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From investment decisions to entry modes during uncertain times: national and international evidence

Advisor: Mario Daniele AMORE

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Margherita CORINA

ID number: 0993956

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Abstract

We are in times of persistent uncertainty regarding economic and social factors: the pandemic, de-globalization, disruption, populism and increasing distrust. My research seeks to better understand the role of domestic and multinational firms in this changing environment, looking at their behaviors and strategies.

Environmental uncertainty has been extensively discussed in organization and strategy literatures, and now, more than ever, is becoming an area of higher concern for firms. Environmental uncertainty, seen as "the difficulty firms have in predicting the future, which comes from incomplete knowledge", was largely studied by strategy scholars looking at economic shocks, demand fluctuations, regulatory changes, technological progress and natural disasters.

The goal of my dissertation is about how companies manage business actions in response to a particular form of environmental uncertainty, *political uncertainty*, envisioned as the difficulty for firms to forecast government actions and to access key information on the regulations that a new government will implement, which in turn harm firms' investment policies.

In the first paper, bridging insights from international business and political science, we argue that the effect of political elections on firms' investment activities is contingent on the country's electoral system. In particular, we expect the negative effect of elections on corporate investment to be smaller for firms operating in plurality systems. We test our theory using a panel dataset of listed firms around the world, and a panel of US multinationals. Our results confirm that during an election period firms in countries with a plurality system reduce investment less than firms in other countries. Additionally, we show that multinationals' foreign investment is affected by elections abroad: their investment in a host country declines during an election in that country, though to a lesser extent if the election is held with a plurality system. Collectively, our findings provide new evidence on the role of political institutions for firms' investment decisions.

In the second paper, I study the trade-off between acquisitions and alliances in the context of elections by looking at the costs and benefits of companies' business configurations. By testing my assumptions on a dataset of US companies during government elections between 1990 and 2018, I show that companies in states that hold elections, and therefore subject to greater political uncertainty, prefer alliances to acquisitions. I then show that this result varies according to the similarity and complementarity of business between the two companies: during political elections, companies whose *business is similar* prefer to engage in acquisitions or alliances - as opposed to internal development - and prefer acquisitions as opposed to alliances. On the contrary, companies whose *business is complementary* prefer not to ally or acquire with respect to internal development. Overall, my findings provide new insights into the importance of political uncertainty in shaping business strategies.

In the third paper, we analyze the impact of growing populism on national and multinational investments. Combining insights from international business and political science, we develop various hypotheses about how a populist government and firm's geographic scope shapes corporate investment decisions. By testing our hypotheses on a global dataset of firms from 1994 to 2020, we show that firms in populist countries

reduce investment more than those in non-populist countries. However, our results highlight that the type of populism matters, as left-wing populism amplifies this negative effect compared to right-wing. Finally, the investment activity of multinationals is less sensitive to populism than that of domestic firms in their country of origin. However, multinationals are affected by populism abroad: their investments are dwindling in the populist host country. Overall, our results provide new evidence in the literature on the influence of populism on corporate investment activities.

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Abstract

A recent literature shows that the spike in uncertainty during political elections harms firms' investment. Bridging insights from international business and political science, we argue that the effect of political elections on firms' investment activities is contingent on the country's electoral system. In particular, we expect the negative effect of elections on corporate investment to be smaller for firms operating in plurality systems. We test our theory using a panel dataset of listed firms around the world, and a panel of US multinationals. Our results confirm that during an election period firms in countries with a plurality system reduce investment less than firms in other countries. Additionally, we show that multinationals' foreign investment is affected by elections abroad: their investment in a host country declines during an election in that country, though to a lesser extent if the election is held with a plurality system. Collectively, our findings provide new evidence on the role of political institutions for firms' investment decisions.

Keywords: political uncertainty; investment; electoral systems; multinationals.

INTRODUCTION

A central question in management research has revolved around how firms respond to "environmental uncertainty", defined as a set of hard-to-predict events that - by increasing the amount of information that a firm has to gather and elaborate to achieve a given performance level, or by weakening relationships with exchange partners - impair the ability to plan and operate deterministically (Bode et al. 2011; Thompson 1967; Van de Ven 1979; Van de Ven & Drazin 1985).

Strategy scholars have traditionally focused on various sources of environmental uncertainty such as economic shocks (Chakrabarti 2014), demand fluctuations (Bennett & Hall 2020), regulatory changes (Dutt & Joseph 2019; Fabrizio 2013), and natural disasters (Oh & Oetzel 2011). Motivated by policy discussions in the aftermath of the 2008-09 financial crisis, scholars have begun to explore a specific type of uncertainty stemming from the political sector, i.e. *political uncertainty*, defined as the irresolution about the policies and regulations that a new government will put in place (Baker et al. 2016; Bloom 2014; Blake & Jandhyala 2019).

Political environments are perceived to be increasingly uncertain (Davis 2019) due to contentious events such as the surge of populist parties or the Brexit referendum (Cumming & Zahra 2016; Moschieri & Blake 2019). Accordingly, corporate executives have expressed growing concerns about the role of political risk for the companies they manage (Giambona et al. 2017). Existing evidence shows that political uncertainty harms a broad array of corporate policies including investment, IPOs, disclosure,

dividends and foreign activities (Amore 2020; Bonaime et al. 2018; Baker et al. 2016; Colak et al. 2017; Gulen & Ion 2016; Huang et al. 2015; Lee 2018).[1]

Identifying the causal effect of political uncertainty on firms' outcomes has proven to be challenging due, for instance, to the fact that political uncertainty correlates with business cycle conditions. A recent stream of research has thus suggested to take advantage of variations in electoral cycles, which are largely fixed and unaffected by economic or business conditions. Political elections escalate political uncertainty since different candidates who run for office have different priorities, and voting results are often hard to predict. Because the timing of elections is not perfectly correlated across countries, firms in non-election countries can provide a counterfactual for firms in election countries at a given point in time, after controlling for constant heterogeneity and time-varying economic conditions. Several works based on this approach have shown that during election periods companies experience a significant drop in investment activities (e.g. Julio & Yook 2012, 2016; Jens 2017; Amore & Minichilli 2018). In this article, we investigate how a country's *electoral system* shapes the effect of election cycles on corporate investment. As we shall argue, this assessment is useful to uncover how political uncertainty may propagate to the business landscape.

Electoral systems are the set of rules determining how votes are converted into seats (Norris 1997); they are typically classified using various attributes, the most important of which is the electoral rule. The two polar rules are proportional and plurality.

[1] A mechanism at play goes back to Bernanke (1983) and Wernerfelt and Karnani (1987), who suggested that when uncertainty increases, the real-option value of waiting to invest in irreversible projects increases. Another explanation is that policy uncertainty is difficult to be diversified away, and thus increases financing costs (Pastor & Veronesi 2012).

In a plurality system, candidates win a seat if they get more votes than their closest rival in a constituency, whereas in a proportional system candidates are elected based on the overall percentage of votes received by their party, and seats are distributed accordingly (Persson & Tabellini 2004; Blais & Massicotte 1997). The political science literature has shown that proportional systems can provide a higher representation of minorities and a better balance between different political parties (Lijphart 1994). To achieve this balance, electoral proportionality gives rise to coalition or minority governments (e.g. Persson et al. 2003; Powell 2000), whose agendas require the convergence of broader, and potentially also less cohesive, political interests through complex pre- and post-election bargaining processes. Typically, these processes take time to unfold and their outcome is difficult to foresee. As a consequence, at the time of an election – and often even after the election result has been announced – there is a relatively high uncertainty about the policies the new government will implement. Several examples, from the 2010 Belgian general elections to the 2017 Netherlands general election, show how complex can it be to appoint a ruling coalition under a proportional system. The bargaining process between political parties lasted several months, and the ultimate political agenda that the government decided to pursue was uncertain until the moment when the government was appointed. By contrast, in countries with a plurality rule - even when the election is highly contested, such as in the US in 2016 or France in 2017 - voting results translate more directly into policy outcomes (Indridason 2011), the prediction over future policies is more straightforward (Vuchelen 2003), and the new government is typically appointed soon after the voting date. Collectively, these arguments suggest that electoral systems can shape the

impact of electoral cycles on corporate policies: the negative effect of elections on investment is expected to be larger for firms in countries with a proportional system.

Going back to Rugman (1976), international business scholars have argued that multinationality provides risk-diversification opportunities. Operating in multiple countries allows firms to manage unsystematic risks (Hitt et al. 2006), for instance by holding back projects in countries that become more uncertain and exploit investment opportunities elsewhere (Sarkar 2020). Therefore, multinationality may improve the ability to hedge against political risk (Nguyen et al. 2018; Hill et al. 2019). Other scholars, however, have contended that multinationality may not reduce systemic risks (Reeb et al. 1998; Reuer & Leiblein 2000), and that political uncertainty is generally difficult to be diversified away (Pastor & Veronesi 2013). We argue that running operations in foreign countries exposes multinationals to multiple idiosyncratic sources of political uncertainty. Accordingly, the surge in political uncertainty due to elections in a host country can undermine the *foreign investment* of multinational firms in that country. Yet, consistent with our previous hypothesis, we expect this effect to be lower if the host country adopts a plurality system.

To test these hypotheses, we analyze a panel dataset covering firms in 39 countries around the world. Our results show that during an election companies reduce investment significantly less when the election is held with a plurality system, as compared to other electoral systems. Additionally, we find that the *foreign investment* of multinationals in a foreign country declines when that country holds political elections, and that such decline is positively moderated by plurality systems.

Our work contributes to a vibrant literature about the influence of electoral cycles on business outcomes (e.g., Julio & Yook 2012, 2016; Liu & Ngo 2014; Colak et al. 2017; Jens 2017; Amore & Minichilli 2018). While many works in this area have focused on the impact of political elections on investment decisions, they have not yet explored the important role played by the electoral system according to which elections are held. This void is surprising in light of a voluminous research arguing that electoral systems have pervasive effects not only on the nature of government policies (e.g. Persson & Tabellini 2004) but also on business conditions (Zingales 2017), and companies' structures and policies (Pagano & Volpin 2005; Choy et al. 2011). With a few notable exceptions (Julio & Yook 2016; Sarkar 2020), a common tenet of the literature has been the direct analysis of political elections and investment in the country of firms' headquarter. Going beyond this approach, we focus on multinational firms and explore the sensitivity of investment to the political conditions in the foreign countries where they operate. In so doing, we also expand the literature on the role of political institutions for corporate strategies. Works in this area have studied a wealth of institutional characteristics at the international and local level (Murtha & Lenway 1994; Delios & Henisz 2003; Mudambi & Navarra 2003; Chan et al. 2010; Holburn & Zelner 2010; Filippaios et al. 2019) also including political risk factors (Azzimonti 2019; Beazer & Blake 2018; Liu & Li 2020). Yet, the role of electoral systems has been largely neglected. Our work fills this gap.

In the next section, we provide an account of current debates about the effect of political uncertainty on firms' investment, and describe the research gaps that we wish to address. Then, we develop our hypotheses. We move to explain our data and

variables, and present our findings together with a battery of robustness checks. Finally, we discuss the implications of our findings and conclude.

POLITICAL UNCERTAINTY AND CORPORATE DECISION-MAKING

Beckman et al. (2004) define uncertainty as "the difficulty firms have in predicting the future, which comes from incomplete knowledge". Thompson (1967) argued that uncertainty is a key feature of the environment in which firms operate, and that it can profoundly shape managers' decision-making. These concepts have been extensively discussed in the organization and strategy literature, particularly among theorists who aimed at unfolding the complex nature of interactions between organizations and their environment.

Research in this area has studied uncertainty in its various forms by distinguishing between firm-specific and market-specific uncertainty (Beckman et al. 2004). The first type of uncertainty originates from changes that are internal to the firm, such that entering a new market (Greve 1996), acquiring another firm (Haunschild 1994) or positioning plants internationally (Witold & Delios 2001). The second type relates to external factors, e.g. macroeconomic events, that affect all firms operating within a given context (Beckman et al. 2004).

Uncertainty can have significant implications on a firm's strategy, and a large stream of research has been devoted to understanding how firms make decisions under uncertainty (Wernerfelt & Karnani 1987; Courtney et al. 1997). For instance, there is evidence that firm-level uncertainty increases imitation by complicating predictions

about future performance (Gaba & Terlaak 2013). By contrast, market-specific uncertainty has been shown to reduce the precision in the information that can be inferred from others, thereby reducing imitation. Other works in this area study how different types of uncertainty impact on a variety of actions including network partner selection (Podolny 1994) and the governance of inter-firm relationships (Carson et al. 2006; Krishnan et al. 2016).

A specific type of environmental uncertainty that has received significant scrutiny is the one related to politics (Baker et al. 2016). Firms deal constantly with the political sector to get resources, procurement contracts, and various other types of business opportunities (Amore & Bennedsen 2013). Thus, government activities are key to many corporate decisions involving investment and financing. The amount of uncertainty over government activities, which continuously change as a function of micro- and macro-level factors (Yan & Chang 2018), tends to spike during political elections due to the difficulty in foreseeing the voting outcomes, the composition of the new government, and the policies that will be implemented (Vuchelen 2003). The inability to perfectly forecast the results of an election, and the uncertainty surrounding government policies can thus harm financial performance or restrain firms from meeting future targets (Kingsley et al. 2012). Indeed, political processes that alter the costs of making new or reversing existing policies (Blake & Jandhyala 2019) have a substantial impact on strategic actions (Witold & Delios 2001). Due to these considerations, companies are attentive to political decisions that can impact on their activities, especially those that are costly to adjust in the short-term.

Political uncertainty can discourage firms' irreversible actions due to real-option considerations: uncertainty increases the incentives to *wait* to get new information rather than committing early (Bernanke 1983; Wernerfelt & Karnani 1987). Moreover, different from many sources of risk, policy uncertainty is hard to be diversified away, and thus increases borrowing costs via an increase in risk premia (Pastor & Veronesi 2012). Because corporate investment is often not easily reversible, heightened uncertainty in the period surrounding an election is expected to make firms more cautious in their investment and financing policies. Building on these notions, existing works have shown that firms delay investment activities until the uncertainty regarding future regulations and economic policies is resolved (Julio & Yook 2012; Jens 2017; Amore & Minichilli 2018). A parallel inquiry in non-market strategy research has shown that firms use a variety of strategies (e.g. lobbying, contributions) to gain influence or improve their access to the public-policy process (Hillman & Hitt 1999), both in their home country as well as in the foreign countries where they operate (Brown et al. 2018).

While political uncertainty has been the cornerstone of a vibrant literature in economics and finance, the topic is still scarcely investigated among management scholars, who have been traditionally more interested in firm- or industry-specific uncertainty. The international business literature provides some notable exceptions, though. Following Dunning (1981), several scholars have developed theoretical models showing how firms' decisions to invest abroad are affected by the economic and political conditions of the host country (see Faeth 2009 for a review). A key work in this area is Henisz (2000), which analyzes the relationship between political hazard and multinationals' entry mode. In a similar vein, Delios and Henisz (2003) uses a sample

of Japanese manufacturers to show that policy uncertainty can discourage foreign investment. James and Valeer (2018) contends that the adverse effects of policy risk on firms' investment can be ameliorated by a state's minority equity stake. Lee (2018) further shows that political uncertainty influences in cross-border acquisitions, whereas Zhong et al. (2019) argues that the political risk stemming from politicians' turnover harms foreign subsidiaries' performance. While these works have largely focused on developing countries with unstable political environments, recent evidence shows that the policy risk arising from the contentiousness of political actions harms foreign investment even in a country with sound institutions like the US (Azzimonti 2019). In this debate, it is worth noting that the political institutions of both host and home countries may play a role in determining foreign investment decisions (Beazer & Blake 2018). Collectively, this research establishes that political uncertainty has significant implications for corporate policies.

Political economy scholars too have investigated the role of political institutions for economic outcomes, taking mostly a macroeconomic stance. Works in this area have asked, for instance, whether democracy can improve economic growth (Przeworski & Limongi 1993), and to what extent political risk harms a country's economic performance (Alesina et al. 1996). Existing works have also contended that electoral rules, i.e. the electoral system used to establish the winner and then appoints a government, affect economic outcomes (see Persson & Tabellini 2004 for a review). This research, however, has not probed into the implications of electoral rules for firm-level strategies and results.

We bridge the research streams in international business and political economy by exploiting the context of elections and delving into the neglected role of electoral systems for corporate investment. In particular, we will argue that electoral systems can moderate the effect of elections on firms' investment. Next, we will explore how elections in the *host country* shape the foreign investment of multinational firms.

THEORETICAL BACKGROUND

Electoral systems: An overview

An electoral system comprises three features (Persson & Tabellini 2004). The first, *district magnitude*, determines the number of legislators that get a seat in a given district (with the two extremes being a single countrywide district which elects all politicians, and multiple districts each electing one politician). The second, *ballot structure*, concerns how voters cast their ballot, i.e. whether they can choose among individual candidates or lists of party candidates. The third is the *electoral rule* used to divide votes into seats, i.e. whether the politician who gets the highest share of votes in a district is elected (plurality rule), or whether seats are assigned to parties proportionally to the votes received in each district (proportional rule). As many have noted, these features are correlated across countries: plurality rules tend to be implemented along with single voting ballots in narrow districts, whereas proportional rules tend to be implemented along with party lists and large districts. Operationalizing the proportionality (or plurality) of electoral systems is a complex exercise. Some empirical works have adopted discrete measures which distinguish between proportional and plurality (Persson et al.

2003, 2007; Bormann & Golder 2013). However, many electoral systems combine features of both proportionality and plurality, and may have a varying degree of proportionality. Thus, scholars (e.g., Taagepera 2002; Carey & Hix 2011) have stressed the importance of considering the potential trade-offs between the different features of an electoral system, and adopting continuous measures that can capture the degree of (dis)proportionality more thoroughly.

The intuition behind our work is that plurality and proportional systems can command a different level of uncertainty about future government policies. Let us start with some examples. During the US presidential elections in 2016, Donald Trump's victory came at a huge surprise to many. However, once the electoral result was announced, the uncertainty about whether Trump's policies or Clinton's policies were to be implemented suddenly vanished. An opposite example is provided by the general elections in Netherlands in 2017, which failed to deliver an overall majority among any political party for a long time. As a result, Netherlands did not manage to appoint a new government for 225 days. Almost the same happened in Belgium, where the election in 2010 produced a fragmented political landscape, with 11 parties elected, none of them getting more than 20% of seats, and so the country had 541 days of government without functions. The incumbent Prime Minister in Israel in early 2019 failed to form a governing coalition, which implied the dissolution of the government before going to new elections.

Why did the fate of some elections was determined immediately, while others took so long? As we will discuss, part of the answer lies in the electoral system used to determine the political winner and thus appoints a government. In the US elections, the plurality system ensured that a government was appointed right after the election and

this, in turn, ensured a faster resolution of the electoral uncertainty. In the case of Belgium, which adopts a proportional system, the electoral results led to intense post-election negotiations where multiple parties tried to mold their priorities in order to appoint a coalition government. We will discuss how these different patterns matter for firms' investment decisions along the electoral cycle.

Political uncertainty and corporate investment: The role of electoral systems

Many works have documented that electoral systems have a significant effect on politicians' behavior (Nannicini et al. 2013) as well as economic policies, i.e. the level and composition of public spending (Lizzeri & Persico 2001; Milesi-Ferretti et al. 2002; Persson & Tabellini 2004). Here we argue that electoral systems may also influence how firms invest around a political election.

While all electoral systems tend to give some seat advantage to the strongest party, this advantage is less pronounced in proportional and mixed systems, where seats tend to be assigned to a larger number of (relatively smaller) parties (Norris 1997).[2] As a result, it is well known that proportional and mixed systems often lead to multiparty or coalition-based governments (Lijphart 1994; Vuchelen 2003; Pagano & Volpin 2005), whose political agendas result from the aggregation of heterogeneous political priorities pertaining to each coalition partner.[3] In this way, proportional systems

[2] For instance, Rae (1967) shows that a unit increase in the vote share increases the seat share by 1.07 in proportional systems and 1.20 in plurality systems.
[3] A survey of 20 countries found that 56% of elections with plurality systems produced single-party governments, as compared with 36% of elections with mixed systems, and 34% with proportional systems (Blais & Carty 1987).

increase voters' representation and inclusiveness; if seats are awarded proportionally to the votes received, everyone has some kind of voice in the decision making process (Hout & McGann 2009). The negotiation processes leading to the formation of coalition governments seek to embrace more viewpoints and, in turn, produce policies that are closer to the preferences of the median voter and where each party does not internalize the fiscal costs of spending (Persson et al. 2007). Consistent with this view, there is evidence showing that countries with proportional systems engage in a higher level of government spending, which is also less geographically targeted so as to cater to a broader array of voters (Milesi-Ferretti et al. 2002).

Key to our theory, proportional systems might raise political uncertainty due to three interrelated factors: (1) an intrinsically higher complexity in the formation of a ruling government (Mudambi & Navarra 2004; Pagano & Volpin 2005); (2) the lengthening of the electoral cycle occurring from the post-negotiation processes of coalition-building; (3) a lower identifiability of the resulting government policies. As mentioned, after a proportional election the share of parliamentary seats displays a relatively high level of fragmentation that calls for the formation of multiparty coalitions (Persson et al. 2003). In other words, in countries with proportional systems, the information on the winning party (i.e. the party that got the highest fraction of votes) is relatively less important since the main determinant of future government policies lies in the composition of a multiparty coalition. To make political interests converge towards a common government agenda, multiple parties engage in negotiation processes that typically take some time to work out, and whose fate is hard to forecast. Therefore, both in the polling as well as in the aftermath of an election voters face a higher uncertainty about the

government policies that will be implemented as result of a given voting outcome. Relatedly, scholars have argued that proportional systems may hinder government identifiability (see Dow 2001 and references therein).[4]

By contrast, plurality systems often lead to single-party majority governments, which are believed to be more stable and accountable than multiparty governments (Blais & Massicotte 1997). These features tend to decrease uncertainty about future government policies and their implementations. Indeed, the implementation of such policies does not require to engage in post-elections negotiations with coalition partners (Norris 1997). In countries with plurality systems, the announcement of the ultimate winner (and thus the prediction over the future policies that will implemented) is more straightforward as it hinges more directly on the identity of the winning party, whose political agenda is largely known before the election (Vuchelen 2003). As a result, plurality systems typically provide more effective governments (Lijphart 1994), which carry out policies that reflect more directly the voting outcomes (Dow 2001; Indridason 2011). Once the electoral result in a plurality system has been announced, the prediction over future government policies is more straightforward (Vuchelen 2003) and the electoral uncertainty is resolved more swiftly as compared to a proportional system.

[4] A specific source of uncertainty stemming from proportional systems relates to fiscal policies. Persson et al. (2003) show that coalition governments appointed with proportional rules tend to increase fiscal deficits (hence potentially raising uncertainty over future government actions). Along this line, Alesina and Perotti (1995) argue that "conflicts amongst coalition members and the fragility of coalition governments make it difficult to maintain a 'tough' fiscal stance, particularly when politically sensitive programs, government employment and social security are involved." Fiscal uncertainty is a major element of the economic policy uncertainty index developed by Baker et al. (2016), which is in turn negatively associated with firms' investment (Gulen & Ion 2016).

Many influential works such as Julio and Yook (2012) have documented that elections generally drive a period of political uncertainty during which companies decrease investments until a winner is proclaimed and uncertainty diminishes. Collectively, our arguments suggest that this result will be contingent on the electoral system; in particular, plurality systems will reduce the negative first-order effect of elections on corporate investment.

Hypothesis 1: *Political elections have a negative effect on firms' investment.*

Hypothesis 2: *Plurality systems reduce the negative effect of political elections on firms' investment.*

Political uncertainty and investment among multinational firms

International business scholars have wrestled with the advantages and disadvantages of diversifying a company's operations across countries. Many studies indicate that multinationality allows firms to exploit scale and scope economies, grants them access to a broader set of investment opportunities, and enables the development of diverse capabilities. Accordingly, scholars (e.g. Grant 1987; Daniels & Bracker 1989) have shown a positive relationship between international diversification and performance. The literature has also argued that being present in multiple countries can provide firms with risk-diversification opportunities (Rugman 1976). Multinationals can utilize combinations of organizational and external resources to arbitrage country-specific

sources of risk (Kim et al. 1993).[5] Moreover, they have access to a varied set of investment opportunities accruing from multiple countries subject to different political cycles: whenever policy risk surges in one country, they have the opportunity to exploit investment opportunities elsewhere (Sarkar 2020). Collectively, these arguments suggest that multinationality may render firms able to, at least in part, hedge against political uncertainty (Nguyen et al. 2018; Hill et al. 2019). Other works, however, have challenged the notion that multinational firms are always able to diversity risk. Reeb et al. (1998) show a positive association between internationalization and systemic risk, Reuer and Leiblein (2000) do not find evidence supporting a negative association between multinationality and downside risk, and Tong and Reuer (2007) find a curvilinear relationship between multinationality and risk. In parallel, existing works have suggested that political uncertainty is not fully diversifiable (Brogaard & Detzel 2015; Pastor & Veronesi 2013).

We argue that, in addition to uncertainty over political decisions within their country of headquarter, multinationals are also subject to swings in political conditions abroad. For example, multinationals have been exposed to the uncertainty regarding Trump's foreign trade policies (Chang et al. 2019). Similarly, the business decisions of many companies in the UK have been influenced by the political turmoil related to the Brexit referendum (see Dhingra et al. 2016 for a discussion). Multinationals' executives make strategic decisions considering not only their national political environment but

[5] Another argument relates to the flexibility and bargaining power that result from a multinational network and from broader economies of scale, scope, and learning (Kogut 1985). A global network can enable firms to reallocate investment away from host countries where uncertainty surges (Kogut & Kulatilaka 1994). Multinationality also grants flexibility options useful to minimize uncertainty (De Meza & Van der Ploeg 1987; Kogut 1985; Kogut & Kulatilaka 1994).

also the specific characteristics of the countries where they (intend to) operate. Scholars have thus studied how factors such as foreign countries' economic conditions (e.g., Jorion 1990; Driffield & Love 2007), national cultures (Kogut & Singh 1988; Barkema et al. 1996; Mudambi & Navarra 2003) and geographic and linguistic distance (Johanson & Vahlne 1977) influence international expansion decisions (Delios & Henisz 2003). Moreover, extant research has analyzed how foreign countries' political environments affect the choice about which markets to enter and the entry mode (Henisz 2000; Carroll et al. 1988; Mudambi & Navarra 2003). Recent works confirm that political conditions matter a great deal for multinationals' investment activities. For instance, Azzimonti (2019) shows that foreign direct investment in the US is affected by party conflicts over trade policies, whereas Liu and Li (2019) show that terrorism drives divestment decisions. Other factors such as political governance and civil liberties matter too for foreign direct investment decisions (Filippaios et al. 2019).

Generally, these insights suggest that in their decision to expand across national borders, firms would expose themselves to sources of uncertainty about future cash flows in those foreign countries. Coping with these factors may require to dynamically adjust investment over time. One such uncertainty source is precisely the occurrence of political elections in the foreign country. Therefore, consistent with Julio and Yook (2016), our baseline hypothesis suggests that multinationals would be subject to not only political uncertainty stemming from national elections, but also political uncertainty due to elections in the foreign countries where they operate. Consequently, multinationals would reduce the amount of cross-border investment in a given country during elections periods. However, drawing on the arguments used in our second

hypothesis, we posit that the drop in investment will be contingent on the foreign country's electoral system: the effect is expected to be lower in countries with plurality electoral systems than countries with other electoral systems.

> **Hypothesis 3***: Political elections in the host country have a negative effect on the foreign investment of multinationals.*

> **Hypothesis 4:** *Plurality systems reduce the negative effect of political elections in the host country on the foreign investment of multinationals.*

DATA AND VARIABLES

Our empirical analysis is based on: (1) a panel dataset of listed firms in 39 democratic countries from 1991 to 2017 (amounting to 262 national elections); and (2) a subsample of US listed firms (for which we have data on foreign activities from 1998 to 2017). To construct these samples, we gather information from different sources covering political elections, firm-level variables, and macroeconomic data.

Election data

The elections in our dataset include those to appoint a national government. Detailed data come from the Database of Political Institutions 2017 (DPI) assembled by the Inter-American Development Bank (Cruz et al. 2018). The DPI provides annual information about regimes and authority characteristics, about whether presidents are elected

directly or via an electoral college, the chief's years in office, the electoral system, the date of election, victory margin and vote shares of each political party.

Following Julio and Yook (2012), the first step was to collect data on the source of executive legitimacy (either presidential or parliamentary) and decide what kind of election (either legislative or executive) were to be considered. In countries with a presidential regime, the supreme executive power is vested in the office of the president, whereas in countries with a parliamentary regime the executive power is vested in a cabinet responsible to the parliament. We used executive elections in countries with presidential regimes. Instead, in countries with parliamentary regimes we consider legislative elections, which have the foremost influence over the appointment of the prime minister (or premier) who represents the head of the cabinet and leader of the parliament. Out of the 39 countries for which we have usable firm-level data in the global dataset from 1991 to 2017 (as described next), 27 countries are parliamentary and 12 presidential. Table 1 describes the cross-country data by showing the main electoral variables, and the relative number of firm-year observations in each country.

INSERT TABLE 1 HERE

Following again Julio and Yook (2012), we classify election periods by means of a dummy (*Election*) equal to one for those years in which an election is held no earlier than 60 days prior to the fiscal year-end in year *t* and no more than 274 days after the fiscal year-end of year *t*. This variable is designed to capture changes in firms'

investment decisions in the period leading up to a national election.[6] We will check that results are robust to simply using a dummy equal to one for election years, and zero otherwise.

Next, we classify the electoral system which determines how votes are converted into seats. As already discussed, there are two polar systems: *plurality*, where the candidate wins when she/he gets more votes than each individual opponent in a constituency, and *proportional* (or *mixed*), where candidates are elected based on the overall percentage of votes received by their party. Yet, electoral systems often display a varying degree or proportionality. Out of the 39 countries in our sample, 9 countries (representing 56% of firm-year observations) have a plurality system, 15 countries (representing 37% of observations) have a mixed system, and 15 countries (representing 7% of observations) have a proportional system.[7] For the analysis, we use both a binary variable distinguishing plurality systems from others, and a continuous variable (i.e., the Gallagher Index), largely used by scholars to measure (dis)proportionality in a continuous fashion (e.g., Gallagher 1991; Pennisi 1998; Carey & Hix 2011). Perfect proportionality means that every party receives exactly the same share of the seats as its share of votes (Gallagher 1991); however, this situation is uncommon because countries often put in place specific systems that deviate from perfect proportionality. The Gallagher index measures the relative disproportion

[6] To provide an example, consider the US elections in 2016, which were held on November 6th. 70% of US sample firms in 2016 ended the fiscal year on December 31st. For them, 2016 would be an election year. In fact, 2016 would be election year for fiscal-year ends from March onward (97% of all US firms).
[7] Electoral systems are notoriously stable over time. Some countries like the US, UK and Canada have always had the same system. During the 1990s, electoral reforms took place in Japan and New Zealand, which moved to a mixed system.

between the votes received and the seats obtained in a legislature within an electoral system. We used the DPI database to quantify the percentage of seats and votes for each party during an election. When data were not available, we hand-collected them from the International Election Resources dataset.

Firm-level data

To test hypothesis 1 and 2 we employ a global dataset drawn from Compustat (Global and North America) for the period 1991-2017. To test hypotheses 3-4, which involve multinational firms, we follow existing works (e.g., Duru & Reeb 2002; Denis et al. 2002) and focus on US listed firms with available investment data in the Compustat Segment database from 1998 to 2017.[8]

The dependent variable (*Investment*) is the amount of capital expenditures scaled by the beginning-of-year book value of total assets (Julio & Yook 2012). We control for the firm's financial performance, i.e. the Return on Assets (*ROA*), computed as the ratio of earnings before interest, taxes, depreciation and amortization, scaled by beginning-of-year book value of total assets, and *Firm size*, calculated as the logarithm of the book value of total assets.[9]

[8] Unfortunately, we do not have data to distinguish multinationals and single-country firms in the global dataset employed for testing the first two hypotheses. Our analysis based on Compustat Geographic Segment data starts in 1998 because this is the year when the Statement of Financial Accounting Standards (SFAS) 131 went into effect. SFAS 131 introduced significant changes to the disclosure of company's foreign operations, which raised data reliability and facilitated the pricing of foreign earnings (Hope et al. 2009).

[9] We use a parsimonious set of controls to avoid missing values. However, in untabulated regressions we check that our results are robust to using additional controls such as a firm's cash flows, the debt to equity ratio, and the ratio of cash holdings to total assets. Also, our results are robust to only controlling for year dummies rather than the interaction between year and industry dummies.

Macroeconomic data

Our analysis further includes a set of macroeconomic controls useful to alleviate the concern that corporate investment during an election may change as a result of varying economic conditions before or during an election. From the World Development Indicators of the World Bank we obtain information on a country's economic growth (*GDP growth*), which controls for the effect of economic conditions on investment (Dangl & Wu 2016). To separate out the electoral cycle from other sources of aggregate uncertainty, such as terrorism, trade wars etc., we control for the annual global Economic Policy Uncertainty (*EPU*) index.[10] Finally, we use the International Monetary Fund database to control for two variables related to monetary policy, which has been shown to be an important predictor of corporate investment (Gertler & Gilchrist 1994): Money supply (*M1*), and the interest rate set by the central bank (*Interest rate*).[11]

Summary statistics

Excluding firms with missing values in the firm-level and macroeconomic controls leaves us with a total of 396,261 firm-year observations (39,248 unique firms) for the global sample. Table 2 reports summary statistics on firm characteristics, together with

[10] Values come from Baker et al. (2016), which develops an index that quantifies economic policy uncertainty around the world using the scaled count of words in major newspaper articles containing keywords related to: (1) uncertainty; (2) policy; and (3) the economy. See https://www.policyuncertainty.com for more details. Baker et al. (2016) validated this index by showing its association with other measures of uncertainty, e.g. implied stock market volatility.

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election and macroeconomic variables. For the subsample of US multinationals, we have a total of 1,412 observations (100 unique firms).

INSERT TABLE 2 HERE

Our theoretical framework builds on the notion that when elections are held according to a plurality system there will be a quicker resolution of the political uncertainty surrounding the election. We validate this argument by extracting from Baker et al. (2016) the monthly-level index of economic policy uncertainty for the 22 countries available, and studying the evolution of such index in the aftermath of an election. Specifically, we estimate a regression in which the dependent variable is the logarithm of the economic policy uncertainty index, and the key explanatory variables are a set of dummies for each of the months after an election (from $t + 1$ to $t + 6$); the reference group is the month of the election. The model also includes country fixed effects to remove level differences across countries. Standard errors are heteroskedasticity-adjusted.

Figure 1 plots the regression coefficients and 5% confidence interval estimated separately for countries with and without plurality systems. As shown, countries with plurality systems experience a significant decline in economic policy uncertainty after the election (the coefficients of the time dummies are negative and statistically different from zero). By contrast, countries without plurality system do not experience any significant decline in uncertainty. Moreover, our data indicate that countries with plurality

elections form governments in half of the time as compared to countries with other electoral systems. Collectively, these results support the notion of a faster resolution of political uncertainty when elections are held with a plurality system.

INSERT FIGURE 1 HERE

In Table 3, we provide a descriptive analysis of investment activities among our sample firms. Results show a higher investment activity in countries with proportional or mixed systems (Panel A). Yet, once we focus on election years we find that firms in plurality systems have a significantly higher ability to invest during election periods (Panel B). Finally, in Panel C we provide the average and median value of investment for firms in plurality or proportional/mixed electoral systems in the years around an election period. Relative to the year before the election, the investment of firms at the election year and one year after declines more in proportional/mixed systems than in plurality systems.

INSERT TABLE 3 HERE

EMPIRICAL ANALYSIS

Corporate investment during election periods

Consistent with our first and second hypotheses, the descriptive analysis has suggested that while corporate investment drops during elections, firms experience a different decline depending on the country's electoral system. To test this argument more thoroughly, we estimate the following regression:

$$I_{ijt} = \alpha_i + \beta_1 Election_{jt} + \beta_2 Plurality_{jt} + \beta_3 Election_{jt} \times Plurality_{jt} + \mathbf{X}'_{ijt}\,\delta + \gamma_i + \lambda_t + \varepsilon_{ijt}$$

where *i* denotes firms, *j* denotes countries of headquarter, and *t* denotes years. The dependent variable is the total investment of a firm *i's* headquartered in country *j* at time *t*. *Election* is a dummy equal to one in the period leading up to an election, and zero otherwise. *Plurality* is a dummy equal to one if the electoral system in the country of firm headquarter is based on a plurality rule, and zero otherwise (i.e. for proportional or mixed rules). The key explanatory variable is the interaction term between the dummy identifying the period leading up to an election and the plurality dummy. In accordance with our hypothesis, we expect the coefficient of this interaction term to be positive and significant.

A key feature of our empirical design is that elections do not happen at the same time across countries; this feature allows us to use as counterfactual for a firm in a country experiencing election at time *t* another firm in a country that does not experience election at time *t*. Our regressions include firm and year×industry (i.e. 2-digit SIC) dummies in order to remove both constant corporate heterogeneity and industry-time effects common to all firms. To further account for time-varying differences across countries, we include a vector **X** containing the firm-level and macroeconomic controls described in the previous section. Standard errors are clustered at the firm level.

INSERT TABLE 4 HERE

Table 4 displays the results. Model 1 tests Hypothesis 1 without considering the interaction between elections and electoral systems. Consistent with existing works, results indicate a decline of investment during an election period: the coefficient of the election dummy (equal to 0.0008) indicates that investment drops by 1.3% from the average of 0.06. This result gives support to Hypothesis 1. Models 2 and 3 estimate the regression separately on the subsamples of firms in countries with and without plurality systems. Results indicate that election periods do not significantly harm corporate investment in plurality systems, whereas the effect becomes statistically significant at the 1% level and economically bigger (i.e., almost twice as large than the one in Model 1) in proportional or mixed countries. These findings are supportive of our second hypotheses. To offer an additional validation, we use the full sample and estimate a model that includes the interaction between elections and plurality. As shown in Model 4, the direct effect of elections remains negative and statistically significant at the 1% level. However, the coefficient of the interaction term is *positive* and statistically significant at the 1% level - and similar in magnitude to the negative direct effect of elections. In other words, during electoral times firms in countries with plurality systems are better able to invest than their counterparts in proportional or mixed systems.

Robustness and additional tests

In this section, we provide a number of robustness checks to validate the results of the previous section. Results are collected in Table 5. We start by showing (in Model 1) that our results are largely significant to clustering standard errors at the country level rather (than at the firm level, as done in the baseline analyses). This approach is useful to allow for serial correlation and heteroskedasticity by country (i.e. the level of aggregation of the election system).

Next, we move to the operationalization of the political elections. First, we show that our results are robust to using an alternative election dummy, i.e. a binary variable equal to one if there has been an election in a given year (at any point in time), and zero otherwise. Results in Model 2 show that our findings remain largely unchanged. Then, we deal with the measure of electoral proportionality. As discussed in our theory development, a plurality dummy may be unable to capture the various nuances of electoral systems which generate a varying degree of proportionality in-between the two polar cases of perfect plurality and proportionality. We thus re-estimate our model by replacing the plurality dummy with the Gallagher index of disproportionality (in which higher values indicate less proportionality). Model 3 shows two important results. First, the direct effect of elections on corporate investment (i.e., the effect of elections when disproportionality tends to zero) is negative (p=0.06). This result, which is consistent with the direct effect of the election dummy in Model 4 of Table 4, shows that elections harm firms' investment in proportional countries. Second, the coefficient of the interaction term is positive, and thus denotes that an increase in disproportionality reduces the negative effect of elections on investment. Economically, a standard deviation increase in disproportionality reduces almost entirely the negative direct effect

of elections on investment. To probe more into this result, we provide a graphical illustration using the method described in Meyer et al. (2017). Figure 2 plots the marginal effect of elections on investment over the full range of values of electoral disproportionality. Each dot represents all observations for each value of disproportionality in the sample, and the two lines represent the 95% confidence intervals. As shown, the effect of elections on investment is negative for a range of values in the low-end of the proportionality distribution (the vertical lines represents the bottom and top quartile of electoral disproportionality); however, the effect becomes less negative as disproportionality increases. The effect of elections turns even positive when disproportionality reaches very high levels (i.e. closer to the top decile).[12] Our hypothesis is thus supported for the vast majority of sample firms. However, in the discussion section we will discuss this latter unexpected finding.

INSERT FIGURE 2 HERE

INSERT TABLE 5 HERE

Next, we deal with concerns of endogeneity in the *timing* of elections. A number of countries in our sample have a flexible schedule of elections, i.e. elections may be

[12] In a supplementary test we augmented the model with the quadratic term of disproportionality and its interaction with the election dummy. The quadratic terms did not display any significance.

called upon before the natural expiry of a government. This, in turn, raises the concern that the timing of elections can be endogenous to events, such as the deterioration of economic performance or political turmoil, which can also affect firms' investment. Our baseline regressions do control for several variables capturing a country's economic performance. However, to further rule out this concern, we conduct the analysis excluding countries with a flexible election schedule. Our results, shown in Model 4 of Table 5, are unaffected by this restriction.[13] Additionally, we follow existing approaches based on the use of pre-determined election schedules as instrument for the observed election cycle (Alok & Ayyagari 2020; Durnev 2011). Election schedules are defined as the official time-span between elections: they are a strong predictor of the actual occurrence of an election (which satisfies the relevance condition) and plausibly have no bearing on firm investment other than through the timing of the actual election (which satisfies the exclusion restriction). To construct election schedules, we hand-collect data on the length of time between elections for every country in our sample. Second-stage results of the 2SLS regression (reported in Model 5) indicate that our results remain statistically significant and become larger in terms of economic magnitude.[14]

All our regressions control for the interaction between year and industry dummies, which are useful to absorb time effects (e.g., due to global business cycles) that are also heterogeneous across industries. Yet, one may be concerned that some factors, such as the recent financial crisis, affected countries in a way that may confound

[13] This result is consistent with Julio & Yook (2012) which documents a negative effect of elections on firms' investment in both countries with flexible and fixed election schedules.
[14] The instrument is statistically significant in the first stage and that the F-statistic of the first stage is above the conventional thresholds used to detect weak-instrument problems.

our results. To alleviate this concern, we re-estimated our models excluding the years of banking crises (drawn from Laeven & Valencia 2018). Results reported in Model 6 are again consistent with our baseline findings.[15]

In number of additional checks, we account for the role of abrupt changes in government policies across electoral systems. One may argue that coalition governments (more frequent in proportional systems) create some continuity in government policies, which in turn reduces the spike in uncertainty during an election. The Database of Political Institutions contains a classification of the ruling party's orientation (i.e., left, center or right) with regard to economic and social policies. We collect data on the political orientation of the ruling government to check whether changes in political views (from left to right or vice versa) are more common in proportional or plurality systems. We then re-estimate our model by using election periods that led to a drastic change in government. As expected, results in Model 7 show that the effect of elections on investment is significant and economically larger than our baseline estimates. Yet, the coefficient of the interaction term with plurality remains statistically and economically significant. Alternatively, we control for a dummy equal to one for changes in political views. Results in Model 8 indicate that, while a change in political views has a negative effect on firms' investment, the positive interaction effect of plurality and elections remains significant. Moreover, our results are robust to employing a continuous control for changes in party ideology. To this end, we use the Parliaments and Governments (ParlGov) database which (for a subsample of

[15] Our results are also robust to excluding the early years (such as the first three) or late years (such as the last three) of our panel dataset.

country-years) contains a variable which measures the ruling party's left/right orientation on a scale from 0 to 10. Using this variable, we construct a continuous variable by taking the squared of the change in the ruling party's orientation. Our findings, reported in Model 9, are robust to this alternative operationalization (notice that here it is not possible to estimate the direct effect of plurality because this variable does not exhibit time-changes in the sample used in this regression, and is thus perfectly collinear with firm fixed effects).

A key mechanism through which plurality systems may reduce uncertainty surrounding an election is that they allow a timelier appointment of the ruling government. This, in turn, helps to resolve the uncertainty about the future policies that will be implemented. To validate this argument, we estimate a model in which the key explanatory variable is (for each legislature) the log of the time-span (in days) between elections and government formation (drawn from ParlGov). Results (reported in Appendix A1) indicate that a slower appointment of the new government is negatively associated with firms' investment. This finding provide some direct support to one of the mechanisms outlined in the theoretical section.

Our election dummy is designed to capture changes in investment occurring in the period leading up to an election. A related question concerns the investment activity in the aftermath of an election. To explore this issue, we compute a post-election dummy equal to one for the year subsequent to an election period. We then estimate separately the model for firms in plurality or proportional/mixed electoral systems. Results in Appendix A2 indicate that the coefficient of the post-election dummy is not significant for firms in plurality systems (Model 1), whereas it is negative and significant for firms

in countries with proportional/mixed systems (Model 2). This result is consistent with the intuition that proportionality lengthens the negative effect of electoral cycles on corporate investment.

Investment behavior of multinationals during foreign elections

In this section, we test the third and fourth hypotheses, which concern the sensitivity of multinationals' foreign investment to political elections in the host countries. To this end, we use a subsample of Compustat US listed firms (from 1998 to 2017) which disclose investment data relative to the foreign countries where they operate. We estimate the following model:

$$I_{ijt} = \alpha_i + \beta_1 Foreign\ Election_{jt} + \beta_2 Plurality_{it} + \beta_3 Foreign\ Election_{jt} \times Plurality_{it} + \mathbf{X}'_{ijt}\delta + \gamma_i + \lambda_t + \varepsilon_{ijt}$$

where the dependent variable is the foreign investment of multinational *i's* in country *j* at time *t* (i.e. capital expenditures in the foreign country scaled by the beginning-of-year book value of foreign total assets). The electoral explanatory variables are operationalized as in our previous analyses, but at the level of the host country.[16] Our hypotheses suggest that elections in a host country have a negative effect on the multinational's foreign investment in that country; however, when such elections are held according to a plurality rule the negative effect is attenuated (i.e., the interaction term is expected to have a positive coefficient).

[16] Among the firm-level controls, we only include firm size since other items display a large number of missing values.

Table 6 displays the results. Model 1 shows the results obtained by clustering standard errors at the firm level. Consistent with our hypotheses, elections in the host country have a negative and significant effect on multinationals' foreign investment. Moreover, the coefficient of the interaction term between foreign elections and plurality is *positive* and statistically significant. In other words, during elections multinational firms in countries with a plurality system invest more than multinationals in countries with other systems. These results support the third and fourth hypotheses of our study. In Model 2, we show the robustness to clustering residuals at the country level, whereas in Model 3 we show the results obtained by replacing the plurality dummy with the continuous measure of electoral disproportionality. Economically, a standard deviation increase in disproportionality reduces by 60% the direct negative effect of elections on foreign investment.

INSERT TABLE 6 HERE

DISCUSSION

Politics can significantly shape a firm's access to resources and ultimately its financial profitability (Hillman & Hitt 1999). Drawing on insights from institutional economics (North 1990), the literature has devoted much attention to the relationship between a country's political characteristics and firms' strategies (e.g. Henisz & Delios 2001; Murtha & Lenway 1994; Soule et al. 2014). Within this research inquiry, one political

factor that has lately received significant attention is *political uncertainty*. Government actions encompass several dimensions related to trade policies, regulation, procurement contracts, and taxation, which are all relevant for corporate activities. Political uncertainty relates to the difficulty of firms to forecast such actions or gather key information on the legislative process (Julio & Yook 2012).

Political uncertainty tends to naturally rise during times of election, whose fate is often unexpected and may thus delay the decision of firms to invest in irreversible projects. Building on this idea, a recent literature has suggested to leverage the electoral cycle to capture variations in political uncertainty over time. Works in this area show that during electoral periods, at both the national and local level, firms significantly reduce their investment activities (Amore & Minichilli 2018; Jens 2017; Julio & Yook 2012, 2016).

We contributed to this literature in two significant directions. First, we expanded existing evidence on the relationship between electoral cycles and corporate investment by examining an important yet underexplored aspect of a country's political institutions, i.e. the electoral system. As we argued, in plurality systems voting results map more directly into parliamentary seats and hence policy outcomes, the prediction over future policy outcomes is more straightforward, and the new government is typically appointed soon after the voting date. These features contribute to attenuate the amount of political uncertainty that firms face in the wake of an election. Second, we analyzed the relationship between multinationality and political uncertainty in a firm's host country. Our arguments have suggested that while multinationals may be well equipped to hedge political risk in their home country, their international activities make them sensitive to

foreign countries' electoral cycles and their election system. By ascertaining the effect of foreign election cycles on multinationals, we offer a relevant contribution to the vibrant literature on how political risk influences foreign direct investment (e.g., Azzimonti 2019; Liu & Li 2019; Beazer & Blake 2018; Julio & Yook 2012; Jensen 2008) and, more generally, on the role of institutions in international business (e.g., Hoskisson et al. 2013).

We conducted the empirical analyses on two samples: a global dataset of listed firms from 1991 to 2017, and a sample of US listed multinationals from 1998 to 2017. A key empirical advantage of our analysis is that elections are held at different points in time across countries, and thus we can control for common effects to all sample firms. Moreover, electoral systems display significant differences across countries while being relatively exogenous to corporate outcomes. Consistent with our hypotheses, the evidence indicates that firms operating in countries with a plurality system are significantly better able to invest during election periods. Additionally, we find that the foreign investment of US multinational firms declines during elections in the foreign countries where these such firms operate. Yet, plurality systems appear to ameliorate such effect: the decline in foreign investment by US multinationals is lower when the foreign elections are held according to a plurality system.

By studying the propagation of political shocks on firm activities across different political environments, our findings help to grasp the institutional nuances connotating the relationship between political uncertainty and corporate outcomes. Moreover, they provide guidance to executives that need to confront the vicious implications of political uncertainty for their geographic expansion activities. The literature in this realm has

already remarked the importance of political uncertainty for foreign investment (Julio & Yook 2016; Nguyen et al. 2018). Our work suggests to beware of a specific element of a country's set of political institution, i.e. the electoral formula according to which the elections are held. To the extent to which elections do not take place simultaneously across countries, taking into consideration the electoral system of the host countries represents an opportunity toward developing portfolios of foreign investments that are more resilient to political shocks.

Our work has a number of limitations, which also provide opportunities for future research. The first relates to the challenge of measuring foreign investment with accounting data. This approach is common to the international business literature, which has benefited from a general improvement in the quality of accounting information following the adoption of rules like SFAS 131. That said, quantifying foreign investment using accounting data on the amount of capital investment may be subject to opaqueness and discretionary disclosure. Additionally, this approach typically involves annual data, which may not be ideal to capture adjustments in investment that may occur within an electoral cycle. Having fine-grained data on capital allocation over shorter periods of time can enhance our understanding of the relationship between electoral cycles and firms' strategies. This approach could also shed light on an unexpected finding of our analysis, i.e. that the effect of elections on investment turns positive for a small subset of firms subject to very high disproportionality. Recent works show that firms can time investment decisions along the political cycle to pursue political objectives. For instance, state-owned firms have been shown to increase investment and employment during election times as a means to construct voter support (Alok &

Ayyagari 2020; Inoue 2020). Going beyond state-owned firms, there is evidence that firms with social ties with politics increase employment during an election to support incumbent politicians (Bertrand et al. 2018). If these corporate actions are made to derive benefits from a social exchange with politicians, they might to be stronger in plurality single-member districts, where politicians can undertake distributive policies with more concentrated benefits. Studying how the relationships between politicians and firms differ depending on the electoral system provides a fruitful area of future research.

Another limitation of our study concerns the operationalization of multinational firms and their foreign investment activities. Due to data constraints, we limited the analysis to US listed multinationals with usable data in the Compustat Geographic Segment file. Future studies can expand the analysis by using broader samples of multinationals from multiple countries. Finally, we wish to address endogeneity issues regarding a country's elections. It is well known that electoral systems are largely time-invariant, and thus are largely unaffected by (current) business outcomes. Endogeneity in the timing of (early) elections is subtler as it can arise from a wealth of unobservable factors related to a country's economic and political conditions. To reduce this concern, we have followed existing prescriptions about including macroeconomic controls, checking the robustness to the use of fixed election schedules, and employing an instrumental variable regression. Future studies can account more explicitly for the nuances of the processes that may lead to early elections by also employing data on the political agendas of parties involved in the election and the intensity of electoral competition.

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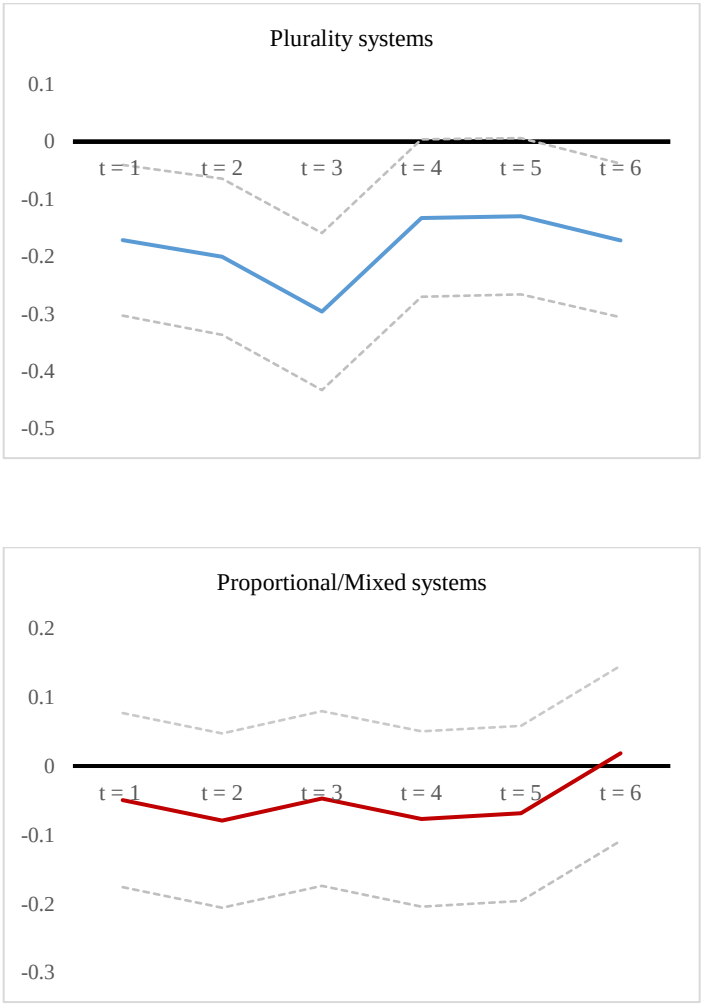
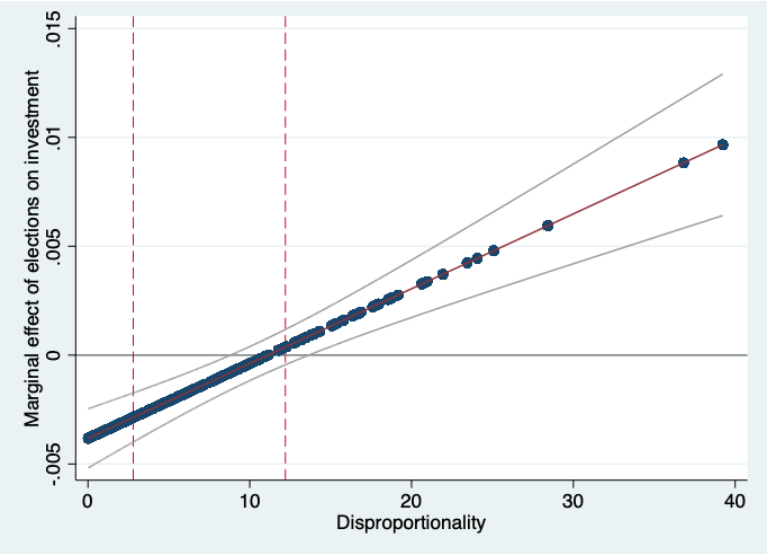
TABLES AND FIGURES

Figure 1. Evolution of economic policy uncertainty in the aftermath of elections



These figures show the coefficients of regressions (estimated separately for plurality and proportional/mixed countries) in which the dependent variable is the logarithm of the economic policy uncertainty index (from Baker et al. 2016), and the explanatory variables are a set of dummies for each of the months after election (from $t + 1$ to $t + 6$); the reference group is the month of the election. The regressions also include country fixed effects, and standard errors are heteroskedasticity-adjusted. The dashed lines represent the 5% confidence intervals.

Figure 2. Effect of elections on corporate investment for different values of disproportionality



This graph illustrates the result in Model 3 of Table 5 by plotting the marginal effect of elections on investment over the full range of values of electoral disproportionality. Each dot represents all observations for each value of disproportionality in the sample, and the two surrounding lines represent the 95% confidence intervals. The dashed vertical lines represent the values of the bottom and top quartile of electoral disproportionality.

Table 1. Country characteristics

Country	Observations in the full sample	Basis of executive legitimacy	Type of elections*	Electoral system**	Election timing
Argentina	1,150	Presidential	Executive	Proportional	Fixed
Australia	22,355	Parliamentary	Legislative	Mixed	Flexible
Austria	1,232	Parliamentary	Legislative	Proportional	Flexible
Belgium	1,592	Parliamentary	Legislative	Proportional	Flexible
Brazil	4,766	Presidential	Executive	Mixed	Fixed
Canada	13,214	Parliamentary	Legislative	Plurality	Flexible
Chile	2,646	Presidential	Executive	Plurality	Fixed
Colombia	488	Presidential	Executive	Proportional	Fixed
Czech Republic	292	Parliamentary	Legislative	Mixed	Flexible
Denmark	2,241	Parliamentary	Legislative	Proportional	Flexible
Finland	2,262	Parliamentary	Legislative	Proportional	Flexible
France	10,572	Parliamentary	Legislative	Plurality	Fixed
Germany	10,982	Parliamentary	Legislative	Mixed	Flexible
Greece	2,679	Parliamentary	Legislative	Mixed	Flexible
Hungary	337	Parliamentary	Legislative	Mixed	Fixed
India	41,313	Parliamentary	Legislative	Mixed	Flexible
Indonesia	4,327	Presidential	Executive	Proportional	Fixed
Ireland	1,123	Parliamentary	Legislative	Proportional	Flexible
Israel	4,188	Parliamentary	Legislative	Proportional	Flexible
Italy	4,370	Parliamentary	Legislative	Mixed	Flexible
Japan	49,783	Parliamentary	Legislative	Mixed	Flexible
Malaysia	14,847	Parliamentary	Legislative	Plurality	Flexible
Mexico	1,872	Presidential	Executive	Mixed	Fixed
Netherlands	2,837	Parliamentary	Legislative	Proportional	Flexible
New Zealand	2,100	Parliamentary	Legislative	Mixed	Flexible
Norway	3,237	Parliamentary	Legislative	Proportional	Fixed

Pakistan	3,321	Parliamentary	Legislative	Plurality	Flexible
Peru	1,340	Presidential	Executive	Proportional	Fixed
Philippines	2,729	Presidential	Executive	Mixed	Fixed
Russia	1,223	Presidential	Executive	Proportional	Fixed
Singapore	9,249	Parliamentary	Legislative	Plurality	Flexible
Spain	2,084	Parliamentary	Legislative	Mixed	Flexible
Sri Lanka	1,892	Presidential	Executive	Proportional	Flexible
Sweden	2,484	Parliamentary	Legislative	Proportional	Fixed
Switzerland	1,629	Parliamentary	Legislative	Mixed	Fixed
Thailand	7,563	Parliamentary	Legislative	Plurality	Flexible
UK	24,056	Parliamentary	Legislative	Plurality	Flexible
United States	131,693	Presidential	Executive	Plurality	Fixed
Venezuela	196	Presidential	Executive	Mixed	Fixed

* This variable denotes the type of elections. If the basis of executive legitimacy is presidential, people vote for the president, and we consider the executive elections. If the basis of executive legitimacy is Parliamentary, people vote for the parliament, which is in charge to elect the president or prime minister, and we consider the legislative elections.

** The electoral system is reported as of 2017.

Table 2. Summary statistics

	Observations	Mean	Std. Dev.	Median
Investment	396,261	0.062	0.097	0.031
ROA	396,261	0.033	0.325	0.087
Firm size	396,261	6.446	3.124	6.247
GDP growth	396,261	2.030	2.482	1.880
M1	396,261	73.815	35.645	70.428
EPU	396,261	0.1611	0.104	0.148
Interest rate	396,261	3.959	5.061	3.118

This table shows summary statistics for the firm-level and macroeconomic variables used in the empirical analysis.

Table 3. Investment and political elections

Panel A: Investment by electoral systems

	Plurality	Proportional/ Mixed	Difference
Investment	0.0605	0.0641	-0.0035
			(0.000)

Panel B: Investment during election periods

	Plurality	Proportional/ Mixed	Difference
Investment	0.0669	0.0626	0.0043
			(0.000)

Panel C: Investment around an election

		t = -2	*t* = -1	*t* = 0	*t* = 1
Plurality	Average	0.0614	0.0606	0.0647	0.0592
	Median	0.0301	0.0304	0.0317	0.0289
Proportional/Mixed	Average	0.0714	0.0770	0.0709	0.0673
	Median	0.0339	0.0357	0.0333	0.0323

Panel A shows a *t*-test comparison of the average investment of firms in plurality or proportional/mixed systems. Panel B shows a *t*-test comparison of the average investment of firms in plurality or proportional/mixed countries during election periods. The third column of both Panels shows the difference between columns 1 and 2 (with *p*-values reported in parentheses). Panel C shows the average and median investment of firms in plurality or proportional/mixed systems from two years before to one year after the election period.

Table 4. The effect of political elections and electoral systems on investment

Dependent variable: Investment				
	Baseline model	Subsample Plurality=1	Subsample Plurality=0	Interaction model
	(1)	(2)	(3)	(4)
Election	-0.0008	0.0005	-0.0015	-0.0026
	(0.011)	(0.378)	(0.007)	(0.000)
Election×Plurality				0.0034
				(0.000)
Plurality	0.0419			0.0420
	(0.025)			(0.025)
GDP Growth	0.0011	0.0005	0.0011	0.0011
	(0.000)	(0.001)	(0.000)	(0.000)
Firm size	0.0058	0.0071	0.0051	0.0058
	(0.000)	(0.000)	(0.000)	(0.000)
ROA	-0.0175	-0.0253	0.0028	-0.0175
	(0.000)	(0.000)	(0.445)	(0.000)
M1	-0.0000	0.0001	-0.0003	-0.0000
	(0.012)	(0.020)	(0.000)	(0.011)
EPU	-0.0238	-0.0122	-0.0239	-0.0235
	(0.000)	(0.000)	(0.000)	(0.000)
Interest rate	-0.0006	-0.0003	-0.0008	-0.0006
	(0.000)	(0.040)	(0.000)	(0.000)
Industry×Year effects	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes
Observations	396,261	217,204	179,057	396,261

p-values are reported in parentheses. Standard errors are clustered by firm.

Table 5. Robustness tests

Dependent variable: Investment									
	Country-clustering	Alternative election year	Continuous plurality	Fixed elections	2SLS model	Non-crisis years	Only elections leading to party change	Control for party change [0/1]	Control for party change [cont.]
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Election	-0.0026	-0.0018	-0.0011	-0.0033	-0.0299	-0.0020	-0.0217	-0.0028	-0.0018
	(0.000)	(0.000)	(0.064)	(0.078)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)
Election×Plurality	0.0034	0.0029	0.0002	0.0055	0.0312	0.0024	0.0200	0.0042	0.0041
	(0.005)	(0.000)	(0.001)	(0.008)	(0.000)	(0.001)	(0.000)	(0.000)	(0.001)
Plurality	0.0420	0.0417	0.0007	0.0353	0.0411	0.0364	0.0418	0.0420	
	(0.000)	(0.026)	(0.000)	(0.060)	(0.028)	(0.498)	(0.027)	(0.025)	
GDP Growth	0.0011	0.0011	0.0007	0.0016	0.0014	0.0011	0.0011	0.0011	0.0008
	(0.016)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Firm size	0.0058	0.0058	0.0058	0.0061	0.0059	0.0058	0.0051	0.0058	0.0078
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ROA	-0.0175	-0.0175	-0.0222	-0.0262	-0.0176	-0.0190	-0.0143	-0.0175	-0.0256
	(0.092)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
M1	-0.0000	-0.0000	-0.0001	0.0000	-0.0000	-0.0000	-0.0001	-0.0000	-0.0001
	(0.531)	(0.008)	(0.000)	(0.518)	(0.091)	(0.023)	(0.003)	(0.009)	(0.001)
EPU	-0.0235	-0.0234	-0.0184	-0.0040	-0.0226	-0.0201	-0.0211	-0.0233	-0.0047
	(0.022)	(0.000)	(0.000)	(0.221)	(0.000)	(0.000)	(0.000)	(0.000)	(0.079)

Interest rate	-0.0006	-0.0006	-0.0005	-0.0001	-0.0004	-0.0007	-0.0006	-0.0006	-0.0000
	(0.092)	(0.000)	(0.000)	(0.621)	(0.000)	(0.000)	(0.000)	(0.000)	(0.857)
Party change								-0.0023	0.0000
								(0.000)	(0.805)
Industry×Year effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	396,261	396,261	352,527	170,658	396,261	347,318	326,149	396,261	161,531

p-values are reported in parentheses. Unless differently specified, standard errors are clustered by firm.

Table 6. The effect of foreign political elections and electoral systems on foreign investment

Dependent variable: Foreign investment			
	Interaction model	Country-clustering	Continuous plurality
	(1)	(2)	(3)
Foreign election	-0.0333	-0.0333	-0.0626
	(0.026)	(0.032)	(0.010)
Foreign election×Plurality	0.0376	0.0376	0.0041
	(0.047)	(0.015)	(0.009)
Plurality	-0.0100	-0.0100	-0.0009
	(0.346)	(0.130)	(0.037)
GDP Growth	0.0020	0.0020	0.0021
	(0.297)	(0.134)	(0.295)
Firm size	-0.0010	-0.0010	-0.0010
	(0.893)	(0.888)	(0.897)
M1	0.0000	0.0000	0.0000
	(0.832)	(0.780)	(0.742)
EPU	-0.0106	-0.0106	-0.0067
	(0.674)	(0.585)	(0.742)
Interest rate	0.0002	0.0002	0.0002
	(0.530)	(0.144)	(0.657)
Industry×Year effects	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes
Observations	1,412	1,412	1,337

p-values are reported in parentheses. Unless differently specified, standard errors are clustered by firm.

Appendix A1. Investment and time to form a government

Dependent variable: Investment	
	(1)
Time to form a government	-0.0008
	(0.003)
GDP Growth	0.0009
	(0.000)
Firm size	0.0053
	(0.000)
M1	-0.0132
	(0.000)
EPU	-0.0001
	(0.001)
Interest rate	-0.0198
	(0.000)
Industry×Year effects	Yes
Firm fixed effects	Yes
Observations	344,365

p-values are reported in parentheses. Standard errors are clustered by firm.

Appendix A2. Investment and post-election periods

Dependent variable: Investment		
	Subsample Plurality=1	Subsample Plurality=0
	(1)	(2)
Post-election	0.0005	-0.0024
	(0.329)	(0.000)
GDP Growth	0.0005	0.0011
	(0.000)	(0.000)
Firm size	0.0071	0.0051
	(0.000)	(0.000)
ROA	-0.0253	0.0028
	(0.000)	(0.422)
M1	0.0001	-0.0003
	(0.011)	(0.000)
EPU	-0.0122	-0.0242
	(0.000)	(0.000)
Interest rate	-0.0003	-0.0008
	(0.029)	(0.000)
Industry×Year effects	Yes	Yes
Firm fixed effects	Yes	Yes
Observations	217,152	178,995

p-values are reported in parentheses. Standard errors are clustered by firm.

Alliances or Acquisitions during political uncertainty: the role of business complementarities and similarities between partners

Abstract

I study how political uncertainty shapes the propensity of firms to ally versus acquire. Testing my hypotheses on a dataset of US firms during gubernatorial elections between 1990 and 2018, I show that firms in states holding elections, and thus subject to higher political uncertainty, prefer alliances to acquisitions. I then show that this decision is contingent on whether the partner is similar or complement in business: during political elections, firms whose business is similar prefer to engage in either acquisitions or alliances (as opposed to none), and in choosing between the two modes, they prefer acquisitions to alliances. By contrast, firms whose business is complementary prefer non-cooperation rather than an alliance or an acquisition. Collectively, my findings provide new insights into the importance of political uncertainty for shaping firms' corporate strategies.

Keywords: alliances; mergers and acquisitions; political uncertainty; business similarity, business complementarity.

INTRODUCTION

Alliances and acquisitions are often considered two alternative strategies for firms interested in accessing or combining resources to achieve similar strategic goals (McConnell & Nantell, 1985). Researchers have extensively analyzed when companies should prefer acquisitions to alliances or vice versa (e.g., Dyer, Kale & Singh, 2004). In general, the choice between alliances and acquisitions depends on the experience that each firm has in these two entry modes (Mellewigt et al., 2017). But also, alliances are preferred to acquisitions in the presence of information asymmetries on the potential target (Balakrishnan & Koza, 1993) or when the assets of allied firms are separable (Hennart, 1988) or if companies are complement in business (Wang & Zajac, 2007); instead, acquisitions are preferred to alliances if the companies maintain business similarity (Wang & Zajac, 2007). These factors underscore the firm's organization, strategy, and alignment with the prospective partner or target. Going beyond these traditional factors, this study investigates how an exogenous factor, namely political uncertainty, shapes firms' decisions to ally or acquire.

Political uncertainty has shaped the global economy over the years and influenced the strategic decision-making of companies. For example, scholars have discovered that political uncertainty tends to increase during political elections due to the inability to predict the policies that the new government will implement. This uncertainty hurts domestic and multinational business investments, capital expenditures, dividends and even corporate governance decisions (Amore & Corina, 2021; Bonaime et al., 2018; Nguyen et al., 2018; Jens, 2017; Baker et al., 2016; Gulen & Ion, 2016; Huang et al., 2015; Yook & Julio, 2012, 2016).

In particular, previous research shows that, during times of political uncertainty, acquisitions decline due to an increase in the option value to delay investment (Grave et al., 2012; Beltratti & Paladino, 2013; Nguyen & Phan, 2017; Bonaime et al., 2018; Chen et al., 2018). What remains unclear is whether political uncertainty makes firms shy away from

acquisitions at the benefit of alternative modes of operation. The current study explores which entry mode is preferred, alliance or acquisition, under high political uncertainty and this decision is contingent on whether the partner is similar or complement in business.

For the empirical analysis, I focus on 600 large listed companies in the US based on their assets and their corresponding 2,094,012 firm dyads during federal elections between 1990-2018. My results show that companies reduce both alliance and acquisition choices during an election and this reduction is stronger for acquisitions than for alliances. This means that companies prefer alliances to acquisitions when the political environment is perceived as highly uncertain. Political uncertainty brings uncertainty on economic policies, shaping the business landscape and affecting investment outcomes. Uncertainty over such policies can alters the valuation of acquisitions (Lee, 2018), underestimating the likelihood that the host government will adopt regulations unfavourable to the acquired business, which can lead to an overpayment of the acquisition, altering the relative bargaining power between acquiring versus target firms. The drop in acquisitions is higher than the drop in alliances because the investment for alliance is not tied down and is more reversible, provide more strategic flexibility and may reduce risk (Hoskisson & Busenitz, 2001; Harrison et al., 2001). Therefore, even if the political situation becomes unfavourable, the allies have room to back out or to flexibly adjust the alliance. With an acquisition, if the business environment become unfavourable the firm will have less room to make flexible adjustments, which would require internal organizational adjustments or even divestitures.

Political uncertainty implies new regulations and government decision makers have the ability to alter market size through government purchases and regulations affecting substitute and complementary products (Hillman & Hitt, 1999). Therefore, the previous results change if we compare the business in which the companies are located. During political uncertainty, demand languishes, and this in turn strengthens competitive pressures (Bloom, 2014), causing firms to engage in some form of cooperation to maintain their profit

position (e.g. by growing in market shares). Companies similar in business are competitors and, as in times of high political uncertainty, market demand decreases and market supply remains the same, causing prices and profits to drop, similar companies in business try to reduce supply with collusive agreements between competitors and to reduce the competitive pressures generated by the highly uncertain political environment. This means that during high political uncertainty, similar firms in business prefer both alliances and acquisitions rather than not engaging in any cooperation strategy; and, moreover, they prefer acquisitions to alliances because the former can actually reduce the quantity offered. This research complements previous studies by showing that not all acquisitions decrease during times of high political uncertainty, on the contrary, similar firms in business prefer to increase alliances and acquisitions to cope with the uncertainty, with the latter increasing the most.

Otherwise, firms complementary in business are not competitors, so a collusive arrangement between them through the acquisition or alliance would not actually reduce supply. During political uncertainty, governments set rules that can benefit or harm some businesses, which is unknown until the election is over. While it is true that companies have a better understanding of similar businesses and can better predict the consequences of future policies in that business, it is not true for companies with complementary businesses -they belong to a business completely unknown to targets/partners, making an acquisition or alliance riskier strategies for the acquirer/partner. Contrary to Wang & Zajac (2007), where complementary firms in business prefer alliances versus acquisitions; this study shows that during times of political uncertainty, complementary companies prefer non-cooperation rather than an alliance or an acquisition.

My work contributes to two research areas. First, it is a building block of the extensive literature on when to ally versus acquire (e.g., Dyer, Kale & Singh, 2004; Hennart, 1988; Kogut & Singh, 1988; Williamson, 1991; Teece, 1992; Balakrishnan & Koza, 1993; Reuer & Koza, 2000; Villalonga & McGahan, 2005; Wang & Zajac, 2007). While this literature has

extensively discussed numerous explanations for guiding this decision, such as scale/scope economies, resource dependence, transaction costs, institutional pressures, network effects, and organizational learning (Gulati, 1998; Palmer & Barber, 2001; Salter & Weinhold, 1978), it has not yet explored how such decisions unfold under political uncertainty. I contribute to this body of research by focusing on the trade-off between acquisitions and alliances in the context of elections looking at costs and benefits of firms' business configurations. As I will argue, choosing acquisitions over alliances involves a cost-benefit trade-off of commitment versus flexibility. Political uncertainty skews this trade-off towards the advantage of flexibility. Moreover, this work is looking at the moderation effect of business similarity and complementarity during political uncertainty, which make acquisitions more appealing versus alliances between firms which business is similar and less appealing both entry modes between firms which business is complement.

Second, I add to the growing literature on the effects of political uncertainty on firm investment (Baker et al., 2016; Bonaime et al., 2017; Gulen and Ion, 2016; Jens, 2017; Julio and Yook, 2012; Nguyen & Phan, 2017) looking not only at capital expenditure, or at merger and acquisitions, but also at alliance from a dyadic perspective. Given that alliances and acquisitions involve at least two firms, the drawback of looking at only one firm preferences is to provide just a one-side perspective, which is not completely correct. At least two firms decide to combine their businesses looking at their preferences and characteristics, which has clearly a dyadic nature: firms often make acquisition decisions based on who the potential target firms are in relation to themselves, and not simply considering target firms in isolation (Wang and Zajac, 2007).

The paper proceeds as follows. In the next section, I provide an account of current debates about the nexus between political uncertainty and entry modes strategies. Then, I develop my hypotheses. I move to explain the data and variables, and present the findings

together with a number of robustness checks. Finally, I discuss the implications of my findings and conclude.

THEORY AND HYPOTHESIS

The effect of political elections on entry modes: alliances and merger and acquisitions

Beckman et al. (2004) define uncertainty as “the difficulty firms have in predicting the future, which comes from incomplete knowledge”. Uncertainty has been extensively discussed in the organization and strategy literatures, particularly among theorists who seek to unfold the complex nature of interactions between organizations and their environment. Research in this area has studied uncertainty in its various forms by distinguishing between firm-specific and market-specific uncertainty (Beckman et al., 2004). The first type of uncertainty originates from changes that are internal to the firm, such that entering a new market (Greve, 1996), acquiring another firm (Haunschild, 1994) or positioning plants internationally (Henisz & Delios, 2001); whereas the second type of uncertainty relates to external factors, e.g. macroeconomic events, that apply to all firms operating within a given context (Beckman et al., 2004); such as economic shocks (Chakrabarti, 2014), demand fluctuations (Bennett & Hall, 2020), regulatory changes (Dutt & Joseph, 2019; Fabrizio, 2013), and natural disasters (Oh & Oetzel, 2011).

Comparing the two sources of uncertainty, firm-specific and market specific, for instance, there is evidence that firm-level uncertainty increases imitation by complicating predictions about future performance (Gaba & Terlaak, 2013); by contrast, market-specific uncertainty reduces the precision in the information that can be inferred from others, thereby reducing imitation. Other works in this area study how these different types of uncertainty influence network partner selection (Beckman et al., 2004; Podolny, 1994; Gulati, 1995) and governance choices (Carson et al., 2006).

Only recently there was an increasing concern to explore a specific type of uncertainty stemming from the political variable, i.e. political uncertainty, defined as the irresolution about the policies and regulations that a new government will put in place (Baker et al., 2016; Bloom, 2014; Blake & Jandhyala, 2019). Political uncertainty, or uncertainty about future government policies, is an external factor that apply equally to all firms. Political uncertainty can discourage irreversible corporate actions due to real-option considerations: uncertainty increases the incentives to wait to get new information rather than committing early. Moreover, as compared to other sources of risk, policy uncertainty is hard to diversity away, and thus increases borrowing costs (Pastor & Veronesi, 2012).

Political uncertainty matters to firm decisions because changes in policy can alter the environment in which firm operates (Chen et al., 2018). When firms decide to expand their operations or develop new capabilities, their managers have a range of options about how to proceed. Growth can be internal or can involve collaborative actions with other firms. Generally speaking, when markets are efficient there are no costs associated with transactions; yet markets are notoriously imperfect, and cooperative efforts with other firms will involve risky investments which tend to be organized as contracts, including alliances and acquisitions (Yin & Shanley, 2008). Politicians and regulatory institutions frequently make decisions that alter the environment in which firms conduct business (Gulen & Ion, 2016), thus changing the underlying uncertainty of the business context where firms operate. Governments issue a vast number of new directives which create uncertainty for firms and substantially increase the transaction costs (Jacobson et al., 1993; Williamson, 1979) of doing business.

Government decision makers have the ability to alter market size through government purchases and regulations affecting substitute and complementary products; to alter market structure through entry and exit barriers and antitrust legislation; to alter firm's cost structure through various types of legislation pertaining to multiple factors, such as employment

practices and pollution standards; and to affect the demand for products and services by charging excise taxes and imposing regulations that affect consumption patterns (Hillman & Hitt, 1999).

Political elections are a key source of uncertainty because they are exogenous to the economic conditions and induce changes in regulation, administrative frameworks, laws, that are hard to forecast. A temporary increase in uncertainty surrounding national or state elections increases managerial risk aversion (Panousi & Papanikolaou, 2012) and creates incentives for firms to postpone the decision to enter in a new market transaction with other firms until the uncertainty is resolved. Consequently, the uncertainty associated with future government decisions can significantly increase the uncertainty related to firms' activities. For example, Henisz (2000) analyses the relationship between political hazard and multinationals' entry mode and Lee (2018) shows that political uncertainty alters the relative bargaining power between acquiring and target firms engaged in cross-border acquisitions.

Finance scholars have largely studied the patterns of mergers and acquisitions during political uncertainty, and they agree that there is a sharp decline when uncertainty surges. Bonaime et al. (2018) refer to political and regulatory uncertainty and show evidence that one standard deviation increase in policy uncertainty is associated with 3.9% decrease in the number of M&A deals, which is in line with the evidence in Chen et al. (2018). Nguyen and Phan (2017) found that policy uncertainty is negatively related to firm acquisitiveness and positively to the time it takes to complete M&A deals.

Likewise, mergers and acquisitions diminish during political uncertainty, so do alliances. Alliances involve a risky decision because they can have loss of consciousness, limited control, difficult coordination, and partner risk, as it is difficult to predict and control the partner's opportunistic behavior. During political uncertainty, it is unknown which business activity will favor the new government, it is unknown which new regulation will be implemented, so it is unknown whether the partner will be the right partner to choose based

on the uncertain environmental conditions. The new government may imply possible new regulations, which could affect the firm's certainty about its future cash flows. As uncertainty rises, firms will begin to avoid taking low-risky or high-risky projects. In the alliance decision, political uncertainty is a lack of knowledge about the future political environment and how that environment will affect an alliance outcome. Therefore, I hypothesize the following:

> ***Hypothesis 1 (baseline):*** *Political elections have a negative effect on firms' acquisition activity.*
>
> ***Hypothesis 2:*** *Political elections have a negative effect on firms' alliance activity.*

Notoriously, there are many vehicles used by firms to enter into new business: franchising, joint venture, internal development, alliances and acquisitions. Understanding the variables playing a role behind these decisions has been largely debated between strategy scholars. Some researchers developed theoretical arguments around transaction costs (Poppo & Zenger, 1998; Zajac & Olsen, 1993), configuration of firms' resources and capabilities (Wang & Zajac, 2007), social structure (Gulati, 1995) and organizational learning (Khanna et al., 1998). Others looked at situations of asymmetric information (Villalonga & McGahan, 2005) or cultural differences (Kogut & Singh, 1988; Kogut, 1991).

Alliances and acquisitions are considered the opposite mean of external development in the continuum of governance modes (Villalonga & McGahan, 2005; Lavie, 2007). Gulati (1998) defines strategic alliances as "voluntary arrangements between firms involving exchange, sharing, or co-development of products, technologies, or services"; differing from acquisitions, which "involve the combination of all of the assets of participating firms under common ownership" (Yin & Shanley, 2008). The fundamental difference between these modes concerns ownership: acquisitions imply an ownership interest, whereas alliances do

not, and, in normal times, these two were compared based on how much control is needed over a project (Villalonga & McGahan, 2005).

The pros and cons of alliances and acquisitions can be studied by examining internal and external factors. For internal factors, strategy scholars have developed several theories, from resource dependence and transaction costs to organizational learning and social embeddedness. Resource dependency theorists have argued that firms manage interdependence with other actors by reducing their dependence on others while increasing others' dependence on them (Oliver, 1991; Pfeffer & Salancik, 1978). Transaction cost theorists have argued that the choice of acquisitions over alliances stems from the need to reduce the effects of environmental uncertainty on a transaction, particularly the effects of partner opportunism due to market imperfections (Williamson, 1985). External factors are seen as environmental characteristics of the new market, for example cultural distance, country risks and environmental uncertainty (Kogut & Singh, 1988; Busija, O'Neill & Zeithaml, 1997), which represent a fundamental business decision variable between alliances and acquisitions and determine the final output.

Alliances and acquisitions are both vehicles that enable firms to access resources that lie beyond their current boundaries. There are many differences between them, such as riskiness, duration, degree of integration, ownership stakes (Sawler, 2005; Dyer et al., 2004), and each strategy has unique advantages and disadvantages in terms of access to resources, synergies and market conditions (Dyer et al., 2004). Notably, either alliances so acquisitions offer an immediate access to technologies, products, distribution channels, and favourable market positions (Al-Laham et al., 2010). Acquisitions are driven by the desire to obtain valuable resources (Chaudhuri & Tabrizi, 1999; Heeley, King, & Covin, 2006) and it can be an external source of innovation (Arora & Gambardella, 1990; Graebner, 2004; Hitt, et al., 1996). Acquisitions are also preferred to increase the number of potential products, to reduce R&D costs (Ahuja & Katila, 2001; Ranft & Lord, 2002).

On the other hand, acquisitions, unlike alliances, present higher risks. Acquisitions may imply an overpayment for some assets that are not needed and inflexibility under changing conditions. They can increase employee stress (Cartwright & Cooper, 1992) leading to an increased turnover (Hambrick & Canella, 1993), and, therefore, a drop in the productivity (Paruchuri et al., 2006). Additionally, managers have a short sighted view of strategic acquisitions, which can make them unsuccessful (Chaudhuri & Tabrizi, 1999). Post-merger integration period is also a source of risk, it can be larger than strategically thought, and imply higher costs.

In comparison, alliances present lower costs for sharing power compare with acquisitions (Hennart, 1998). They have also greater flexibility (Nooteboom, 1999) and are thus preferred during unpredictable periods because they are more reversible and easier to terminate (Yin & Shanley, 2008). Even if alliances also present some drawback, such as knowledge leakage, limited control, difficult coordination, and partner risk, as it is difficult to predict and control opportunistic behaviour of the partner (in acquisitions, a firms can better control the acquired unit); those are firm-specific risks, which exists in normal and uncertain times. Transaction cost theorists (Williamson, 1985) argue that the choice of alliances versus acquisitions results from a need to decrease the effects of environmental uncertainty on a transaction (Yin & Shanley, 2008). If the new entity will face higher market uncertainty, then it is better to engage in an alliance strategy (Dyer et al., 2004) because alliances allow a more dynamic response to variable factors (Reuer & Ariño, 2007). Conversely, acquisitions are difficult in evaluating the potential target and the uncertainty regarding the post-integration process (Vaara, 2003; Balakrishna & Koza, 1993). Far from being static entities, alliances are dynamic and change throughout their lifecycle (Oleksiak et al., 2019). They can change contractually, in terms of board composition (Argyres & Mayer, 2007; Ariño & Reuer, 2004; Reuer, Zollo, & Singh, 2002) or equity distribution between alliance partners (Chung & Beamish, 2010; Iriyama & Madhavan, 2014).

During unpredictable times, the drop in acquisitions is higher than the drop in alliances because the investment for alliance is not tied down and is more reversible, provide more strategic flexibility and may reduce risk (Hoskisson & Busenitz, 2001; Harrison et al., 2001). Therefore, even if the political situation becomes unfavourable, the allies have room to back out or to flexibly adjust the alliance. With an acquisition, if the business environment become unfavourable the firm will have less room to make flexible adjustments, which would require internal organizational adjustments or even divestitures.

Political uncertainty brings uncertainty on economic policies, shaping the business landscape and affecting investment outcomes. Uncertainty over such policies can alters the valuation of acquisitions (Lee, 2018), underestimating the likelihood that the host government will adopt regulations unfavourable to the acquired business, which can lead to an overpayment of the acquisition, altering the relative bargaining power between acquiring versus target firms. Moreover, the outcome of investment is harder to predict under political uncertainty, and therefore the acquirer will require compensation for political uncertainty such as paying a lower takeover premium and using a contingent payment option. Without such compensation, the acquirer may not find it attractive to make a deal (Lee, 2018).

It is known that the government's economic policies -such as exchange rate, labour laws, firm taxation- shape the business landscape and affect investment outcomes (Holburn & Zelner, 2010). During political elections, predictions over such policies can be erroneous and this uncertainty can complicate the valuation of alliances and acquisitions (Lee, 2018), discouraging the negotiations. Based on this argument, I posit that, during political elections not only alliances drop, but also, the negative effect of political elections on acquisitions is stronger compared to alliances: political uncertainty would make companies more cautious in choosing their external development strategy, preferring to postpone such decision. Therefore, I hypothesize the following:

Hypothesis 3: *During political elections, the drop in acquisition activity is greater than the drop in alliance activity.*

Political uncertainty and partner selection: business similarity and complementarity

Managers can make two broad business comparisons when deciding whether to acquire or ally with a firm: the extent to which a target firm's businesses overlap with its businesses (similarity) and the extent to which a target firm's businesses add to its businesses (complementarity). Having shown that during periods of political uncertainty companies drop alliances and acquisitions, with an higher negative effect for acquisitions compared to alliances, the following step of the paper is to study if this result change under conditions of political uncertainty if the partners are similar or complement in business.

Similarity and complementarity in business or resources (Koh & Venkatraman, 1991; Pehrsson, 2006) are discussed widely in the strategic management literature. Koh & Venkatraman (1991) point out that joint ventures can create value based on how resources are combined, and can be maximized when firms are similar in market and product scope. Villalonga and McGahan (2005) show that similar companies in an industrial activity prefer acquisitions to alliances and alliances to divestments, as a consequence of resource-based view and transaction costs' theories. Wang and Zajac (2007) find that firms with higher business similarity prefer acquisitions over alliances, whereas firms with business complementarity prefer alliances over acquisitions, without comparing these choices with no cooperation. Yu et al. (2015) focus their analysis on acquisitions and demonstrate that acquirers prefer target firms with greater resources complementarity; otherwise, if R&D pipeline are compared, acquirers prefer target firms with greater resources similarity. Bettinazzi et al. (2018) focus on ownership similarity between firms and demonstrate that acquisitions are more likely to occur among similar firms.

Based on previous studies it emerges that similarity and complementarity encapsulate different dimensions, and the conclusion about how those affect firms' behavior may differ according to which dimension it is compared. In this paper, I focus on business similarity and complementarity in order to compare the trade-off between alliance versus acquisition choice during political uncertainty, and alliance and acquisition versus no cooperation choice during political uncertainty.

Political uncertainty implies new regulations and government decision makers have the ability to alter market size through government purchases and regulations affecting substitute and complementary products (Hillman & Hitt, 1999). They can affect the demand for products and services by charging excise taxes and imposing regulations that affect consumption patterns (Hillman & Hitt, 1999), and they can alter market structure through entry and exit barriers and antitrust legislation (Hillman & Hitt, 1999). During political uncertainty, demand languishes, and this in turn strengthens competitive pressures (Bloom, 2014), inducing firms to engage in some form of cooperation to maintain their profit position (e.g. by growing in market shares). Firms whose business is similar are more likely to share similar resources, therefore, are more likely to compete (Hannan & Freeman, 1977) and they can directly reduce the competitive forces with some form of agreement with their competitors: alliances or acquisitions. Therefore, I hypothesize the following:

> ***Hypothesis 4a:*** *During political elections, the greater the degree of business similarity between two firms, the greater the probability of either an alliance or acquisition (vs. no cooperation).*

Regarding the choice between alliances and acquisitions with partner/target similar in business, I see several factors that would suggest that similarity in business favours acquisitions during political uncertainty. Again, during political uncertainty, demand languishes, and this in turn strengthens competitive pressures (Bloom, 2014), firms similar in business are competitors and they can reduce significantly market competition by

decreasing the number of firms in the marketplace, implying more acquisitions than alliances. Moreover, during competitive pressures, firms similar in business experience a lower willingness to share resources in collaborative agreements during political uncertainty; therefore, direct competition between focal / partner and target / partner firms can increase the need for "protective" governance structures, such that acquisitions are preferred to alliances, promoting knowledge sharing between partners (Oxley & Sampson, 2004).

Additionally, cooperative efforts may be complex, due to a higher need of sharing in overlapping areas (Bleeke & Ernst, 1995), and risky (Kogut & Singh, 1988). Therefore, firms may prefer to combine their resources under common ownership in an acquisition (Yin & Shanley, 2008) in order to pre-empt competition. Based on economies of scale within the organization, greater similarity implies a lower cost of integration (Coase, 1937) and higher value creation (Wang & Zajac, 2007); acquirers are thus more likely to understand the target's business when the target's assets are related to the acquirer's business (Capron & Shen, 2007). Firm similarity reduces information asymmetries thereby reducing the informational cost of acquisitions during political uncertainty (Wang & Zajac, 2007). A pair of firms with similar businesses may generate conflicts between them during the operation of an alliance. Conflicts may especially be likely to arise in the overlapping areas (Bleeke & Ernst, 1995). The risks of cooperation include creating new competitors, making the existing competitors stronger through knowledge transfer and market access (Kogut, 1988). This set of concerns suggests that firms similar in business are more likely to engage in an acquisition than to form an alliance. Drawing on these insights, I posit that not only political uncertainty increases the likelihood of alliances or acquisitions when firms display a higher degree of similarity, but, also, political uncertainty would increase the likelihood of acquisitions (as compared to alliances) between such similar firms.

Hypothesis 4b: *During political elections, the greater the degree of business similarity between two firms, the greater the probability of an acquisition versus an alliance.*

The above argument may not be true for entry mode strategies among firms whose businesses are complementary. Several studies define complementarity in a variety of ways that result in differences in analysis and hypothesis development. Harrison et al. (1991, 2001) envisioned complementarity in resources and measured them by looking at differences in firms' R&D intensity, capital intensity, administrative intensity, and debt intensity. Stuart (2000) focuses on complementary assets owned by different organizations; for example, when each firm possesses strength in a different stage in a product's value chain, complementarities may arise if one firm has manufacturing expertise and the other controls a distribution channel. The focus of this paper is on business complementarity, defined as the extent to which two firms' businesses are different, but still interdependent and mutually supportive (Tanriverdi & Venkatraman, 2005; Wang & Zajac, 2007). For example, if a firm combine, usually, two different activities, such as manufacturing and packaging soaps and manufacturing pulp, it means that those activities are complements.

Contrarily to the findings in Wang and Zajac (2007) and Yu et al. (2015) - where firms with business complementarity have a higher likelihood of both entry modes-, during a period of high political uncertainty companies that have to choose a governance arrangement with a firm whose business is complementary may prefer to wait and let uncertainty resolve instead of having an acquisition or an alliance.

Political uncertainty, defined as the irresolution about the policies and regulations that a new government will put in place (Baker et al., 2016; Bloom, 2014; Blake & Jandhyala, 2019), is an important source of risk as it could lead to increased uncertainty about target/partner firms' standalone values or the value of deal synergies (Bonaime et al., 2018). The government and government policies are critical sources of uncertainty for firms and

have control over critical resources that shape firms' competitive environments (Hillman & Hitt, 1999). During political uncertainty, there is a generalized uncertainty about the future states of the world and therefore which business will be benefited and which will not. Governments set rules that can benefit or harm some businesses, which is unknown until the elections come over. Firms which business is complement, can have an opportunity to gain competitive advantage, which is highly true if the environment is uncertain, but it is still a risky decision.

During political uncertainty there would be three possible outcomes for firms that are thinking to engage in a relationship with a new firm which business is complement: they can lose competitive advantage if they are in a business that will be harmed by future regulation; or they can be in a steady state, not lose and not gain any competitive advantage; or they can gain competitive advantage guessing to be in a business that perfectly complement their own business and have super-additive synergies. For these three scenarios there are differences in risk if we compare alliances versus acquisitions and these two options with no resource combination between two firms.

Assimilating complementary resources to the firm can be difficult as it can increase integration costs, decrease knowledge transfer, and cause human resource disruptions (Bowman & Helfat, 2001; Chang & Singh, 2000; Yu et al., 2015). Mistakes that are made in selecting potential targets on the basis of business complementarity are likely to cause serious problems during integration (Harrison et al., 2001). Therefore, firms must have effective research mechanisms to select potential targets/partners with complementary businesses: acquirers/partners must make broader comparisons to consider if a target firm’s business add to its existing business (Yu et al., 2015). During political uncertainty there is a huge lack of information, complementary firms in business are not perfectly known to each other, the previous relationship between government and business is unknown, and there is uncertainty as to which activities the new government will benefit or it will hurt. The

likelihood of making a mistake in valuating target businesses and the future creation of synergies by integrating firms resources is considerably high.

While companies may have a better understanding of related assets and can better predict the consequences of future policies in that business, this is not true for companies with complementary businesses: they belong to a business completely unknown to targets/partners. Moreover, firms use a variety of strategies (e.g. lobbying, contributions) to gain influence or improve their access to the public-policy process (Hillman & Hitt, 1999). Related firms can have a better understanding on how the lobbying agenda is moving, which, again, it is fully unknown for firms complementary in business. During high political uncertainty, in which the future of companies' business is unknown and highly uncertain, forecasts on target/partner selection can be highly erroneous and distorted; therefore, instead of starting a cooperation strategy, called acquisition or alliance, with complementary companies in business, they prefer to wait for the uncertainty to be resolved. Therefore, I assume that companies prefer to wait for uncertainty to be resolved instead of initiating an acquisition or alliance during the period of high political uncertainty.

> ***Hypothesis 5a:*** *During political elections, the greater the degree of business complementarity between two firms, the lower the probability of an acquisition vs. no cooperation.*
>
> ***Hypothesis 5b:*** *During political elections, the greater the degree of business complementarity between two firms, the lower the probability of an alliance vs no cooperation.*

On the other hand, the goal for firms to seek complementary businesses is to compensate for weaknesses in their existing businesses (Harrison et al., 2001). Complementarity in business offer higher opportunities for expansion and for value-enhancing resource redeployment (Cassiman & Veugelers, 2006). Firms which business is complementary can use a complementary set of related resources across business units

and create additional, super-additive, value synergies that are not captured by resource similarity (Tanriverdi & Venkatraman, 2005), which would imply a preference toward cooperation with partners which businesses are complementary.

In times of high political uncertainty, there would be new opportunities for companies to create synergies. During the elections, there is profound uncertainty about future policies and regulations, which can not only harm some companies, but also create new business opportunities. Companies have better information about their business, but this information is almost unknown to companies that have a complementary and not similar business.

All companies are surrounded by uncertainty about future regulation, and companies want to leverage this scenario to build new cooperation in a complement, but not similar, business, while not providing the latter with any super additive value. The only scenario in which companies can try to capture a competitive advantage in an uncertain scenario is to find themselves in a company that integrates their business with an alliance, which may be the least risky cooperation strategy. Strategic alliances are interesting for enhancing business packages when an organization's current capabilities are insufficient to achieve the desired results. Alliances provide access to complementary businesses and do not require a long-term commitment to such businesses as acquisitions.

On the basis of these intuitions, I hypothesize that political uncertainty, even if it reduces the probability of both cooperation strategies, by comparing the two strategies with each other, alliances are preferred in order not to lose the possible value that can be generated by greater synergies between complementary partners

> ***Hypothesis 5c:*** *During political elections, the greater the degree of business complementarity between two firms, the lower the probability of an acquisition vs an alliance.*

DATA AND VARIABLES

The empirical analysis builds on a panel dataset of firms in United States from 1990 to 2018. For hypotheses 1, 2 and 3 I use quarterly data, to have a more fine-grained data considering that firms can respond to elections in a shorter time span. Instead, for hypotheses 4a, 4b and 5a, 5b, and 5c, I use yearly data since, as I will explain below, the dyadic analysis creates computational burdens at the quarterly level. I developed a unique dataset by merging a number of different data sources, covering alliance and acquisition data, election data, firm-level data and macroeconomic data. Acquisition and alliance data are from the Thomson Reuters SDC Platinum database (SDC). To be included in the sample, a deal must be classified as: an acquisition, an acquisition of assets, an acquisition of majority interest, a merger, or an alliance. I link acquirers and targets to elections based on their state of headquarters as reported in SDC. I follow Bhagwat et al. (2016) and identify the timing of a merger by using the announcement date because firms are most susceptible to policy changes during the time period between the announcement and effective dates. I employ Congressional Quarterly Press for US gubernatorial elections data, Compustat database to control for firm characteristics and World Bank database to control for national macroeconomic characteristics.

Dependent variables

Acquisition and Alliance data

The dependent variable for hypothesis 1, the effect of political elections on acquisition activity, is NumberAcquisition equal to the number of acquisition announcements (Chen et al., 2018) per quarter-state. The dependent variable for hypothesis 2, the effect of political elections on alliance activity, is NumberAlliance equal to the number of alliance announcements (Chen et al., 2018) per quarter-state. For hypothesis 3, during political elections, the substitution effect between alliance and acquisition, the dependent variable is the NumberAlliance equal to the number of alliance announcements (Chen et al., 2018) per

quarter-state. The sample contains 5,800 state-quarter acquisition and alliance observations from 1990 to 2018.

The level of analysis for hypotheses 4 and 5, on the likelihood of governance structure and the likelihood of an alliance or acquisition occurrence between firms as a function of business similarity or complementarity during elections, is done at the dyadic level. Given that alliances and acquisitions involve at least two firms, the drawback of looking at only one firm preferences is to provide just a one-side perspective, which is not completely correct. At least two firms decide to combine their businesses looking at their preferences and characteristics, which has clearly a dyadic nature: firms often make acquisition decisions based on who the potential target firms are in relation to themselves, and not simply considering target firms in isolation (Wang and Zajac, 2007).

cThe dependent variable is Occurrence, which can take three possible values: 0 if there was no resource combination between two firms; 1 if an alliance was formed between two firms; and 2 if an acquisition was formed between two firms (Wang & Zajac, 2007). Within my dataset, the likelihood of the event is composed of all possible pairs of listed firms. After excluding the inverse permutation of the same dyad (ex., since Firm A and Firm B can combine as “Firm A with Firm B” and “Firm B with Firm A”, I considered only one of two cases) this result in 43,245,000 dyads of firms that could potentially form an alliance or do an acquisition in a given year. Considering 28 years of observations (1990-2018) it results in 1,210,860,000 dyad year observations (43,245,000 dyads*28 years), which entail computational burdens. For this reason, I have decided to use the observations of the 600 largest companies in the United States in 1990 based on their total assets (Wang & Zajac, 2007). I chose these largest companies as my sample because their strategic behaviors and performance are critical for sustaining daily economic life (Perrow, 1986). In addition, they actively invest large amounts of capital in both alliances and acquisitions. This information was drawn from the Center for Research in Security Prices (CRSP) and Compustat. I

merged this data with SDC Platinum database, which count with 32,445 number of yearly deals in alliances and 12,755 number of yearly deals in merger and acquisitions during the years under observation. Once merged these two databases, I relied on 10,667 firm observation and 2,094,012 dyad observations for analysis. Table 1 lists the number of firms in the sample by year during the period 1990-2018. The number of firms dropped from 600 to 191 in 2018. In other words, 409 firms either were acquired or went out of business during the sample period.

Table 2 shows the number of alliances and acquisitions among sample firms and years. In general, there are more alliances than acquisitions over the years.

INSERT TABLE 1 HERE

INSERT TABLE 2 HERE

Independent variables

Gubernatorial Elections

I measured political uncertainty using 407 U.S. gubernatorial elections from 1990 to 2018. As a result of the U.S. government elections falling in November during the electoral years, the effects of uncertainty can manifest themselves until the first quarter of the year following the elections, therefore the variable take into account this time range. For hypotheses 1, 2 and 3, I combine estimates on election years and quarter 4 (Election time*q4) and after elections year and quarter 1 (Election time*q1), to have the interaction with the appropriate quarter measuring the above mentioned time range. For the last two hypotheses, I do not consider quarters, but years, therefore I employ Gub_Election as dummy variable taking

value equals to 1 for election years (Chen et al., 2018), and I include the variable Gub_Election One Year After as dummy variable equals to 1 during one year after the election year. The data was obtained from Congressional Quarterly Press.

Business similarity between two firms

I employed the North American Industrial Classification System (NAICS) to measure business similarity with available data from the Center for Research in Security Prices (CRSP) and Compustat. To this end, scholars used both the Standard Industrial Classification (SIC) and the NAICS. I prefer NAICS because, as also recognized by the US Census Bureau, it provides a more precise sector classification than SIC. Based on Wang and Zajac (2007), I define Similarity between two firms to be equal to 1 if the first four digits of the firms' NAICS codes are the same; equal to 0.75 if the first three digits of the two firms' NAICS codes are the same; 0.5 if the first two digits of the two firms' NAICS codes are the same; 0.25 if the first digit of the two firms' NAICS codes is the same; and 0 if the first digit of the two firms' NAICS codes is different. To measure the effect of political election on alliance and acquisition activities for firm with product similarity, I used the interaction term between then election dummies and similarity measures.

Business complementarity between two firms

I employed again the NAICS codes to measure business complementarity, based on the method used by Wang and Zajac (2007) and Teece et al. (1994). Activities that are more frequently combined within the same corporation are considered complementary. If firms that engage in activity A, mostly often engage also in activity B, then A and B are complementary. Therefore, the degree of complementarity between two NAICS codes can be used as a proxy for business complementarity between two firms with these two primary NAICS codes. I gathered all primary firms' NAICS codes from Compustat and I excluded all firms with only one NAICS code and I did not include in my calculations a NAICS code with itself, because there are no complementarities. I assign a value of zero as business

complementary to firms that have business similarity equal to one (exact same four digits NAICS codes). Based on Wang and Zajac (2007), complementarity is defined in the following way:

$$Comp_{ij} = (J_{ij} - \mu_{ij})/\delta_{ij}$$

where $Comp_{ij}$ is the complementarity score between any pair of NAICS codes *i* and *j*; J_{ij} is the number of times that two NAICS codes appear in one firm; μ_{ij} = (N_i * N_j)/*K* where N_i is the number of firms in NAICS code *i*, N_j is the number of firms in NAICS code *j*, *K* is the total number of firms; $\delta_{ij} = \sqrt{\mu_{ij} * \left(1 - \frac{N_i}{K}\right) * \left(\frac{K}{K-1}\right) * (1 - \frac{N_j}{K})}$.

To measure the effect of political election on alliance and acquisition activities depending on firms' product complementarity, I used the interaction term between election and complementarity.

Control variables

Relative return on assets. Firm size and performance can be key indicator of a firm's resource base that can be critical in its alliance and acquisition decisions. In the dyadic context I need to look at the difference between firms in a dyad on each attribute. Performance indicates the degree of success in the marketplace. Good performers may be more prone to engage in alliances to leverage some of their successes; meanwhile, poor performers may seek alliances to improve performance (Gulati, 1995). Return on assets is largely used as indicator of firm performance. Based on that, I control for relative ROA between each dyad per each year as follows:

$$Relative\ ROA = |(\exp(ROA1) - \exp(ROA2)|/[\exp(ROA1) + \exp(ROA2)]$$

Relative size. Relative size can influence governance choice of resource combination. Size indicates a firm's financial and managerial resource endowment as well as its level of economies of scale and scope (Gulati, 1995). Prior research suggests that relative business size may influence redeployment of resources between target and acquiring businesses following horizontal acquisitions (Mitchell, 1994; Capron et al., 1998). Additionally, larger firms might acquire smaller firms to realize scale-related synergies that would otherwise be difficult to obtain (Ramaswamy, 1997). I measured relative size as the absolute value of the total assets difference between two firms and divided by the sum of the total assets of two firms.

Absolute size. Firms different in size can be more prone to engage in alliance instead of acquisition, or vice versa (Wang & Zajac, 2007). I measured it as log of firm's total assets.

Industry concentration index. Firms operating in industries subject to medium or high levels of concentration may be more prone to engage in resource combination to gain market shares; additionally, industry analysis theory suggests that when there is a high number of competitors in the market, it is more difficult to engage in resource combination practices. I measured this index using sales from Compustat with the following formula: $\sum(S_i^2 / S^2)$, where S is the total sales of all firms in one specific industry defined by three digit NAICS code, and S_i is the sale of firm *i* (Wang & Zajac, 2007).

Industry sectors of each firm. To control for specific industry characteristics, I included dummy variables for each industry. Based on NAICS code classification I grouped industries by sectors (following the classification of the US Department of Labor): natural resources and mining; construction; trade, transportation, and utilities; information; financial services; professional and business services; educational and health services; and leisure and hospitality; and unclassified. Public administration was not considered because my data does not have firms in this kind of industry.

Year dummy variables. I included the full set of dummies for each year (using 1990 as baseline) to capture effects of temporal trend.

Repeated alliance experience of each firm. To capture the repetitive momentum in individual firms' alliance activities, I add two control variables for each firm having more than one prior alliance with any other firm in the previous 5 years.

Repeated acquisition experience of each firm. To capture the repetitive momentum in individual firms' acquisition activities, I add two control variables for each firm having more than one prior acquisition with any other firm in the previous 5 years.

Macroeconomic controls. Several macroeconomic factors were included as control variables. These controls are useful to alleviate the concern that diversification during an election may change as a result of economic conditions contemporaneous to the political election. From the Bureau of Economic Analysis, I obtained *quarterly* and *yearly state GDP*, and from the Bureau of Labor Statistics, I obtained *quarterly* and *yearly state unemployment* data. Those variables control for the effect of economic conditions (Dangl & Wu, 2016). Finally, I include 350 US presidential elections from 1990 to 2018 to control for the *presidential election* cycle, being a source of political uncertainty (Chen et al., 2018). Data were obtained from the Database of Political Institutions 2017 (DPI) organized by the Inter-American Development Bank (Cruz et al., 2018) and from Congressional Quarterly Press. Presidential election is a dummy variable equal to one if a presidential election occurs in a year and in a quarter.

For hypothesis 1, I count with 5,800 state-quarter observations (29 years * 4 quarters * 50 states). Meanwhile, for hypothesis 2a, 2b and 3, excluding firms with missing values related to each firm-level and macroeconomic control leaves me with a total number of 2,094,012 dyads observations. Table 3 reports descriptive statistics and Table 4 reports the correlation matrix.

INSERT TABLE 3 HERE

INSERT TABLE 4 HERE

EMPIRICAL ANALYSIS

There are challenges to empirically testing political uncertainty, due to the difficulty to disentangle political uncertainty from other sources of risk, such as economic conditions, financial development, which are correlated with alliance and acquisition activity. Based on recent studies (Amore & Corina, 2021; Amore & Minichilli, 2018; Colak et al., 2017; Gao et al., 2019; Jens, 2017; Julio & Yook, 2012; Vaaler, 2008), I use gubernatorial elections to measure political uncertainty. This is a novel approach having several advantages. First, as natural experiment elections are mostly exogenous events and allow to correct for endogeneity. Second, elections can create high political uncertainty: political leaders can exert a significant influence over the country's economic environment.

To test hypotheses 1, 2 and 3, the number of quarter-state acquisition or alliance announcements during periods of political election, I employed the Poisson-Logit Hurdle Regression Model. This model is appropriate to model count data with over-dispersion and unobservable heterogeneity (Chen et al., 2018). This model develops in two stages, one for zero counts and the other for positive counts. The first stage estimates, by means of a logit regression, the propensity of the dependent variable to be greater than zero, i.e. it estimates

if firms decide to engage in an alliance or not. Once the “hurdle” is crossed, the second stage estimates a count model, estimated by means of a Poisson regression. In particular, it estimates in how many transactions firms engaged. To test hypothesis 3, to demonstrate the substitution effect between alliances and acquisitions, I employ as dependent variable the number of alliances in state partner 1, taking it as the state holding the elections (Table 7, columns 1-3), and the number of alliances in state partner 2, taking it as the state holding the elections (Table 7, columns 4-6) in each state quarter. Panel A shows the effects of gubernatorial elections on alliances mediated by the number of targets during elections, and Panel B shows the effects of gubernatorial elections on alliances mediated by the number of acquirers during elections. Coefficients are combined estimates on election and year after election and an interaction with quarters and number of targets or number of acquirers. A positive coefficient means that acquisitions are substitute with alliances during elections.

To test hypotheses 4a, 4b, 5a, 5b, and 5c, I focus at the dyads level of analysis, and I decided to employ the Multinomial Logit Regression Model with the dyad as the cluster factor to assess the hypothesized relationships. This model is appropriate when the dependent variable can have more than two categorical values, in my case they can be three categorical outcomes: two firms do not have any business combination, which value is 0; two firms have an alliance, which value is 1; two firms have an acquisition, which value is 2.

To arrive at the multinomial logit model, one can imagine, for K possible outcomes, running K-1 independent binary logistic regression models, in which the outcome chosen as a "pivot" is 0 (no alliance and no acquisition), and then the other K-1 outcomes, which are values 1 (alliance) and 2 (acquisition), are separately regressed against the pivot outcome. This would proceed as follows, the probability to have the outcome K (the pivot outcome equal to 0) for jth observation is the following:

$$p_{kj} = \Pr(y_k = k) = \frac{1}{1 + \sum_{m=1}^{2} \exp(x_k \beta_m)}, if\ k = 0$$

$$p_{kj} = \Pr(y_k = k) = \frac{\exp\,(x_j\beta_i)}{1 + \sum_{m=1}^{2} \exp(x_k\beta_m)}, if\ k = 1{,}2$$

where x_k is the row vector of observed values of the independent variables for the *jth* observation and β_m is the coefficient vector for outcome *m*.

With dyads observations I face the problem of unobserved heterogeneity: the same dyad appears across different years and the same firm appears in different dyads. I solve the first problem clustering standard errors per year and state. For the second problem, firm level unobserved heterogeneity, I control for firms' tendency to repeat alliance and/or acquisitions. Therefore, I include four control variables, repeated alliance experience for firm 1 and for firm 2, and repeated acquisition experience for firm 1 and for firm 2, as explained in control variables session.

To test hypotheses fourth and fifth, which concerns which entry mode strategy is preferred during political uncertainty based on business similarity and complementarity, the key explanatory variable is the interaction term between an election period in state j in year t and the level of similarity or complementarity between firms. I expect the interaction terms between similarity and elections to be positive for both, alliances and acquisitions, but at higher level for acquisitions; contrarily, the interaction terms between complementarity and elections to be negative for both, alliances and acquisitions.

As mentioned above, I include industry and year fixed effects in order to remove industry heterogeneity over time and time effects common to all firms. To also account for time-varying differences across states, I include a vector X containing the macroeconomic controls described in the previous section together with the firm-level controls. Standard errors are clustered by state and year in order to account for heteroskedasticity and serial correlation by state/year.

RESULTS

Estimates for hypothesis 1 are presented in Table 5. Dependent variable is the number of Acquisitions in target state holding elections (columns 1-3) and the number of Acquisitions in acquirer state holding elections (columns 4-6) in each state quarter. The effect of elections on Acquisitions is showed by the coefficients on “election time * quarter 4” and on “election time * quarter 1”. Both are negative and statistically significant. “election time * quarter 4” is statistically significant at 5% and 1% levels; and “election time * quarter 1” is statistically significant at 1% level. It means that Acquisitions drop by 9.6% if there are elections in the target state and by 8.2% if the elections are in the acquirer state. This result supports the hypothesis 1.

INSERT TABLE 5 HERE

Estimates for hypothesis 2 are presented in Table 6. Dependent variable is the number of alliances in state partner 1 holding elections (columns 1-3) and the number of alliances in state partner 2 holding elections (columns 4-6) in each state quarter. The effect of elections on alliance activity is showed by the coefficients on “election time * quarter 4” and on “election time * quarter 1”. Both are negative and “election time * quarter 1” is statistically significant at 1% level. It means that alliances drop by 25% if there are elections in the state of partner 1 and by 18% in the state of partner 2. This result supports the hypothesis 2.

INSERT TABLE 6 HERE

Estimates for hypothesis 3 are presented in Table 7. Panel A shows the effects of gubernatorial elections on alliances mediated by the number of targets during elections, and Panel B shows the effects of gubernatorial elections on alliances mediated by the number of acquirers during elections. In Panel A (columns 1-3 for partner state 1 holding elections; and columns 4-6 for partner state 2 holding elections) the interaction terms between “election time*quarter4*M&A in target states” and “election time*quarter4*M&A in target states” are positive and statistically significant at 1% level; it means that if M&As in target state drop by 1%, alliance in the same state drop by 0.5% and alliance in the other state drop by 0.4%. In Panel B (columns 1-3 for partner state 1 holding elections; and columns 4-6 for partner state 2 holding elections) the interaction terms between “election time*quarter4*M&A in acquirer states” and “election time*quarter4*M&A in acquirer states” are positive and statistically significant at 1% level; it means that if M&As in acquirer state drop by 1%, alliance in the same state drop by 0.6% and alliance in the other state drop by 0.5%. This result confirms that the drop of M&As during elections is higher than the drop of alliances, giving support to hypothesis 3. It can be noticed, also, that the direct effect of elections on the number of alliances still is negative and statistically significant at 1% level.

INSERT TABLE 7 HERE

Table 8 displays the results related to the testing of hypotheses 4a, 4b, showing the effect of gubernatorial elections over alliances and acquisitions between firms which business is similar. I use a multinomial logit regression model which can have three possible outcomes: 0 if there was no resource combination between two firms; 1 if an alliance was formed between two firms; and 2 if an acquisition was formed between two firms. Results reported in Table 8 show the regression of the multinomial logit and the marginal effect for each model.

Model 1 and Model 2 are related to the testing of hypothesis 4a. I take as my baseline regression model the outcome 0, i.e. no resource combination between two firms, and I compare it with the other two outcomes: an Acquisition was formed between two firms (Model 1) and an Alliance was formed between two firms (Model 2) for business similarity during elections (Business Similarity*Gub_elections). The interaction effects between election times and business similarity for acquisition and for alliance are positive and statistically significant at 1% level. During elections, for 1-unit increase in business similarity, acquisitions compare to no resource combination would expect to increase by 6.49 units; and for 1-unit increase in business similarity during elections, alliances compare to no resource combination would expect to increase by 2.88 units. During elections, increasing the degree of business similarity between two firms, they prefer to have some form of cooperation, alliance or acquisition, instead of no resource combination. This result gives support to the hypothesis 4a.

Model 3 is related to the testing of hypothesis 4b, which examine the differential effect of business similarity during election times on the comparative choice between alliance and acquisition. Hypothesis 4b suggests that higher level of business similarity between firms during election times has a stronger relationship with acquisitions than with alliances. Model 3 shows that the coefficient for alliance is negative and statistically significant. For 1-unit increase in business similarity during elections, alliances compare to acquisitions would expect to decrease by 3.6 units: during elections: increasing the degree of similarity between firms, they prefer as cooperation strategy an acquisition instead of an alliance. This result gives support to hypothesis 4b.

INSERT TABLE 8 HERE

Table 9 displays the results related to the testing of hypotheses 5a-5b-5c, showing the effect of gubernatorial elections over acquisitions and alliances between two firms which business is complementary. I use a multinomial logit regression model which can have three possible outcomes: 0 if there was no resource combination between two firms; 1 if an alliance was formed between two firms; and 2 if an acquisition was formed between two firms. Results reported in Table 9 show the regression of the multinomial logit and the marginal effect for each model.

Model 1 and Model 2 are related to the testing of hypotheses 5a (Model 1) and 5b (Model 2). I take as my baseline regression model the outcome 0, i.e. no resource combination between two firms, and I compare it with the other two outcomes: an Acquisition was formed between two firms (Model 1) and an Alliance was formed between two firms (Model 2) for business complementarity during elections (Business Complementarity*Gub_elections). The interaction term between election times and business complementarity for acquisition is negative and statistically significant at 1% level. For 1-unit increase in business complementarity during elections, acquisitions compare to no resource combination would expect to decrease by 0.24 units. The interaction term between election times and business complementarity for alliance is negative and statistically significant at 1% level. For 1-unit increase in business complementarity during elections, alliances compare to no resource combination would expect to decrease by 0.030 units. During elections, increasing the degree of complementarity between two firms, they prefer no resource combination instead of having alliance or acquisition. These results give support to the hypotheses 5a and 5b.

Model 3 is related to the testing of hypothesis 5c, which examine the differential effect of business complementarity during election times on the comparative choice between alliance and acquisition. Hypothesis 5c suggests that higher level of business complementarity between firms during election times has a stronger relationship with

alliances than with acquisitions. Model 3 shows that the coefficient for alliance is positive and statistically significant at 5% level. For 1-unit increase in business complementarity during elections, alliances compare to acquisitions would expect to increase by 0.322 units: during elections, increasing the degree of complementarity between firms, they prefer as cooperation strategy an alliance instead of an acquisition. This result gives support to hypothesis 5c.

INSERT TABLE 9 HERE

Table 10 reports the comparison between coefficients for the effect of each independent variable (0 = there was no resource combination between two firms; 1 = an alliance was formed between two firms; 2 = an acquisition was formed between two firms) on the interaction term between business similarity and business complementarity relative to the different base categories. Based on these results, during elections similarity in business between two firms has positive stronger effect on acquisition versus no resource combination, has positive medium effect on acquisition versus alliance, and has positive little effect on alliance versus no resource. Therefore, I can conclude that firms which business is similar, during elections prefer to have acquisitions above, if not, they prefer to have alliance, instead of not resource combination. Regarding these results during elections business complementarity between two firms has negative stronger effect on acquisition versus no resource combination, has negative medium effect on acquisition versus alliance, and has negative little effect on alliance versus no resource combination. Therefore, I can conclude that during elections firms complementary in business prefer no resource combination instead of alliance or acquisition, and between these last two, they prefer to have alliance, instead of acquisitions. In every contrast the difference is significant.

INSERT TABLE 10 HERE

Robustness checks

All my regressions control for year dummies, which are useful to absorb time effects (e.g. global business cycle) common to all firms in the sample, and for industry dummies. A concern may be related to whether the results are always the same if alliances and acquisitions are in the same state or have been crossed. For this purpose, I run an additional regression, employing the logit-poisson hurdle regression model with yearly data –I employed the larger database to have more data for the same state analysis-, and I found that results do not change if I analyse transactions in the same state and cross states. Table 11 reports results

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INSERT TABLE 11 HERE

DISCUSSION

Uncertainty has been a fundamental determinant in firms' investment decisions from different perspectives in Management literature. A significant body of literature suggests that firms are opposed to investing when there are environments of high uncertainty that occur with economic crises, political and institutional instability, natural disasters and other situations or events that represent negative shocks (Amore & Corina, 2021; Amore & Minichilli, 2018; Delios & Henisz, 2003; Pastor & Veronesi, 2013). Recently, there was an increasing concern to explore a specific type of uncertainty stemming from the political sector, i.e. political uncertainty, defined as the irresolution about the policies and regulations

that a new government will put in place (Baker et al., 2016; Bloom, 2014; Blake & Jandhyala, 2019).

Political uncertainty can discourage irreversible corporate actions due to real-option considerations: uncertainty increases the incentives to wait to get new information rather than committing early. Moreover, as compared to other sources of risk, policy uncertainty is hard to diversity away, and thus increases borrowing costs (Pastor & Veronesi, 2012). The host government's economic policies -such as exchange rate, labor laws, firm taxation- shape the business landscape and affect investment outcomes (Holburn & Zelner, 2010).

Recently, scholars measure political uncertainty with election cycles, being a novel approach and allowing for endogeneity to be corrected. Works in this area show that during electoral periods, at both the national and local level, firms significantly reduce their investment activities (Amore & Minichilli, 2018; Jens, 2017; Yook & Julio, 2012, 2016), and reduce their merger and acquisition activity (Bonaime et al., 2018; Chen et al., 2018; Nguyen & Phan, 2017); yet, none of these works look at alliance activity and at the two-sided perspective of the decision which has clearly a dyadic nature.

I have expanded this literature in two significant directions. First, I have explored whether political uncertainty makes firms shy away from acquisitions at the benefit of alternative modes of operation, such as alliances. Second, I have analyzed if this decision is contingent on whether the partner is similar or complement in business.

I conducted the empirical analyses on 600 largest companies in the United States during 1990 at dyadic level, which gave us a total number of 2,094,012 dyads observations during the US gubernatorial elections between 1990-2018. A key empirical advantage of my analysis is that elections are held at different points in time across states, and thus I can control for common effects to all sample firms.

What I conclude in this study is that during times of high political uncertainty, not only do acquisitions decrease, but also alliances, making the first contribution to the literature. Furthermore, I compare the two modes of entry and show that during times of political uncertainty companies prefer to switch to the alliance instead of engaging in an acquisition activity, making the second contribution to the literature. The key insight here is that alliances are more reversible and flexible than acquisitions.

Furthermore, looking at the role of business similarity between partners, the outcome does not change with respect to periods of non-political uncertainty, as previous studies showed (Wang & Zajac, 2007): alliances and acquisitions are both preferred, and acquisitions to a greater extent. Firms with an increasing degree of business similarity, prefer to have acquisitions compare with alliances and compare to internal development. During political uncertainty, there is a contraction in consumer demand for a given market supply, which implies an increase in competition. To be in the market and retain their profits, firms prefer to acquire firms with an increasing degree of similarity in order to reduce competition.

On the contrary, companies whose business is complementary are not competitors on the market and the results change: acquisitions are no longer a viable strategy, in fact companies prefer not to collaborate instead of having acquisitions, but also alliances are no longer a privileged strategy, companies prefer non-cooperation instead, making the third contribution to literature. The key insight here is that complementary activities are not well known among companies and political uncertainty makes information asymmetries more pronounced, implying greater risk for engaging in alliance activities or acquisitions.

Even if firms whose business is complementary are not competitors in the market, their business complement each other, implying synergies and higher performance. Alliances with complementary partners in resources had the highest probability of creating value and Harrison et al. (1991, 2001) pinpoint that business complementarity is associated with higher performance in alliances due to greater synergies created by complementary

resource combinations, implying firm's competitive advantage. During political uncertainty, governments set rules that can benefit or harm some businesses, which is unknown until the elections come over. Therefore, firms with complementary businesses belong to a business that is fully unknown for the acquirers/partners, hence, companies are discouraged from acquisitions due to the higher risk stemming from the uncertain political environment and lack of knowledge of complementary companies, but, firms are encouraged to have alliances instead, which may involve higher future performance based on synergies.

This paper opens a very interesting debate, and from my point of view, still understudied, regarding which governance structure for resource combination should firms prefer during uncertainty. By studying the effects of political shocks on entry modes, my research helps to understand which strategy is preferable based on the differences between target and focus firms in times of high uncertainty. My study is novel in two directions: first, it studies the effect of uncertainty over alliances and acquisitions, and, second, it focuses on which are the target and focus firms preferable during uncertainty and, based on that, the respective strategy to be used to avoid an increasing competition between firms. Both directions are, until now, unknown. Moreover, my findings provide guidance to executives that need to confront the vicious implications of political uncertainty in their short run strategies.

The sample used in my analysis is limited to: an acquisition of assets, an acquisition of majority interest, a merger, or an alliance, excluding from my sample the following transaction types: leveraged buyouts, spinoffs, recapitalizations, self-tenders, exchange offers, repurchases, minority stake purchases, acquisitions of remaining interest, and privatizations. For future research the sample can be open to these other transactions and include heterogeneity in alliances..

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Table 1.

Number of firms and dyads in the dataset, 1990-2018

Year	Number of firms	Number of dyads
1990	600	179,700
1991	590	173,755
1992	584	170,236
1993	564	158,766
1994	551	151,525
1995	523	136,503
1996	506	127,765
1997	478	114,003
1998	453	102,378
1999	422	88,831
2000	395	77,815
2001	371	68,635
2002	358	63,903
2003	344	58,996
2004	332	54,946
2005	314	49,141
2006	306	46,665
2007	294	43,071
2008	284	40,186
2009	277	38,226
2010	273	37,128
2011	267	35,511
2012	258	33,153
2013	252	31,626
2014	247	30,381
2015	239	28,441
2016	200	19,900
2017	194	18,721
2018	191	18,145
Total	10,667	2,198,052

Table 2.

Number of alliances and acquisitions among sampled firms by year

Year	Number of alliances	Number of acquisitions
1990	21	12
1991	97	10
1992	102	12
1993	80	20
1994	90	34
1995	95	34
1996	81	46
1997	68	31
1998	59	44
1999	53	34
2000	60	23
2001	54	8
2002	47	7
2003	57	8
2004	56	11
2005	45	20
2006	54	16
2007	42	35
2008	52	19
2009	51	4
2010	39	12
2011	38	1
2012	36	0
2013	36	0
2014	36	2
2015	36	2
2016	29	3
2017	33	1
2018	39	9
Total	1,583	456

Table 3.

Summary statistics H1 to H3

Variable	Obs.	Mean	Std. Dev.	Min.	Max.
Number M&A	5,800	41.06931	58.34586	0	583
Number Alliance	5,800	7.061034	16.31636	0	238
Gub. Elections	5,800	.2737931	.4459425	0	1
US Elections	5,800	.5172414	.4997457	0	1
US_GDP Growth	5,800	.0300222	.0801003	-.0338692	.4462697
Unemployment	5,800	5.488207	1.860877	2.2	13.9

Summary statistics H4 to H5

Variable	Obs.	Mean	Std. Dev.	Min.	Max.
Number M&A	2,094,262	.0060162	.4488455	0	46
Number Alliance	2,094,262	.0476869	1.844099	0	102
Occurrence	2,094,262	.0011934	.040366	0	2
Similarity	2,094,262	.1247022	.2495277	0	1
Complementarity	1,921,214	8.614465	9.043355	-.8702122	48.98981
Gub_Election	2,094,262	.2783208	.4481723	0	1
Gub_Election One Year After	2,094,262	.2054573	.4040355	0	1
US_Election	2,094,262	.2473964	.4314991	0	1
US_GDP Growth	2,094,262	.0432733	.1032656	-.0338692	.4462697
Unemployment	2,094,262	5.238209	1.479624	2.2	13.9
Relative Size	2,079,773	.4840825	.287348	0	.9999909
Relative ROA	2,079,773	.0161829	.0388817	0	.9964148
Repeated M&A Firm 1	2,094,262	.0011269	.0335502	0	1
Repeated M&A Firm 2	2,094,262	.0010567	.0324897	0	1
Repeated Alliance Firm 1	2,094,262	.0007043	.0265294	0	1
Repeated Alliance Firm 2	2,094,262	.0006952	.0263581	0	1
Industry Concentration Index Firm 1	2,094,262	.0032861	.054776	0.00000111	1
Industry Concentration Index Firm 2	2,094,262	.0054778	.0718921	0.00000111	1
Absolute Size1	2,086,999	3.889319	.5926379	-.0109954	6.339974
Absolute Size2	2,086,998	3.844991	.5563148	-.0109954	6.514562
Natural resources & mining Firm 1	2,094,262	.0225433	.1484424	0	1
Construction Firm 1	2,094,262	.0160176	.1255429	0	1
Trade, transportation & utilities Firm 1	2,094,262	.2923383	.454837	0	1
Information Firm 1	2,094,262	.0961575	.2948072	0	1
Financial services Firm 1	2,094,262	.1364472	.3432629	0	1

Professional & business services Firm 1	2,094,262	.029985	.170546	0	1
Educational and health services Firm 1	2,094,262	.0013013	.0360505	0	1
Leisure & hospitality Firm 1	2,094,262	.0124603	.1109281	0	1
Unclassified Firm 1	2,094,262	.0090668	.0947871	0	1
Natural resources & mining Firm 2	2,094,262	.029676	.1696921	0	1
Construction Firm 2	2,094,262	.0231828	.1504837	0	1
Trade, transportation & utilities Firm 2	2,094,262	.2755366	.4467844	0	1
Information Firm 2	2,094,262	.0973218	.2963955	0	1
Financial services Firm 2	2,094,262	.2019955	.401489	0	1
Professional & business services Firm 2	2,094,262	.0059498	.0769053	0	1
Educational and health services Firm 2	2,094,262	.0015392	.0392018	0	1
Leisure & hospitality Firm 2	2,094,262	.0155181	.1236012	0	1
Unclassified Firm 2	2,094,262	.0019809	.0444631	0	1

Table 4.

Correlation Matrix H1 to H3

Matrix of correlations

Variables	(1)	(2)	(3)	(4)	(5)	(6)
(1) Number Alliance	1.000					
(2) Number M&A	-0.001	1.000				
(3) Gub_Election	0.006	0.004	1.000			
(4) US Election	0.002	0.002	0.482	1.000		
(5) US GDP Growth	0.007	0.019	-0.031	0.128	1.000	
(6) Unemployment	-0.117	0.066	-0.021	-0.028	-0.085	1.000

Correlation Matrix H4 to H5

Matrix of correlations

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1) Number Alliance	1.000									
(2) Number M&A	0.001	1.000								
(3) Occurrence	0.599	0.701	1.000							
(4) Similarity	0.030	0.052	0.065	1.000						
(5) Complementarity	-0.003	-0.015	-0.014	-0.127	1.000					
(6) Gub_election	-0.003	0.000	-0.000	-0.003	-0.010	1.000				
(7) One year after Election	0.001	-0.002	-0.002	0.002	-0.001	-0.314	1.000			
(8) US Election	-0.000	0.001	0.001	-0.003	-0.001	0.585	-0.490	1.000		
(9) US GDP Growth	0.000	-0.000	0.000	-0.001	-0.002	-0.001	-0.001	-0.003	1.000	
(10) Unemployment	0.004	-0.006	-0.001	0.021	-0.037	-0.129	0.034	-0.036	-0.004	1.000
(11) Relative ROA	0.000	-0.006	-0.005	-0.041	0.023	-0.008	-0.000	0.007	-0.001	-0.012
(12) Relative size	0.002	-0.025	-0.019	-0.024	0.010	-0.027	-0.003	-0.016	-0.001	-0.019
(13) MA trend Firm1	0.014	0.395	0.344	0.112	-0.028	0.001	0.000	0.001	-0.000	-0.002
(14) MA trend Firm2	0.012	0.403	0.351	0.108	-0.027	0.001	0.000	0.001	-0.000	-0.003
(15) Alliance trend Firm1	0.906	0.001	0.616	0.030	-0.003	-0.001	-0.001	0.000	0.000	0.003
(16) Alliance trend Firm2	0.898	0.001	0.610	0.031	-0.002	-0.001	-0.001	-0.000	0.000	0.003
(17) Size Firm1	0.021	0.001	0.019	0.025	-0.050	-0.012	-0.017	-0.008	-0.001	0.005
(18) Size Firm2	0.016	0.002	0.015	0.013	0.018	-0.037	-0.011	-0.027	0.000	-0.018
(19) Industry concentration Firm1	-0.001	-0.000	0.000	-0.024	-0.019	0.004	0.000	0.003	-0.000	0.019
(20) industry concentration Firm2	-0.002	-0.000	-0.002	-0.033	0.006	0.011	-0.012	0.008	0.000	0.004

Variables	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
(1) Number Alliance										
(2) Number M&A										
(3) Occurrence										
(4) Similarity										
(5) Complementarity										
(6) Gub_election										
(7) One year after Election										
(8) US election										
(9) US GDP Growth										
(10) Unemployment										
(11) Relative ROA	1.000									
(12) Relative size	0.053	1.000								
(13) MA trend Firm1	-0.012	-0.048	1.000							
(14) MA trend Firm2	-0.012	-0.049	0.931	1.000						
(15) Alliance trend Firm1	0.001	0.003	0.016	0.014	1.000					
(16) Alliance trend Firm2	0.001	0.002	0.017	0.014	0.923	1.000				
(17) Size Firm1	-0.165	0.222	0.013	0.012	0.026	0.025	1.000			
(18) Size Firm2	-0.050	0.171	0.012	0.013	0.018	0.019	0.128	1.000		
(19) Industry concentration Firm1	0.003	0.012	0.001	0.002	0.000	0.000	-0.016	0.017	1.000	
(20) Industry concentration Firm2	-0.002	-0.000	-0.000	-0.000	-0.002	-0.002	0.019	0.017	0.003	1.000

Table 5. The effect of political elections on Acquisition activity (H1)

DV: Number of	Acquisitions (Target state holding elections)			Acquisitions (Acquirer state holding elections)		
	Logit	Poisson	Marginal effects	Logit	Poisson	Marginal effects
Election year*quarter1	.026	.023	.023	.208	-.033	-.033
	(0.973)	(0.332)	(0.332)	(0.124)	(0.030)	(0.030)
Election year*quarter2	.136	.012	.012	.184	.013	.013
	(0.810)	(0.607)	(0.607)	(0.173)	(0.369)	(0.369)
Election year*quarter3	.966	.135	.135	.292	.031	.031
	(0.186)	(0.000)	(0.000)	(0.031)	(0.035)	(0.035)
Election time*quarter4	**.453**	**.045**	**.045**	**.260**	**-.050**	**-.050**
	(0.483)	**(0.063)**	**(0.063)**	**(0.054)**	**(0.001)**	**(0.001)**
Election time *quarter1	**.630**	**-.096**	**-.096**	**.272**	**-.082**	**-.082**
	(0.439)	**(0.000)**	**(0.000)**	**(0.052)**	**(0.000)**	**(0.000)**
After election year*quarter2	-.097	-.056	-.056	.253	-.038	-.038
	(0.895)	(0.025)	(0.025)	(0.070)	(0.017)	(0.017)
After election year*quarter3	.515	-.025	-.025	.226	-.029	-.029
	(0.580)	(0.314)	(0.314)	(0.105)	(0.056)	(0.056)
After election year*quarter4	.074	.064	.064	.201	-.083	-.083
	(0.932)	(0.011)	(0.011)	(0.151)	(0.000)	(0.000)
Presidential elections	17.467	-1.087		-.004	-.733	
	(0.993)	(0.000)		(0.984)	(0.000)	
Unemployment	-.430	.827		-.155	.293	
	(0.000)	(0.000)		(0.000)	(0.000)	
State GDP per capita	.000	.000		-.000	.000	
	(0.214)	(0.000)		(0.000)	(0.000)	
Uncertainty	.004	.000		-.000	.000	
	(0.489)	(0.036)		(0.948)	(0.115)	
Constant	-19.623	-4.473		1.567	1.345	
	(0.992)	(0.000)		(0.000)	(0.000)	
Year FE	yes	yes	yes	yes	yes	yes
Quarter FE	yes	yes	yes	yes	yes	yes
Obs.	5,800	5,800	5,800	5,800	5,800	5,800

p-values in parenthesis.

Table 6. The effect of political elections on Alliance activity (H2)

DV: Number of	Alliance State 1 (holding elections)			Alliance State 2 (holding elections)		
	Logit	Poisson	Marginal effects	Logit	Poisson	Marginal effects
Election year*quarter1	.202	.082	.082	-.189	-.012	-.012
	(0.184)	(0.001)	(0.001)	(0.224)	(0.608)	(0.608)
Election year*quarter2	-.071	.015	.015	.079	.025	.025
	(0.646)	(0.547)	(0.547)	(0.610)	(0.314)	(0.314)
Election year*quarter3	.317	-.013	-.013	-.074	-.109	-.109
	(0.039)	(0.605)	(0.605)	(0.639)	(0.000)	(0.000)
Election time*quarter4	**.276**	**-.016**	**-.016**	**.247**	**-.008**	**-.008**
	(0.068)	**(0.525)**	**(0.525)**	**(0.105)**	**(0.747)**	**(0.747)**
Election time*quarter1	**.180**	**-.257**	**-.257**	**.174**	**-.181**	**-.181**
	(0.247)	**(0.000)**	**(0.000)**	**(0.266)**	**(0.000)**	**(0.000)**
After election year*quarter2	.110	-.122	-.122	.373	-.098	-.098
	(0.481)	(0.000)	(0.000)	(0.018)	(0.000)	(0.000)
After election year*quarter3	.250	-.042	-.042	.027	-.144	-.144
	(0.113)	(0.121)	(0.121)	(0.868)	(0.000)	(0.000)
After election year*quarter4	.006	.057	.057	.045	.046	.046
	(0.965)	(0.030)	(0.030)	(0.778)	(0.083)	(0.083)
Presidential elections	1.056	-.959		1.233	-.943	
	(0.000)	(0.000)		(0.000)	(0.000)	
Unemployment	-.248	.480		-.243	.439	
	(0.000)	(0.000)		(0.000)	(0.000)	
State GDP per capita	-.000	.000		-.000	.000	
	(0.000)	(0.000)		(0.000)	(0.000)	
Uncertainty	-.000	.000		-.001	.000	
	(0.664)	(0.022)		(0.137)	(0.221)	
Constant	1,228	-1.843		1.265	-1.559	
	(0.000)	(0.000)		(0.000)	(0.000)	
Year FE	yes	yes	yes	yes	yes	yes
Quarter FE	yes	yes	yes	yes	yes	yes
Obs.	5,800	5,800	5,800	5,800	5,800	5,800

p-values in parenthesis.

Table 7. The effect of political elections on Alliances mediated by the number of Acquisitions (H3)

Panel A: Effects of elections on Alliances mediated by the number of Acquisitions in target states during elections						
DV: Number of	Alliance State 1 (holding elections)			Alliance State 2 (holding elections)		
	Logit	Poisson	Marginal effects	Logit	Poisson	Marginal effects
Election year*quarter1	.266	-.057	-.057	-.139	-.162	-.162
	(0.105)	(0.031)	(0.031)	(0.401)	(0.000)	(0.000)
Election year*quarter2	.068	-.112	-.112	.128	-.132	-.132
	(0.707)	(0.000)	(0.000)	(0.433)	(0.000)	(0.000)
Election year*quarter3	.464	-.141	-.141	.025	-.233	-.233
	(0.009)	(0.000)	(0.000)	(0.884)	(0.000)	(0.000)
Election time *quarter4	**.302**	**-.151**	**-.151**	**.284**	**-.133**	**-.133**
	(0.048)	**(0.000)**	**(0.000)**	**(0.069)**	**(0.000)**	**(0.000)**
Election time *quarter1	**.270**	**-.392**	**-.392**	**.221**	**-.295**	**-.295**
	(0.120)	**(0.000)**	**(0.000)**	**(0.194)**	**(0.000)**	**(0.000)**
After election year*quarter2	.141	-.248	-.248	.404	-.253	-.253
	(0.386)	(0.000)	(0.000)	(0.013)	(0.000)	(0.000)
After election year*quarter3	.273	-.194	-.194	.078	-.304	-.304
	(0.087)	(0.000)	(0.000)	(0.654)	(0.000)	(0.000)
After election year*quarter4	.100	-.130	-.130	.130	-.130	-.130
	(0.569)	(0.000)	(0.000)	(0.466)	(0.000)	(0.000)
Election year*q1*Numbertargets	-.040	.004	.004	-.028	.004	.004
	(0.403)	(0.000)	(0.000)	(0.507)	(0.000)	(0.000)
Election year*q2*Numbertargets	-.106	.004	.004	-.026	.004	.004
	(0.199)	(0.000)	(0.000)	(0.485)	(0.000)	(0.000)
Election year*q3*Numbertargets	-.108	.004	.004	-.066	.004	.004
	(0.165)	(0.000)	(0.000)	(0.273)	(0.000)	(0.000)
Election time*q4*Numbertargets	**-.012**	**.004**	**.004**	**-.017**	**.004**	**.004**
	(0.360)	**(0.000)**	**(0.000)**	**(0.453)**	**(0.000)**	**(0.000)**
Election time*q1*Numbertargets	**-.065**	**.005**	**.005**	**-.030**	**.004**	**.004**
	(0.313)	**(0.000)**	**(0.000)**	**(0.559)**	**(0.000)**	**(0.000)**
AfterElection year*q2*Numbertargets	-.017	.004	.004	-.017	.005	.005
	(0.580)	(0.000)	(0.000)	(0.571)	(0.000)	(0.000)
AfterElection year*q3*Numbertargets	-.011	.004	.004	-.033	.005	.005
	(0.439)	(0.000)	(0.000)	(0.515)	(0.000)	(0.000)
AfterElection year*q4*Numbertargets	-.065	.005	.005	-.060	.005	.005
	(0.305)	(0.000)	(0.000)	(0.347)	(0.000)	(0.000)
Presidential elections	1.066	-.899		1.242	-.878	
	(0.000)	(0.000)		(0.000)	(0.000)	
Unemployment	-.232	.408		-.227	.375	
	(0.000)	(0.000)		(0.000)	(0.000)	
State GDP per capita	-.000	.000		-.000	.000	
	(0.000)	(0.000)		(0.000)	(0.000)	
Uncertainty	-.000	.000		-.001	.000	
	(0.685)	(0.022)		(0.139)	(0.287)	
Constant	1.121	-1.316		1.159	-1.103	
	(0.000)	(0.000)		(0.000)	(0.000)	
Year FE	yes	yes	yes	yes	yes	yes
Quarter FE	yes	yes	yes	yes	yes	yes
Obs.	5,800	5,800	5,800	5,800	5,800	5,800

p-values in parenthesis.

Panel B: Effects of elections on Alliances mediated by the number of Acquisitions in acquiror states during elections						
DV: Number of	Alliance State 1 (holding elections)			Alliance State 2 (holding elections)		
	Logit	Poisson	Marginal effects	Logit	Poisson	Marginal effects
Election year*quarter1	.489	-.157	-.157	.055	-.259	-.259
	(0.003)	(0.031)	(0.031)	(0.738)	(0.000)	(0.000)
Election year*quarter2	.325	-.219	-.219	.463	-.245	-.245
	(0.055)	(0.000)	(0.000)	(0.006)	(0.000)	(0.000)
Election year*quarter3	.608	-.266	-.266	.196	-.356	-.356
	(0.000)	(0.000)	(0.000)	(0.246)	(0.000)	(0.000)
Election time *quarter4	**.521**	**-.240**	**-.240**	**.501**	**-.221**	**-.221**
	(0.001)	**(0.000)**	**(0.000)**	**(0.002)**	**(0.000)**	**(0.000)**
Election time *quarter1	**.429**	**-.495**	**-.495**	**.466**	**-.390**	**-.390**
	(0.010)	**(0.000)**	**(0.000)**	**(0.005)**	**(0.000)**	**(0.000)**
After election year*quarter2	.333	-.365	-.365	.637	-.378	-.378
	(0.046)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
After election year*quarter3	.579	-.306	-.306	.311	-.415	-.415
	(0.001)	(0.000)	(0.000)	(0.076)	(0.000)	(0.000)
After election year*quarter4	.365	-.286	-.286	.408	-.275	-.275
	(0.034)	(0.000)	(0.000)	(0.020)	(0.000)	(0.000)
Electionyear*q1*Nacquirers	-.039	.005	.005	-.034	.005	.005
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Electionyear*q2*Nacquirers	-.065	.005	.005	-.056	.005	.005
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Electionyear*q3*Nacquirers	-.037	.005	.005	-.036	.005	.005
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Electiontime*q4*Nacquirers	**-.028**	**.005**	**.005**	**-.028**	**.005**	**.005**
	(0.000)	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**
Electiontime*q1*Nacquirers	**-.032**	**.006**	**.006**	**-.042**	**.005**	**.005**
	(0.000)	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**
AfterElectionyear*q2*Nacquirers	-.027	.006	.006	-.034	.006	.006
	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
AfterElectionyear*q3*Nacquirers	-.041	.005	.005	-.037	.006	.006
	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)
AfterElectionyear*q4*Nacquirers	-.049	.007	.007	-.053	.007	.007
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Presidential elections	1.131	-.987		1.307	-.902	
	(0.000)	(0.000)		(0.000)	(0.000)	
Unemployment	-.193	.423		-.187	.394	
	(0.000)	(0.000)		(0.000)	(0.000)	
State GDP per capita	-.000	.000		-.000	.000	
	(0.000)	(0.000)		(0.000)	(0.000)	
Uncertainty	-.000	.000		-.001	.000	
	(0.703)	(0.019)		(0.162)	(0.287)	
Constant	.693	-1.384		.722	-1.182	
	(0.015)	(0.000)		(0.012)	(0.000)	
Year FE	yes	yes	yes	yes	yes	yes
Quarter FE	yes	yes	yes	yes	yes	yes
Obs.	5,800	5,800	5,800	5,800	5,800	5,800

p-values in parenthesis.

Table 8. Testing the role of business similarity during elections on alliances and acquisitions (H4a-H4b)

Dependent Variable: Occurrence of	Model 1: Acquisition vs no resource combination		Model 2: Alliance vs no resource combination		Model 3: Alliance vs Acquisition	
	MLogit	Marginal Effect	MLogit	Marginal Effect	MLogit	Marginal Effect
Gub_election	-6.321	-.0011	-.330	.000006	5.991	.000006
	(0.002)	(0.003)	(0.637)	(0.292)	(0.007)	(0.282)
***H4a-4b:* Business Similarity*Gub_election**	**6.489**	**.0011**	**2.887**	**.000007**	**-3.601**	**.000007**
	(0.002)	**(0.002)**	**(0.000)**	**(0.292)**	**(0.108)**	**(0.289)**
One year after election	-.260		1.010		1.270	
	(0.221)		(0.154)		(0.099)	
US Election	1.689		-4.209		-5.898	
	(0.022)		(0.079)		(0.018)	
US GDP Growth	-.000		.0006		.0006	
	(0.048)		(0.002)		(0.001)	
Unemployment	.158		.854		.695	
	(0.065)		(0.016)		(0.058)	
Relative ROA	-111.70		-115.7		-4.074	
	(0.002)		(0.001)		(0.657)	
Relative size	-7.376		0.137		7.515	
	(0.000)		(0.920)		(0.000)	
Size Firm1	2.665		.686		-1.979	
	(0.000)		(0.208)		(0.002)	
Size Firm2	-2.904		2.004		4.906	
	(0.000)		(0.000)		(0.000)	
MA trend Firm1	3.854		0.408		-3.466	
	(0.001)		(0.842)		(0.073)	
MA trend Firm2	2.655		-4.945		-7.605	
	(0.016)		(0.203)		(0.055)	
Alliance trend Firm1	35.478		46.49		10.842	
	(0.000)		(0.000)		(0.020)	
Alliance trend Firm2	43.782		54.36		10.580	
	(0.000)		(0.000)		(0.007)	
Industry Concentration Firm1	-52.514		-5.574		47.343	
	(0.710)		(0.985)		(0.879)	
Industry Concentration Firm2	-3.127		-929.4		-929.20	
	(0.557)		(0.215)		(0.216)	
Natural resources and mining Firm1	.561		-1.386		-1.948	
	(0.499)		(0.163)		(0.060)	
Construction Firm1	1.737		-9.886		-11.637	
	(0.002)		(0.000)		(0.000)	
Trade, transportation, and utilities Firm1	.385		4.414		4.036	
	(0.315)		(0.001)		(0.003)	
Information Firm1	-.055		1.729		1.794	
	(0.887)		(0.005)		(0.005)	
Financial services Firm1	.553		3.877		3.329	
	(0.159)		(0.003)		0.012	
Professional and business services Firm1	.613		-11.49		-12.109	
	(0.192)		(0.000)		(0.000)	
Educational and health services Firm1	4.096		-10.68		-14.777	
	(0.000)		(0.000)		(0.000)	
Leisure and hospitality Firm1	-.118		-9.837		-9.709	
	(0.780)		(0.000)		(0.000)	
Unclassified Firm1	52.844		-5.377		-58.622	
	(0.708)		(0.984)		(0.851)	
Natural resources and mining Firm2	-.651		0.593		1.247	
	(0.363)		(0.597)		(0.278)	
Construction Firm2	.348		-0.180		-.557	
	(0.665)		(0.797)		(0.449)	
Trade, transportation, and utilities Firm2	-.276		3.887		4.169	
	(0.676)		(0.085)		(0.075)	
Information Firm2	-.494		5.233		5.742	
	(0.448)		(0.086)		(0.066)	
Financial services Firm2	.034		6.663		6.640	
	(0.958)		(0.074)		(0.085)	
Professional and business services Firm2	-.480		7.012		7.507	
	(0.495)		(0.058)		(0.048)	
Educational and health services Firm2	2.298		-7.994		-10.285	
	(0.009)		(0.034)		(0.008)	

Leisure and hospitality Firm2	-1.076		-6.628		-5.546	
	(0.210)		(0.091)		(0.166)	
Unclassified Firm2	2.255		922.0		922.67	
	(0.679)		(0.219)		(0.220)	
Constant	-8.268		-36.25		-25.204	
	(0.000)		(0.000)		(0.006)	
Year fixed effects	yes	yes	yes	yes	yes	yes
Industry fixed effects	yes	yes	yes	yes	yes	yes
Obs.	2,079,772	2,079,772	2,079,772	2,079,772	2,079,772	2,079,772

p-values in parenthesis. Robust standard errors are clustered by state and year.

Table 9. Testing the role of business complementarity during elections on alliances and acquisitions (H5a-H5b)

Dependent Variable: Occurrence of	Model 1: Acquisition vs no resource combination		Model 2: Alliance vs no resource combination		Model 3: Alliance vs Acquisition	
	MLogit	Marginal Effect	MLogit	Marginal Effect	MLogit	Marginal Effect
Gub_election	-.026	-.000005	-.038	-.000003	-.575	-.000003
	(0.932)	(0.934)	(0.795)	(0.796)	(0.532)	(0.468)
***H5a-5b-5c:*Business Complementarity*Gub_election**	**-.240**	**-.00004**	**-.030**	**-.00002**	**.322**	**.0000007**
	(0.004)	**(0.043)**	**(0.000)**	**(0.000)**	**(0.010)**	**(0.017)**
One year after election	-.277		.078		1.243	
	(0.209)		(0.408)		(0.108)	
US Election	1.572		-1.028		-6.263	
	(0.027)		(0.008)		(0.022)	
US GDP Growth	.0001		.0001		.0008	
	(0.141)		(0.033)		(0.002)	
Unemployment	.149		.182		.822	
	(0.076)		(0.000)		(0.031)	
Relative ROA	-94.438		1.857		-6.143	
	(0.004)		(0.063)		(0.481)	
Relative size	-7.202		-.450		7.473	
	(0.000)		(0.000)		(0.000)	
Size Firm1	2.589		1.455		-1.807	
	(0.000)		(0.000)		(0.018)	
Size Firm2	-2.790		1.259		4.879	
	(0.000)		(0.000)		(0.000)	
MA trend Firm1	4.062		2.843		-3.041	
	(0.001)		(0.000)		(0.157)	
MA trend Firm2	2.674		-1.817		-8.624	
	(0.025)		(0.026)		(0.045)	
Alliance trend Firm1	35.833		47.463		11.629	
	(0.000)		(0.000)		(0.029)	
Alliance trend Firm2	42.730		53.789		11.058	
	(0.000)		(0.000)		(0.010)	
Industry Concentration Firm1	-63.034		-.119		66.204	
	(0.638)		(0.523)		(0.621)	
Industry Concentration Firm2	-3.488		-128.4		-831.48	
	(0.227)		(0.002)		(0.233)	
Natural resources and mining Firm1	.548		-1.977		-2.526	
	(0.495)		(0.076)		(0.032)	
Construction Firm1	1.734		-10.162		-11.897	
	(0.002)		(0.000)		(0.000)	
Trade, transportation, and utilities Firm1	.376		4.108		3.731	
	(0.313)		(0.001)		(0.003)	
Information Firm1	-.011		2.023		2.034	
	(0.976)		(0.001)		(0.002)	
Financial services Firm1	.475		4.252		3.777	
	(0.203)		(0.007)		(0.017)	
Professional and business services Firm1	.542		-10.703		-11.245	
	(0.234)		(0.000)		(0.000)	
Educational and health services Firm1	4.055		-10.783		-14.839	
	(0.000)		(0.000)		(0.000)	
Leisure and hospitality Firm1	-.128		-9.811		-9.683	
	(0.763)		(0.000)		(0.000)	
Unclassified Firm1	66.731		-10.66		-77.396	
	(0.618)		(0.000)		(0.563)	
Natural resources and mining Firm2	-.619		-.069		.549	
	(0.358)		(0.959)		(0.685)	
Construction Firm2	.392		-.662		-1.055	
	(0.622)		(0.289)		(0.047)	
Trade, transportation, and utilities Firm2	-.227		4.003		4.230	
	(0.723)		(0.167)		(0.158)	
Information Firm2	-.444		5.153		5.597	
	(0.478)		(0.161)		(0.136)	
Financial services Firm2	.142		6.911		6.768	
	(0.824)		(0.136)		(0.156)	
Professional and business services Firm2	-.362		6.821		7.184	
	(0.593)		(0.121)		(0.110)	
Educational and health services Firm2	2.283		-8.238		-10.522	
	(0.012)		(0.059)		(0.019)	

Leisure and hospitality Firm2	-1.042		-6.707		-5.664	
	(0.212)		(0.140)		(0.222)	
Unclassified Firm2	2.625		827.52		824.89	
	(0.344)		(0.237)		(0.238)	
Constant	-8.394		-34.589		-26.194	
	(0.000)		(0.001)		(0.013)	
Year fixed effects	yes	yes	yes	yes	yes	yes
Industry fixed effects	yes	yes	yes	yes	yes	yes
Obs.	1,907,301	1,907,301	1,907,301	1,907,301	1,907,301	1,907,301

p-values in parenthesis. Robust standard errors are clustered by state and year

Table 10. Coefficients for the effect of each independent variable (0 = there was no resource combination between two firms; 1 = an alliance was formed between two firms; 2 = an acquisition was formed between two firms) on the interaction term between business similarity and business complementarity relative to the different base categories

	Business Similarity during elections			Business Complementarity during elections		
	b	z	P>|z|	b	z	P>|z|
0 vs 1	-2.8879	3.880	0.000	0.0309	4.375	0.000
0 vs 2	-6.4892	-3.081	0.002	0.2401	2.036	0.042
1 vs 0	2.8879	3.880	0.000	-0.0309	-4.375	0.000
1 vs 2	-3.6013	-1.607	0.108	0.2092	1.786	0.074
2 vs 0	6.4892	3.081	0.002	-0.2401	-2.036	0.042
2 vs 1	3.6013	1.607	0.108	-0.2092	-1.786	0.074

Table 11.

The effect of state elections on governance structure when transactions are in the same state and cross states (yearly data)

	Same States			
Dependent variable: Number	Alliance		M&A	
	Logit Model	Poisson Model	Logit Model	Poisson Model
	(1)	(2)	(3)	(4)
Gub_Election	-0.050	-0.070***	-0.171	-0.084***
	(0.144)	(0.020)	(0.121)	(0.022)
Gub_Election One Year After	0.321	0.035	-0.276*	-0.147***
	(0.221)	(0.028)	(0.145)	(0.028)
US_Election	0.005	0.030	0.284*	-0.345***
	(0.153)	(0.021)	(0.148)	(0.034)
Gub_GDP Growth	2.177**	-0.252**	-2.269***	1.760***
	(0.986)	(0.104)	(0.433)	(0.089)
US_GDP Growth	-0.000	-0.000***	0.000***	-0.000***
	(0.000)	(0.000)	(0.000)	(0.000)
Unemployment	0.094*	-0.039***	0.118***	-0.148***
	(0.055)	(0.008)	(0.045)	(0.009)
Constant	5.914***	5.574***	4.686***	4.398***
	(0.456)	(0.062)	(0.368)	(0.074)
Obs.	169,971	169,971	169,971	169,971
Year fixed effects	yes	yes	yes	yes

	Cross States			
Dependent variable: Number	Alliance		M&A	
	Logit Model	Poisson Model	Logit Model	Poisson Model
	(1)	(2)	(3)	(4)
Gub_Election	0.122*	-0.066***	0.710	-0.146*
	(0.072)	(0.009)	(0.484)	(0.086)
Gub_Election One Year After	-0.022	0.032***	14.70	-0.147***
	(0.076)	(0.010)	(716.4)	(0.028)
US_Election	-0.057	0.103***	0.304	-0.191*
	(0.073)	(0.009)	(0.485)	(0.110)
Gub_GDP Growth	-0.299	-0.293***	-0.016	0.994**
	(0.280)	(0.0308)	(1.982)	(0.431)
US_GDP Growth	-0.000***	-0.000***	-0.000	-0.000***
	(0.000)	(0.000)	(0.000)	(0.000)
Unemployment	-0.121***	-0.024***	0.074	-0.212***
	(0.016)	(0.002)	(0.138)	(0.030)

Constant	9.126***	5.428***	11.50***	5.002***
	(0.155)	(0.020)	(1.185)	(0.332)
Obs.	1,907,301	1,907,301	1,907,301	1,907,301

*** p<0.01, ** p<0.05, * p<0.1.

Corporate investment in the context of rising populism: Domestic firms, MNEs and Emerging Markets

Abstract

This paper analyzes the impact of populism on national and multinational investments. Combining insights from international business and political science, we investigate how a populist government and firm's geographic scope shapes corporate investment decisions. By providing some theoretical contributions, based on the role played by the agency of the populist leader, and testing these hypotheses on a global dataset of firms from 1994 to 2020, it is shown that firms in populist countries reduce investment more than those in non-populist countries. However, the findings of this paper highlight that the type of populism matters, as left-wing populism amplifies this negative effect on investment compared to right-wing populism. Furthermore, the effect of populism on business investment is exacerbated in emerging markets compared to developed economies. Finally, we show that multinationals' investment is less sensitive to the presence of populism in one's own country than domestic firms' investment; however multinationals prefer to withdraw their investments when the host country is ruled by a populist government. This paper, in addition to considering how political uncertainty derived from the institutional frameworks influence firm's investment, also proposes the actors' capacity to exacerbate uncertainty, which can even lead to a situation of institutional volatility. An emerging literature has highlighted the weakness of our understanding of the rise of populism, its relationship to global and national institutions, and its relevance to the strategies of multinational and domestic firms. Overall, the theoretical contributions and findings in this paper provide new evidence in the literature on the influence of populism on corporate investment activities.

Keywords: populism; corporate investment; geographic scope; multinationals; emerging markets.

INTRODUCTION

The presence of populist governments has increased significantly in various countries in recent years. The policy measures adopted by this type of government have influenced the decisions of the firms, leading them to modify their strategies. Populism in the United Kingdom, for instance, fueled the Brexit process, leading both European and British firms to drastically modify their investment decisions. When Donald Trump took office in the White House, the new President threatened to end NAFTA (North American Free Trade Agreement) and through a few tweets substantially modified the decisions of Toyota, Ford and General Motors, leading them to cancel their investments in Mexico. Andrés Manuel López-Obrador, as new the president of Mexico, condemned the neoliberal economic model and decided to cancel the energy reform promoted by the predecessor government, thus modifying the large investments that multinational companies had planned in the sector. In sum, there are many examples of how populism has modified investment decisions, unleashing high uncertainty that affects both multinational firms (MNEs) and domestic ones.

Although populism has been studied for some years in the fields of political science and economics (Acemoglu et al., 2013; Dornbush & Edwards, 1991; Guiso et al., 2019; Müller, 2016; Rode & Revuelta, 2015; Rodrik, 2018 ; Sachs, 1989; Stanley, 2008), recently populism has increased the attention of various scholars in the field of international business (e.g. Devinney & Hartwell, 2020; Ghauri et al., 2021; Hartwell & Devinney, 2021; Mudambi, 2018). This emerging literature has highlighted, among other aspects, that populism represents a particular source of political uncertainty that affects the decisions of firms by generating institutional volatility (Hartwell & Devinney, 2021). This paper is part of this emerging research stream. . Its objective is to provide some theoretical contributions and a quantitative analysis to document the effects that populism generates in domestic and multinational investments. We also investigate the role of populist ideology and its effects on corporate investment, as well as the possible differential effects of populism in emerging markets versus developed economies.

Populism has been considered an ideology or political movement that is centered around three concepts: the people, the elite and the general will (Mudde & Kaltwasser, 2017)[17]. Populism is seen as a movement that champions short-term protection policies in favor of the “people” by using anti-elite and anti-globalization rhetoric to manipulate people's beliefs, while concealing their long-term costs (Guiso et al., 2019). The populist leader plays a central role, since he has the belief that he represents the "general will", knowing what the people want and deserve in front of the elite (Wehner & Thies, 2021). The elite represents the political and economic groups that have previously ruled and that have exploited the people. Rode and Revuelta (2015) consider that the ideological variant of populism is used to highlight the mechanism by which populism exacerbates uncertainty through populist discourse, which includes statements, platforms and speeches (Hawkins, 2009; Mudde, 2004; Mudde & Kaltwasse, 2017). According to Hartwell & Devinney (2021), populist leaders are specific actors who have the ability to use political uncertainty and generate institutional volatility. Given that the rhetoric of the populist leader is used to threaten the institutions that give certainty to business, the central idea of this emerging literature in International Business is that populism has effects on the decisions of companies by exacerbating uncertainty. Thus, the populist leader is a relevant political actor in the generation of institutional volatility.

The contribution of this paper is innovative under three standpoints. First, we provide some theoretical contributions by considering that populism influences corporate investment decisions, through uncertainty, exacerbated by the interplay between the weakness / strength of institutions and the role played by the populist leader as an actor. In this sense, our study approaches the literature that typically focuses on the relationship between political risk and investment decisions from the perspective of institutions that regulate

[17] In political science literature there are several definitions of populism and we do not have to mix populism with other closely related concepts such as nationalism, xenophobia, clientelism (Wehner & Thies, 2021; Mudde & Kaltwasser, 2017).

markets and provide certainty (Amore & Corina, 2021; Bloom, 2014, 2018; Bonaime et al., 2018; Nguyen et al., 2018; Jens, 2017; Baker et al., 2016; Gulen & Ion, 2016; Huang et al., 2015; Yook & Julio, 2012). However, since the rhetoric of the populist leader is used to threaten institutions that give certainty to investments, the central thrust in this paper is that populism also exacerbates uncertainty, recognizing actors' ability to generate institutional volatility. As Hartwell & Devinney (2021) points out, research based exclusively on institutional frameworks is inadequate to analyze the link between political uncertainty and company decisions in the 21st century, since the role of political players must also be considered. From our perspective, populism can even change the institutional framework in a country by weakening or removing pre-existing rules of the game that establish controls in a political system and give certainty to long-term investment decisions (Devinney & Hartwell, 2020; Fukuyama, 2014). In sum, this paper seeks to shed some light on how populism can affect firm behavior, considering both the agency of the populist leader and the role played by institutions.

Second, an empirical analysis of the effects of populism on corporate investment is provided, including a panel data set of firms in 42 democratic countries from 1994 to 2020. A subsample of US-listed firms is also used, which contains data on foreign activities from 1998 to 2020. To assemble the final dataset, we collected information from different sources covering populism speech data, firm-level data and macroeconomic data. In particular, we analyze how the presence of populism, as well as its possible ideological orientation (left-wing populism versus right-wing populism), affect firm domestic and foreign investment. Third, this paper provides an empirical analysis of the impacts of populism on multinational firms. The rise of populism in several countries has uncovered major gaps in our business literature. Our work contributes to this vibrant and emerging literature about the influence of populism on business outcomes, in which there are only a few works (Cumming & Zahra, 2016; Devinney & Hartwell 2020; Ghauri et al. 2021; Hartwell & Devinney 2021; Hill et al., 2019; Moschieri & Blake, 2019; Mudambi, 2018). While many works have focused on the

impact of political uncertainty on investment decisions, the role of populism for business decisions has been less explored. We extend some theoretical developments about the populist rhetoric and also bring new elements to the theory by which the ideological orientation of populism matters in investment decisions. We also provide an empirical analysis in which some mechanisms proposed by recent theories developed about populism in international business are tested. To the best of our understanding, these contributions are novel in the international business literature.

In the next section, this paper provides some theoretical contributions in which possible mechanisms based on the interaction between the agency of the populist leader with the institutions could exacerbate uncertainty and, therefore, influence investment decisions and firm's performance. Then, we develop our hypotheses. We move to explain our data and variables, and present our findings together with a number of robustness checks. Finally, we discuss the implications of our findings and conclude.

THEORY AND HYPOTHESES

Populism and uncertainty

The wide diversity of theoretical perspectives around populism provides several points on how to address and study this political disruption and its varieties (e.g. Albertazzi & McDonnell, 2008; Barr, 2009; Dornbush & Edwards, 1991; Guiso et al., 2017; Hawkins et al. ., 2018; Hawkins, 2019; Moffitt, 2016; Mudde, 2017; Weyland, 2017). From a more practical perspective, Devinney and Hartwell (2020) argue that it is not necessary to have a single view of populism to analyze its effects on business decisions. Instead, it is important to have a framework for understanding the different variants of populism in order to explore their relevance to global strategy and international business.

Our analysis focuses on the statements of the populist ruler, who is capable of manipulating reality, exacerbating surrounding uncertainty, and generating institutional

volatility (Hartwell & Devinney, 2021). Unlike governments that emanate from traditional political parties, populist governments expand their power by weakening institutions (Devinney & Hartwell, 2020; Rode & Revuelta, 2015). This is relevant, since these institutions are the ones that regulate the markets and provide certainty so that the investments are significant and viable in the long term. In addition, populist governments clash with the controls provided by the division of powers (among executive, legislative and judicial branches), international treaties, multilateral agencies and organizations, as well as the division of powers between supranational, national and subnational governments.

Therefore, the uncertainty unleashed by populism goes beyond the political uncertainty that has been traditionally studied in the literature (Amore & Corina, 2021; Bloom, 2014, 2018; Bonaime et al., 2018; Nguyen et al., 2018; Jens, 2017; Baker et al., 2016; Gulen & Ion, 2016; Huang et al., 2015; Yook & Julio, 2012, 2016). Populism can even change the institutional framework of a country, threatening, weakening, or eliminating the pre-existing rules of the game that establish controls in a political system and give certainty to long-term investment decisions (Devinney & Hartwell, 2020; Fukuyama, 2014). Although it is a political uncertainty, the disruptive way in which populism has emerged and its potential institutional instability that it can cause is what makes it a particular case of uncertainty to the one studied in the International Business literature. Populism, as part of its strategy, fuels uncertainty by promoting policies that aim to abruptly reverse the political arrangements previously built under the traditional parties, thus weakening institutions and promoting a high level of polarization (Barr, 2009; Devinney & Hartwell, 2020; Havlík, 2019). Firm's investment decisions are drastically altered by the negative and massive impact of the uncertainty of populist governments. This uncertainty is far from the logic of traditional parties, widely used in the literature where uncertainty emanates from institutional frameworks (Amore & Corina, 2021; Amore & Minichilli, 2018; Inoue, 2019; Jens, 2017; Yook & Julio, 2012, 2016). In populism, uncertainty arises from an institutional instability promoted by the agency of the populist leader.

Populism emerges as an alternative that confronts the status quo given by a ruling elite. The general idea of populism is that it represents the will of the people, and exploits anti-globalization and anti-elite rhetoric to manipulate beliefs in societies (Dowding, 2006; Hawkins, 2009; Mudde, 2004; Mudde & Kaltwasse, 2017). While governments led by traditional parties promote change through institutional channels, populism does so by threating to destroy these channels, as part of its strategy and its essence. For firms, maintaining such channels are essential to provide certainty in their investment decisions whose returns are guaranteed in the long term through the presence of political arrangements, institutions, multilateral organizations, and international treaties. Populism disrupts this entire institutional apparatus by abruptly changing the rules of the game. Furthermore, unlike authoritarian regimes, populism has generally emerged in democratic regimes, where the agency of the populist leader exploits discontent and polarization in society. Likewise, populism does not imply turning towards an authoritarian regime, since what is proposed is to disrupt previously established institutional arrangements, without this representing an annihilation of democracy.

In the search for greater power, populist governments collide with the controls that provide the division of powers among the executive, legislative and judicial branches (Devinney & Hartwell, 2020). To this must be added the threat to international treaties, multilateral agencies and organizations, as well as the division of powers between supranational, national and subnational governments. This collision with previously defined institutions, controls and rules of the game puts investors under massive stress, not commonly seen in traditional political party governments. Examples of these events are the departure of the United Kingdom from the European Union through Brexit, or the renegotiation of the North American Free Trade Agreement (NAFTA), pushed by the US government of Donald Trump (Ghauri et al., 2021). The firms' capacity to influence political arenas, and redefine strategies, both domestic and foreign, were undermined during these two emblematic episodes unleashed by populist governments.

Additionally, it could be argued that since the electoral process, populist candidates have attacked institutions, so there should be no political uncertainty derived from the predictability of populist proposals to attack previously established arrangements. However, in various electoral processes, the victories of populist candidates have been unexpected. Examples such as Donald Trump in the United States or Brexit in the United Kingdom, the results were unexpected to the surveys that had previously been carried out.

Collectively, our arguments suggest that firms' investments in home country will be negatively affected by populist governments, therefore, we hypothesize the following:

Hypothesis 1: *Populist governments have a negative effect on firms' investment.*

The effect of left-wing and right-wing populism in shaping the uncertainty-investment nexus

The literature has highlighted how several adverse factors have been relevant to understanding the economic roots of populism (Eichengreen, 2018). Economic globalization, financial crises, macroeconomic recessions, high unemployment, falling subsidies, falling pension systems, automation, or austerity policies are some examples of these adverse factors. However, this does not necessarily determine its ideological orientation, as this is ultimately induced by the supply and demand of populist policies (Guiso et al., 2017; Rodrik, 2018, 2020). Therefore, why does the ideological orientation of a populist government matter in investment decisions? What would be the differentiated effects of left-wing populism and right-wing populism on firms' investment behavior and what would be the mechanisms to observe these differences? Our central argument is that left-wing populisms, in their relationship with investors, exacerbate uncertainty to a greater extent than that generated by right-wing populisms. While both have a negative impact on companies' investment decisions, the political orientation of the left is even more damaging.

To develop these ideas, it is necessary to understand the supply and demand process that led to the rise of populism. Thus, it is important to take into account its different variants in order to identify the specific mechanisms and systematically explain why their ideological orientation could affect investment decisions.

This is relevant given that the economic and redistributive conflict between the traditional left and right political forces seems to be diminishing -or even disappearing- in different countries due to the rise of populism in recent years. This emerging movement has been placed on the political spectrum, where the conflict has now shifted towards the differences between nationalist and socially conservative groups versus cosmopolitan and socially progressive groups (Tabellini, 2019). Emerging populist parties have rapidly gained ground and have managed to electorally outperform traditional political parties. Radicalization has been successfully exploited by populist parties, fueling further polarization. Traditional political parties have not been able to move easily within the political spectrum, as if they decided to radicalize to the left or right wing they would jeopardize their traditional political base. For this reason, the ideological orientation of populist parties does not necessarily follow the same logic as traditional political parties. Although left-wing populist parties share many attributes in their ideological platform with respect to traditional political parties with the same ideological orientation, the priorities in the political debate and the strategy employed by the former, based on polarization and confrontation with pre-existing political arrangements and rules of the game, mark notable differences in the results of investment decisions.

According to Devinney & Hartwell (2020), the structural forms of populism emphasize aspects such as the need to prioritize local employment on the public agenda. This explains the anti-globalization or anti-migrant political position of the populist parties from a certain perspective. Considering the possible implications of populism in investment decisions, the structural variant is closer to the logic of the right-wing populist. Both left-wing and right-wing

populist governments can be characterized by proclaiming greater protectionism in the face of increasing globalization. However, from the perspective of right-wing populism, foreign investment could be viable in the populist country, as it would have the objective of protecting and creating jobs. In this sense, multinational firms could be threatened if they diversified their investments in destinations outside the populist country. This is not necessarily observed in traditional right-wing political parties, as these have been the main promoters of free trade agreements. This would be the case of the Republican Party in the United States under the administration of the two presidents Bush. However, both populist parties and traditional right-wing parties share their affinity with the benefits of the free market within their countries, as well as their deregulatory vision of markets.

Left-wing populist governments, from the vision of Devinney & Hartwell (2020), would fit into the logic of the economic variant of populism. The redistributive idea of the economic benefits in a country towards broader sectors of the population is present in the platforms of these parties. Left-wing populist parties also share with the traditional parties the same ideological orientation of expropriations and of being against foreign investment. Likewise, both types of parties share their idea of the markets' overregulation and the idea of the provider state in certain strategic activities of the economy. However, the fundamental difference lies in the strategy to achieve these objectives. The traditional parties bet to carry these reforms through the institutional route, while the populist parties put aside this path, in order to abruptly and radically change the rules of the game.

The economic and structural variants of populism developed by Devinney and Hartwell (2020) help to understand the ideological orientation and, thus, to identify the possible impact on investment decisions. A left-wing populism can promote nationalization measures (Devinney & Hartwell, 2020), as well as anti-globalization measures. Right-wing populism is an ideology that proclaims that governments must generate measures that exclusively benefit members of the native group, conceived as an ethnically homogeneous

group (Mudde, 2007; Rydgren, 2007). Thus, the platforms of right-wing populisms promote measures to return the jobs "stolen" by globalization. However, right-wing populist governments are not averse to foreign investment. For example, Donald Trump celebrated that Toyota moved its factories from Mexico to the United States as this measure met the demand for its support base: to create jobs. Left-wing populism, in addition to having nationalization measures embedded in its agenda, is contrary to foreign investment. In the case of Mexico, for example, the president López Obrador has spoken out on many occasions against foreign firms, describing them as corrupt and as the cause of promoting neocolonialism.

Another factor that distinguishes populisms due to their ideological orientation is the conception of the advantages of the market. While right-wing populisms promote domestic free-market and economic deregulation measures, left-wing populisms promote greater regulation and nationalization. Left-wing populisms are even against the regulatory state as they promote the return of the provider state (that certain productive sectors that are considered strategic only involve state-owned companies). Likewise, left-wing populisms have been characterized by promoting policies with spectacular results in the short term, but sacrificing economic stability in the long term (Dornbush & Edwards, 1991). While traditional left-wing governments also have elements that generate uncertainty, such as the idea of nationalization, overregulation and their anti-foreign investment preferences, left-wing populist governments magnify uncertainty in their strategies of abrupt change, setbacks in politics and institutional level, by establishing new rules of the game (Barr, 2009; Havlík, 2019; Hartwell & Devinney, 2021). The uncertainty in left-wing populist parties is even greater for investors, as long-term changes focus not only on political concerns, but also on how the rules of the game will play out (Hartwell and Devinney, 2021).

In sum, the supply and demand for populist policies determines the ideological orientation of this political disruption and its effects on firms' investment. Right-wing and left-

wing populistic governments come with different discourses and, therefore, different priorities. Right-wing populist's priorities are defending jobs in favor of members of the native group, force multinational firms to return their investments to the domestic country, and the inclusion of anti-globalization policies. However, right-wing populism is not contrary to foreign investment, as long as such investment is made in its own country and creates more jobs. Right-wing populism is also not contrary to the economic deregulation of markets. Meanwhile, left-wing populist's priorities are in favor of the control of certain economic activities by the State, therefore, in favor of expropriation, averse to neoliberal policies, private investments, deregulation of markets, and foreign investments. Therefore, for firms' investments, left-wing populism is more pernicious than right-wing populism.

> **Hypothesis 2:** *Left-wing populism (compare to right-wing populism) amplifies the negative effect of populism on firms' investment.*

The effect of populism on corporate investment in emerging market

Several investors are interested in emerging markets for the potential for high growth but also they need to deal with distinct institutional contexts. What characterizes emerging markets is the unique institutional environment, which needed to be well understood before planning an expansion of business operations in these markets (Winkler et al., 2015). Emerging markets are not uniform, but all of them, in different forms, fall in providing the institutions necessary to support basic business operations (Khanna & Palepu, 1997). Investors declare a great appetite for emerging markets, being in the middle between advanced economies, which are economies already explored, but companies can rely on institutions that minimize market failures; and stagnant economies, that are not growing, sometime declining, and suffer for the absence of basic institutions (Khanna & Palepu, 1997). Emerging markets offer the prospect of substantial growth because they have

developing institutions helping to achieve this goal, but, at the same time, institutional voids make market failure a latent threat (Khanna & Palepu, 1997).

Managers' information level influences decision making effectiveness and emerging markets are characterized by a lack of information and by ambiguity (a lack of clarity of available information), which implications for firms remain unclear (Daft & Macintosh, 1981). The more adequate the information is handled, better results in the decision outcomes. In emerging-economy home countries, where market failures and institutional voids tend to be widespread, the state more often than not plays a relatively active role in the economy and firms strategies and operating modes are more conditioned by politics, policies and non-market considerations.

Information ambiguity is exactly the result of populist discourses. Populist rulers are able to manipulate reality, exacerbate the surrounding uncertainty and generate institutional volatility (Hartwell & Devinney, 2021). Populist governments expand their power by threaten institutions that regulate markets and provide certainty so that investments are meaningful and viable in the long term (Devinney & Hartwell, 2020; Rode & Revuelta, 2015). The institutional volatility that characterized emerging markets is magnified by populist governments, increasing transaction costs and affecting investment decisions. In addition to a significant lack of information that firms naturally face in foreign markets, emerging markets are more dynamic and '*surprise-intensive*', and populists intensify the surrounding uncertainty.

The characterization of emerging markets about institutional voids, relative importance of informal compared to formal institutions, institutional pressures by local governments, as well as institutional change and transitions, make the populist discourse against institutions a real threat. In emerging markets, populist leader has a real ability to materialize his political platform against institutions. In the search for greater power, populist governments collide with the controls that provide the division of powers among the

executive, legislative and judicial branches (Devinney & Hartwell, 2020), international treaties, multilateral agencies and organizations, as well as the division of powers among supranational, national and subnational governments. This collision with previously defined institutions, controls and rules of the game puts investors under massive stress.

Developed markets are also characterized by institutional change, but the nature and pace of change is considerably different in emerging markets (Rottig, 2016). Developed markets are characterized by stable institutions that regulate markets, meanwhile, the institutional change in emerging markets is more sudden and unpredictable and difficult to manage for firms. Such unstable institutions may constitute (largely unethical but legal) opportunities for firms to exploit loopholes in formal rules and regulations at the cost of local social and environmental interests (Rottig, 2016), but the populist ruler make those opportunities more difficult to predict based on the threat that institutions will disappear and make the emerging market a stagnant market, without institutions.

The phenomenon of populism presents a challenge to existing theoretical frameworks, as the phenomena is not only accelerating existing institutional change (Hartwell & Devinney, 2021), but potentially serving as originators of new institutional structures and creating institutional volatility (Hartwell, 2018). Populist political parties are able to subsume existing institutional levers to their own ends, generating uncertainty rather than dampening it. Institutions are fundamental for the design of the rules of the game, building the boundaries, but populism is pushing these boundaries outwards and emerging markets are unable to contain it (Hartwell & Devinney, 2021). Therefore, we hypothesize the following:

Hypothesis 3: *The drop in firms' investment is higher in populist emerging markets.*

The populism-investment nexus among multinational firms

International investments can be a good diversifier for investment portfolio because economic downturns in one country or region can be offset by growth in another. Strategy and international business scholars have wrestled with the advantages and disadvantages of diversifying firms' operations across countries. It is well known that multinationality may improve performance by allowing firms to better exploit scale and scope economies, granting access a broader set of investment opportunities, enabling the development of diverse capabilities, and diversifying risks idiosyncratic to their domestic market. Accordingly, many studies (e.g. Grant, 1987; Daniels & Bracker, 1989; Haar, 1989) have documented a positive relationship between international diversification and firm performance.[18]

A distinctive argument in favor of geographic diversification relies on the increasing flexibility and greater bargaining power that result from a multinational network and from broader economies of scale, scope, and learning (Kogut, 1985). Indeed, a global network can create value for multinational firms by enabling them to reallocate investment away from host countries with high uncertainty Kogut & Kulatilaka (1994). Moreover, geographic dispersion grants firms with flexibility options useful to minimize uncertainty. Along this line, there is an extended research on the value of flexibility under uncertainty (De Meza & Van der Ploeg, 1987) and the option valuation of production shifting in a network (Kogut 1983, 1985; Kogut & Kulatilaka, 1988, 1994). Internationally-diversified firms can also gain competitive advantages by arbitraging country-specific sources of risk: as compared to single-country firms, multinationals are better positioned to reduce risk by spreading its activities across multiple global market areas (Kim et al., 1993). An alternative perspective suggests that multinationals can manage uncertainty more effectively by leveraging on their strategic asset-seeking intent and financial abundance (Luo & Bu, 2018). Drawing on these

[18] Other scholars have shown that the positive relationship between internationalization and performance is contingent to the presence of other factors, e.g. intangible assets (Morck & Yeung, 1991).

insights, we posit that populism in the country of headquarter harm less the investment of multinationals as compared that of single-country firms. Therefore, we hypothesize the following:

> **Hypothesis 4:** *Multinationality reduces the negative effect of populism in the home country on firms' investment.*

The effect of populism among geographically-diversified firms

We argue that populism wave, recently stretching over so many diverse countries, put multinationals and domestic firms equally at risk. Populist countries will exert more pressure for favoured local value chain factors of production, for ownership of structures to capture political rents, and to use corporate structures to push populist agenda (Devinney & Hartwell, 2020). Government action is key to corporate activities, which influence foreign investment from the location decisions of multinational corporations (Mudambi & Navarra, 2003). Populism is changing the institutional structure of a country, altering the rules of the game (Hartwell & Devinney, 2021), rules already incorporated in the strategies of multinationals, making it difficult to operate. In addition, populism magnifies the polarization of society, maintaining extreme positions, increasing the deterioration of the political environment and the attraction to invest.

Scholars have studied the threat of political uncertainty and the efficacy of political institutions for multinationals as the dominant threats of the day (Hartwell & Devinney, 2021). For example, Amore & Corina (2021) show that political elections in the host country have a negative effect on the foreign investment of multinationals. Azzimonti (2019) shows that foreign direct investment in the US is affected by party conflicts over trade policies, whereas Liu and Li (2020) show that terrorism drives divestment decisions. International business scholars confirm that political conditions matter a great deal for multinationals' investment

activities (Carroll et al., 1988; Filippaios et al., 2020; Henisz, 2000; Mudambi & Navarra, 2003).

Multinationals, in addition to uncertainty over political decisions within their country of headquarter, are also subject to swings in political conditions abroad. As we discuss previously, populism is changing a country's institutional structure, altering the rules of the game (Hartwell & Devinney, 2021). For example, multinationals have been exposed to the uncertainty regarding Trump's foreign trade policies (Chang et al., 2019). Similarly, the business decisions of many companies in the UK have been influenced by the political turmoil related to the Brexit referendum (see Dhingra et al., 2016 for a discussion). Multinationals' executives make strategic decisions considering not only their national political environment but also the specific characteristics of the countries where they (intend to) operate. Unfortunately, as discussed previously, multinationals, based on a lack of understanding of the individual political actors and how they are operating in, and making use of, the institutions with which they interact, may lead to incorrect strategic decisions (Devinney & Hartwell, 2020). Political uncertainty generated by populism may increase the risk for managers to forecasting political events that might be deleterious for the firm (Sniazhko, 2019). Additionally, the uncertainty surrounding the populist drive for power and the prospects of success can affect firm investment decisions or even consumption patterns, leading to shifts in consumer demand. This can be a shock to be addressed by MNEs.

We argue that geographic dispersion grants firms with flexibility options useful to minimize uncertainty, reason for why they will divert their investments from populist countries, seen as a highly uncertain scenario, to countries that are not populist. Previous work (e.g. Grant, 1987; Daniels & Bracker, 1989; Haar, 1989) have documented not only a positive relationship between international diversification and firm performance, but also, that multinationals, counting with a global network, will reallocate their investments away from host countries with high uncertainty (Kogut & Kulatilaka, 1994). Along this line, there is

an extended research on the value of flexibility under uncertainty (De Meza & Van der Ploeg, 1987) and the option valuation of production shifting in a network (Kogut, 1983, 1985; Kogut & Kulatilaka, 1988, 1994).

Drawing on these insights, we posit that populism harms multinational investments in the host country, as compared that of single-country firms.

Hypothesis 5: *Populism in the host country has a negative effect on multinationals' foreign investment.*

DATA AND VARIABLES

Our empirical analysis builds on: 1) a panel dataset of firms in 42 democratic countries from 1994 to 2020; and 2) a subsample of US listed firms (for which we have data on foreign activities from 1998 to 2020). To assemble the final dataset, we gather information from different sources covering populism speech data, firm-level data and macroeconomic data.

Dependent variables

To test our hypothesis, we employ a global dataset drawn from Compustat (Global and North America) for the period 1994-2020. To test the hypothesis for multinational firms, we follow existing works (e.g., Duru & Reeb, 2002; Denis et al., 2002) and focus on US listed firms with available investment data in the Compustat Segment database from 1998 to 2020.[19]

The dependent variables are *Investment*, measured as a firm *i*'s capital expenditures headquartered in country *j* at time *t*, scaled by the beginning-of-year book value of its total assets (Julio and Yook, 2012); and *Foreign investment*, measured as a firm *i*'s capital

[19] Unfortunately, we do not have data to distinguish multinationals and single-country firms in the global dataset employed for testing the first two hypotheses. Our analysis based on Compustat Geographic Segment data starts in 1998 because this is the year when the Statement of Financial Accounting Standards (SFAS) 131 went into effect. SFAS 131 introduced significant changes to the disclosure of company's foreign operations, which raised data reliability and facilitated the pricing of foreign earnings (Hope et al. 2009).

expenditures headquartered in USA and investing in host country *j* at time *t*, scaled by the beginning-of-year book value of its total assets (Denis et al., 2002; Duru & Reeb, 2002).

Independent variables

The independent variable is populism. To measure populism (*Populist score*), we rely on the work of Hawkins et al. (2019), Global Populism Database. The dataset measures the level of populist discourse in the speeches of 215 chief executives (presidents and prime ministers) from 66 countries across all continents between 1989 and 2020. The index was built with textual analysis of political speeches using holistic grading to measure diffuse, latent aspects of texts such as tone, style, and quality of argument. This type of data fit perfectly with our definition of populism, focusing on the potentiality of a populist political regime. The analyses highlight the extent to which populists in power impact the economic and political system and they use experts to subjectively evaluate each country's formal and informal institutional structures, capturing the more contemporaneous changes in orientation (Devinney & Hartwell, 2020). *Populist score* is a continuous variable in the interval between 0 [“not populist”] to 2 [“very populist”]. Based on the database classification, leaders whose speeches average below 0.5 are counted as “Not Populist”; those between 0.5 and 0.99 are “Somewhat Populist”; between 1.0 and 1.49 “Populist”, and 1.50 and higher are “Very Populist”.

We employ a continuous variable because recent studies have argued and demonstrated that populism might better be conceived of as a scale: parties can be more or less populist (Deegan-Krause & Haughton, 2009; Hawkins, 2009; Jagers & Walgrave, 2007; Pauwels, 2011; Rooduijn & Pauwels, 2011; Rooduijn et al., 2014; Ruzza & Fella, 2011).

To test the additional hypothesis, we calculate the interaction term between *Populist score* and *Left-wing* party (*Left-wing populist*). *Left-wing* party is a classification from The

Global Populism Database, which includes a separate classification of each leader's overall ideological position, measured as left (of center), center, or right (of center) categories, using a combination of data sources[20]. We also calculate the interaction term between *Populist score* and *Emerging Market* (*dincomepop*). *Emerging Market* is a classification from The World Bank database, which includes a classification of emerging markets based on their income. Finally, we calculate the interaction term between multinationality (*Diversification*) and populist score (*divpop*). Detailed data on each regime for the country under study are summarized in Table 1.

INSERT TABLE 1 HERE

Control variables

We control for firm's financial performance, i.e. the Return on Assets (*ROA*), computed as the ratio of earnings before interest, taxes, depreciation and amortization, scaled by beginning-of-year book value of total assets, and *Firm size*, calculated as the logarithm of the book value of total assets.

Our analysis further includes a set of macroeconomic controls useful to alleviate the concern that corporate investment may change as a result of varying economic conditions. From the World Development Indicators of the World Bank we obtain information on a country's economic growth (*GDP growth*), which controls for the effect of economic conditions on investment (Dangl & Wu, 2016). We control for *Unemployment*, because labour market is attractive for investment and Foreign Direct Investment (Habib & Zurawicki,

[20] The Global Populism Database includes a separate classification of each leader's overall ideological position, measured as left (of center), center, or right (of center) categories, using a combination of data sources including the Democratic Accountability and Linkages Project (DALP, Kitschelt 2013), the Political Representation, Parties, and Presidents Survey for Latin America (PREPPS) and 4 the Chapel Hill Survey for European Parties (Bakker et al. 2015), as well as consultation with in-country experts. See https://doi.org/10.7910/DVN/LFTQEZ/DLCAGA for details.

2002), which data come from the International Labour Organization. Finally, to separate out the populism from other sources of aggregate uncertainty, such as economic crisis, downturns, etc., we control for the annual global Economic Policy Uncertainty (*EPU*) index (Davis, 2016)[21]. We, finally, include the variable *election*, to control for an additional source of uncertainty.

For the regression about foreign investment, we include two additional control variables: the *GDP per capita* as a measure of the market size of the host country and the ratio *Trade/GDP* to control if a country is open to international trade, from the World Bank and the International Monetary Fund databases, respectively.

Summary statistics

Excluding firms with missing values in firm-level and populist score leaves us with a total of 280,000 observations for the global sample. Table 2 reports summary statistics on firm characteristics, together with populism, firm and macroeconomic variables.

INSERT TABLE 2 HERE

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[21] Values come from Baker et al. (2016), which develops an index that quantifies economic policy uncertainty using the scaled count of newspaper articles containing keywords related to: (1) uncertainty; (2) policy; and (3) the economy. Baker et al. (2016) validated this index by showing that is correlates with other measures of uncertainty. See https://www.policyuncertainty.com for details.

EMPIRICAL ANALYSIS

Corporate investment during populist periods

We employed a panel regression estimation with fixed effects. Consistent with our first and second hypotheses, the descriptive analyses suggest that while corporate investment drops in country which populism score is high, firms experience a different decline depending on the populism type, left-wing or right-wing. To test this argument more thoroughly, we estimate the following regression:

$$I_{ijt} = \alpha_i + \beta_1 Populist\ Score_{jt} + \beta_2 Leftwing_{jt} + \beta_3 Populist\ Score_{jt} \times Leftwing_{jt} + \mathbf{X}'_{ijt}\delta + \gamma_i + \lambda_t + \varepsilon_{ijt}$$

where *i* denotes firms, *j* denotes countries of headquarter, and *t* denotes years. The dependent variable is the investment of firm *i's* headquartered in country *j* at time *t*. This is defined as capital expenditures of firm *i*'s in country *j* at time *t*, scaled by beginning-of-year book value of total assets. The key explanatory variable is the interaction term between populist score in country *j* in year *t* and the type of populism in country *j* in year *t.* Based on our hypothesis, we expect the populist score to be negative and significant and the interaction term to be negative and significant. The *Populist score* variable is a continuous variable, which takes values from zero to one point nine, from not populist to very populist. The *Left-wing* variable is a dummy, which takes value of one if the populism is a left-wing type in country *j*, and zero otherwise.

Table 3 displays the results related to the testing of our hypothesis 1 and hypothesis 2 with panel regression with fixed effects. Model 1 and Model 2 estimate hypothesis 1, without and with control variables, respectively. Results show that corporate investment in populist countries drops by 2.8% and by 2.6%, respectively (statistically different from zero at the 1% level). These results give support to our hypothesis 1: domestic investments drop by 2.6% in countries with higher degree of populist in charge.

Model 3 estimates hypothesis 2, including the interaction between a populist government in charge and the left-wing type. As shown, the direct effect of populist remains negative. The interaction between populism and left-wing is *negative* (drops by 2.7%) and statistically significant at the 1% level. In other words, firms in countries governed by a left-wing type of populism invest less than firms in countries with right-wing and centre populism. Additionally, the effect of left wing traditional party on firm investment is positive, meaning that left wing traditional parties have a positive effect on firm's investments, taking out all concerns that the negative effect on firm investment may be driven by the left-wing traditional party in the government and not because the left-wing party is populist. These results give support to our hypothesis 2.

INSERT TABLE 3 HERE

For the testing of our third hypothesis, concerning the role of populism in emerging markets, we estimate the following regression:

$$I_{ijt} = \alpha_i + \beta_1 Populist\ Score_{jt} + \beta_2 Emerging_{jt} + \beta_3 Populist\ Score_{jt} \times Emerging_{jt} + \mathbf{X}'_{ijt}\delta + \gamma_i + \lambda_t + \varepsilon_{ijt}$$

Table 4 displays the results related to the testing of our hypothesis 3 with panel regression with fixed effects. Model 1 estimate the effect of the interaction term (emerging markets * populist score) over the total database. The coefficient is negative (-6.6%) and is significant, indicating that the regression coefficient emerging markets is significantly different from the coefficient non emerging markets. Models 2 and 3 estimate the two regression separately: the effect of populism on firm investments in emerging and non-emerging markets. Results show that corporate investment in emerging markets with a populist in charge drops by 5%, which is higher compare to the drop of corporate investment in non-emerging markets with a populist in charge (-0.2%) (statistically different from zero

at the 1% level). These results give support to our hypothesis 3: domestic investments drop more in emerging markets with a populist in charge.

INSERT TABLE 4 HERE

Investment behavior of multinationals in home country

We now move to the testing of the fourth hypothesis, which concerns the differential investment of multinationals and single-country firms during populism in their home country. To this end, we focus on the subsample of US listed firms (for which we have export data), and estimate the following regression:

$$I_{ijt} = \alpha_i + \beta_1 PopulistScore_{jt} + \beta_2 Multinational_{it} + \beta_3 PopulistScore_{jt} \times Multinational_{it} + \mathbf{X}'_{ijt}\delta + \gamma_i + \lambda_t + \varepsilon_{ijt}$$

which includes a dummy equal to one for firms with foreign revenues as identified in the Compustat Segment dataset. Our fourth hypothesis suggests that multinational firms are better able to hedge against populism in their home country, and thus the coefficient of the interaction term should be positive.

Results in Table 5 show that while the populist score has a negative and statistically significant effect on investment, the interaction between populist score and multinationality is positive and significant (at the 1% level): consistent with our hypothesis, multinational firms are able to weather the negative effect of populism on investment.

INSERT TABLE 5 HERE

Investment behavior of multinationals in foreign countries

In this section, we test the fifth hypothesis, which concern the effect of populism in the host country for the investment behavior of multinationals. To this end, we employ again a subsample of US listed firms from Compustat, for which we also have data on the foreign country where they operate. For each of these foreign countries, we also have information on the populism score. The model we estimate is the following:

$$I_{ijt} = \alpha_i + \beta_1 Populist\ score_{jt} + \mathbf{X}'_{ijt}\delta + \gamma_i + \lambda_t + \varepsilon_{ijt}$$

where the dependent variable is the foreign investment of multinational firm *i's* headquartered in the US and operating in country *j* at time *t*. The key explanatory variables are the same as before, but they are computed at the level of the host country. Our hypotheses suggest that populism in a host country should have a negative effect on foreign investment.

Table 6 displays the results. Model 1 shows the model without control variables. Model 2 shows the complete regression model. As shown, populism in the host country have a negative (-2%) and significant effect on the foreign investment of multinationals. This result provides empirical support to the fifth hypothesis.

INSERT TABLE 6 HERE

In all our models we include firm, country and industry fixed effects in order to remove corporate heterogeneity, industry heterogeneity and country effects common to all firms. To also account for time-varying differences across countries, we include a vector **X** containing the macroeconomic controls described in the previous section together with the firm-level controls. Standard errors are clustered by firm in order to account for heteroskedasticity and serial correlation by firm.

Robustness checks

All our regressions control for the annual global Economic Policy Uncertainty (*EPU*) index (Davis 2016) to separate out the populism from other sources of aggregate uncertainty, such as economic crisis, downturns, etc.

We check, as alternative analysis for hypothesis 2, what happens to firm investment if the type of populism in charge is right-wing. In Table 7, Model 1, results confirm the direct effect on firm investment in populist countries to be negative (-4.8%) and significative at 1% level, but the interaction term between right-wing and populist becomes positive (+3.2%) and significative at 1% level. Even though this result confirms our hypothesis 2, let us thinking about the positive effect of right-wing type of populism on investments. What our second hypothesis implies is that right-wing type of populism is not as deleterious as left-wing type of populism for investments. But it let us thinking of what can be the mechanism behind the positive result around right-wing type of populism, do firm believe that right-wing populist party is good for their investments? Or do they were induced to increase their investments, by taxing policies, without increasing their performance? It will be a good point for future research. As we argued, we did not include in our analysis the effect of the type of populism on firm foreign investments, arguing that multinationals are subject to an environment of constant uncertainty without any mitigating effect whether the populist in charge is from the left-wing or the right-wing. As robustness check we run the regression model looking at the effects on firm foreign investment if there is right-wing and left-wing type of populism. In Table 7, Models 2 and 3, we show that there is not effect on firm foreign investment for right-wing and left-wing type of populism.

INSERT TABLE 7 HERE

Finally, we run our regressions for hypothesis 1 and 2 employing a different database for our dependent variable and independent variables. We use a panel dataset of firms in 24 democratic countries from 1998 to 2018. The dependent variable (*investment)* is obtained from the Thomson Financials' Worldscope database for the period 1998-2018. It is measured as a firm *i*'s capital expenditures headquartered in country *j* at time *t*, scaled by the beginning-of-year book value of its total assets (Julio & Yook, 2012). As before, we measure populism (*Populistic score*) relying on Global Populism Database (Hawkins et al., 2019). To measure *left-wing*, different from before, we rely on Database of Political Institutions 2017 (DPI) organized by the Inter-American Development Bank (Cruz et al., 2018). The DPI provides annual information about regimes and authority characteristics. We control for different firm characteristics: *Tobin's Q* (calculated as firm's total market value scaled by beginning- of-year book value of total assets), which is generally employed as proxy of investment opportunities, and *Cash flow* (calculated as earnings before interest and taxes, plus depreciation and amortization scaled by beginning-of-year book value of total assets), which represent financial resources available to use in normal operations of the company. Table 8 shows the effects of populism on investment and confirms our main results on hypothesis 1 and hypothesis 2: firm's investments drops (-2.2%) in populist countries (Model 2), and left-wing type of populism exacerbate this effect, being negative (-4.4%) and significative at 5% level. As it can be noticed, the variable on left-wing type of party, without the interaction term with populism, employing a different database to measure it, it is not negative for firm investments, separating the effects of a traditional left-wing party and a populist left-wing in charge.

INSERT TABLE 8 HERE

DISCUSSION

We argue that populism alters domestic and foreign firms' investment decisions by exacerbating uncertainty. Our approach goes beyond the literature that largely studies the negative effects of political uncertainty on capital expenditures, dividends and foreign direct investment (Amore & Corina, 2021; Bloom, 2014, 2018; Bonaime et al., 2018; Nguyen et al., 2018; Jens, 2017; Baker et al., 2016; Gulen & Ion, 2016; Huang et al., 2015; Yook & Julio, 2012), which is based on the role of the institutions. However, populism unleashes uncertainty with very particular characteristics, delving deeper into the political positions of populist rulers. Populism even can change the institutional framework in a country by weakening or removing the pre-existing rules of the game that establish controls in a political system and give certainty to investment decisions in the long term (Devinney & Hartwell, 2020; Fukuyama, 2014).

Unlike governments that emanate from traditional political parties, populist governments expand their power, by weakening the institutions that regulate markets and provide certainty so that investments are meaningful and viable in the long term (Devinney & Hartwell, 2020; Rode & Revuelta, 2015). In addition, populist governments clash with the controls provided by the division of powers (among executive, legislative and judicial branches), international treaties, multilateral agencies and organizations, as well as the division of powers between supranational, national and subnational governments.

In this work we mainly consider the ideological and the economic varieties of populism, suggested by Devinney and Hartwell (2020), in order to distinguish the mechanism by which populism exacerbates uncertainty, which ultimately affects firm's investments (both domestic and foreign). Both varieties of populism will also help us differentiate it from the effects that arise from a traditional party on investment decisions, even when the populist and the traditional parties share the same ideological orientation.

Our paper contributes to the vibrant and emerging literature on the influence of populism in international business, in which there are only few works (Cumming & Zahra, 2016; Devinney & Hartwell 2020; Ghauri et al. 2021; Hartwell & Devinney 2021; Hill et al., 2019; Moschieri & Blake, 2019; Mudambi 2018). The rise of populism in several countries has uncovered major gaps in our understanding of international business. Conducting an empirical analysis on a global dataset of firms in 42 democratic countries from 1994 to 2020, we conclude that populism harms firm' investment and this effect turns stronger if it is a left-wing type. Moreover, the negative effect of populism on firm's investment in emerging markets, compare to developed economies, is stronger. Finally, we move our attention to the role of multinational firms and we argue two main points. The first point, multinationals can manage uncertainty more effectively by leveraging on their strategic asset-seeking intent and financial abundance; therefore, we posit that populism in the country of headquarter harm less the investment of multinationals as compared that of single-country firms. The second point of our analysis, we posit that multinationals, counting with a global network, will reallocate their investments away from host countries with high uncertainty, therefore populism harms multinational investments in the host country, as compared that of single-country firms.

This paper opens three main points for future research: 1. Is there some substitution effect about firms' investments, or firms prefer to allocate their investments in some other activity? 2. Do right-wing populist regulatory policies indirectly obliged MNE's investment to be back in their home country- such that taxing policies- without increasing their performance? 3. Is there a rebound in the company's investments once the populist rulers are out of office? To answer these questions, future research needs to be developed.

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Table 1. Country populism score characteristics 1994-2020

Country	Observations (firm-year)	Speech Category	Populism Type	Years in charge[22]
Argentina	1,330	Somewhat populist	Right	1994-1999
		Somewhat populist	Centre	2002-2003
Austria	1,134	Not populist		
Brazil	4,867	Somewhat populist	Right	2019-2020
Bulgaria	570	Somewhat populist	Centre	2010-2013
Canada	26,022	Not populist		
Chile	2,584	Not populist		
Colombia	551	Not populist		
Croatia	1,110	Somewhat populist	Right	1994-1999
		Somewhat populist	Right	2003-2009
Czech Republic	284	Populist	Right	2006-2009
Ecuador	21	Very populist	Left	2007-2016
Estonia	32	Not populist		
Finland	704	Not populist		
France	9,393	Not populist		
Germany	11,056	Not populist		
Ghana	19	Not populist		
Greece	1,155	Not populist		
Hungary	363	Somewhat populist	Right	2010-2018
India	17,909	Somewhat populist	Right	2014-2020
Ireland	729	Not populist		
Italy	2,233	Somewhat populist	Right	2001-2005
		Somewhat populist	Right	2008-2011
		Populist	Centre	2018-2020

[22] "Years in charge" may not correspond to the entire duration of the president or prime minister appointment, but it takes into account data where investment and populist score have not missing values.

Japan	25,183	Not populist		
Latvia	394	Not populist		
Lithuania	446	Not populist		
Mexico	1,749	Populist	Left	2019-2020
Mongolia	3	Not populist		
Netherlands[23]	1,850	Not populist		
Norway	2,683	Not populist		
Panama	27	Not populist		
Peru	1,328	Populist	Centre	2006-2010
		Somewhat populist	Left	2011-2015
Philippines	846	Not populist		
Poland	6,890	Somewhat populist	Right	2005-2009
Romania	931	Not populist		
Russia	3,065	Somewhat populist	Centre	2013-2018
Slovakia	127	Somewhat populist	Left	2007-2010
Slovenia	201	Somewhat populist	Right	2005-2007
Spain	2,241	Not populist		
Sweden	7,203	Not populist		
Switzerland	735			
Turkey	3,245	Populist	Right	2007-2013
		Very populist	Right	2014-2018
United Kingdom	23,705	Not populist		
United States	105,418	Somewhat populist	Right	2017-2020
Venezuela	176	Very populist	Left	2000-ongoing

[23] In the Netherlands the Socialist Party is considered in the literature a left-wing populist party during 1993, which is not part of our dataset. In 2002 and 2006 the party has moderated its populist profile (Roodujin & Pauwels, 2011), therefore in the database is not considered populist.

Table 2. Summary statistics

Variable	Obs.	Mean	Std. Dev.	Min.	Max.
Investment	299,685	.058207	.0971639	0	1
Foreign investment	1,618	.0297754	.0738997	0	.8836781
Populist score	299,685	.2287075	.2409017	0	1.916
Left-Wing	299,685	.2470828	.431316	0	1
Right-Wing	299,685	.5836795	.4929488	0	1
Centre-Wing	299,685	.1692377	.3749624	0	1
Roa	290,149	.0212348	.350211	-3.737511	.6276013
Size	299,367	6.304183	3.101043	-6.907755	22.57767
GDP growth	293,795	2.744397	2.584444	-14.83861	25.16253
Unemployment	299,685	6.35052	2.613945	2.24	27.47
EPU	299,653	137.9135	74.78393	24.06889	539.2246
Elections	299,685	.1013728	.301822	0	1
Trade/GDP	290,866	46.92067	23.2353	18.13435	226.0414

Table 3. Panel Regression. The effect of populism on investment

Dependent variable: Investment			
	(1)	(2)	(3)
H1: Populist score	-0.0285	-0.0261	-0.0261
	(0)	(0)	(0)
H2: Leftwing*Populist score			-0.0275
			(0)
Leftwing			0.003
			(0.0025)
ROA		0.002	0.0019
		(0.207)	(0.240)
Size		0.0026	0.0027
		(0)	(0)
Unemployment		-0.0008	-0.0005
		(0)	(0)
GDP growth		0.0015	0.0016
		(0)	(0)
EPU		-0.000	-0.000
		(0)	(0)
Elections		0.000	0.0004
		(0.984)	(0.282)
Constant	0.0647	0.0596	0.0567
	(0)	(0)	(0)
Observations	296,854	281,192	281,192
R-squared	0.425	0.445	0.446
Firm Fe	yes	yes	yes
Country Fe	yes	yes	yes
Industry Fe	yes	yes	yes

p-values in parenthesis. Standard errors are clustered by firm.

Table 4. Panel Regression. The effect of populism on firm investment in emerging markets

Dependent variable: Investment	Total	Emerging	Developed
	(1)	(2)	(3)
Populist score	-0.0009	-0.0506	-0.003
	(0.471)	(0)	(0.0249)
H3: Emerging*Populist score	-0.0669		
	(0)		
Emerging	0.0164		
	(0)		
ROA	0.0007	0.199	-0.0104
	(0.651)	(0)	(0)
Size	0.0033	-0.0003	0.005
	(0)	(0.772)	(0)
Unemployment	-0.0003	0.0015	-0.0007
	(0.009)	(0.000)	(0)
GDP growth	0.0015	0.0006	0.0015
	(0)	(0.038)	(0)
EPU	-0.0001	-0.000	-0.0001
	(0)	(0)	(0)
Election	0.0017	-0.0065	0.002
	(0)	(0.0072)	(0)
Constant	0.0482	0.0632	0.0386
	(0)	(0)	(0)
Observations	281,192	53,089	228,024
R-squared	0.449	0.313	0.507
Firm Fe	yes	yes	yes
Country Fe	yes	yes	yes
Industry Fe	yes	yes	yes

p-values in parenthesis. Standard errors are clustered by firm.

Table 5. Panel Regression. The effect of populism on home investment for multinational firms

Dependent variable: MNEs investment	(1)
Populist score	-0.0570
	(0)
H4: Populist score* Diversification	0.093
	(0)
Diversification	-0.067
	(0)
Size	-0.004
	(0)
Unemployment	-0.001
	(0.423)
GDP Growth	0.002
	(0.236)
EPU	-0.0158
	(0)
Election	-0.0108
	(0.272)
Trade/GDP	0.000
	(0)
GDP per capita	0.000
	(0)
Constant	0.008
	(0.546)
Observations	36,273
R-squared	0.424
Firm Fe	yes
Country Fe	yes
Industry Fe	yes

p-values in parenthesis. Standard errors are clustered by firm.

Table 6. Panel Regression. The effect of populism on multinational foreign investment

Dependent variable: Foreign investment	(1)	(2)
H5: Populist score	-0.019	-0.020
	(0.0242)	(0.0861)
Size		0.0020
		(0.619)
Unemployment		-0.000
		(0.465)
GDP growth		0.0011
		(0.0541)
EPU		-0.000
		(0.350)
Election		-0.009
		(0.127)
GDP per capita		-0.000
		(0.331)
Trade/GDP		-0.000
		(0.265)
Constant	0.0327	0.0713
	(0)	(0.256)
Observations	1,598	1,496
R-squared	0.356	0.363
Firm Fe	yes	yes
Country Fe	yes	yes
Industry Fe	yes	yes

p-values in parenthesis. Standard errors are clustered by firm.

Table 7. Robustness Check. The effect of populism on investment

Dependent variables:	Investment (H2)	Foreign Investment (H5)	
	(1)	(2)	(3)
Populist score	-0.0480	-0.0202	-0.0199
	(0)	(0.337)	(0.003)
Rightwing*Populist score	0.0320	0.0082	
	(0)	(0.719)	
Right wing	-0.0092	-0.0080	
	(0)	(0.0357)	
Leftwing*Populist score			0.0041
			(0.908)
Left wing			0.0071
			(0.0496)
ROA	0.0020		
	(0.202)		
Size	0.0025	0.0023	0.0022
	(0)	(0.562)	(0.568)
Unemployment	-0.00070	-0.0007	-0.0006
	(0)	(0.482)	(0.467)
GDP growth	0.0014	0.0011	0.0011
	(0)	(0.0530)	(0.0673)
EPU	-0.000	-0.000	-0.000
	(0)	(0.362)	(0.431)
Election	0.0004	-0.0101	-0.0096
	(0.224)	(0.124)	(0.141)
GDP per capita		-0.000	-0.000
		(0.506)	(0.376)
Trade/GDP		-0.0003	-0.0003
		(0.376)	(0.353)
Constant	0.0653	0.0082	0.0565
	(0)	(0.719)	(0.361)
Observations	281,192	1,496	1,496
R-squared	0.446	0.364	0.364

Firm Fe	yes	yes	yes
Country Fe	yes	yes	yes
Industry Fe	yes	yes	yes

p-values in parenthesis. Standard errors are clustered by firm.

Table 8. Robustness Checks. The effect of populism on Investment

Dependent variable: Investment				
	(1)	(2)	(3)	(4)
H1: Populist score	-0.018	-0.022	-0.020	-0.010
	(0.098)	(0.046)	(0.065)	(0.255)
H2: Populist score*Left-wing				-0.044
				(0.047)
Left-wing			0.008	0.016
			(0.015)	(0.006)
Tobin's q		-0.000	-0.000	-0.000
		(0.199)	(0.178)	(0.186)
Cash flow		-0.000	-0.000	-0.000
		(0.694)	(0.692)	(0.700)
Size		0.003	0.002	0.002
		(0.007)	(0.006)	(0.009)
GDP per capita		0.000	0.000	0.000
		(0.037)	(0.041)	(0.038)
GDP growth		0.000	0.000	0.000
		(0.856)	(0.897)	(0.638)
Unemployment		-0.000	-0.001	-0.000
		(0.428)	(0.256)	(0.376)
EPU		0.001	0.006	0.006
		(0.940)	(0.687)	(0.660)
Constant	0.093	-0.061	-0.059	-0.060
	(0.000)	(0.340)	(0.348)	(0.329)
Observations	97,799	97,117	97,117	97,117
Firm FE	yes	yes	yes	yes
Year FE	yes	yes	yes	yes

p-values in parenthesis. Standard errors are clustered by country and firm.