score of 0 points to Very High Risk. The subcomponents are Civil War/Coup Threat, Terrorism/Political Violence, and Civil Disorder. Source: As above.
<i>External Conflict</i>	The external conflict measure is an assessment both of the risk to the incumbent government from foreign action, ranging from non-violent external pressure (diplomatic pressures, withholding of aid, trade restrictions, territorial disputes, sanctions, etc) to violent external pressure (cross-border conflicts to all-out war). External conflicts can adversely affect foreign business in many ways, ranging from restrictions on operations to trade and investment sanctions, to distortions in the allocation of economic resources, to violent change in the structure of society. The risk rating assigned is the sum of three subcomponents, each with a maximum score of four points and a minimum score of 0 points. A score of 4 points equates to Very Low Risk and a score of 0 points to Very High Risk. The subcomponents are War, Cross-Border Conflict, and Foreign Pressures. Source: As above.
<i>Religious Tensions</i>	Religious tensions may stem from the domination of society and/or governance by a single religious group that seeks to replace civil law by religious law and to exclude other religions from the political and/or social process; the desire of a single religious group to dominate governance; the suppression of religious freedom; the desire of a religious group to express its own identity, separate from the country as a whole. The risk involved in these situations range from inexperienced people imposing inappropriate policies through civil dissent to civil war. Source: As above.
<i>Ethnic Tensions</i>	This component is an assessment of the degree of tension within a country attributable to racial, nationality, or language divisions. Lower ratings are given to countries where racial and nationality tensions are high because opposing groups are intolerant and unwilling to compromise. Higher ratings are given to countries where tensions are minimal, even though such differences may still exist. Source: As above.

Variable	Description
<i>Military in Politics</i>	The military is not elected by anyone. Therefore, its involvement in politics, even at a peripheral level, is a diminution of democratic accountability. However, it also has other significant implications. The military might, for example, become involved in government because of an actual or created internal or external threat. Such a situation would imply the distortion of government policy in order to meet this threat, for example by increasing the defense budget at the expense of other budget allocations. In some countries, the threat of military take-over can force an elected government to change policy or cause its replacement by another government more amenable to the military's wishes. A military takeover or threat of a takeover may also represent a high risk if it is an indication that the government is unable to function effectively and that the country therefore has an uneasy environment for foreign businesses. A full-scale military regime poses the greatest risk. In the short term a military regime may provide a new stability and thus reduce business risks. However, in the longer term the risk will almost certainly rise, partly because the system of governance will be become corrupt and partly because the continuation of such a government is likely to create an armed opposition. In some cases, military participation in government may be a symptom rather than a cause of underlying difficulties. Overall, lower risk ratings indicate a greater degree of military participation in politics and a higher level of political risk. Source: As above.
<i>Democratic Accountability</i>	This is a measure of how responsive government is to its people, on the basis that the less responsive it is, the more likely it is that the government will fall, peacefully in a democratic society, but possibly violently in a non-democratic one. The points in this component are awarded on the basis of the type of governance enjoyed by the country in question. For this purpose, we have defined the following types of governance: Alternating Democracy, Dominated Democracy, De Facto One-Party State, De Jure One-Party State, and Autarchy. Source: As above.
<i>Government Stability</i>	This is an assessment both of the government's ability to carry out its declared program(s), and its ability to stay in office. The risk rating assigned is the sum of three subcomponents, each with a maximum score of four points and a minimum score of 0 points. A score of 4 points equates to Very Low Risk and a score of 0 points to Very High Risk. The subcomponents are Government Unity, Legislative Strength, and Popular Support. Source: As above.
<i>Socioeconomic Conditions</i>	This is an assessment of the socioeconomic pressures at work in society that could constrain government action or fuel social dissatisfaction. The risk rating assigned is the sum of three subcomponents, each with a maximum score of four points and a minimum score of 0 points. A score of 4 points equates to Very Low Risk and a score of 0 points to Very High Risk. The subcomponents are Unemployment, Consumer Confidence, and Poverty. Source: As above.

Variable	Description
<i>Investment Profile</i>	This is an assessment of factors affecting the risk to investment that are not covered by other political, economic and financial risk components. The risk rating assigned is the sum of three subcomponents, each with a maximum score of four points and a minimum score of 0 points. A score of 4 points equates to Very Low Risk and a score of 0 points to Very High Risk. The subcomponents are Contract Viability/Expropriation, Profits Repatriation, and Payment Delays. Source: As above.
<b><i>C. Firm-specific variables</i></b>	
<i>Firm Age</i>	Log of firm age in years. Source: World Bank Enterprises Surveys.
<i>Audited</i>	A dummy variable that equals to 1 if the annual financial statement of a firm is checked and certified by an external auditor; 0 otherwise. Source: As above.
<i>Foreign</i>	A dummy variable that equals to 1 if 50% or more of a firm is owned by a foreign entity; 0 otherwise. Source: As above.
<i>State</i>	A dummy variable that equals to 1 if 50% or more of a firm is owned by the government; 0 otherwise. Source: As above.
<i>Exporter</i>	A dummy variable that equals to one if 10% or more of a firm's sales are exported; 0 otherwise. Source: As above.
<i>Subsidiary</i>	A dummy variable that equals to 1 if a firm is part of a larger establishment; 0 otherwise. Source: As above.
<i>International Certification</i>	A dummy variable that equals to 1 if a firm holds internationally recognised quality certification; 0 otherwise. Source: As above.
<i>Publicly Listed</i>	A dummy variable that equals to 1 if a firm has the legal status of publicly listed company; 0 otherwise. Source: As above.
<i>Privately Held</i>	A dummy variable that equals to 1 if a firm has the legal status of privately held limited liability company; 0 otherwise. Source: As above.
<i>Sole Proprietorship</i>	A dummy variable that equals to 1 if a firm has the legal status of sole proprietorship; 0 otherwise. Source: As above.
<i>Partnership</i>	A dummy variable that equals to one if a firm has the legal status of partnership or limited partnership; 0 otherwise. Source: As above.
<i>Micro</i>	A dummy variable that equals to 1 if a firm has less than or equal to 10 full-time equivalent employees; 0 otherwise. Source: As above.
<i>Small</i>	A dummy variable that equals to 1 if a firm has more than 10 and up to 50 full-time equivalent employees; 0 otherwise. Source: As above.
<i>Medium</i>	A dummy variable that equals to 1 if a firm has more than 50 and up to 150 full-time equivalent employees; 0 otherwise. Source: As above.
<i>Large</i>	A dummy variable that equals to 1 if a firm has 150 plus full-time equivalent employees; 0 otherwise. Source: As above.
<i>Employment Growth</i>	Annual employment growth. Source: As above.
<i>Female Participation</i>	A dummy variable that equals to one if a female is involved in the ownership of the firm; 0 otherwise. Source: As above.
<i>Manager's Experience</i>	Log of the number of years the top manager has been working in the firm's sector. Source: As above.

Variable	Description
<i>Low Growth</i>	A dummy variable that equals to 1 if a firm's real annual percentage sales growth is less than the sample median; 0 otherwise. Source: As above.
<i>New Product</i>	A dummy variable that equals to 1 if a firm has introduced a new product or significantly improved a product or service during the last three years; 0 otherwise. Source: As above.
<i>Service Sector</i>	A dummy variable that equals to 1 if a firm operates in the service sector; 0 otherwise. Source: As above.
<i>SMEs</i>	A dummy variable that equals to 1 if a firm employs at most 50 full-time permanent workers; 0 otherwise. Source: As above.
<b><i>D. Country-specific variables</i></b>	
<i>GDP Per Capita</i>	Log of GDP per capita in constant 2010 US\$. Source: World Development Indicators.
<i>Income Growth</i>	Annual GDP per capita growth rate. Source: As above.
<i>Inflation</i>	Annual change in consumer prices. Source: As above.
<i>Total Population</i>	The midyear total population of a country. Source: As above.
<i>Legal Rights</i>	The degree to which collateral and bankruptcy laws protect the rights of borrowers and lenders. Source: Doing Business Report, World Bank.
<i>Credit Information</i>	The coverage, scope, and accessibility of credit information available through either a public credit registry or a private credit bureau. Source: As above.
<i>Public Credit Registry</i>	The variable reports the number of individuals and firms listed in a public credit registry with current information on repayment history, unpaid debts, or credit outstanding. The number is expressed as a percentage of the adult population. Source: As above.
<i>Private Credit Bureau</i>	The variable reports the number of individuals and firms listed by a private credit bureau with current information on repayment history, unpaid debts, or credit outstanding. The number is expressed as a percentage of the adult population. Source: As above.