Policy Uncertainty and Foreign Investment: Heterogeneous Impacts on the Mode of Entry*

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April 2024

Abstract

We study the short- and long-term impacts of policy uncertainty across U.S. states on inbound foreign investment. Leveraging granular data on cross-border M&As and greenfield investment from 2003 to 2020, we demonstrate that higher policy uncertainty leads to a decline in greenfield investment, but a rise in the incidence of M&As. After manually matching M&A and greenfield data to each foreign investor, we show that higher uncertainty leads firms to shift away from greenfield projects towards M&As. The negative effects are more pronounced in industries where investment is more irreversible. Investors also pursue smaller deals to preserve flexibility.

JEL classification: F21; G31; G34; E22; D89

Keywords: Policy Uncertainty; Cross-border Mergers and Acquisitions; Inbound Greenfield Investment

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*We thank George Alessandria, Kerem Coşar, Matthias Kehrig, Nuno Limão, Ferdinando Monte, Toshihiko Mukoyama, Luca Opromolla, participants at the Midwest International Trade and Theory Conference in Atlanta and Southern Economic Association Conference in New Orleans for helpful discussions.

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1 Introduction

The U.S. was the top-ranked destination for foreign investment in 2021. It recorded the largest increase among all economies in that year.[1] The increase was a welcome reversal from the drop in foreign direct investment (FDI) inflows the U.S. economy experienced in the preceding several years because foreign investment can be an important source of productivity gains, financing, employment, and higher wages (BEA, 2023).[2] It also has positive spillover effects in the local economy (Setzler and Tintelnot, 2021).[3] Some observers have casually suggested that the reduction in FDI inflows can be attributed to higher economic policy uncertainty in the U.S.[4] In this paper, we formally analyze and quantify the impact of local economic policy uncertainty across U.S. states on the volume and composition of inbound foreign investment. We use granular data on both cross-border mergers and acquisitions (M&As) and greenfield (GF) investment projects from 2003 to 2020 to demonstrate that an increase in local policy uncertainty leads to a decline in greenfield investment but a significant increase in the incidence of cross-border M&A activity in a given state. We further show that as policy uncertainty grows, foreign firms shift their investment activity in the U.S. away from greenfield projects towards cross-border M&A deals.

Our paper contributes to the existing literature in several ways. First, we focus our analysis on state-level foreign investment flows, as opposed to cross-country data. A major advantage of utilizing state-level variation in foreign investment instead of cross-country data is that we are able to implicitly control for potential confounding factors such as federal and macroeconomic policy changes that can be difficult to measure and to include in the empirical analysis, and thus we can avoid potential biases that may occur in a cross-country setting. Second, we analyze the temporal dynamics of the investment flows and demonstrate that the immediate response of foreign investors to heightened

[1] https://www.imf.org/en/Blogs/Articles/2022/12/07/united-states-is-worlds-top-destination-for-foreign-direct-investment

[2] https://www.bea.gov/news/2023/activities-us-affiliates-foreign-multinational-enterprises-2021, accessed March 7, 2024

[3] The Bureau of Economic Analysis reports that foreign multinationals directly employ about 8 million U.S. workers, and a report by the Department of Commerce suggests that 10.1% of the total labor force in the U.S. is supported by foreign investment directly or indirectly. See https://www.trade.gov/sites/default/files/2022- 04/IndirectJobsSelectUSABrief.pdf for details. See also Alfaro (2017) for a review of the potential effects of FDI on local economies, and the role of complementarities between FDI and local policies in mediating the benefits host countries can gain from multinational activity.

[4] See, for example, an opinion piece by Adam Posen (https://www.piie.com/blogs/trade-and-investment-policy-watch/cost-trumps-economic-nationalism-loss-foreign-investment) and an article in the Wall Street Journal: https://www.wsj.com/articles/for-foreign-investment-the-west-is-losing-its- appeal-11560358800.

policy uncertainty can be different from the response in the long(er) run. More importantly, we document a reallocation between GF investment and cross-border M&A, not just in the aggregate but also within a firm. Our empirical analysis demonstrates that when local economic policy uncertainty across U.S. states rises, the incidence of inbound GF investment decreases, whereas the incidence of cross-border M&A activity grows. Furthermore, we show that the increase in uncertainty leads individual foreign firms to shift their investment activity away from GF projects toward cross-border M&A deals.

To the best of our knowledge, our paper is the first to analyze the impact of policy uncertainty on foreign firms' choice of entry mode, GF vs. M&A, when they enter local markets across U.S. states. The findings that emerge from our analysis are important because GF investment in the U.S. has contributed significantly to local job creation and overall economic growth.[5] In contrast, M&A activity can often lead to downsizing for the acquired target firm (see Arnold et al. (2023) for a recent example). Our empirical analysis suggests that local economic policy uncertainty can undermine the generous incentives state governments often lavish on foreign investors when they undertake GF projects. To introduce some basic empirical facts, we plot in Figure 1 the aggregate patterns of the two main modes of U.S. inbound foreign investment: cross-border M&As and GF investments. While both investment types have mostly been on an upward trend in our sample period, episodically, they appear to move in opposite directions. Further, Figure 1 provides some anecdotal evidence that when they diverge, economic policy uncertainty is high, such as when there is a threat of a U.S. government shutdown.

As we discuss in detail in the next section, theoretically, uncertainty can affect firms' investment decisions either positively or negatively.[6] This theoretically ambiguous conclusion has spurred a large and growing empirical literature to shed light on the role of uncertainty on various forms of investment in the U.S.[7] In particular, it led to a growing body of research studying the link between economic policy uncertainty and foreign direct investment flows employing country-level panel data such as Julio and Yook (2016)

[5]For example, in 1986, Toyota built a large, 1,300-acre manufacturing facility in Georgetown, Kentucky, in which they invested $5.3 billion, partly enticed by $150 million in tax breaks and other incentives. This investment not only created 7,000 jobs at the new facility but also supported 28,000 additional jobs across the state. In 2007, according to the Association of International Automobile Manufacturers, foreign automakers employed 92,700 workers directly and 574,500 indirectly, accounting for 33 percent of U.S. auto production. (Newsweek, 2008).

[6]For instance, Hartman (1972), Hartman (1976), Abel (1983), Bar-Ilan and Strange (1996) predict a positive impact whereas Bernanke (1983), Pindyck (1991), Rodrik (1991), Dixit and Pindyck (1995), Bertola (1998) show a negative impact.

[7]Using news-based indexes of economic policy uncertainty such as the Baker et al. (2016) index, Gulen and Ion (2016), Nguyen and Phan (2017), and Bonaime et al. (2018) find that it has a negative impact on mergers and acquisitions as well as corporate investment in the U.S.

and Canh et al. (2020), Jardet et al. (2022) or firm-level data such as Slangen (2013), Li et al. (2021), Sun et al. (2021), and Kim and Lee (2023).[8] While the impacts of uncertainty on foreign investment are often estimated to be negative, the robustness of these results depends on sample characteristics, such as the sample period (pre- vs. post-Great Recession era) or the sample of countries analyzed (advanced vs. emerging markets). Moreover, the evidence regarding the importance of source country vs. host country uncertainty in a push-pull framework is also quite mixed.

To provide an in-depth analysis of GF and cross-border M&A investment dynamics, we use two detailed, transaction-level datasets on cross-border M&As and GF projects from 2003 to 2020 (SDC Platinum and fDi Markets by the Financial Times, respectively). Using these two different data sources and a number of algorithms, we are able to match cross-border M&A transactions and inbound GF investments that are initiated by the same foreign investor, based on the investor's name (as the databases do not have unique investor IDs). We create this novel firm-level dataset so that we can evaluate any potential within-firm reallocation in foreign investment. In order to evaluate the effects of policy uncertainty on investment flows into the U.S., we use a recent news-based index of economic policy uncertainty available at the state level, constructed by Baker et al. (2022). This measure helps us capture the heterogeneous impacts of domestic and global policy changes across U.S. states, which differ along many dimensions such as regulations, infrastructure, and demographics, among other factors (Baker et al., 2022).[9]

Our results demonstrate that an increase in local policy uncertainty has a negative impact on the incidence of new foreign GF investment projects, and this effect grows over time, becoming significantly larger in the long(er) run (6 quarters). In contrast, our work demonstrates that there is little to no impact on cross-border M&As in the first six months after a policy uncertainty shock. Still, a positive effect emerges in the longer term (6 quarters following the shock). These contrasting results show that when they face local policy uncertainty, foreign investors tend to choose cross-border M&As rather than GF projects

[8] The measure of uncertainty in these studies includes national election data or national news-based indexes such as the world uncertainty index by Ahir et al. (2022) and country-level policy uncertainty index by Baker et al. (2016).

[9] A growing strand of literature also studies the impact of state-level policy uncertainty index by Baker et al. (2022) on different measures of economic activity such as US venture capital investment (Tian et al., 2018) and firm investment (Alam et al. (2023); Adra et al. (2024)) finding negative impacts. The broader existing literature has also shown that a number of other local factors, in addition to policy uncertainty, affect inbound FDI. For example, Kandilov and Senses (2016) demonstrate that local labor regulations that increase firing costs decrease inbound FDI; Kandilov et al. (2016, 2017) and Bilir et al. (2019) provide evidence that local banking competition and local financial development have a positive impact on (the incidence of) inbound FDI; while Kandilov and Leblebicioğlu (2024) show that strengthening local intellectual property protections can raise the incidence of inbound greenfield investment but lower that of cross-border M&As.

as their mode of entry into the U.S. market. Quantitatively, we find that a 2-standard deviation increase in local policy uncertainty, which is equivalent to about 20% growth in uncertainty relative to the mean, reduces the number of GF transactions by 44% over the course of 18 months. By contrast, we find that while M&A activity initially declines, after about 9 months, it starts recovering, leading to a net increase of 18% in the incidence of cross-border M&A transactions after 18 months. We show that these results are robust to controlling for time-varying source country factors. More importantly, our results provide new evidence that local uncertainty, rather than source-country uncertainty, explains the observed patterns of U.S. inbound investment. We also find that the positive long-run cumulative effects on M&A activity are driven by cross-border deals initiated by foreign investors who have completed multiple deals in the U.S. Because these investors have experience doing business in the U.S., they are likely not as easily discouraged by the greater risk of policy changes. There are no significant differences across investors that carry out multiple or single GF investment projects.

To further shed light on the factors mediating the response of foreign investment to heightened policy uncertainty, we extend our analysis to the industry-state-quarter level and consider three industry traits: irreversibility, external finance dependence, and intangible asset intensity. The results suggest that policy uncertainty is more detrimental to both GF investments and M&A deals in more irreversible industries. Moreover, we find that the long-run positive impact of uncertainty on the number of M&A deals emerges only in sectors with relatively lower costs of disinvestment. Hence, irreversibility explains a large portion of the observed differences in foreign investment inflows, in line with the real options theory of irreversibility (Bernanke, 1983).

After we document a reallocation between the two modes of investment flows in the aggregate (at the state level and at the industry-by-state level) in the presence of higher policy uncertainty, we provide evidence that the decision to shift away from GF investments to cross-border M&As occurs not just across firms, but also within firms. To that end, we specify a linear probability model using an indicator variable equal to unity if the investor completed a cross-border M&A deal (as opposed to a GF transaction) as the dependent variable, which we regress on the (lags of the) policy uncertainty measure, including state-by-source country and year effects, in addition to investor-specific effects. The results indicate that higher local policy uncertainty results in a greater likelihood that the foreign investors would choose M&A deal as opposed to the GF transaction as their mode of entry into the U.S. market.

Finally, we also analyze the impact of policy uncertainty on foreign investment inflows along the intensive margin. We find that while the number of cross-border M&A deals increases with higher uncertainty, the average deal value declines. This result is consistent with Dixit and Pindyck (1995)'s theory on the trade-off between flexibility and scale. Greater uncertainty leads firms to opt for flexibility and invest in smaller deals rather than larger ones, especially in industries that feature greater irreversibility. We do not find any discernible effects of policy uncertainty on the average size of the GF investment transaction.

Parallel to our work, Sun et al. (2021) studied 981 GF investments and 86 cross-border M&As by Chinese firms and found that these firms prefer M&As over GF investment under higher policy uncertainty. As opposed to our finding, uncertainty in the source country (China) rather than the host country is the dominant factor. The differences in the results between our study and Sun et al. (2021) demonstrate the importance of focusing on granular uncertainty for each U.S. state in drawing conclusions about U.S. inbound foreign investment flows. In another study with 172 foreign entries by Dutch firms, Slangen (2013) finds host country uncertainty leads to a decline in wholly-owned M&As and an increase in GF investment. The reasoning for the result is that wholly-owned M&As require full payment upfront, whereas GF investment can be more flexible in terms of the payment of fixed costs as it can be incurred more gradually. In our data, however, firms are not necessarily limited to pursuing 100% acquisitions and, thus, may still retain flexibility in cross-border investment: they choose to invest in smaller M&A deals and possibly do this by acquiring smaller percentages of target firms.

Our paper is structured as follows. In section 2, we describe our data sources. We present our econometric model in section 3 and discuss our results in section 4. We provide our concluding remarks in section 5.

2 Conceptual Framework

Theoretical studies have identified a number of factors that can influence investors' decisions in the face of uncertainty. Arguably the most prominent of those factors is irreversibility, which increases the option value of waiting to invest under uncertainty, since higher uncertainty increases the likelihood of bad news (Bernanke, 1983; Caballero, 1991; Rodrik, 1991; Dixit and Pindyck, 1995). When reversing an investment is costly, firms delay projects during periods of high uncertainty to circumvent unfavorable economic outcomes. This wait and see approach generates a negative contemporaneous relation between investment and uncertainty.

Bar-Ilan and Strange (1996) point to another important factor affecting investment decisions–investment lags. Given that there are lags between an investment decision and the realization of the returns to investment, the opportunity cost of delaying, which is the potential forgone profits, depends on the future economic conditions. Since higher uncertainty can result in more profitable conditions in the future, with investment lags, firms also have the motive to hurry to invest in order to appropriate the profits in the future. Hence, as a rise in uncertainty leads to both an increase in the marginal value of delaying an irreversible investment and the marginal cost of waiting with the time-to-build lags, whether investment increases or decreases is theoretically ambiguous.

There are additional factors determining the impact of uncertainty on foreign investment decisions. Dixit (2011) argues that the the fact that foreign investors have limited protection from the host country's legal and political institutions can make FDI more sensitive to the political environment. Therefore FDI might be more adversely affected by policy uncertainty. Moreover, as discussed by Gulen and Ion (2016), foreign investment can be costlier to reverse compared to domestic investment due to regulations on withdrawing capital or exchange rate exposure. As such, in the face of heightened policy uncertainty, foreign investors might be more likely to delay their investments. However, how much they delay can depend on the mode of investment.

Given that sunk costs and irreversibility are important features determining investment behavior, and the two main modes of foreign investment—GF investment and cross border mergers and acquisitions (M&A)—are different in nature, policy uncertainty can affect the two modes of investment differently.[10] First, GF investments can be considered more irreversible compared to M&A transactions since it involves building a new subsidiary from the ground-up as opposed acquiring an existing one. Second, investment lags are longer for GF as it takes longer to decide on a location, build the subsidiary, and integrate it into the local infrastructure network (Davies et al., 2018). Hence, both the marginal cost and the marginal value of delaying investment are very different for GF investment than they are for cross-border M&As.

In addition to the existing theories studying the dynamics of investment, more recent theoretical work specifically focusing on the choice of foreign market entry mode also guides our empirical framework that estimates the impact of policy uncertainty on foreign investment. Nocke and Yeaple (2007, 2008) develop a theory of FDI that explores the determinants of the two entry modes into a foreign market– cross-border M&A and GF investment. In their framework, the two modes of entry are not perfect substitutes (as opposed to Antràs and Yeaple (2014)). The (cross-border) merger market is where firms

[10]Despite some major differences in implementation and objectives, Davies et al. (2018) note that two types of investment also have some similarities. They are both influenced by market size and distance, and usually originate from advanced countries, as predicted by a gravity model.

buy and sell heterogeneous corporate assets to exploit complementarities. In contrast, GF FDI simply allows the investor to deploy corporate assets abroad. Their model highlights how firm heterogeneity, related to firm-specific tangible and intangible assets, which can be imperfectly mobile across countries, influences the choice between M&A and GF FDI. In particular, Nocke and Yeaple (2008) shows that an increase in the cost of a producing abroad, which could happen because of an increase in local economic policy uncertainty, results in a greater share of cross-border M&A in total FDI, which is what our empirical analysis also suggests.

3 Data

In this section, we describe the data sources we use and the construction of the main variables of interest. Additional definitions and data sources for all covariates we incorporate in our analysis can be found in the Data Appendix.

3.1 Greenfield Investment Data

To examine the role of state-level economic policy uncertainty on foreign investment along both the extensive and the intensive margins, we obtain GF investment data from the Financial Times Ltd. fDi Markets database.[11] For each GF investment, the database provides the announcement date and the location (U.S. state) of the project, the foreign investor's country of origin, and (an aggregate) industry associated with the local investment. For some of the investment projects, the database also reports the capital expenditures committed to the project, as well as the number of new jobs that the project will generate. We use the information on capital expenditures to study the impact of policy uncertainty on the intensive margin, i.e., on the (real) transaction values.[12] The data start in 2003 and contain information on 18,034 investment projects in the 48 contiguous states between 2003-2020.

Using the data, we first construct a balanced panel at the state-month-year level, counting the total number of announced GF projects in each state. With this aggregation, we obtain 10,368 state-month-year observations, 5,997 of which have a positive count of GF projects. We also consider two alternative aggregations of the project-level data to

[11] This database is a comprehensive source of GF investment data that is also used by international agencies, such as United Nations Conference on Trade and Development that keeps track of global capital flows.

[12] We focus our attention on the capital expenditures to study the intensive margin to keep the analysis symmetric with the cross-border M&A data, which does not contain any information on jobs.

highlight the industry and source-country aspects of the investment inflows. For the former, we count the number of GF investment projects in each 2-digit NAICS industry, state, and quarter. We change the frequency of the data from months to quarters to circumvent having too many zero observations in each industry and state cell. The industry-level panel contains 76,032 industry-state-quarter-year cells, with 8,640 non-zero observations.

To check the robustness of our results to controlling for source country determinants of foreign investment and to study the joint impact of U.S. state-level economic policy uncertainty and source country uncertainty, we construct a panel dataset aggregated up to a source country, host state, and quarter level. The total number of transactions in our sample comes from 107 source countries, most of which have less than a few GF investment projects recorded between 2003-2020. Once again, to avoid having too many zero observations, when constructing our panel along the source country dimension, we focus our attention on the top 23 investor countries. Foreign investment inflows (both GF and M&A) originating from these countries make up more than 80% of all foreign investment flows into the U.S.[13] Counting the number of GF investment projects coming from these source countries, into each state for every quarter and year, and omitting the observations with missing values of the source country uncertainty measure, we obtain a panel with 55,296 observations with 8,167 non-zero entries.

3.2 Cross-border M&A Data

We also evaluate the impact of state-level economic policy uncertainty on cross-border M&A deals, which also constitute an important type of cross-border flows into the U.S. The information on cross-border M&A investments comes from the SDC Platinum database, which provides data on (among many other variables) the date the deal was announced, the date the deal was completed, the target's location in the U.S. (target state), the identity of the foreign acquirer, the acquirer's location (source country), and the (2-digit NAICS) industry in which the target and the acquirer operate. Consistent with our analysis of GF investment, we use the information from SDC Platinum to aggregate the data into three different panels: (i) state-month-year, (ii) industry-state-quarter-year, and (iii) source country-state-year. To study the intensive margin along which policy uncertainty can affect cross-border M&A investments, we use the information on the M&A deal value and the percentage of the target acquired.[14]

While the data in SDC Platinum start in the 1980s, to keep our analysis symmetric with

[13] See the Appendix in section 8 for the list of countries.

[14] The former is available for about half of the transactions, and the latter is available for about 75% of the deals.

the GF investment analysis, we focus on the cross-border M&A deals between 2003 and 2020, which account for 25,811 transactions. These transactions yield 11,216 and 7,821 non-zero observations at the industry-state-quarter-year level and the source country-state-quarter-year level panels described above, respectively. We report the summary statistics for the number of deals and transaction values for both GF investments and cross-border M&As in Table 1.

3.3 State-level economic policy uncertainty

To study the role of economic policy uncertainty on U.S. inbound foreign investment, we employ a news-based measure of state-level economic policy uncertainty (EPU-C) introduced by Baker et al. (2022). Their study constructs EPU-C by tracking around 3,500 small, local news outlets from 50 U.S. States (along with Washington, D.C.) and counting the number of articles with words such as 'economy' or 'economic', 'uncertainty' or 'uncertainties', as well as a selection of state- and nation-specific policy-related keywords, depending on the scope. For example, for Michigan, state-specific keywords include 'Michigan Senate' and 'Michigan Attorney General'. Nation-specific keywords include 'White House', 'monetary policy', and 'Congressional election'. The composite index, EPU-C, includes keywords from both sets. It is obtained by dividing the number of articles with such keywords by the total number of articles in the same outlets, and then multiplying the ratio by 100. Baker et al. (2022) also provide the state and the national components of EPU-C as separate indexes. In robustness analysis, we report the results we obtain using the state economic policy uncertainty (EPU-S) and national economic policy uncertainty (EPU-N) separately.

The composite index EPU-C varies by state and month. It captures uncertainty arising from policy shocks at the state level, as well as shocks at the national and international levels, which can have heterogeneous impacts on U.S. states. Baker et al. (2022) find that gubernatorial elections, especially close elections, are among the important state-specific events that lead to a spike in the index. It also captures factors beyond elections, and it responds to various local shocks, such as Hurricane Katrina in 2006, which had major economic ramifications for Louisiana and the surrounding states. According to Baker et al. (2022), national elections, as well as important events such as the June 2016 Brexit referendum and the Covid-19 pandemic, are among the common shocks that lead to spikes in the index and have heterogeneous effects across states. In the context of Covid-19 for instance, Baker et al. (2022) document that economic policy uncertainty across states during the pandemic can be explained by the level of lockdown stringency.

3.4 Additional Control Variables

To understand the role of alternative channels of the nexus between state-level policy uncertainty and cross-border investment activity, we consider three industry traits: investment irreversibility, external finance dependence, and R&D intensity. We construct dummy variables for each trait using firm-level data from Compustat as follows.

Irreversibility: We first calculate the average value of property, plant, and equipment (PP&E) and the average value of total assets for each firm over the 2000-2020 period, and then take their ratio, i.e., average(PP&E)/average(assets). We assign the median value in each 2-digit NAICS industry as the industry's irreversibility measure. We then calculate the average irreversibility measure for all industries, and then categorize all industries into two groups - above the mean (where investment is more irreversible) and below mean (where investment is less irreversible) - using a dummy variable (which equals to one for more irreversible industries).

External finance dependence: We define an external finance dependence dummy variable that equals one for industries with an above-mean measure of external finance dependence and zero otherwise. Following Rajan and Zingales (1998), we first derive each firm's mean capital expenditure (CapEx) net of cash flows over the 2000-2020 period and then divide it by the mean capital expenditure over the same period, i.e., mean(CapEx - Cash Flow)/mean(CapEx). We then calculate the external finance dependence measure of each industry (two-digit NAICS) as the median of the above measure within the industry, and then calculate the average over all industry measures to determine the cut-off for the dummy variable.

Intangible asset intensity: We construct an intangible asset intensity dummy variable that equals one for industries with an above-mean level of intangible asset intensity and zero otherwise. To calculate intangible asset intensity, we compute each firm's mean intangible assets, divided by mean total assets over the 2000-2020 period, i.e., mean(intangible)/ mean(assets). Then, we take the median within each industry based on the two-digit NAICS classification and calculate the mean level of intangible asset intensity over all industries.

Source country uncertainty: In section 4.2, we expand our analysis to consider the impact of source-country EPU in addition to U.S. state-level EPU on cross-border capital flows. The measures we employ are the news-based indexes from the study of Baker et al. (2016) and other papers following a similar methodology posted on policyuncertainty.com. Each country-level index is constructed based on the number of articles with keywords such as 'economy' or 'economic', 'uncertainty' or 'uncertainties', and a selection of nation-specific policy-related keywords in the country's national or official language. Limited by data availability, the source countries included in this exercise are Australia, Canada, China, France, Germany, India, Ireland, Italy, Japan, Mexico, Netherlands, Singapore, South Korea, Spain, Sweden, and the U.K.

4 The Impact of Policy Uncertainty on the Incidence of Foreign Investment

4.1 Econometric Strategy

To evaluate the impact of policy uncertainty on the frequency of new inbound cross-border investment transactions, we specify the following Poisson regression model, which is frequently used for count data (see, e.g., Cameron and Trivedi (2005)).

$$P(N_{smt} = n) = \frac{\Gamma(n+\nu)}{n!\Gamma(\nu)} \left(\frac{\nu}{\nu + \mu_{smt}}\right)^{\nu} \left(\frac{\mu_{smt}}{\nu + \mu_{smt}}\right)^{n}, \text{ for } n = 0, 1, 2, ... \tag{1}$$

where N_{smt} is the number of all completed, inbound, cross-border investment transactions (M&A or GF) in a target state s and in month $m = 1, 2, ..., 12$, in year $t = 2003, 2004, ..., 2020$. When computing the total number of cross-border deals we include all observations, counting observations with missing transaction values as well. The mean and the variance of the outcome variable is $\mathbb{E}\left(N_{smt}\right) = Var\left(N_{smt}\right) = \mu_{smt}$, and as typical, it is assumed to follow a log link:

$$\mu_{smt} = \exp\left(\Sigma_{i=m-1}^{m-18} \beta_i EPU_{smt,i} + \boldsymbol{X}_{sqt}\gamma + \omega_s + \tau_m + \upsilon_{st}\right). \tag{2}$$

The main variable of interest is the measure of policy uncertainty EPU_{smt}. Our specification includes state and year effects (ω_s and τ_m)to account for time-invariant, state-specific heterogeneity, as well as annual, aggregate, macroeconomic shocks that affect all states. The above specification also includes state-by-year effects (υ_{st}), which explicitly control for any state-specific, annual shocks that affect inbound, foreign investment. As such, we identify the effects of policy uncertainty on the number of cross-border investments using within-year variation in the uncertainty measure in a given state. We start off by estimating our model at the monthly frequency to trace out the effects of uncertainty on the incidence of inbound foreign investments over time. We then switch our analysis to quarterly frequency to incorporate the industry dimension to our analysis. Because disaggregating the data into industries by state generates too many zero investment transactions at the monthly level, we opt for quarterly frequency. In all models, we additionally control for state-specific covariates collected in the matrix $\boldsymbol{X_{sqt}}$, such as quarterly state-level GDP growth.[15]

The coefficients of interest in our model above are the β_i's, which capture the effect of policy uncertainty in the 18 months prior to the particular month of the foreign investment announcements. When we employ quarterly frequency, instead of 18 lagged monthly impacts (β_i, $i = m-18, ..., m-1$), we estimate 6 lagged, quarterly impacts (β_i, $i = q-6, ..., q-1$). We choose an 18-month period to trace the impacts of the uncertainty shocks because most cross-border investment transactions take a long time during the target selection and due diligence periods before the deal is announced. Importantly, we care about the cumulative impacts of policy uncertainty over time, so in all specifications, we highlight the cumulative coefficients, i.e., β_{m-1}, $\beta_{m-1} + \beta_{m-2}$, ..., $\Sigma_{i=m-1}^{m-18}\beta_i$, which allows us to infer the total impact of policy uncertainty shocks over the 18 months prior to announcement on foreign investment decisions.

We estimate the above Poisson Maximum Likelihood model with multi-way fixed effects employing the methodology in Correia et al. (2020). Their algorithm for estimating Poisson regressions with high dimensional fixed effects is robust to convergence issues, which are typical in this setup. While using a Poisson specification, with the restrictive mean-variance assumption, is the most efficient way to estimate the impacts of policy uncertainty on the incidence of foreign investment if the model is correctly specified, we also show that our estimates are robust to using an alternative – a negative binomial model.[16] In all cases, we estimate standard errors that are robust to heteroskedasticity and are clustered at the state level to account for the possibility of serial correlation within a state over time.

In our analysis of foreign investment, we also consider the source country dimension. To that end, we construct a panel data set at the state-source country-quarter level, which serves two purposes. First, the source country dimension allows us to check the robustness of our results to potential source country factors that can impact foreign investment decisions. Specifically, we include state-by-source country (pair-specific fixed effect) and source country-by-quarter fixed effects to control for country pair-specific, time-invariant factors that affect foreign investment (e.g., geographical distance, common language, and legal origins), as well as source country-specific shocks that vary at the quarterly level

[15]It is worth noting that the state-level variables for which we control are not available at a quarterly frequency. Moreover, many state-level variables, such as wages or corporate taxes, do not vary much within a year, and therefore become highly collinear with the state-year effects, v_{st}, and therefore cannot be separately identified.

[16]In addition to the Poisson Maximum Likelihood model, the negative binomial is also often used to estimate count models, which allows the mean and variance of the outcome variable to be different.

(e.g., exchange rate fluctuations, foreign GDP, and bilateral trade). Second, extending the analysis to include the source country dimension allows us to control for the source country's policy uncertainty, which can intensify or mitigate foreign investors' sensitivity to policy uncertainty in the host state.

To investigate potential mechanisms behind the impact of policy uncertainty on the incidence of foreign investment across U.S. states, we finally analyze the data along the industry dimension. To this end, we construct a panel data set at the state-industry-quarter level. In addition to the state, year, and state-by-year fixed effects, in these specifications, we include industry-by-year effects. These control for any potential industry by year shocks that may be correlated with policy uncertainty. We augment our primary model in equations (1) and (2) above by additionally including an interaction term between the uncertainty measure and a dummy variable that captures an important industry characteristic, such as irreversibility, to estimate the following specification

$$P(N_{sjqt} = n) = \frac{\Gamma(n+\nu)}{n!\Gamma(\nu)} \left(\frac{\nu}{\nu + \mu_{sjqt}}\right)^{\nu} \left(\frac{\mu_{sjqt}}{\nu + \mu_{sjqt}}\right)^{n}, \text{ for } n = 0, 1, 2, ...$$

$$\mu_{sjqt} = \exp\left(\Sigma_{i=q-1}^{q-6} \beta_i EPU_{sqt,i} + \Sigma_{i=q-1}^{q-6} \delta_i EPU_{sqt,i} * D_j + \mathbf{X}_{sqt}\gamma + \omega_s + \tau_q + \kappa_j + v_{st} + \psi_{jt}\right), \tag{3}$$

where D_j denotes the dummy variable that captures industry j's characteristic. We report the individual and cumulative coefficients on the main policy uncertainty terms ($\Sigma_{i=q-1}^{q-6} \beta_i EPU_{sqt,i}$), as well as the interaction terms ($\Sigma_{i=q-1}^{q-6} \delta_i EPU_{sqt,i} * D_j$), which illuminate alternative mechanisms through which policy uncertainty can affect foreign investors' decisions.

4.2 Results

Monthly response patterns

We start by illustrating the results using monthly data. As we noted above, because cross-border transactions take a long time to materialize due to lengthy target selection and due diligence periods before the deal is announced, we trace the effect of a shock to political uncertainty over the subsequent 18 months. Instead of reporting 18 individual monthly coefficients, we plot the cumulative effect of a shock in policy uncertainty i months into the future, where $i = 1, 2, ..., 18$ months.

Figure 3a documents our findings on the incidence of inbound GF transactions. The plot reveals that while there does not appear to be any cumulative effect on the number of GF investment transactions up to 3 months following a policy uncertainty shock, the cumulative impact grows more negative and becomes both statistically significant and economically meaningful in the long(er) run, up to 18 months following the shock. In fact, the long-run, cumulative effect 18 months following a policy uncertainty shock on the number of GF investments has an elasticity of nearly -0.40. Given the summary statistics for our variables in Table 1, this implies that an increase in (the logarithm of) policy uncertainty of 2 standard deviations (1.1), which is equivalent to about 20% growth in policy uncertainty relative to the mean, would lead to a total of 44% decline in the total number of foreign GF transactions in a given U.S. state, 18 months following the shock. This result is not surprising; most of the existing literature that looks at (policy) uncertainty on foreign direct investment, of which GF transactions and M&A deals are the two most significant components, documents a negative relation between uncertainty and FDI (see e.g., Julio and Yook, 2016; Canh et al., 2020; Jardet et al., 2022).

In Figure 3b, we employ the same empirical model to estimate the impact of policy uncertainty on the monthly count of inbound, cross-border M&A deals. Unlike the case of GF transactions, the estimates suggest that the long-run impact of policy uncertainty on M&A deals may be positive. While the cumulative effects are not precisely estimated, it appears that they become positive 9 months following the shock to policy uncertainty. This time pattern suggests that when policy uncertainty rises in a given period, keeping all else constant, investors postpone M&A activity, on average, for 9 months. Hence, we see first a decline in cross-border M&A activity within the first few months, followed by an increase afterwards. By contrast, GF investment activity keeps declining over the entire 18 month period.

This is a novel and interesting result, as in general, the literature has found a negative impact on local M&A activity from uncertainty. Chen et al. (2023) focusing only on U.S. domestic M&A deals from the SDC Platinum database, find a negative impact from uncertainty driven by gubernatorial election. Nguyen and Phan (2017) also find a negative impact on firm acquisitiveness (based on the incidence of M&As) from U.S. policy uncertainty measured by the Baker et al. (2016) (BBD) index. While keeping the target country constant in this comparison, our analysis shows how cross-border M&A activity likely differ from domestic M&A activity in the face of higher uncertainty.

To ensure that the responses of GF investments and cross-border M&A deals are indeed statistically different, we plot the cumulative long-run impacts of policy uncertainty on the number of M&A deals relative to the number of GF investments in Figure 3c.[17] The

[17]We append the observations for the number of GF investments to the number of cross-border M&A

estimates clearly show that greater policy uncertainty tends to have a positive impact on M&A deals relative to GF transactions. That is, higher risk of policy changes likely shifts foreign investment from GF transactions to M&A deals in the aggregate, likely because the former is relatively more irreversible compared to the latter. It tends to be easier, faster, and cheaper to divest after a merger or an acquisition than it is following the setup of a new establishment abroad. By contrast, GF investments can be characterized as much more irreversible – they are typically long-term investments that involve the setup of a new facility, the transfer of the foreign investor's technology and capital, and the hiring of local human resources.

In addition to being relatively more flexible in terms of reversibility, cross-border M&A investments can be less risky in the face of uncertainty compared to GF investment since acquiring or merging with a local firm that is familiar with the local environment can reduce the impacts of policy risks (Dikova and Van Witteloostuijn, 2007). To check if familiarity plays an important role in mediating foreign investment activity when policy uncertainty is heightened, we separately estimate the impact of uncertainty on the number of GF investments and cross-border M&A deals carried out by foreign investors who have completed multiple investments in the U.S. (multiple investors) and those carried out by single-transaction investors.[18] There are no discernible differences across investors that carry out multiple or single GF investment projects (see Figures 4a and 4b). The number of transactions decline for both groups over the 18 month period, suggesting previous experience and familiarity are not enough to mitigate the risks associated with higher uncertainty when investments are irreversible. The cumulative effects plotted in Figure 4c and Figure 4d demonstrate that the positive long-run effects on the M&A activity are driven by cross-border deals initiated by foreign investors who have previously completed multiple deals in the U.S., i.e. initiated by investors with greater familiarity, who are not as easily discouraged by the potential risk of policy changes.

Quarterly response patterns and robustness

deals and estimate the model in equations (1) and (2) augmented by an interaction term between a dummy variable that takes on a value of one for the M&A counts and each of the 18 lagged EPU-C terms, as well as all the fixed effects included in equation (2). Figure 3c plots the cumulative interaction terms over 18 months. The figure showing the cumulative coefficients we obtain on the EPU-C terms, which capture the baseline effect of policy uncertainty on the GF investments, is essentially identical to Figure 3a.

[18] To classify an M&A deal as a "multiple" vs. "single" investor transaction, we count how many times the investor has invested in the U.S. via cross-border M&A, going back to 1981, when the SDC Platinum data start. We count a particular deal as a multiple-investor transaction if the investor has invested prior to the announcement of that deal. For the GF transactions, we do the same going back to 2003, the first year GF investment data are available.

In the first column of Table 2, we show that the baseline results discussed above are robust to aggregating the data to a quarterly frequency. To conserve space, and for clarity of exposition, we report the long-run cumulative impact ($\Sigma_{i=q-1}^{q-6} \beta_i EPU_{sqt,i}$) in Table 2, and provide a detailed version of these results with individual coefficients in Appendix Table A1. The results reveal a cumulative elasticity of -0.39, the same result we obtained using monthly data. Similarly, the quarterly results for the M&A deals presented in column (5) depict the same pattern we obtain using the monthly data. An increase in policy uncertainty leads investors to postpone their investments by about three quarters, resulting in an initial decline in M&A activity and then an increase. Once again, we find that the long-run impact is positive, with an elasticity of 0.16.

Next, we consider the two separate components of the composite policy uncertainty measure we use in our baseline model – national and state policy uncertainty. Note that even though all states are subject to the same national policy uncertainty shocks, the impacts are certainly heterogeneous across states. For example, consider an increase in trade policy uncertainty due to a trade war that involves agricultural products, among other things, such as soybeans. States that are engaged in international trade (exports) of soybeans are likely to be affected more by such a trade war, and the national uncertainty index in those states may have greater impact on foreign investment. Consequently, inbound foreign investment in those states will be more sensitive to trade policy uncertainty. The results in columns (2)-(3) and (6)-(7) of Table 2 (and also Appendix Table A1) demonstrate that the responses of both GF investments and cross-border M&A deals to the national and state-specific measures resemble the responses we obtain using the composite measure, suggesting that the results are not solely driven by either national or state policy uncertainty.

In columns (4) and (8) we check if there are any spill-over effects from local policy uncertainty. To that end, for each state, we construct an average uncertainty measure associated with the U.S. Census division where the state is located. In computing the Census division average measure, we exclude the given state's own uncertainty measure. For example, for the state of Texas, we calculate the average uncertainty in the West South Central states of Arkansas, Louisiana, and Oklahoma. We include the division uncertainty measure in our baseline specification along with the state's own composite uncertainty index. The results reveal that there are indeed spillover effects from neighboring states' policy uncertainty, and they impact GF investment and M&A transactions much in the same way the state's own economic policy uncertainty does – by reducing the former and increasing the latter in the long(er) run.

Baker et al. (2022) find that gubernatorial elections, especially close elections, are among the important state-specific events that lead to a surge in the political uncertainty index. A number of papers (e.g., Chen et al. (2023), and Jens (2017)) have used gubernatorial elections as a proxy for uncertainty. We check the robustness of our results to additionally controlling for gubernatorial elections in Table 3.[19] In columns (1) and (3) of Table 3, we include three indicator variables capturing whether a statewide election was held 1, 2, or 3 quarters prior to the current period, along with the policy uncertainty index. We find the election indicators to be statistically insignificant when it comes to GF investments. Interestingly, we obtain positive and significant coefficients on the second and third lags of the election indicator when it comes to cross-border M&A activity, suggesting that foreign investors increase the incidence of cross-border M&A deals once the election uncertainty is resolved. Importantly, we also obtain cumulative coefficients of the effect of the economic policy uncertainty index that are very similar to the ones we previously estimated in columns (1) and (4) of Table 2, demonstrating that the Baker et al. (2022) index captures much more than the uncertainty generated by local elections.

Finally, columns (2) and (4) in Table 3 (and also Appendix Table A2) check if our results are robust to the choice of econometric specification. We show that instead of employing a Poisson count model, using a Negative Binomial specification still delivers nearly identical effects for both GF investment flows and cross-border M&A deals.

Source country effects

Before we analyze potential mechanisms that can mediate the response of GF investments or cross-border M&A deals to policy uncertainty, we check if our results change when we allow for source country factors that may affect international investment decisions. In order to incorporate source country characteristics into our analysis, we change our unit of analysis from the state-quarter-year level to the more granular source country-state-quarter year level (e.g., GF investments or M&A transactions by Japanese investors in Texas in the first quarter of 2005). Because this more granular analysis leads to a higher number of zero observations, we focus our attention on the top 22 investor countries in our sample, which account for more than 80% of total inbound foreign investment in the U.S. To conserve space, in Table 4, we only present the cumulative impacts of uncertainty over the 6 quarter period.[20]

In addition to the set of fixed effects we include in our baseline specification in Table 2, in columns (1) and (5) of Table 4 for GF investments and cross-border M&A deals,

[19] See also Appendix Table A2 for a detailed version of Table 3.

[20] See Appendix Table A3 for a detailed version of the results.

we also include state-by-source country (pair specific fixed effect) that control for country pair specific, time-invariant factors that affect foreign investment (e.g., geographical distance, common language and legal origins). Moreover, we include source country-by-year or source country-by-quarter-year fixed effects to control for source country-specific shocks that vary at the annual or quarterly level (e.g., exchange rate fluctuations, foreign GDP, and bilateral trade). The results controlling for source country effects yield policy uncertainty impacts that are very similar to, and in fact, slightly larger in magnitude than the ones we find in our baseline specifications. A year and a half after local (host state) policy uncertainty increases, the incidence of GF investments declines significantly; whereas the number of cross-border M&A deals grows.

An added advantage of extending the analysis to include the source country dimension is that we can explicitly control for the foreign country's policy uncertainty and check how local uncertainty interacts with source country uncertainty. In columns (3) and (7), we include the source country policy uncertainty measure, which varies at the quarterly level, along with its interaction with the state's composite uncertainty measure (EPU-C). Perhaps due to the large number of fixed effects we include, we do not obtain statistically significant estimate of the coefficient on the source country uncertainty index for both GF investments and M&As.[21] The results suggest that source country uncertainty may have the same impact on inbound foreign investment in the U.S. as local policy uncertainty does. However, they also demonstrate that local policy uncertainty has a greater impact on inbound investment. Columns (4) and (8) contain the results from a more exhaustive specification with source-country-quarter-year effects, in which we control for all quarterly source country shocks, such as exchange rate changes. In these specifications, we can no longer separately identify the impact of the source country uncertainty, but we can identify its interaction with local policy uncertainty. While, none of the estimated interaction effects are statistically significant, the sign on the interaction coefficients (positive for GF flows, and negative for M&A deals) suggest that investors from source countries with greater policy uncertainty are less sensitive to local policy uncertainty. Overall, one can conclude that local policy uncertainty, rather than source country uncertainty, matters more for the observed patterns in inbound foreign investment across U.S. states.

Industry traits

[21] The literature studying the role of uncertainty as a pull factor vs. push factor using aggregate data on FDI flows reports mixed impacts and a range of magnitudes. See, for instance, Jardet et al. (2022) for a discussion.

The results we have presented so far clearly demonstrate that the response of two main modes of foreign investment – GF investment and cross-border M&A deals – differ in the face of heightened policy uncertainty over the long(er) run (18 months after the shock). We find that the number of GF investment projects consistently declines over time, whereas the number of cross-border M&A deals declines in the short run and then recovers, reaching a level higher than the initial. The reaction of cross-border M&As suggests that when the policies in a given state become more uncertain, foreign investors hold back and postpone cross-border investments initially. However, after about 6 months, they change course and start reinvesting, especially investors with prior experience in the U.S. The contrasting results between GF investments and M&A deals conform to the theories which posit that investments that are costlier to reverse are more likely to be delayed when uncertainty grows (Bernanke, 1983; Dixit and Pindyck, 1995). Our results imply that given the long-term nature of GF investments, which potentially involve large sunk costs of setting up a new facility, uncertainty may, in fact lead foreign investors to postpone their projects indefinitely.

To further highlight the importance of irreversibility in determining foreign investors' response to the host economy's policy uncertainty, we extend our analysis to the industry-state-year-quarter level. We categorize the industries as more or less irreversible, and we include an interaction term between the policy uncertainty measure and an irreversibility indicator (see the Data section 3 for details) in equation (3). Columns (1) and (4) of Table 5 present the cumulative effects of policy uncertainty on the less irreversible and the more irreversible industries separately.[22]

The results demonstrate that in industries with higher costs of reversing an investment, policy uncertainty is more detrimental to both GF flows and M&As deals. Given a one percent increase in policy uncertainty, GF investments decline by 39% in less irreversible industries and by 63% in more irreversible ones. More importantly, we find that while uncertainty increases the number of M&A deals in sectors with lower cost of disinvestment over the course of 18 months by 23%, it reduces the number of deals in more irreversible industries by 52%. These contrasting impacts underscore the role of irreversibility in determining investors' response to policy uncertainty.

Another important channel through which policy uncertainty can affect foreign investment is the cost of capital. Pástor and Veronesi (2012, 2013) suggest that elevated policy uncertainty can lead to a higher risk premium and a decline in stock prices. As

[22]See Appendix Table A4 for the individual quarterly coefficients. The reported cumulative effects for the more irreversible industries are obtained by the sum of the coefficients on the policy uncertainty measure and their interaction with the irreversibility indicator, i.e., $\Sigma_{i=q-1}^{q-6}(\beta_i + \delta_i)$.

a result, firms in such economic environments may become relatively cheap(er) for foreign acquirers, potentially increasing the number of M&A deals. More generally, policy uncertainty can exacerbate firms' financial constraints, increasing the cost of external financing (Pástor and Veronesi, 2013; Gilchrist et al., 2014; Brogaard and Detzel, 2015). Consequently, investors can find it more difficult to finance their GF projects or M&A deals, which would discourage investments, especially in externally finance-dependent industries.

To address the role of financial constraints in moderating foreign investment, we interact the policy measure with an external finance dependence indicator, which takes on a value one if an industry is more external finance dependent compared to the average, and include the interaction in the baseline specification. Columns (2) and (5) of Table 5 corroborate the notion that policy uncertainty discourages foreign investment further by exacerbating financial constraints. The negative uncertainty effect seems to be larger in magnitude for GF transactions in more external finance-dependent industries, although the difference across the two groups is not statistically significant. However, the results for cross-border M&A deals are significantly different across the two groups of industries.[23] Policy uncertainty increases the number of deals only in industries that are relatively less dependent on external financing. In more dependent industries, uncertainty discourages cross-border M&As, despite the fact that the targets may become cheaper to acquire.

Lastly, in columns (3) and (6) of Table 5, we consider another important industry trait – intangibility. The intensity of intangible assets, such as the firm's brand recognition, supplier network, and intellectual property rights in an industry, may affect the firm's choice of investment mode in the face of higher uncertainty. In industries with more tangible assets, GF investment declines after a year and a half by 64% in response to an uncertainty shock, whereas in industries with more intangible assets, it goes down by only 29%. For cross-border M&As, the opposite impact exists – industries with more intangible assets experience a 39% increase in cross-border M&As in the face of higher uncertainty. In industries with more asset tangibility, this effect is negative, smaller in magnitude (-26%) and statistically insignificant. GF investment often involves building a new subsidiary from scratch with investor's tangible and intangible assets, whereas M&A transactions entail the transfer of assets' ownership. Higher uncertainty may result in less protection of intellectual assets, so in intangible assets-intensive industries, firms may seek a local partner and better protection – therefore M&As become more attractive for foreign firms

[23]The sum of the interaction terms, showing the marginal effect of being in an external finance-dependent industry, is -0.686, with a standard error of 0.290.

in the face of higher local uncertainty. Investors may also prefer M&As over GF investment during more uncertain times, because having access to a local partner's supplier network may be easier than building one as a GF investor. In industries with more tangible assets, there are larger sunk costs, which makes GF investment a less attractive option in the face of higher uncertainty.

In an exhaustive study, Takayama (2021) explores U.S. firms' outward FDI choice, documenting that firms with more intangible capital choose GF investment over M&As. Our study complements this finding and shows that, in the presence of uncertainty, this pattern may be reversed in the case of inbound M&As. Moreover, our results suggest that local uncertainty can be even more detrimental to GF investment in intangible assets-intense industries.

5 Uncertainty and Foreign Firm's Mode of Investment Choice

In the previous section, we have demonstrated that there is an aggregate reallocation from inbound GF investment flows to cross-border M&A activity following an increase in local policy uncertainty. In the this section, we focus our attention on estimating the effects of policy uncertainty on foreign investment decisions at the firm level. In particular, we ask if individual foreign investors substitute away from inbound GF projects towards cross-border acquisitions when they face greater policy uncertainty in the U.S. To answer this question, we create a novel dataset by matching cross-border M&A transactions and inbound GF investment projects from the two different databases (SDC Platinum and Financial Times' fDi Markets) we have employed separately up to this point.

As the two databases do not have unique investor IDs, we match transactions based on the investor's name, using several matching algorithms and manual inspection (see the Appendix for details). In our sample period between 2003 and 2020, our dataset contains information on 21,466 unique investors, of which 1,174 (or 5.5%) are multiple-transaction (repeat) investors who carry out both cross-border M&A deals and GF investment projects. These repeat investors account for 15.7% of the total number (43,845) of both cross-border M&A deals and GF investment projects.[24]

Once we successfully match both types of transactions, GF and M&A, to the foreign investors who initiated them, we specify an empirical model to analyze the investor's dichotomous choice between a cross-border M&A deal and a GF investment project. To

[24]Note that there are multiple-transaction investors who carry out either GF investment projects or cross-border M&A deals but not both, i.e. they only use one and the same mode of entry into the U.S. market. They are not included in the 1,174 number above.

that end, we estimate the following linear probability model

$$\mathbb{I}_{hfsqtjc} = \Sigma_{i=q-1}^{q-6} \beta_i EPU_{sqt,i} + \boldsymbol{Z}_{hfqt}\alpha + \boldsymbol{X}_{sqt}\gamma + \theta_f + \tau_{qt} + v_{st} + \psi_{jqt} + \lambda_{cqt} + \kappa_{sc} + \varepsilon_{hfsqtjc}, \tag{4}$$

where $\mathbb{I}_{hfsqtjc}$ is an indicator dependent variable equal to unity if a foreign firm f completed an investment h, which was a cross-border M&A deal as opposed to a GF transaction, in state s, in quarter q, and in year t, and it is equal to zero when the transaction was a GF investment. Similar to our previous empirical specifications, we regress the indicator variable on the (lags of the) policy uncertainty measure, and control for state-level covariates. We also control for a rich set of fixed effects including firm fixed effect (θ_f), quarter-year effects (τ_{qt}), state-specific year effects (v_{st}), 2-digit industry (of investment) specific quarter-year effects (ψ_{jqt}), source country quarter-year effects (λ_{cqt}), and host state-source country pair effects (κ_{sc}).[25] Including this exhaustive set of fixed effects allows us to absorb all time-varying industry and source country factors that can affect the choice of investment mode, and provides an opportunity to focus on the impact of economic policy uncertainty on within-firm investment decisions. The investor-transaction specific variable vector $\boldsymbol{Z}_{hfqt}$ contains an indicator of whether the firm has undertaken a cross-border M&A deal prior to the given transaction in the U.S., and their number of previous investments.

Our econometric strategy in estimating equation (4) relies on a linear probability model instead of a logit or a probit specification because of the presence of the large number of fixed effects that are relevant to our within firm analysis. As a result of this, it was not possible to find a reliable solution or achieve convergence using a logit or a probit model. Note also that the mean of the dependent variable, i.e. the fraction of inbound transactions that are M&A deals as opposed to GF projects, is about 0.5, which implies that the estimates from a linear probability model will likely be very close to the two non-linear alternatives.

We present the long-term cumulative results in Table 6 and the complete set of results in Appendix Table A5, and Figure 5. We begin in column (1) of Table 6, where we estimate the linear probability model using all countries in our sample and we cluster the standard errors at the state level to account for serial correlation within a state over time, which is important as our main variable of interest, the (lags of) state policy uncertainty varies at that spatial level. As we did in our previous empirical specifications, we additionally

[25]Note that while we control for quarter-year effects for industries and source countries, we are only able to control for state-year (and not state-quarter-year) effects as the local policy uncertainty index varies at the state-quarter-year level.

include local output (GSP) growth, which likely affects foreign investment, and it may differentially impact the likelihood of inbound M&A activity. The estimates indicate that with the exception of the first quarter lag, whose estimated coefficient is effectively zero, local policy uncertainty has a positive impact on the probability of choosing cross-border M&A (as opposed to GF investment) as a mode of entry. The estimated coefficients on all other quarterly lags of local policy uncertainty are positive, and two of them (on the second and fourth lag) are also statistically significant at the 5% level (see Appendix Table A5). The cumulative, long-term impact of local policy uncertainty amounts to 0.073 (with a standard error of 0.033), which is statistically significant at the 5% level, and it also represents an economically meaningful effect. It suggests that a 1% increase in local policy uncertainty, which roughly corresponds to an increase of two standard deviations in log(EPU-C) leads to about 7.3% growth in the likelihood that a foreign investor would choose to enter the U.S. market via cross-border M&A instead of GF investment.

In column (2) of Table 6, our linear probability model additionally includes two important investor characteristics – previous cross-border M&A experience in the U.S., which is an indicator variable equal to unity if the investor has previously completed an M&A deal at least once in the U.S., and the total number of previous investments in the U.S., including both cross-border M&A transactions as well as GF investment projects. Not surprisingly, both investor characteristics have an economically meaningful and statistically significant impact on the likelihood of choosing cross-border M&A as an entry mode. A greater number of previous inbound investments completed by a foreign investor leads to a higher probability of currently opting for an M&A deal instead of a GF project. Similarly, previous experience with a cross-border acquisition leads to about 40% increase in the likelihood of choosing an M&A deal as opposed to GF investment. Even after controlling for both of these important investor-level determinants of the entry mode, the estimated effect on economic policy uncertainty of 0.061 (with a standard error of 0.029) is quite similar to that in column (1), and it is still economically meaningful and statistically significant. Figure 5, depicts the cumulative, positive, effects of policy uncertainty on the choice of M&A mode starting from one quarter lag to six quarters (one and a half year). Note that the pattern of the cumulative effects here looks quite similar to that estimated and plotted earlier in Figure 3c.

In column (3) of Table 6, we report double-clustered standard errors by state and by firm, so as to account for potential serial correlation within foreign investor, as well. The magnitude and sign of the impact of policy uncertainty remain the same, however, it is less precisely estimated. In column (4), we restrict the sample of source countries for foreign investors to the top 21 countries, from which nearly three quarters of all transactions originate. The effect of policy uncertainty on the likelihood of choosing M&A as an entry mode only grows in magnitude, although it is still imprecisely estimated. Finally, in the last two columns, columns (5) and (6), of Table 6, we estimate our linear probability model by additionally including interaction terms between the lags of the policy uncertainty measure and one of the previous investment experience controls, either the previous number of overall investments in the U.S. or the previous M&A experience indicator. In both cases, the effect of economic policy uncertainty for the base category, i.e. for foreign investors with no prior experience in the U.S., is slightly larger, at about 9 to 11% increase in the likelihood of choosing M&A as an entry mode, than we previously estimated in columns (1) - (4). It is also statistically significant at either the 5 or at the 10% level. Moreover, for foreign investors with previous M&A experience in the U.S., the long-run impact of economic policy uncertainty on the choice of M&A entry mode is even greater. Given the cumulative interaction term of 0.049, the total effect of a 1% increase in uncertainty on the likelihood of choosing M&A over GF investment rises to 15%. Lastly, we find that the cumulative interaction term with the total number of previous investments is negative and significant, which suggests that the greater number of previous investments and, therefore, more experience investing in the U.S. market decreases the impact of uncertainty on the choice of entry mode.

6 Effects of Policy Uncertainty on the Value of Cross-border M&A Deals and Greenfield Investment Projects

In addition to the incidence of cross-border transactions and the market entry choice we have analyzed so far, the individual transaction value is another important dimension along which local policy uncertainty can affect foreign investment. Investors' responses to uncertainty may result in fewer but larger cross-border deals; alternatively, they may involve a greater number of smaller investments. To evaluate the impact of local policy uncertainty on the average transaction value, we estimate the following two-way fixed effects econometric model:

$$logV_{hfsqtjc} = \Sigma_{i=q-1}^{q-6}\beta_i EPU_{sqt,i} + Z_{hfqt}\alpha + \boldsymbol{X}_{sqt}\gamma + \theta_f + \tau_{qt} + v_{st} + \psi_{jt} + \lambda_{ct} + \varepsilon_{hfsqtjc}, \quad (5)$$

where $logV_{hfsqtjc}$ is the natural logarithm of the value (expressed in 2020 U.S. dollars) of foreign investment transaction h of foreign firm f, in state s, in quarter q and year t, in two-digit NAICS industry j, from source country c. As before, $\boldsymbol{X}_{sqt}$ captures time-varying state-level covariates. The investor-transaction specific variable Z_{hfqt} captures the number of previous investments by the foreign firm in the U.S.[26] This variable captures the fact that multiple-transaction investors can be larger companies that run large-scale operations, and often investing in higher-value projects.

In addition to the control variables listed above, our econometric model features a number of fixed effects. First, to obtain within firm estimates, we include firm fixed effects θ_f. Second, as in the empirical model for the incidence of investment, i.e. the number of inbound foreign transactions, we allow for state-by-year fixed effects, v_{st} , industry-by-year fixed effects, ψ_{jt}, and source country-by-year fixed effects, λ_{ct}. As before, we include source country-by-year fixed effects to capture time-varying (and time-invariant), investor country-specific factors, such as the geographic distance from source country c to state s, as well as legal and linguistic differences between the source country and the U.S., which may affect the size of the investment transaction, as well as the exchange rate, which affects the price of a local investment undertaken by a foreign company. Because the value of target firms across industries likely differ due to variation in productivity or market structure, we also include two-digit SIC industry fixed effects to capture potential cross-industry differences in the value of new foreign investments. We allow these industry productivity differences to vary over time by including industry-by-year effects, too. Finally, as before, the standard errors are clustered at the state level.

The results for both GF transactions and M&A deals from all investors are plotted in Figure 6a), and from those in the 21 largest source countries are plotted in Figure 6b). The estimates in both panels suggest no discernible effects of policy uncertainty on the average value of GF transactions within a year, and a significant decline after a year and a half when we look at investments coming from all source countries. This could be because initial GF investments are typically large, reflecting the size of the entry costs related to establishing a presence in a foreign market for the first time. Hence, when policy uncertainty increases, it deters foreign firms from investing, without necessarily lowering the amount they choose to invest.

Our estimates of the impact of local policy uncertainty on the average deal value for cross-border M&A deals, on the other hand, show a steady decline over the 6 quarters, especially from the foreign firms in top 21 investor countries. The evidence implies that inbound M&A transactions decline by about 25 percent, suggesting that in the face of local policy uncertainty, foreign investors increase the number of M&A deals but reduce

[26] In the case of cross-border M&A, we count how many times a foreign firm has invested going back to 1981, when the data start. For the GF transactions, we do the same going back to 2003, the first year GF data is available.

the deal size over the long run. To further understand the cause of the decline in M&A deal values, we check whether investors choose to buy smaller percentage ownership of U.S. companies, or if they pay less when they are acquiring full ownership of U.S. companies.[27] The latter can emerge if in the face of uncertainty, foreign firms discount the amount they pay or if they choose to buy smaller companies to minimize their risk. Figure 7a shows that the negative effect of uncertainty on the deal size is even more pronounced for 100 percent acquisitions by foreign investors. Additionally, Figure 7b suggests that the percentage of the target acquired may have declined also, but the estimates are not precise enough to draw firm conclusions. These patterns are in line with Dixit and Pindyck (1995)'s theory on the trade-off between flexibility and scale: as uncertainty goes up, firms operating in irreversible industries may prefer to retain flexibility and invest in smaller amounts.

7 Conclusion

Foreign investment can be an essential source of financing, productivity gains, and employment. In the U.S. alone, foreign multinationals provide jobs to about 8 million workers, paying wages higher than those in domestically owned firms and generating positive spillover effects in the local economy (BEA (2023);[28] Setzler and Tintelnot (2021)). Not surprisingly, state and local governments are eager to attract foreign firms to their jurisdictions, often with the promise of generous subsidies. While much work has been done to assess the factors that are important in the location choice of foreign multinationals in the U.S., no work to date has evaluated the impact of economic policy uncertainty, which has experienced several episodes of dramatic changes over the last two decades.

Our paper offers the first, to our knowledge, analysis of the impact of economic policy uncertainty across U.S. states on inbound foreign investment. We leverage granular data on both cross-border M&A deals and greenfield investment projects from 2003 to 2020, to demonstrate that local policy uncertainty has a negative effect on the incidence of cross-border greenfield projects across U.S. states, and a pronounced, positive effect on the incidence of inbound M&A deals. We manually match foreign investment transactions, both greenfield projects and M&A deals, which come from two different databases, to

[27] The optimal firm ownership structure and the boundaries of multinational firms have been studied theoretically by Antràs (2003). See Eppinger and Ma (2024) for a recent empirical application. Our work does not directly address this question as we focus on the incidence (and size) of cross-border investment, and not the share of local firms owned by foreign multinationals.

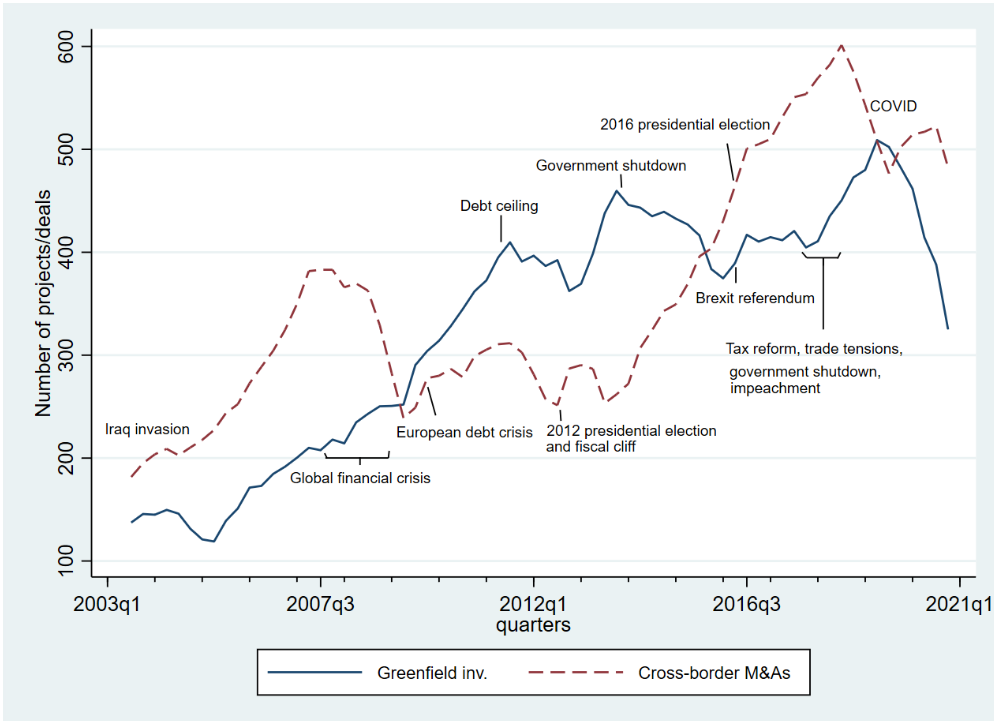
[28] https://www.bea.gov/news/2023/activities-us-affiliates-foreign-multinational-enterprises-2021, accessed March 7, 2024

each foreign investor, and we show that rising economic policy uncertainty induces a shift in the foreign firms' mode of investment in the U.S. away from greenfield projects towards cross-border M&A deals. We also uncover a substantial amount of heterogeneity in the effects of policy uncertainty. In particular, our estimates suggest that heightened uncertainty has a larger negative effect on the incidence of cross-border transactions in industries where investment is more irreversible. Further, our results suggest that in the face of uncertainty, foreign investors engage in smaller M&A deals, likely to preserve flexibility.

Economic policy uncertainty is often challenging to eliminate, and local government officials may not be able to control it perfectly. However, our work demonstrates that there may be gains (to foreign investment flows and their associated benefits to the local economy) from reducing uncertainty and improving transparency in policy-making, especially for greenfield projects in sectors where investment is highly irreversible.

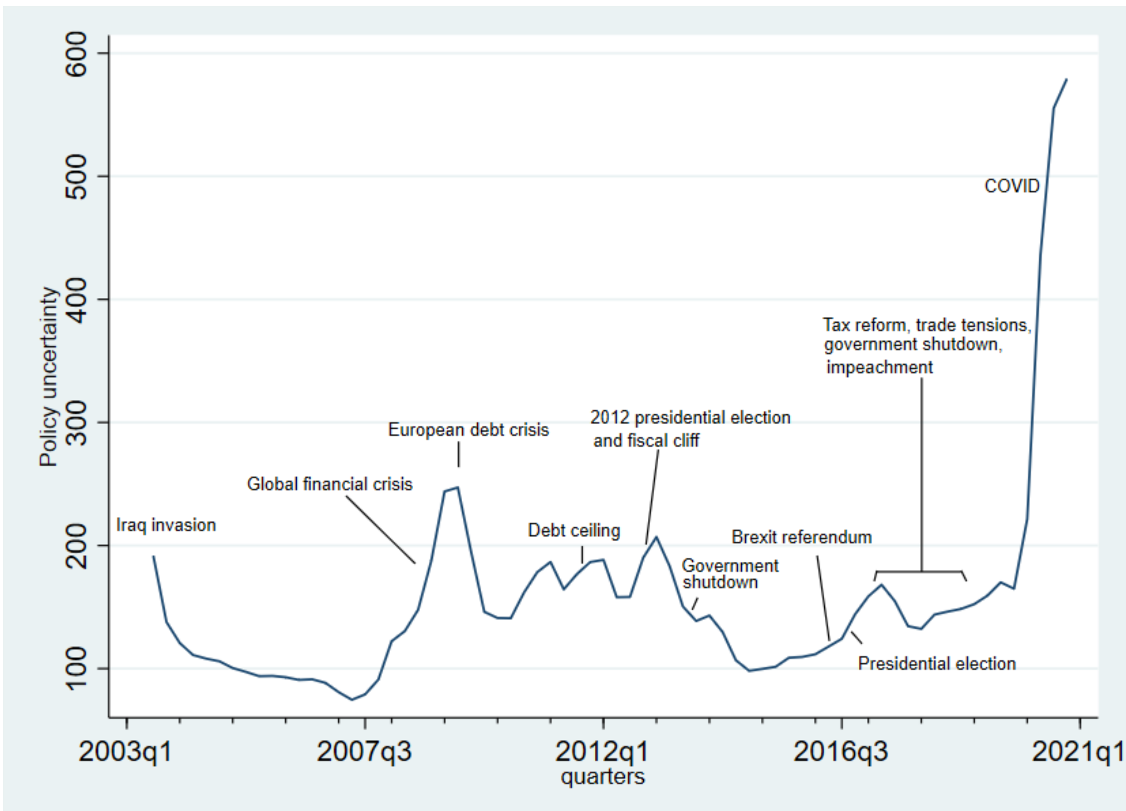
7.1 Figures and Tables

Figure 1: U.S. inbound investment: greenfield vs. cross-border M&As



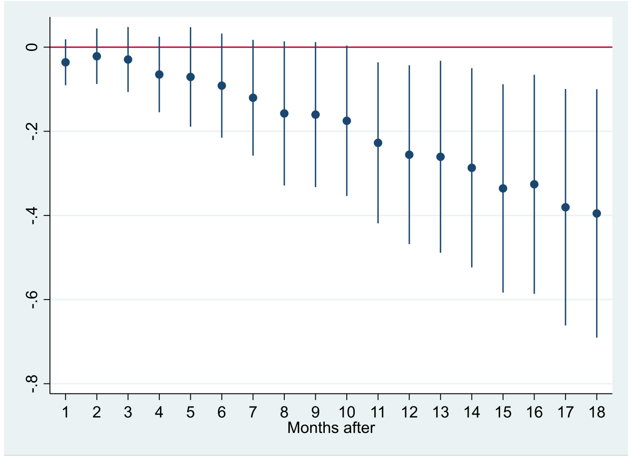
Notes: Greenfield investment projects and cross-border M&A deals are plotted in 4-quarter moving averages of total numbers of projects from the top 21 source countries. Source: Authors' calculations, Financial Times Ltd. fDi Markets database, and SDC Platinum database. The events in the figure mirror those in Figure 2 and coincide with spikes in U.S. policy uncertainty.

Figure 2: U.S. local policy uncertainty

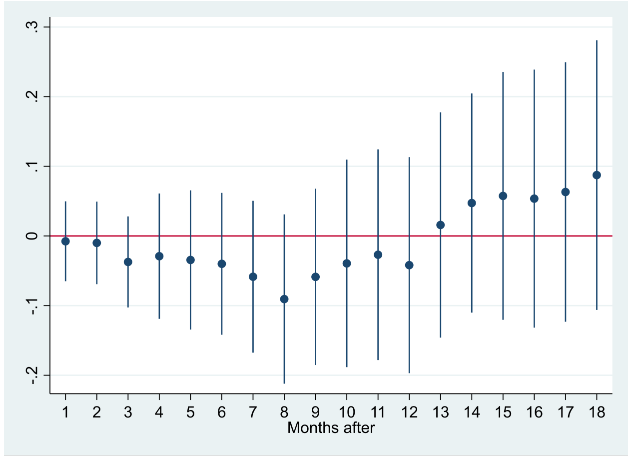


Notes: Local policy uncertainty index (EPU-C) in logs, reported as the mean of 50 U.S. states and in 4-quarter moving averages. Source: Authors' calculations and Baker et al. (2022)

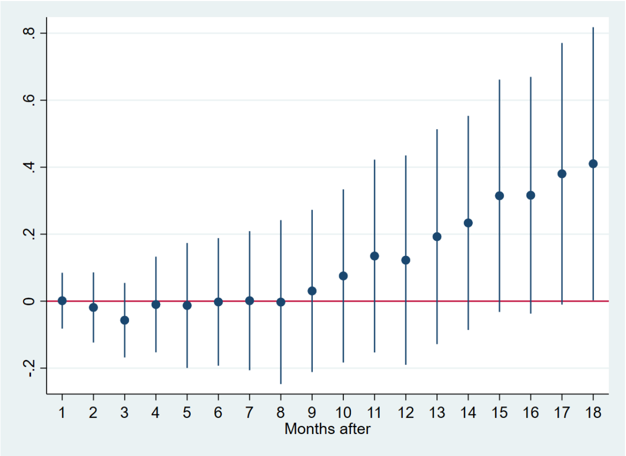
Figure 3: Monthly Cumulative Effects of Policy Uncertainty on the Incidence of Foreign Investment



(a) Greenfield Investments



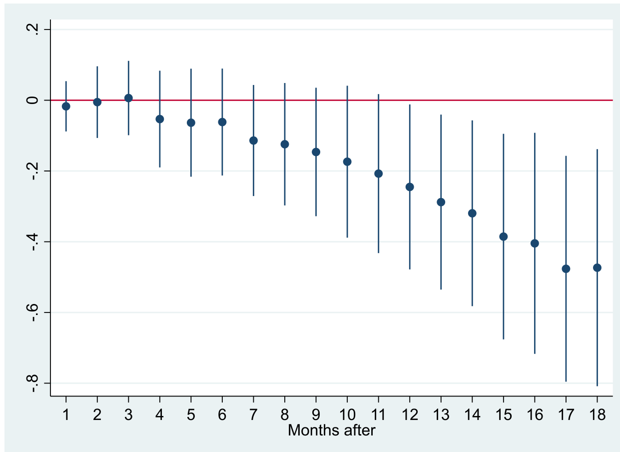
(b) Cross-border M&A Deals



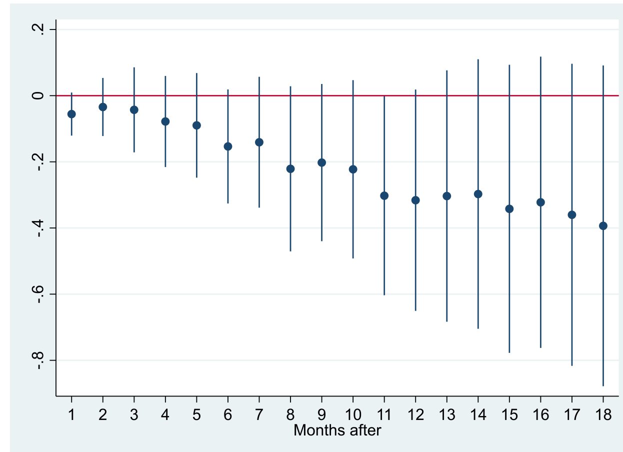
(c) Difference between the Number of Cross-border M&A Deals and Greenfield Investments

Notes: We report results from the estimation of the model described in (1)-(2), which includes state, year, state-by-year fixed effects. We report the cumulative impacts of policy uncertainty over time, as captured by the cumulative coefficients, i.e., β_{m-1}, $\beta_{m-1} + \beta_{m-2}$, ..., $\Sigma_{i=m-1}^{m-18}\beta_i$. Robust standard errors clustered by state are used to construct the 95% confidence intervals.

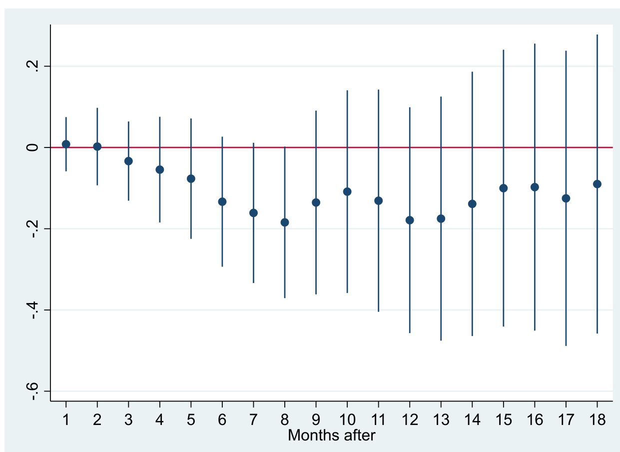
Figure 4: Monthly Cumulative Effects of Policy Uncertainty on the Incidence of Foreign Investment– Multiple and Single Transaction Investors



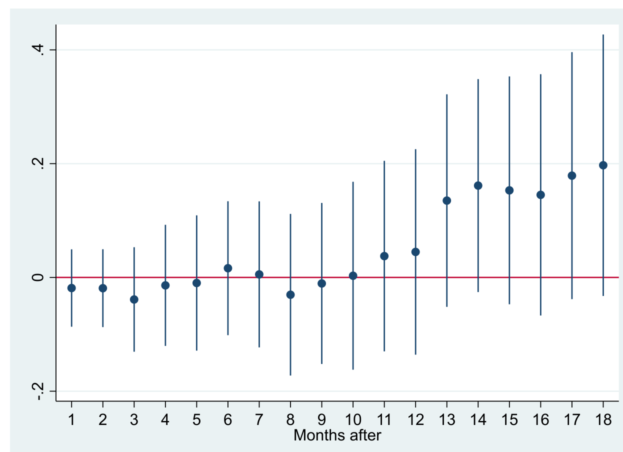
(a) Greenfield Investments–Single Transaction Investors



(b) Greenfield Investments–Multiple Transaction Investors



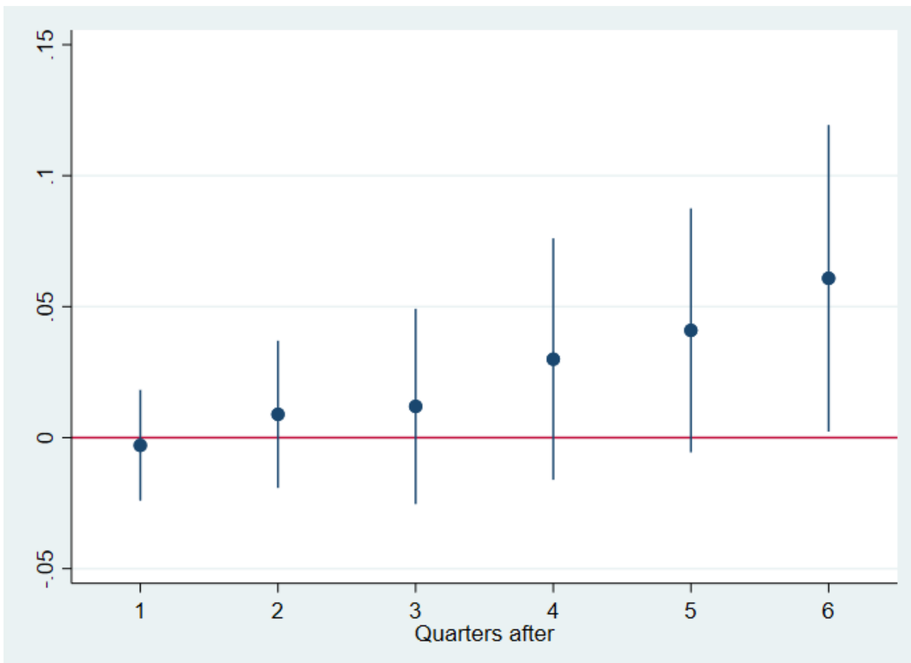
(c) Cross-border M&A deals–Single Transaction Investors



(d) Cross-border M&A deals–Multiple Transaction Investors

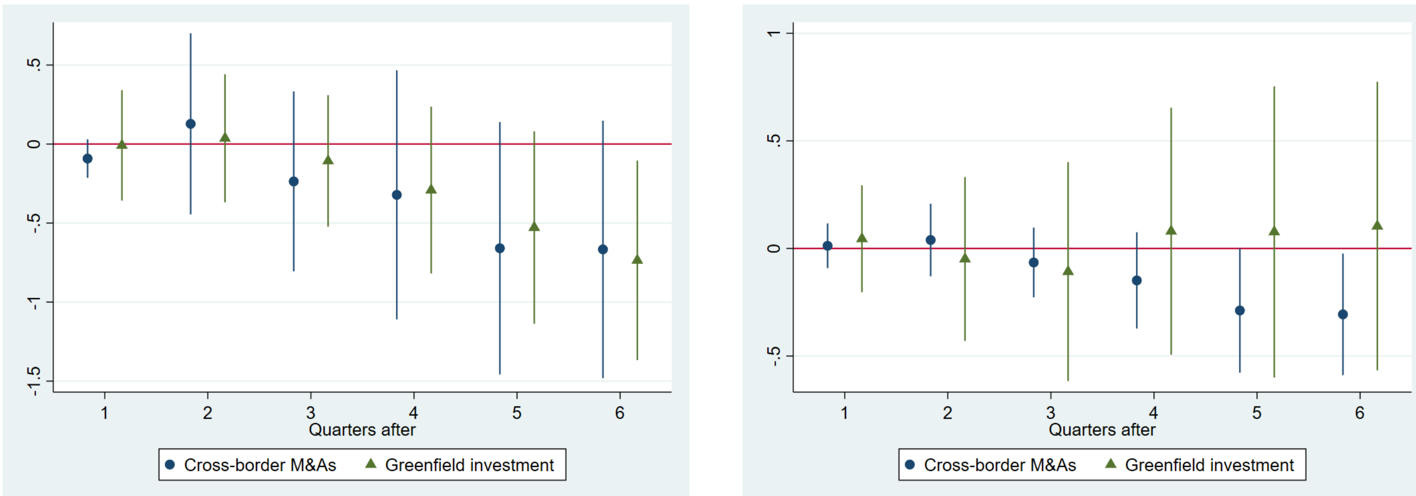
Notes: We report results from the estimation of the model described in (1)-(2), which includes state, year, state-by-year fixed effects. We report the cumulative impacts of policy uncertainty over time, as captured by the cumulative coefficients, i.e., β_{m-1}, $\beta_{m-1} + \beta_{m-2}$, ..., $\Sigma_{i=m-1}^{m-18} \beta_i$. Robust standard errors clustered by state are used to construct the 95% confidence intervals.

Figure 5: Quarterly Cumulative Effects of Policy Uncertainty– The Likelihood of Foreign Firms' Cross-Border M&A Choice



Notes: We report the cumulative effects from the estimation of the linear probability model described in (4), which includes firm fixed effects, quarterly time effects, source country specific quarterly time effects, state-specific year effects, and two-digit NAICS industry specific quarterly time effects. We report the cumulative impacts of policy uncertainty over time, as captured by the cumulative coefficients, i.e., $\beta_{q-1}, \beta_{q-1} + \beta_{q-2}, ..., \Sigma_{i=q-1}^{q-6} \beta_i$. Robust standard errors clustered by state are used to construct the 95% confidence intervals.

Figure 6: Quarterly Cumulative Effects of Policy Uncertainty– Transaction Values

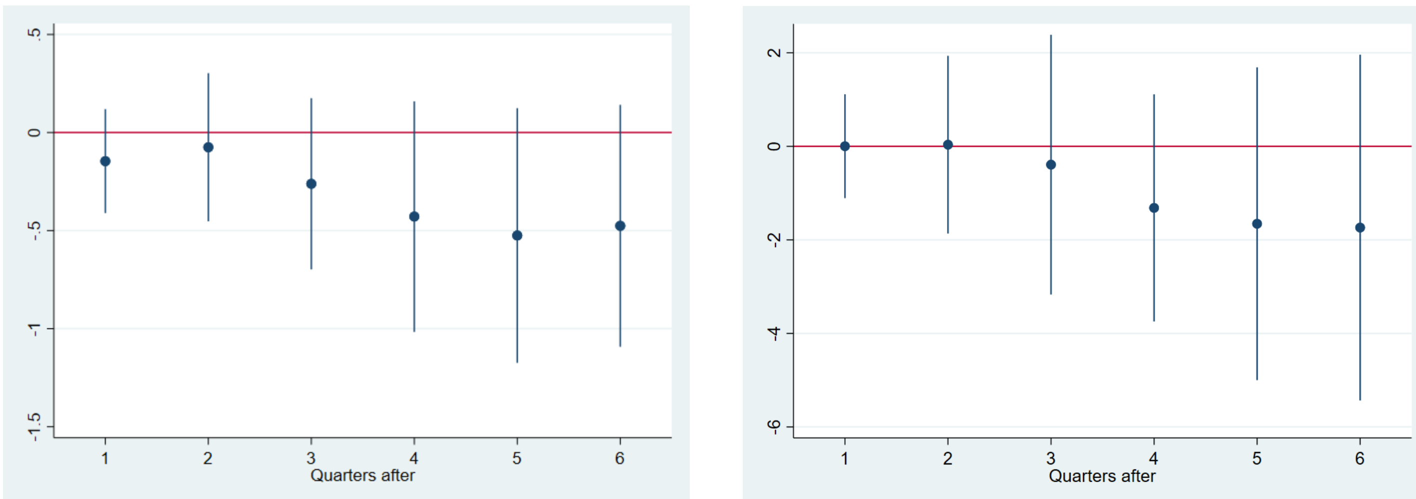


(a) Investments from all source countries

(b) Investments from top 21 source countries

Notes: We report results from the estimation of the model described in (5), which includes firm, state-by-year, industry-by-year, source country-by-year fixed effects as well as time-varying state-level covariates and investor characteristics such as the number of previous investments. We report the cumulative impacts of policy uncertainty over time, as captured by the cumulative coefficients, i.e., β_{q-1}, $\beta_{q-1} + \beta_{q-2}$, ..., $\Sigma_{i=q-1}^{q-6} \beta_i$. Robust standard errors clustered by state are used to construct the 95% confidence intervals.

Figure 7: Quarterly Cumulative Effects of Policy Uncertainty– Transaction Values for Cross-Border M&As



(a) 100% Acquisitions

(b) Percentage Acquired

Notes: We report results from the estimation of the model described in (5), which includes firm, state-by-year, industry-by-year, source country-by-year fixed effects as well as time-varying state-level covariates and investor characteristics such as the number of previous investments. We report the cumulative impacts of policy uncertainty over time, as captured by the cumulative coefficients, i.e., β_{q-1}, $\beta_{q-1} + \beta_{q-2}$, ..., $\Sigma_{i=q-1}^{q-6} \beta_i$. Robust standard errors clustered by state are used to construct the 95% confidence intervals.

Table 1: Summary Statistics

Panel A: Summary statistics for state-quarter panel and transaction level data

Variable	Mean	Std. D.	Min	Max
M&A count	5.975	12.805	0	162
Greenfield count	5.453	10.863	0	100
Real GSP growth	0.003	0.021	-0.171	0.12
Log EPU (composite index)	4.916	0.557	2.623	7.207
EPU (composite index)	162.524	124.279	13.767	1348.452
Log EPU (nation index)	4.514	0.583	1.492	6.976
EPU (nation index)	109.244	78.648	4.444	1070.973
Log EPU (state index)	4.289	0.646	1.873	6.990
EPU (state index)	93.837	95.541	6.508	1085.338
Log M&A transaction value	2.098	2.25	-6.572	10.205
M&A transaction value	122.783	738.800	0.001	27046.8
M&A previous investor	1393.266	1996.540	0	6217
Log greenfield transaction value	2.332	1.953	-3.451	9.393
Greenfield transaction value	71.848	336.362	0.032	12000
Greenfield previous investor	1.602	7.101	0	110

Panel B: Summary statistics for state-source country-quarter panel

Variable	Mean	Std. D.	Min	Max
M&A count	0.353	1.096	0	27
Greenfield count	0.361	1.063	0	22
Log source country EPU	4.822	0.545	2.866	6.492
Source country EPU	144.882	89.266	17.571	659.818

Notes: Panel A reports summary statistics for the cross-border M&A counts, greenfield investment counts, as well as the covariates for the state-quarter panel with 2,968 observations. The summary statistics for the individual M&A and greenfield transaction values used in the transaction-level sample are reported in the bottom section with 11,119 and 4,579 observations, respectively. Real transaction values are in millions of 2020 U.S. dollars.

Panel B presents summary statistics for the state-source country-quarter panel: cross-border M&A counts, greenfield counts, and the covariates used in the panel.

Table 2: Quarterly Impacts of Policy Uncertainty on the Number of Transactions

Investment mode:	Greenfield investment				Cross-border M&A			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Uncertainty index:	Composite	Nation	State	Composite	Composite	Nation	State	Composite
Long-run impact of uncertainty ($\Sigma_{i=q-1}^{q-6}\beta_i$)	-0.391**	-0.237*	-0.215	-0.335**	0.159*	0.145	0.152**	0.155
	(0.168)	(0.129)	(0.136)	(0.167)	(0.097)	(0.119)	(0.076)	(0.096)
Long-run neighboring effects				-0.588***				0.447**
				(0.207)				(0.179)
Observations	2,903	2,860	2,875	2,903	2,949	2,900	2,915	2,949
Pseudo R^2	0.753	0.753	0.752	0.753	0.766	0.768	0.766	0.767
Estimation methodology	PPML	PPML	PPML	PPML	PPML	PPML	PPML	PPML

Notes: The results for the full specification are reported in Appendix Table A1. All specifications include state specific year effects, and quarterly time effects. The specific policy uncertainty index used in each specification is noted at the beginning of the table, and the estimation methodology is noted at the end. The long-run impact is calculated as the sum of the coefficients on the six lagged values of the uncertainty index ($\Sigma_{i=q-1}^{q-6}\beta_i EPU_{sqt,i}$). Robust standard errors clustered at the state level are reported in parentheses. ***, **, * denote significance at the 1%, 5%, and 10%, respectively.

Table 3: Quarterly Impacts of Policy Uncertainty on the Number of Transactions

Investment mode:	Greenfield investment		Cross-border M&A	
	(1)	(2)	(3)	(4)
Uncertainty index:	Composite	Composite	Composite	Composite
Long-run impact of uncertainty ($\Sigma_{i=q-1}^{q-6}\beta_i$)	-0.389**	-0.391**	0.165*	0.159*
	(0.168)	(0.168)	(0.097)	(0.097)
$election_{t-1}$	0.041		0.084	
	(0.089)		(0.052)	
$election_{t-2}$	0.032		0.150***	
	(0.086)		(0.051)	
$election_{t-3}$	0.030		0.101**	
	(0.068)		(0.043)	
Observations	2,903	2,997	2,949	2,997
Pseudo R^2	0.753	0.383	0.767	0.388
Estimation methodology	PPML	Neg.Bin.	PPML	Neg.Bin.

Notes: The results for the full specification are reported in Appendix Table A2. All specifications include state specific year effects, and quarterly time effects. The specific policy uncertainty index used in each specification is noted at the beginning of the table, and the estimation methodology is noted at the end. The long-run impact is calculated as the sum of the coefficients on the six lagged values of the uncertainty index. Robust standard errors clustered at the state level are reported in parentheses. ***, **, * denote significance at the 1%, 5%, and 10%, respectively.

Table 4: Long-run Impacts of Policy Uncertainty on the Number of Transactions from the Top Source Countries

Investment mode:	Greenfield investment				Cross-border M&A			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Long-run impact of local uncertainty	-0.466**	-0.456**	-1.581**	-1.132	0.263**	0.268**	0.716	1.137*
	(0.184)	(0.179)	(0.762)	(0.974)	(0.114)	(0.116)	(0.508)	(0.632)
Long-run impact of source country uncertainty			-1.144				0.521	
			(0.805)				(0.509)	
Interaction			0.226	0.135			-0.0932	-0.177
			(0.157)	(0.201)			(0.0946)	(0.121)
quarter_year f.e.	yes	yes	yes	yes	yes	yes	yes	yes
state X year f.e.	yes	yes	yes	yes	yes	yes	yes	yes
state X source country f.e.	yes	yes	yes	yes	yes	yes	yes	yes
source X year f.e.	yes		yes		yes		yes	
source X quarter_year f.e.		yes		yes		yes		yes
Observations	37,933	37,272	37,829	37,168	37,557	36,493	37,445	36,409
Pseudo R^2	0.440	0.451	0.440	0.451	0.460	0.466	0.460	0.466

Notes: The results for the full specification are reported in Appendix Table A3. The table presents the long-run impact of policy is calculated as the sum of the coefficients on the six lagged values of the local and source country uncertainty indexes (individual coefficients suppressed for brevity). The included fixed effects are listed for each specification. The estimation methodology is PPML for all specifications. Robust standard errors clustered at the state level are reported in parentheses. ***, **, * denote significance at the 1%, 5%, and 10%, respectively.

Table 5: Quarterly Impacts of Policy Uncertainty on the Number of Transactions — Industry Characteristics

Investment mode:	Greenfield investment			Cross-border M&A		
	(1)	(2)	(3)	(4)	(5)	(6)
Industry characteristic (D_j):	Irreversibility	Ext. finance dep.	Intangibility	Irreversibility	Ext. finance dep.	Intangibility
Long-run impact of uncertainty, $D_j = 0$ ($\Sigma_{i=q-1}^{q-6} \beta_i$)	-0.393	-0.406	-0.639***	0.230*	0.315*	-0.255
	(0.267)	(0.277)	(0.080)	(0.127)	(0.164)	(0.259)
Long-run impact of uncertainty, $D_j = 1$ ($\Sigma_{i=q-1}^{q-6} (\beta_i + \delta i)$)	-0.629***	-0.569***	-0.285	-0.516*	-0.371	0.389**
	(0.222)	(0.173)	(0.394)	(0.306)	(0.262)	(0.186)
Observations	39,495	39,495	39,495	63,368	63,368	63,368
Pseudo R^2	0.480	0.480	0.480	0.493	0.493	0.493

Notes: The results for the full specification are reported in Appendix Table A4. All specifications include state specific year effects, industry specific year effects, and quarterly time effects. D_j refers to the industry characteristic dummy variable noted in the top of the table. The composite policy uncertainty index is used in all specifications. The estimation methodology is PPML for all columns. The long-run impact of policy is calculated as the sum of the coefficients on the six lagged values of the uncertainty index. Robust standard errors clustered at the state level are reported in parentheses. ***, **, * denote significance at the 1%, 5%, and 10%, respectively.

Table 6: Quarterly Impacts of Policy Uncertainty on the Probability of Cross-Border M&A Choice — Firm Level Characteristics

Linear Probability Model:	*Prob*(*Cross-border M&A*=1 | *X*)					
	(1)	(2)	(3)	(4)	(5)	(6)
Investor characteristic (Z_j):					*Prev. M&A*	*Prev. inv. count*
Long-run impact of uncertainty	0.073**	0.061**	0.061	0.075	0.106**	0.087*
	(0.033)	(0.029)	(0.039)	(0.049)	(0.046)	(0.046)
Long-run impact of uncertainty interaction					0.049**	-0.015***
					(0.019)	(0.003)
Prev. M&A		0.371***	0.371***	0.131	0.372***	0.371***
		(0.012)	(0.016)	(0.093)	(0.017)	(0.017)
Prev. inv. count		0.008***	0.008***	0.013***	0.097***	0.016***
		(0.002)	(0.003)	(0.004)	(0.019)	(0.004)
Source country sample	all	all	all	top 21	top 21	top 21
Clustering at the state level	yes	yes	yes	yes	yes	yes
Clustering at the investor level			yes	yes	yes	yes
Observations	22,816	22,816	22,816	16,500	16,500	16,500
R^2	0.882	0.907	0.907	0.893	0.893	0.893

Notes: The results for the full specification are reported in Appendix Table A5. All specifications include firm fixed effects, quarterly time effects, source country specific quarterly time effects, state-specific year effects, and two-digit NAICS industry specific quarterly time effects. Z_j refers to the firm characteristic dummy variable (Previous M&A) or count variable (Previous investment count) noted at the top of the table. The composite policy uncertainty index is used in all specifications. We estimate a linear probability model with *Prob*(*Cross-border M&A*=1 | *X*) in all specifications (OLS). The long-run impact of policy is calculated as the sum of the coefficients on the six lagged values of the uncertainty index. The long-run marginal effect of the investor characteristic is calculated as the sum of the six interaction terms. Robust standard errors clustered at the state level in specifications (1)-(2) and at the firm and state level in specifications (3)-(6) are reported in parentheses. ***, **, * denote significance at the 1%, 5%, and 10%, respectively.

References

Abel, A. B. (1983). Optimal Investment Under Uncertainty. *The American Economic Review*, 73(1):228–233.

Adra, S., Gao, Y., and Yuan, J. (2024). Local Policy Uncertainty and the Firm's Investment Reaction to Monetary Policy. *Economics Letters*, 234:111473.

Ahir, H., Bloom, N., and Furceri, D. (2022). The World Uncertainty Index. Technical report, National Bureau of Economic Research.

Alam, A. W., Farjana, A., and Houston, R. (2023). Firm Investment Steering through State-level Policy Uncertainty. *Finance Research Letters*, 58:104470.

Alfaro, L. (2017). Gains from foreign direct investment: Macro and micro approaches. *The World Bank Economic Review*, 30(Supplement_1):S2–S15.

Antràs, P. (2003). Firms, Contracts, and Trade Structure. *The Quarterly Journal of Economics*, 118(4):1375–1418.

Antràs, P. and Yeaple, S. R. (2014). Multinational Firms and the Structure of International Trade. *Handbook of international economics*, 4:55–130.

Arnold, D., Milligan, K. S., Moon, T., and Tavakoli, A. (2023). Job transitions and employee earnings after acquisitions: Linking corporate and worker outcomes. Technical report, National Bureau of Economic Research.

Baker, S. R., Bloom, N., and Davis, S. J. (2016). Measuring Economic Policy Uncertainty. *Quarterly Journal of Economics*, 131(4):1593–1636.

Baker, S. R., Davis, S. J., and Levy, J. A. (2022). State-Level Economic Policy Uncertainty. *NBER Working Paper Series*.

Bar-Ilan, A. and Strange, W. C. (1996). Investment Lags. *The American Economic Review*, 86(3):610–622.

Bernanke, B. S. (1983). Irreversibility, Uncertainty, and Cyclical Investment. *The Quarterly Journal of Economics*, 98(1):85–106.

Bertola, G. (1998). Irreversible Investment. *Research in Economics*, 52(1):3–37.

Bilir, L. K., Chor, D., and Manova, K. (2019). Host-Country Financial Development and Multinational Activity. *European Economic Review*, 115:192–220.

Bonaime, A., Gulen, H., and Ion, M. (2018). Does Policy Uncertainty Affect Mergers and Acquisitions? *Journal of Financial Economics*, 129(3):531–558.

Brogaard, J. and Detzel, A. (2015). The Asset-Pricing Implications of Government Economic Policy Uncertainty. *Management science*, 61(1):3–18.

Caballero, R. J. (1991). On the Sign of the Investment-Uncertainty Relationship. *The American Economic Review*, 81(1):279–288.

Cameron, A. C. and Trivedi, P. K. (2005). *Microeconometrics: Methods and Applications*. Cambridge University Press.

Canh, N. P., Binh, N. T., Thanh, S. D., and Schinckus, C. (2020). Determinants of Foreign Direct Investment Inflows: The Role of Economic Policy Uncertainty. *International Economics*, 161:159–172.

Chen, Z., Cihan, M., Jens, C. E., and Page, T. B. (2023). Political Uncertainty and Firm Investment: Project-Level Evidence from M&A Activity. *Journal of Financial and Quantitative Analysis*, 58(1):71–103.

Correia, S., Guimarães, P., and Zylkin, T. (2020). Fast Poisson Estimation with High-Dimensional Fixed Effects. *The Stata Journal*, 20(1):95–115.

Davies, R. B., Desbordes, R., and Ray, A. (2018). Greenfield versus Merger and Acquisition FDI: Same wine, different bottles? *Canadian Journal of Economics/Revue canadienne d'économique*, 51(4):1151–1190.

Dikova, D. and Van Witteloostuijn, A. (2007). Foreign Direct Investment Mode Choice: Entry and Establishment Modes in Transition Economies. *Journal of International Business Studies*, 38:1013–1033.

Dixit, A. (2011). International Trade, Foreign Direct Investment, and Security. *Annual Review of Economics*, 3(1):191–213.

Dixit, A. K. and Pindyck, R. S. (1995). The New Option View of Investment.

Eppinger, P. and Ma, H. (2024). Optimal Ownership and Firm Performance: An Analysis of China's FDI Liberalization. *Review of Economics and Statistics*, pages 1–46.

Gilchrist, S., Sim, J. W., and Zakrajšek, E. (2014). Uncertainty, financial frictions, and investment dynamics. Technical report, National Bureau of Economic Research.

Gulen, H. and Ion, M. (2016). Policy Uncertainty and Corporate Investment. *The Review of Financial Studies*, 29(3):523–564.

Hartman, R. (1972). The Effects of Price and Cost Uncertainty on Investment. *Journal of Economic Theory*, 5(2):258–266.

Hartman, R. (1976). Factor Demand with Output Price Uncertainty. *The American Economic Review*, 66(4):675–681.

Jardet, C., Jude, C., and Chinn, M. (2022). Foreign Direct Investment Under Uncertainty: Evidence from a Large Panel of Countries. *Review of International Economics*.

Jens, C. E. (2017). Political Uncertainty and Investment: Causal Evidence from US Gubernatorial Elections. *Journal of Financial Economics*, 124(3):563–579.

Julio, B. and Yook, Y. (2016). Policy Uncertainty, Irreversibility, and Cross-Border Flows of Capital. *Journal of International Economics*, 103:13–26.

Kandilov, I. and Leblebicioğlu, A. (2024). Trade Secrets Protection and Foreign Investment. *Available at SSRN 4770611*.

Kandilov, I. T., Leblebicioğlu, A., and Petkova, N. (2016). The Impact of Banking Deregulation on Inbound Foreign Direct Investment: Transaction-Level Evidence from the United States. *Journal of International Economics*, 100:138–159.

Kandilov, I. T., Leblebicioğlu, A., and Petkova, N. (2017). Cross-Border Mergers and Acquisitions: The Importance of Local Credit and Source Country Finance. *Journal of International Money and Finance*, 70:288–318.

Kandilov, I. T. and Senses, M. Z. (2016). The Effects of Wrongful Discharge Protection on Foreign Multinationals: Evidence from Transaction-Level Data. *Canadian Journal of Economics*, 49(1):111–146.

Kim, D. and Lee, S. (2023). Reallocating Global Investment and Production: Multinational Firms' Response to Economic Policy Uncertainty. *Available at SSRN 4643090*.

Li, F., Liang, T., and Zhang, H. (2021). Does Economic Policy Uncertainty Affect Cross-Border M&As?—A Data Analysis Based on Chinese Multinational Enterprises. *International Review of Financial Analysis*, 73:101631.

Nguyen, N. H. and Phan, H. V. (2017). Policy Uncertainty and Mergers and Acquisitions. *Journal of Financial and Quantitative Analysis*, 52(2):613–644.

Nocke, V. and Yeaple, S. (2007). Cross-border Mergers and Acquisitions vs. Greenfield Foreign Direct Investment: The Role of Firm Heterogeneity. *Journal of International Economics*, 72(2):336–365.

Nocke, V. and Yeaple, S. (2008). An Assignment Theory of Foreign Direct Investment. *The Review of Economic Studies*, 75(2):529–557.

Pástor, L. and Veronesi, P. (2012). Uncertainty about Government Policy and Stock Prices. *The Journal of Finance*, 67(4):1219–1264.

Pástor, L. and Veronesi, P. (2013). Political Uncertainty and Risk Premia. *Journal of Financial Economics*, 110(3):520–545.

Pindyck, R. S. (1991). Irreversibility, Uncertainty, and Investment. *Journal of Economic Literature*, 29(3):1110.

Rajan, R. G. and Zingales, L. (1998). Financial Dependence and Growth. *American Economic Review*, pages 559–586.

Rodrik, D. (1991). Policy Uncertainty and Private Investment in Developing Countries. *Journal of Development Economics*, 36(2):229–242.

Setzler, B. and Tintelnot, F. (2021). The effects of foreign multinationals on workers and firms in the united states. *The Quarterly Journal of Economics*, 136(3):1943–1991.

Slangen, A. H. (2013). Greenfield or Acquisition Entry? The Roles of Policy Uncertainty and MNE Legitimacy in Host Countries. *Global Strategy Journal*, 3(3):262–280.

Sun, T., Zhang, W., Xu, X., and Zhang, L. (2021). Greenfield or M&A? The role of economic policy uncertainty in home and host countries. *Emerging Markets Finance and Trade*, 57(6):1628–1639.

Takayama, H. (2021). *Greenfield or Brownfield?: FDI Entry Mode and Intangible Capital*. Research Institute for Economics and Business Administration, Kobe University.

Tian, X., Wang, Y., and Ye, K. (2018). How Does Policy Uncertainty Affect Venture Capital? *Available at SSRN 4365390*.

8 Appendix

8.1 List of source countries

Australia, Belgium, Canada, China, Denmark, Finland, France, Germany, Hong Kong, India, Ireland, Israel, Italy, Japan, Mexico, Netherlands, Singapore, South Korea, Spain, Sweden, Switzerland, Taiwan, United Kingdom.

8.2 Creating firm-level data by matching investors from the transaction-level greenfield investment and cross-border M&A data

The greenfield investment data and cross-border M&A data list firm (investor) names as a string variable, sometimes imperfectly coded. For example, some firm names are abbreviated, have a typo, or are capitalized. Also, parent firms may be listed along with their subsidiaries and appear under different names. To create a sample of unique firms engaged in two modes of investment, we consider the following steps in Stata17:

1. From both greenfield and M&A datasets, we first remove the high-frequency words, such as "Corp.", "Corporation", "Inc.", "Holdings", as well as industry-specific words such as "Chemical", "Insurance", "Laboratories" etc. since they may potentially lead to false positive matches. Further, keeping source country information in the datasets helps us filter out different investors from different source countries.

2. Using the Stata *matchit* function with the option of *3-grams* and a minimum *similscore* set at 0.5, we perform a match between two datasets to obtain the list of common investor names. Different options can be selected in this step depending on the issues in the data (e.g., frequent typos or abbreviations). Performing a manual check at the final step is necessary, so the options chosen in this step should not matter for the accuracy of the final match.

3. Once the match is complete, we assign unique IDs to each investor.

4. We merge the data with the original greenfield and M&A datasets to obtain the complete dataset.

5. Finally, we perform a manual check of the entire dataset to correct matching errors. From step 2, these are mainly false negative matches and, to some extent, false positive matches. Especially in the case of abbreviated investor names, there may

be apparent errors that need to be corrected. For several cases, we make the following assumption. We match a parent firm with its subsidiaries unless they are matched in step 2. We also match subsidiaries under a unique firm ID even when the parent firm is not listed. Sometimes, these subsidiaries may be from different industries. Still, since these subsidiaries make cross-border investment decisions under the management of their parent firm, we consider it safe to assume that they will have a common firm fixed effect in our analysis. Finally, in a few cases, a firm's name might have changed after a merger. For these cases, we also assign a unique ID. In many cases, a Google search may need to be performed to make the correct judgment.

8.3 Detailed tables

See next page.

Table A1: Quarterly Impacts of Policy Uncertainty on the Number of Transactions

Investment mode:	Greenfield investment				Cross-border M&A			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Uncertainty index:	Composite	Nation	State	Composite	Composite	Nation	State	Composite
Long-run impact of uncertainty ($\Sigma_{i=q-1}^{q-6}\beta_i$)	-0.391**	-0.237*	-0.215	-0.335**	0.159*	0.145	0.152**	0.155
	(0.168)	(0.129)	(0.136)	(0.167)	(0.097)	(0.119)	(0.076)	(0.096)
Long-run neighboring effects				-0.588***				0.447**
				(0.207)				(0.179)
$ln(epu_{t-1})$	0.0014	-0.017	-0.006	0.014	-0.026	-0.019	0.003	-0.029
	(0.049)	(0.035)	(0.037)	(0.047)	(0.033)	(0.029)	(0.024)	(0.033)
$ln(epu_{t-2})$	-0.122***	-0.086***	-0.054	-0.110**	-0.058*	-0.023	-0.020	-0.061*
	(0.045)	(0.033)	(0.033)	(0.047)	(0.035)	(0.042)	(0.025)	(0.035)
$ln(epu_{t-3})$	-0.018	0.003	-0.004	-0.009	0.073**	0.030	0.076***	0.068*
	(0.043)	(0.041)	(0.030)	(0.044)	(0.037)	(0.037)	(0.026)	(0.037)
$ln(epu_{t-4})$	-0.108***	-0.061	-0.026	-0.099**	0.028	0.047	0.011	0.029
	(0.004)	(0.042)	(0.040)	(0.042)	(0.033)	(0.041)	(0.024)	(0.034)
$ln(epu_{t-5})$	-0.052	-0.026	-0.037	-0.034	0.066*	0.070**	0.036	0.061*
	(0.044)	(0.040)	(0.033)	(0.043)	(0.035)	(0.031)	(0.023)	(0.035)
$ln(epu_{t-6})$	-0.098*	-0.051	-0.051	-0.098*	0.076**	0.040	0.045*	0.086***
	(0.056)	(0.042)	(0.042)	(0.059)	(0.031)	(0.024)	(0.026)	(0.032)
$ln(division-exown-epu_{t-1})$				-0.207***				0.170***
				(0.067)				(0.064)
$ln(division-exown-epu_{t-2})$				-0.169***				-0.053
				(0.037)				(0.048)
$ln(division-exown-epu_{t-3})$				-0.127*				0.073
				(0.070)				(0.055)
$ln(division-exown-epu_{t-4})$				-0.055				0.125**
				(0.064)				(0.060)
$ln(division-exown-epu_{t-5})$				0.029				0.011
				(0.060)				(0.051)
$ln(division-exown-epu_{t-6})$				-0.059				0.120**
				(0.082)				(0.050)
$GSP\ growth_t$	0.395	0.381	0.387	0.336	0.003	0.103	-0.008	0.031
	(0.697)	(0.693)	(0.684)	(0.697)	(0.330)	(0.328)	(0.304)	(0.353)
Observations	2,903	2,860	2,875	2,903	2,949	2,900	2,915	2,949
Pseudo R^2	0.753	0.753	0.752	0.753	0.766	0.768	0.766	0.767
Estimation methodology	PPML	PPML	PPML	PPML	PPML	PPML	PPML	PPML

Notes: All specifications include state specific year effects, and quarterly time effects. The specific policy uncertainty index used in each specification is noted at the beginning of the table, and the estimation methodology is noted at the end. The long-run impact is calculated as the sum of the coefficients on the six lagged values of the uncertainty index ($\Sigma_{i=q-1}^{q-6}\beta_i EPU_{sqt,i}$). Robust standard errors clustered at the state level are reported in parentheses. ***, **, * denote significance at the 1%, 5%, and 10%, respectively.

Table A2: Quarterly Impacts of Policy Uncertainty on the Number of Transactions

Investment mode:	Greenfield investment		Cross-border M&A	
	(1)	(2)	(3)	(4)
Uncertainty index:	Composite	Composite	Composite	Composite
Long-run impact of uncertainty ($\Sigma_{i=q-1}^{q-6}\beta_i$)	-0.389**	-0.391**	0.165*	0.159*
	(0.168)	(0.168)	(0.097)	(0.097)
$ln(epu_{t-1})$	0.002	0.001	-0.024	-0.026
	(0.049)	(0.049)	(0.033)	(0.033)
$ln(epu_{t-2})$	-0.121***	-0.122***	-0.059*	-0.058*
	(0.045)	(0.045)	(0.035)	(0.035)
$ln(epu_{t-3})$	-0.017	-0.018	0.075**	0.073**
	(0.044)	(0.044)	(0.037)	(0.037)
$ln(epu_{t-4})$	-0.107***	-0.108***	0.031	0.028
	(0.040)	(0.040)	(0.033)	(0.033)
$ln(epu_{t-5})$	-0.052	-0.052	0.065*	0.066*
	(0.044)	(0.044)	(0.034)	(0.035)
$ln(epu_{t-6})$	-0.094*	-0.094*	0.077**	0.076**
	(0.056)	(0.056)	(0.030)	(0.031)
$election_{t-1}$	0.041		0.084	
	(0.089)		(0.052)	
$election_{t-2}$	0.032		0.150***	
	(0.086)		(0.051)	
$election_{t-3}$	0.030		0.101**	
	(0.068)		(0.043)	
$GSP\ growth_t$	0.397	0.395	0.042	0.003
	(0.700)	(0.697)	(0.330)	(0.330)
Observations	2,903	2,997	2,949	2,997
Pseudo R^2	0.753	0.383	0.767	0.388
Estimation methodology	PPML	Neg.Bin.	PPML	Neg.Bin.

Notes: All specifications include state specific year effects, and quarterly time effects. The specific policy uncertainty index used in each specification is noted at the beginning of the table, and the estimation methodology is noted at the end. The long-run impact is calculated as the sum of the coefficients on the six lagged values of the uncertainty index. Robust standard errors clustered at the state level are reported in parentheses. ***, **, * denote significance at the 1%, 5%, and 10%, respectively.

Table A3: Long-run Impacts of Policy Uncertainty on the Number of Transactions from the Top Source Countries

Investment mode:	Greenfield investment				Cross-border M&A			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Long-run impact of local uncertainty	-0.466**	-0.456**	-1.581**	-1.132	0.263**	0.268**	0.716	1.137*
	(0.184)	(0.179)	(0.762)	(0.974)	(0.114)	(0.116)	(0.508)	(0.632)
Long-run impact of source country uncertainty			-1.144				0.521	
			(0.805)				(0.509)	
Interaction			0.226	0.135			-0.0932	-0.177
			(0.157)	(0.201)			(0.0946)	(0.121)
$ln(epu_{t-1})$	-0.011	-0.023	-0.181	0.229	0.012	0.015	-0.006	-0.066
	(0.054)	(0.054)	(0.275)	(0.389)	(0.047)	(0.049)	(0.277)	(0.287)
$ln(epu_{t-2})$	-0.106**	-0.091**	-0.185	0.237	0.011	0.009	-0.103	-0.048
	(0.047)	(0.046)	(0.317)	(0.434)	(0.049)	(0.049)	(0.301)	(0.371)
$ln(epu_{t-3})$	-0.073	-0.070	-0.708**	-1.176***	0.065	0.065	0.082	0.276
	(0.054)	(0.055)	(0.330)	(0.361)	(0.046)	(0.046)	(0.254)	(0.321)
$ln(epu_{t-4})$	-0.105*	-0.101	-0.212	-0.680	0.001	-0.002	0.279	0.464
	(0.063)	(0.066)	(0.346)	(0.447)	(0.046)	(0.046)	(0.280)	(0.334)
$ln(epu_{t-5})$	-0.080	-0.079	-0.855**	-0.414	0.077	0.083	-0.007	-0.131
	(0.053)	(0.054)	(0.366)	(0.344)	(0.055)	(0.054)	(0.377)	(0.373)
$ln(epu_{t-6})$	-0.090	-0.092	0.561*	0.672	0.097**	0.098**	0.472*	0.641**
	(0.070)	(0.067)	(0.331)	(0.445)	(0.046)	(0.046)	(0.248)	(0.276)
$ln(epusc_{t-1})$			-0.218				-0.125	
			(0.260)				(0.264)	
$ln(epusc_{t-2})$			0.025				-0.152	
			(0.319)				(0.329)	
$ln(epusc_{t-3})$			-0.653**				0.096	
			(0.318)				(0.287)	
$ln(epusc_{t-4})$			-0.093				0.346	
			(0.390)				(0.254)	
$ln(epusc_{t-5})$			-0.842**				-0.113	
			(0.391)				(0.349)	
$ln(epusc_{t-6})$			0.637*				0.469**	
			(0.350)				(0.239)	
$ln(epu_{t-1}) * ln(epusc_{t-1})$			0.035	-0.048			0.004	0.016
			(0.055)	(0.077)			(0.051)	(0.054)
$ln(epu_{t-2}) * ln(epusc_{t-2})$			0.017	-0.065			0.022	0.011
			(0.066)	(0.088)			(0.062)	(0.075)
$ln(epu_{t-3}) * ln(epusc_{t-3})$			0.128*	0.222***			-0.004	-0.043
			(0.066)	(0.074)			(0.050)	(0.065)
$ln(epu_{t-4}) * ln(epusc_{t-4})$			0.022	0.117			-0.056	-0.094
			(0.076)	(0.096)			(0.054)	(0.065)
$ln(epu_{t-5}) * ln(epusc_{t-5})$			0.156**	0.066			0.017	0.043
			(0.076)	(0.070)			(0.073)	(0.073)
$ln(epu_{t-6}) * ln(epusc_{t-6})$			-0.132**	-0.156*			-0.076	-0.110**
			(0.065)	(0.087)			(0.049)	(0.054)
quarter_year f.e.	yes	yes	yes	yes	yes	yes	yes	yes
state X year f.e.	yes	yes	yes	yes	yes	yes	yes	yes
state X source country f.e.	yes	yes	yes	yes	yes	yes	yes	yes
source X year f.e.	yes		yes		yes		yes	
source X quarter_year f.e.		yes		yes		yes		yes
Observations	37,933	37,272	37,829	37,168	37,557	36,493	37,445	36,409
Pseudo R^2	0.440	0.451	0.440	0.451	0.460	0.466	0.460	0.466

Notes: The table presents the long-run impact of policy is calculated as the sum of the coefficients on the six lagged values of the local and source country uncertainty indexes (individual coefficients suppressed for brevity). The included fixed effects are listed for each specification. The estimation methodology is PPML for all specifications. Robust standard errors clustered at the state level are reported in parentheses. ***, **, * denote significance at the 1%, 5%, and 10%, respectively.

Table A4: Quarterly Impacts of Policy Uncertainty on the Number of Transactions — Industry Characteristics

Investment mode:	Greenfield investment			Cross-border M&A		
	(1)	(2)	(3)	(4)	(5)	(6)
Industry characteristic (D_j):	Irreversibility	Ext. finance dep.	Intangibility	Irreversibility	Ext. finance dep.	Intangibility
Long-run impact of uncertainty, $D_j = 0$ ($\Sigma_{i=q-1}^{q-6}\beta_i$)	-0.393	-0.406	-0.639***	0.230*	0.315*	-0.255
	(0.267)	(0.277)	(0.080)	(0.127)	(0.164)	(0.259)
Long-run impact of uncertainty, $D_j = 1$ ($\Sigma_{i=q-1}^{q-6}(\beta_i + \delta i)$)	-0.629***	-0.569***	-0.285	-0.516*	-0.371	0.389**
	(0.222)	(0.173)	(0.394)	(0.306)	(0.262)	(0.186)
$ln(epu_{t-1})$	0.011	0.007	0.010	-0.004	0.009	-0.128***
	(0.059)	(0.061)	(0.082)	(0.032)	(0.033)	(0.038)
$ln(epu_{t-2})$	-0.128**	-0.117**	-0.137	-0.037	-0.021	-0.111**
	(0.056)	(0.057)	(0.111)	(0.055)	(0.041)	(0.052)
$ln(epu_{t-3})$	-0.042	-0.056	-0.011	0.075	0.071	0.009
	(0.105)	(0.106)	(0.068)	(0.058)	(0.067)	(0.047)
$ln(epu_{t-4})$	-0.080	-0.086	-0.198***	0.038	0.054	-0.043
	(0.077)	(0.082)	(0.053)	(0.060)	(0.055)	(0.073)
$ln(epu_{t-5})$	-0.078	-0.080	-0.081	0.054	0.082*	0.062
	(0.065)	(0.067)	(0.075)	(0.042)	(0.042)	(0.064)
$ln(epu_{t-6})$	-0.076	-0.072	-0.222**	0.104**	0.120**	-0.043
	(0.093)	(0.084)	(0.118)	(0.109)	(0.053)	(0.091)
$ln(epu_{t-1}) * D_j$	-0.035	-0.016	-0.012	-0.209***	-0.155***	0.161***
	(0.078)	(0.082)	(0.106)	(0.057)	(0.059)	(0.060)
$ln(epu_{t-2}) * D_j$	0.106	0.046	0.056	-0.113	-0.112**	0.099**
	(0.156)	(0.161)	(0.119)	(0.080)	(0.055)	(0.047)
$ln(epu_{t-3}) * D_j$	0.072	0.126	-0.027	-0.128	-0.053	0.083
	(0.090)	(0.091)	(0.102)	(0.086)	(0.092)	(0.079)
$ln(epu_{t-4}) * D_j$	-0.102	-0.067	0.172	-0.118*	-0.117	0.109*
	(0.135)	(0.114)	(0.115)	(0.071)	(0.080)	(0.065)
$ln(epu_{t-5}) * D_j$	-0.055	-0.038	-0.014	0.094*	-0.053	0.009
	(0.056)	(0.059)	(0.099)	(0.053)	(0.081)	(0.062)
$ln(epu_{t-6}) * D_j$	-0.221***	-0.213***	0.177*	-0.272*	-0.196*	0.184
	(0.085)	(0.077)	(0.105)	(0.157)	(0.114)	(0.114)
$GSP\ growth_t$	0.510	0.504	0.508	0.285	0.285	0.289
	(0.893)	(0.806)	(0.677)	(0.542)	(0.437)	(0.414)
Observations	39,495	39,495	39,495	63,368	63,368	63,368
Pseudo R^2	0.480	0.480	0.480	0.493	0.493	0.493

Notes: All specifications include state specific year effects, industry specific year effects, and quarterly time effects. D_j refers to the industry characteristic dummy variable noted in the top of the table. The composite policy uncertainty index used in all specifications. The estimation methodology is PPML for all columns. The long-run impact of policy is calculated as the sum of the coefficients on the six lagged values of the uncertainty index. The long-run marginal effect of the industry characteristic is calculated as the sum of the six interaction terms. Robust standard errors clustered at the state level are reported in parentheses. ***, **, * denote significance at the 1%, 5%, and 10%, respectively.

Table A5: Quarterly Impacts of Policy Uncertainty on the Probability of Cross-Border M&A Choice — Firm Level Characteristics

Linear Probability Model:	*Prob*(*Cross-border M&A*=1 ∣ *X*)					
	(1)	(2)	(3)	(4)	(5)	(6)
Investor characteristic (Z_j):					*Prev. M&A*	*Prev. inv. count*
Long-run impact of uncertainty	0.073**	0.061**	0.061	0.075	0.106**	0.087*
	(0.033)	(0.029)	(0.039)	(0.049)	(0.046)	(0.046)
Long-run impact of uncertainty interaction					0.049**	-0.015***
					(0.019)	(0.003)
Prev. M&A		0.371***	0.371***	0.131	0.372***	0.371***
		(0.012)	(0.016)	(0.093)	(0.017)	(0.017)
Prev. inv. count		0.008***	0.008***	0.013***	0.097***	0.016***
		(0.002)	(0.003)	(0.004)	(0.019)	(0.004)
$ln(epu_{t-1})$	-0.002	-0.003	-0.003	-0.026	-0.007	-0.013
	(0.013)	(0.011)	(0.010)	(0.020)	(0.018)	(0.015)
$ln(epu_{t-2})$	0.023**	0.012	0.012	0.035**	0.022	0.020
	(0.009)	(0.008)	(0.010)	(0.017)	(0.013)	(0.015)
$ln(epu_{t-3})$	0.001	0.003	0.003	-0.011	0.001	0.017
	(0.010)	(0.009)	(0.009)	(0.020)	(0.015)	(0.017)
$ln(epu_{t-4})$	0.024***	0.018**	0.018	0.035**	0.034***	0.023*
	(0.008)	(0.008)	(0.012)	(0.015)	(0.012)	(0.013)
$ln(epu_{t-5})$	0.012	0.011	0.011	0.021	0.024*	0.031*
	(0.008)	(0.008)	(0.010)	(0.014)	(0.013)	(0.016)
$ln(epu_{t-6})$	0.014	0.020*	0.020	0.020	0.031*	0.009
	(0.013)	(0.010)	(0.012)	(0.018)	(0.016)	(0.014)
$ln(epu_{t-1}) * Z_j$					0.036**	-0.005*
					(0.015)	(0.003)
$ln(epu_{t-2}) * Z_j$					-0.024	-0.001
					(0.016)	(0.003)
$ln(epu_{t-3}) * Z_j$					0.024	0.001
					(0.022)	(0.003)
$ln(epu_{t-4}) * Z_j$					-0.010	-0.007*
					(0.018)	(0.004)
$ln(epu_{t-5}) * Z_j$					0.003	-0.000
					(0.019)	(0.005)
$ln(epu_{t-6}) * Z_j$					0.020	-0.003
					(0.013)	(0.004)
GSP growth$_t$	-0.000	-0.034	-0.034	-0.022	-0.013	-0.009
	(0.079)	(0.067)	(0.073)	(0.109)	(0.112)	(0.111)
Source country sample	all	all	all	top 21	top 21	top 21
Clustering at the state level	yes	yes	yes	yes	yes	yes
Clustering at the investor level			yes	yes	yes	yes
Observations	22,816	22,816	22,816	16,500	16,500	16,500
R^2	0.882	0.907	0.907	0.893	0.893	0.893

Notes: All specifications include firm fixed effects, quarterly time effects, source country specific quarterly time effects, state-specific year effects, and two-digit NAICS industry specific quarterly time effects. D_j refers to the firm characteristic dummy variable (Previous M&A) or count variable (Previous investment count) noted at the top of the table. The composite policy uncertainty index is used in all specifications. We estimate a linear probability model with *Prob*(*Cross-border M&A*=1 ∣ *X*) in all specifications (OLS). The long-run impact of policy is calculated as the sum of the coefficients on the six lagged values of the uncertainty index. The long-run marginal effect of the investor characteristic is calculated as the sum of the six interaction terms. Robust standard errors clustered at the state level in specifications (1)-(2) and at the firm and state level in specifications (3)-(6) are reported in parentheses. ***, **, * denote significance at the 1%, 5%, and 10%, respectively.