

Economic policy uncertainty and multinational companies

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Abstract

We study the impact and propagation of economic policy uncertainty (EPU) via subsidiary networks of US multinational corporations (MNCs). We find that increases in host-country EPU lead to significant decreases in MNC valuations. We document heterogeneous effects across key firm- and country-level dimensions such as intangible capital intensity, financial constraints, and country institutional quality. Higher EPU in host countries is associated with a decline in the growth of local MNC subsidiary-level assets and employment. We find no evidence of significant average spillover effects of host-country EPU on MNC subsidiaries in other countries and some evidence of negative spillover effects among vertically linked subsidiaries.

Keywords: multinational corporations; foreign direct investment; economic policy uncertainty; firm valuation; subsidiary networks.

JEL classifications: F21, F23, G32, G38.

1. Introduction

Government economic policies have far-reaching effects on companies and markets. They set the playing field for how firms operate and compete, determine how firms are taxed and subsidized, influence domestic and foreign investments, and affect international trade and macroeconomic conditions. Uncertainty related to such policies has first-order effects on corporate investment and financing decisions (e.g., [Julio and Yook 2012](#); [Gulen and Ion 2015](#); [Baker, Bloom, and Davis 2016](#); [Bonaime, Gulen, and Ion 2018](#)) as well as asset prices and the cost of external finance (e.g., [Pástor and Veronesi 2012](#); [Brogaard and Detzel 2015](#); [Kaviani et al. 2020](#)). Most existing research focuses on the effects of domestic economic policy uncertainty (EPU) on firms. Less is known about how EPU affects diversified companies that operate in multiple countries. Understanding the impact of EPU on multinational companies (MNCs) is important given their key role in the economy ([Yeaple 2013](#); [Erel, Jang, and Weisbach 2021](#)) and in propagating shocks across borders ([Cravino and Levchenko 2017](#); [Bena, Dinc, and Erel 2022](#)). Our article addresses these questions by examining how host-country EPU affects the valuation and real activities of US MNCs.

The overall impact of EPU on MNCs is a priori unclear. On one hand, the geographically diversified operations of MNCs provide them with the flexibility to reallocate resources

across borders in response to EPU shocks.¹ This flexibility can be valuable in mitigating the downside risks of EPU and in capitalizing on valuable growth options that arise during periods of uncertainty (Pindyck 1988; Kogut and Kulatilaka 1994). On the other hand, EPU can dampen overall economic activity in host countries (Bloom 2009; Basu and Bundick 2017), potentially impairing the performance of MNCs operating in those markets. Additionally, the practical benefits of operating flexibility could be constrained by the high sunk costs associated with foreign operations (Melitz 2003), the complexity of international supply chains, and internal capital market frictions (Shin and Stulz 1998; Desai, Foley, and Hines 2008). Consequently, the extent to which EPU affects MNCs remains an empirical question.

Several data sources are key for our empirical analyses. We measure US MNC exposures to individual foreign countries using information on the location of foreign subsidiaries from Exhibit 21 disclosures mandated by the US Securities and Exchange Commission (SEC). We supplement subsidiary location data with subsidiary-level financial information from Bureau van Dijk's Orbis database. While Orbis does not offer a comprehensive coverage of MNC subsidiaries and is not as complete as Exhibit 21 disclosures, it reports detailed financial information for covered entities, which is important for understanding the foreign subsidiary-level effects of EPU. We measure host-country EPU with indices based on Baker, Bloom, and Davis (2016). The indices quantify newspaper coverage of policy-related economic uncertainty terms and are available for twenty-one foreign countries. This measure of EPU has been widely used in prior research to study the effects of EPU (e.g., Gulen and Ion 2015; Brogaard and Detzel 2015; Bonaime, Gulen, and Ion 2018; Brogaard et al. 2020; Kaviani et al. 2020).

Our first main finding is that US MNC value, as measured by Tobin's Q, is negatively affected by rising EPU in countries where the MNCs have material operations. A 10 percent increase in host-country EPU is associated with a 0.5 percent decrease in firm value relative to its mean. This negative effect of policy uncertainty on firm value persists after controlling for macroeconomic conditions and financial uncertainty, which previous studies have identified as possible precursors of EPU (e.g., Ludvigson, Ma, and Ng 2021), as well as controlling for key country risk measures.

To address concerns about omitted variables more generally, we employ two approaches. First, we use an instrumental variables (IV) approach leveraging exogenous variation in EPU around host-country national elections. For the exclusion restriction to hold, these elections should impact MNC valuations only through their effect on EPU, which is more plausible when election timing is not driven by economic conditions (Julio and Yook 2012). Therefore, we focus on elections with timing independent of local economic conditions and demonstrate that these elections are not significantly correlated with local economic fundamentals. We also document larger increases in EPU when we focus on contested elections and those with high policy disagreement, further supporting the credibility of our approach. Second, we use the June 2016 Brexit referendum as a shock to EPU for US MNCs with UK exposure and estimate a difference-in-differences (DiD) model. We show that US MNCs with UK exposure experienced significant valuation declines compared to those without, even after controlling for a measure of the first-moment impact of Brexit.

We next use subsidiary-level data to shed light on how EPU affects MNC subsidiary activities. Our analysis reveals that when host-country EPU is high, foreign MNC subsidiaries experience slower growth in assets and employment. The effects are robust to specifications using cross-subsidiary variation within firms and are not driven by cross-firm variation in country exposures or shocks at the firm level. We also investigate potential spillover

¹ For discussions of MNC optimal operating policies under uncertainty, see Kogut and Kulatilaka (1994); Mello, Parsons, and Triantis (1995); Allen and Pantzalis (1996); Bell and Campa (1997); Dasu and Li (1997); Sung and Lapan (2000); Kazaz, Dada, and Moskowitz (2005).

effects—the extent to which MNCs respond to rising EPU in a foreign market by reallocating resources through the firm’s existing subsidiary network. Specifically, we estimate how subsidiary growth is affected by EPU in other countries where the MNC has subsidiaries. In this analysis, we compare the growth of subsidiaries within the same country that experience differential indirect EPU shocks through their parent firm’s subsidiary network. We find no significant spillover effects on average.

A number of studies show that the cross-border transmission of shocks within MNCs could depend on production linkages (e.g., [Kleinert, Martin, and Toubal 2015](#); [Boehm, Flaaen, and Pandalai-Nayar 2019](#)). We investigate this potential heterogeneity in the effect by leveraging data from the US Bureau of Economic Analysis (BEA) input–output tables to infer production linkages among subsidiaries and examine EPU spillover effects as a function of these linkages. We still do not find significant spillover effects among horizontally linked subsidiaries or subsidiaries that do not share a production linkage. We find some evidence of negative spillover effects among subsidiaries that are vertically linked—when EPU increases in a host country, vertically integrated subsidiaries owned by the same MNC but located in other countries experience slower growth in assets and employment.

Lastly, we examine whether the real effects of host-country EPU on local subsidiary activities translate into a significant overall effect at the MNC level. We show that host-country EPU reduces the consolidated firm-level asset growth and investment. We also find weaker evidence of negative host-country EPU effects on firm-level employment. Taken together, these findings on host-country EPU’s influence on MNC foreign subsidiaries support our earlier results of negative impacts on overall MNC valuation. The operating flexibility granted by MNCs’ global operation networks does not appear to offset the adverse effects of EPU. This evidence is consistent with previous research indicating that multinational operations are not primarily driven by diversification motives ([Antràs and Yeaple 2014](#)). Rather, foreign direct investment (FDI) entails large sunk costs ([Helpman, Melitz, and Yeaple 2004](#)), and foreign subsidiaries are often established to either take advantage of international factor-price differentials or to reduce trade costs when serving foreign markets ([Feinberg and Keane 2006](#); [Fillat and Garetto 2015](#)).

In the final part of our study, we explore the cross-MNC and cross-country heterogeneity in the effect of EPU on MNC value. Motivated by the theoretical significance of investment irreversibility in the uncertainty literature ([Bernanke 1983](#)) and the large irreversible costs associated with FDI ([Melitz 2003](#)), we examine how the effect varies with MNC capital intensity, distinguishing between tangible and intangible assets. Interestingly, we find that the effect of EPU on firm value does not vary significantly with a firm’s capital intensity of tangible assets. However, the effect is significantly amplified among firms with more intangible capital intensity. This finding is consistent with studies showing that uncertainty has a more negative effect on the value of firms that own more intangible capital ([Bloom and Van Reenen 2002](#); [Bansal et al. 2021](#)).

Supporting theories that policy uncertainty exacerbates financial constraints and increases the cost of external financing ([Gilchrist, Sim, and Zakrajšek 2014](#); [Bretschler, Schmid, and Vedolin 2018](#); [Alfaro, Bloom, and Lin 2024](#)), we find more negative valuation effects of host-country EPU for financially constrained US MNCs. Aligned with this interpretation and the “good” versus “bad” uncertainty effect of [Segal, Shaliastovich, and Yaron \(2015\)](#), we also find a magnified negative EPU effect on MNC valuations during adverse economic conditions. Next, we find that EPU has a more pronounced negative effect on MNC value through subsidiaries in countries with weak institutions. This finding is consistent with the notion that EPU generates uncertainty not only about economic policies but also increases expropriation risk in markets with poor property rights ([Julio and Yook 2016](#)). Lastly, we find that EPU’s negative impact is larger when foreign subsidiaries are located in countries where government expenditures account for a large share of economic output. This result supports prior research documenting elevated exposure to EPU from

reliance on government purchases of goods and services (e.g., Baker, Bloom, and Davis 2016).

Our article contributes to several strands of literature. First, it contributes to the growing literature on the impact of policy and political uncertainty on corporate investment and financing decisions (Leahy and Whited 1996; Pástor and Veronesi 2012; Julio and Yook 2012; Kellogg 2014; Gulen and Ion 2015; Jens 2017; Bonaime, Gulen, and Ion 2018; Chen et al. 2023; Campello, Kankanhalli, and Kim 2024). Most of this literature focuses on the impact of EPU at the aggregate firm-level within a single country. Little is known about how host-country policy uncertainty impacts MNCs and propagates through their subsidiary networks. Using a sample of multinational mining firms, Sarkar (2022) finds that when policy uncertainty increases in a country where those firms operate, they increase investment in other countries within their network. Campello et al. (2022) and Hassan et al. (2024) focus on Brexit and broadly examine the effect of this event on non-UK companies. In comparison to these studies, we study both the average and heterogeneous effects of EPU on US MNCs operating in multiple countries and industries. Consequently, we provide comprehensive and novel evidence on the impact of host-country EPU on the value and real activities of MNCs.²

Our article is also related to studies that seek to understand the impact of host-country economic and institutional environment on the investment, financing, and performance of MNCs (e.g., Desai, Foley, and Hines 2008; Bilir 2014; Bilir, Chor, and Manova 2019; Lin et al. 2019; Albertus, Glover, and Levine 2022), as well as studies that explore the spillover of business cycles across borders through MNCs (e.g., Cravino and Levchenko 2017; Boehm, Flaaen, and Pandalai-Nayar 2019; Bena, Dinc, and Erel 2022). In contrast to these studies, our focus is on EPU, which is a related yet distinct and prevalent host-country factor for MNCs. For example, while concerns about political risk and property rights protection are usually concentrated in less developed countries with weaker institutions, EPU can fluctuate widely, even in the most developed countries.

2. Theoretical background

The effect of host-country EPU on the value of MNCs is theoretically ambiguous. On one hand, high EPU in host countries can increase the volatility of local factors such as product demand, prices, and input costs. According to standard real-options models, this could enhance the value of MNCs operating in these markets (e.g., Oi 1961; Hartman 1972; Abel 1983). The idea is that if MNCs have the flexibility to adjust the scale of local operations, they can amplify the positive effects of favorable policy shocks and mitigate the adverse effects of unfavorable ones. Consequently, higher host-country EPU could raise the expected value of future marginal revenue products of capital for local subsidiaries, thereby increasing overall MNC value. Even with irreversible investment that generally incentivizes MNCs to delay investments in uncertain markets, the positive effect of host-country EPU on MNC's growth options may still lead to higher MNC value (Pindyck 1988). However, in practice, due to the high sunk costs of foreign operations (Melitz 2003) and the complexities of production networks, MNCs' ability to benefit from growth options may be limited.

On the other hand, host-country EPU can negatively affect MNC value through its adverse effect on expected cash flows. First, the host-country EPU can reduce expected cash flows from foreign subsidiaries due to substantial deadweight costs associated with potential negative outcomes. In a recent review, Stulz (2025) highlights examples of such costs, including forgone investment opportunities, productivity losses, and financial distress. For instance, an increase in host-country EPU may cause an MNC's local subsidiaries to

² In the context of foreign direct investment, Julio and Yook (2016) find a drop in aggregate FDI flows from US companies during periods prior to host-country elections. Cao, Li, and Liu (2019) find that uncertainty due to national elections deters inbound acquisitions by foreign firms and encourages firms to conduct outbound cross-border acquisitions.

underinvest, eroding their future cash flows. Second, recent research also indicates that heightened EPU can lead to negative demand shocks in host countries by reducing these countries' aggregate economic output, investment, and hiring (e.g., Baker, Bloom, and Davis 2016; Alfaro, Bloom, and Lin 2024; Baker, Bloom, and Terry 2024). These shocks can be exacerbated by various frictions, such as nominal rigidities (Basu and Bundick 2017), search frictions (Leduc and Liu 2016), and misallocation (Bloom et al. 2018). Consequently, high EPU can weaken overall economic conditions in host countries, thereby reducing local demand and expected cash flows for MNCs.

In addition, host-country EPU can lead to higher required risk premiums for MNCs. This increase may occur either because elevated EPU heightens the systematic risk of MNCs, or because MNCs may have a significant investor base in host countries where risk premiums tend to rise in response to higher EPU (McDonald and Siegel 1985; Pástor and Veronesi 2012, 2013; Ai and Kiku 2016; Brogaard et al. 2020; Kaviani et al. 2020). The resulting increase in risk premiums reduces the present value of MNC cash flows and growth options in host countries, ultimately leading to a lower overall firm value. Moreover, as recent studies have shown (Gilchrist, Sim, and Zakrajšek 2014; Christiano, Motto, and Rostagno 2014; Alfaro, Bloom, and Lin 2024), financial constraints can further amplify the cash flow shocks and risk premiums associated with heightened policy uncertainty.

Overall, the net effect of host-country EPU on MNC value hinges on the relative strength of these channels. While the traditional "real options" models suggest a positive relationship, the negative impact on expected cash flows and the higher discount rates associated with EPU can lead to a decline in MNC value.

3. Data, variable definitions, and descriptive statistics

3.1 Subsidiary location data

We build a dataset on the international subsidiary networks of US MNCs via textual analysis of their 10-Ks. We start with all firms in Compustat from 1996 to 2019 with available Central Index Keys (CIKs). We use the CIKs to match firm-years to annual data collected from firms' 10-Ks Exhibit 21 tables, accessible through the SEC website.³

SEC Rule S-K, Item 601(b)(21) mandates the inclusion of Exhibit 21 in companies' annual 10-K reports. Companies must report the names and countries of incorporation or organization for their significant subsidiaries. Under Rule 1-02(w) of Regulation S-X, a subsidiary is considered "significant" if it accounts for more than 10 percent of the parent's investment, assets, or income. According to Item 601, "the names of particular subsidiaries may be omitted if the unnamed subsidiaries, considered in the aggregate as a single subsidiary, would not constitute a significant subsidiary." In other words, the omitted subsidiaries cannot exceed 10 percent of the parent's investment, assets, or income in the aggregate. Therefore, although the exhibit does not contain financial information related to the size, scope, or type of foreign operations, it provides an accurate and comprehensive measure of a US MNC's presence in foreign countries. Figure OA1 of Supplementary Appendix presents an example of Exhibit 21 reported by Lindsay Corporation for the fiscal year 2017.

A text search algorithm scans Exhibit 21 tables and identifies distinct foreign countries in which firms report operations. The program also simultaneously records the number of times a country's name appears in an Exhibit 21 table.⁴ Once we build our subsidiary

³ The company filings search engine of the SEC can be found at: <http://www.sec.gov/edgar/searchedgar/companysearch.html>. Most firms begin having electronic 10-K filings in 1996.

⁴ While the text search program does not perfectly identify all foreign countries with material operations, it enables us to study a much larger sample than would be possible if the data were read and coded by hand. We cross-validate our data with other databases such as Compustat Segments and SDC Platinum. We find that firms with operations in more countries are larger and have more foreign and geographically diversified sales. We also find that firms that have acquired companies in a country in the past are more likely to report subsidiaries in that country on their Exhibit 21. Moreover, firms that acquire companies in a country during a given year mention the name of that country more often in their Exhibit 21 for that year. These results are intuitive and support

location data, we obtain additional country-level and firm-level data from several sources, as described in Sections 3.3 and 3.4, respectively. We exclude firms with missing or no foreign sales according to Compustat and companies headquartered outside of the United States. Our final sample consists of 186,999 firm-year–subsidiary-country observations (3,314 unique MNCs with foreign subsidiaries in twenty-one countries) over the period of 1996–2019.⁵

3.2 Subsidiary financial data

Exhibit 21 provides a comprehensive list of US MNCs' foreign subsidiary names and locations. It does not, however, contain subsidiary financial information. In our analysis of subsidiary-level growth, we resort to our second main data source, the Orbis database from Moody's Bureau van Dijk, which provides financial and ownership information for a subset of the subsidiaries in our sample.

Orbis covers millions of public and private companies globally. This includes a large number of foreign subsidiaries owned by US MNCs (local firms in host countries that are majority-owned by US parents). While MNC subsidiaries are de facto private companies, many foreign countries require private companies to report financial data publicly. The reporting thresholds and requirements vary by country. For countries where the laws require every firm to file to the national business register, such as many European countries, the financial data in Orbis mirror the data from countries' statistical offices (Fons-Rosen et al. 2017).⁶ Orbis also supplements publicly available data with information from private sources such as surveys.

Orbis provides a rolling 10 years of firm-level data as part of the platform's standard subscription package. Since our subscription started in 2019, the information for most companies is available to us from 2009 to 2019.⁷ One limitation is that we have access only to recent vintages of the Orbis data, and each vintage contains only the latest available ownership information, and so we are not able to track ownership changes over time. As a result, if an MNC purchased a subsidiary from another firm during the sample period, we would erroneously treat that subsidiary as belonging to the buyer before the purchase. However, there is no obvious reason to believe the measurement error in ownership would bias our estimates upward. Orbis provides financial data on subsidiaries across all twenty-one countries in our sample. For thirteen of them—Australia, Brazil, China, France, Germany, India, Ireland, Italy, Mexico, Netherlands, Singapore, Spain, and the UK—Orbis contains information on more than 1,000 subsidiaries owned by our sample firms per country. For the remaining eight countries, the database includes data on over 100 subsidiaries owned by our sample firms per country. From Orbis, we collect each subsidiary's country location, total assets, and number of employees.

3.3 EPU and country-level controls

We obtain monthly country-level EPU measures, based on Baker, Bloom, and Davis (2016), available for twenty-one countries from <http://www.policyuncertainty.com>. These countries are Australia, Brazil, Canada, Chile, China, Colombia, France, Germany, Greece,

the validity of our data. Importantly, other studies have analyzed Exhibit 21 data as well and pointed out its significant advantages over existing datasets (e.g., Dyreng and Lindsey 2009; Dyreng, Lindsey, and Thornock 2013; Mihov and Naranjo 2019; Lin et al. 2019).

⁵ While firms reported subsidiaries in 231 distinct countries and overseas territories in Exhibit 21, our analysis is limited to the twenty-one countries with available EPU data described in Section 3.3. These twenty-one countries, however, account for the majority of the subsidiaries reported in Exhibit 21 (55 percent on average through the sample period).

⁶ See Kalemlı-Ozcan et al. (2019) and Bajgar et al. (2020) for a comprehensive description of the Orbis database and its coverage. For recent studies that have relied on data from Orbis, see, among others, Cravino and Leychenko (2017); Gopinath et al. (2017); Alfaro and Chen (2018); Bena, Dinc, and Erel (2022)

⁷ If a company went out of business since 2009, its information is made available for the 10 years before that year. For example, if a company went bankrupt in 2015, the database will provide data for that company over the period of 2005–2014. We do not include data prior to 2009 due to sparse coverage.

India, Ireland, Italy, Japan, Mexico, Netherlands, Russia, Singapore, South Korea, Spain, Sweden, and the United Kingdom. The indices record the monthly coverage frequency of EPU-related terms in major newspapers around the world using textual analysis. The indices are constructed by first counting the number of articles containing both economic uncertainty (e.g., “economic,” “economy,” “uncertainty,” “uncertain”) and policy-related (e.g., “deficit,” “legislation,” “regulation”) terms at each newspaper over time.⁸ Term counts are then divided by the total number of articles within each newspaper-month, and each monthly series is standardized by unit standard deviation. The EPU index for a given country is the average of the standardized series across all newspapers in that country. To match the annual frequency of other data and smooth variation in monthly EPU, we calculate its annual average. We also apply a natural log transformation to deal with the positive skewness in the distribution of EPU.

Baker, Bloom, and Davis (2016) note that policy tends to respond to economic conditions, with policy uncertainty often increasing during adverse environments. To account for macroeconomic conditions in host countries, we include the log of real gross domestic product (GDP), GDP growth, and bilateral exchange rates in our multivariate regressions. Data on real GDP and GDP growth are sourced from the World Bank Development Indicators, while data on exchange rates are obtained from the International Monetary Fund (IMF) International Financial Statistics. In Section 4, we perform additional tests to address concerns that the EPU indices may capture information about first-moment shocks to the economy not reflected in these variables.

3.4 Value and firm-level controls

We follow prior literature and use Tobin's Q, the ratio of the market-to-book value of assets, to measure firm value. The book value of equity and assets are averaged over the beginning and the end of the year, and the market value of equity is calculated as the average monthly market value during the year, the same window used to compute average EPU.

In addition to the country-level characteristics described in the previous section, we also control for firm-level variables in our empirical tests. Firm-level controls are obtained from Compustat or collected from Exhibit 21 tables of firm's 10-K reports. These include total assets, leverage, return on assets, research and development expenditures, dividend payouts, the percentage of a firm's sales that are to foreign customers, and the percentage of a firm's subsidiaries that are located in foreign countries. All firm-level financial variables are winsorized at the 1 percent and 99 percent levels.

3.5 Descriptive statistics

Table 1 presents the average number of MNCs per year operating subsidiaries in the countries with available EPU data during our sample period. The table additionally presents the average frequency of country name mentions in Exhibit 21 of firm 10-K reports, which serves as our proxy for the number of subsidiaries a firm has in a country. Among the twenty-one countries with available data, US MNCs have a substantial number of foreign subsidiaries in large developed economies, including Canada, United Kingdom, Germany, Netherlands, and France. Emerging markets such as Mexico and China also show a relatively strong subsidiary presence of US MNCs.

Figure 1 presents bar charts of the number of total country mentions (Panel A) and the number of distinct country mentions (Panel B) by MNCs in Exhibit 21, averaged across firm size quartiles in 1996, the first year in our sample, and 2019, the last year. There was a large increase in the average number of total country mentions, from twelve in 1996 to sixteen in 2019. However, Panel A shows that there are differences in the pattern across firm size groups. While the average number of total country mentions barely changed

⁸ Some of the terms are country-specific. For example, the policy-related terms include the names of countries' central banks and legislative bodies.

Table 1. MNC foreign subsidiaries and EPU across countries.

Table showing the average number of US MNCs operating in each of the twenty-one countries with available EPU data, the average number of times each country is mentioned in Exhibit 21 filings, and the country's average EPU level. These figures reflect the geographic distribution of MNC operations and the cross-country variation in policy uncertainty. The sample is a panel of 186,999 firm-year–subsidiary–country observations from 3,314 US MNCs operating in twenty-one countries over the period 1996–2019.

	Number of firms	Number of mentions	EPU
Canada	748	2,674	154.15
United Kingdom	729	3,511	185.61
Germany	598	2,041	129.66
Netherlands	587	2,234	93.46
France	549	1,931	160.34
Singapore	500	1,140	130.71
Australia	484	1,904	100.30
Mexico	484	1,848	97.33
China	478	1,589	162.32
Japan	442	1,048	108.45
Italy	404	857	109.31
India	397	1,048	92.79
Brazil	389	868	138.28
Spain	376	872	113.91
Ireland	290	957	111.58
South Korea	270	547	123.79
Sweden	264	562	93.41
Chile	153	397	107.49
Russia	146	254	132.06
Colombia	118	285	104.32
Greece	77	119	119.80

between 1996 and 2019 for the firms in the top size quartile (Group 1), the average number of country mentions was higher at the end of the sample for firms in all the other size quartiles (Groups 2–4). Panel B shows a consistent pattern of increasing breadth in country presence across all firm size groups. Across these groups, the average number of countries in which MNCs operated increased from four in 1996 to eight in 2019. Overall, this evidence is consistent with prior research (e.g., Denis, Denis, and Yost 2002; Jang 2017) showing that the intensity of US MNC international activity increased substantially over recent decades.

Table 2 presents summary statistics for the main variables used in our analysis. Panel A focuses on country-level variables. $\ln(EPU)$ has a mean of 4.70, a standard deviation of 0.47, and an interquartile range of 0.62 (4.98–4.36).⁹ For additional context, Figure OA2 of Supplementary Appendix plots $\ln(EPU)$ for the ten most frequently mentioned countries in our sample. The figure indicates substantial within-country variation in EPU.¹⁰ Further, the measure appears to capture events of importance for country-specific EPU (e.g., United Kingdom's Brexit referendum of 2016) as well as events with broader implications for cross-country policy uncertainty (e.g., Lehman Brothers' collapse in 2008). Table 2, Panels B and C present summary statistics for variables at the parent firm and

⁹ The corresponding mean, standard deviation, and interquartile range for unlogged EPU are 123.95, 73.14, and 67.40, respectively.

¹⁰ A visual inspection of Figure OA2 also suggests that countries may exhibit co-movement in their EPU indices, potentially indicating shared global uncertainty influences. In Table OA1 of Supplementary Appendix, we orthogonalize each country's EPU measure to a global EPU index based on Baker, Bloom, and Davis (2016). The results confirm that country-specific EPU is significantly related to the value of MNCs operating in those markets, independent of global EPU trends.

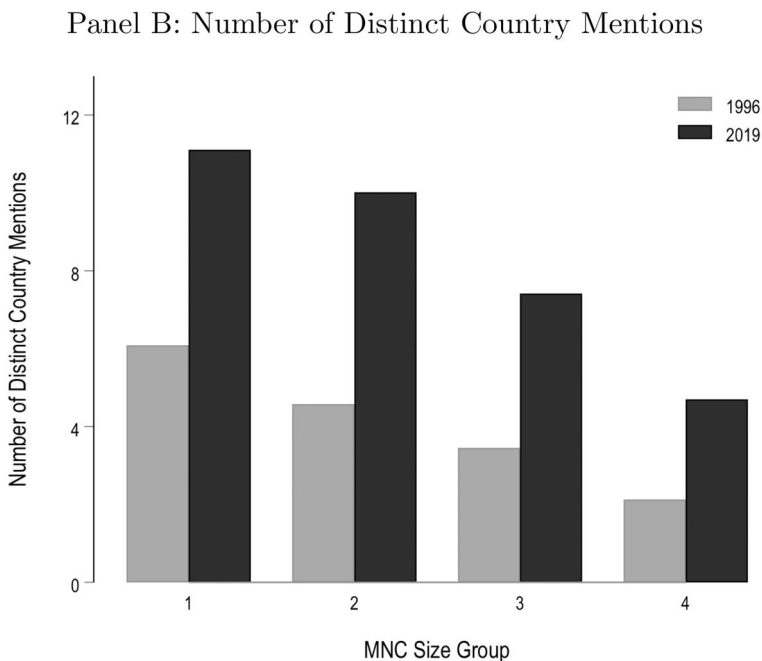
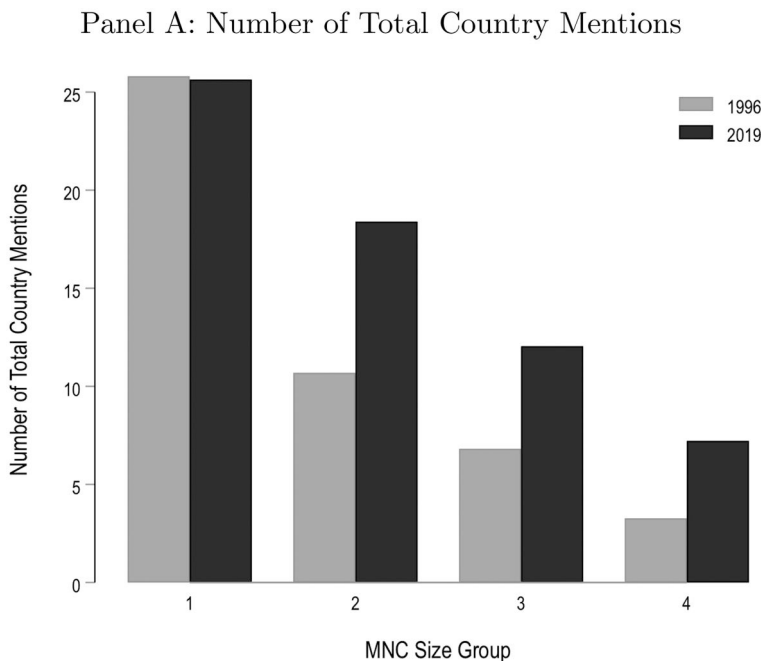


Figure 1. Foreign subsidiaries over time. Bar charts showing the total and distinct number of foreign countries mentioned in Exhibit 21 filings by US MNCs in 1996 and 2019, illustrating the growing international footprint of US multinationals over time. MNCs are grouped in asset size quartiles for 1996 and 2019, where quartile ordering decreases in asset size (e.g., MNCs in the top size quartile are in group 1, while MNCs in the bottom size quartile are in group 4). Panel A shows the average number of total country mentions by MNCs, calculated across firms within each size quartile. Panel B shows the average number of distinct countries mentioned, also calculated across firms within each size quartile.

Table 2. Descriptive statistics.

Three-panel table presenting summary statistics for country-level variables, firm-level variables, and subsidiary-level variables used in the analysis. The sample is a panel of 186,999 firm-year–subsidiary–country observations from 3,314 US MNCs operating in twenty-one countries over the period 1996–2019. Panel A presents country-level variables (unit of observation at the country-year level). Panel B presents firm-level variables (unit of observation at the firm-year level). Panel C presents subsidiary-level variables (unit of observation at the subsidiary-year level). Detailed definitions for all variables are presented in [Appendix A](#).

	Mean	Std. Dev.	25 th Pct.	Median	75 th Pct.	Obs.
Panel A: Country-year sample						
EPU	123.946	73.139	78.242	107.981	145.643	467
Ln(EPU)	4.699	0.471	4.360	4.682	4.981	467
GDP (\$ billions)	1,739.08	1,726.33	441.28	1,317.41	2,290.69	467
GDPG	3.064	3.453	1.370	2.797	4.700	467
Government size	4.758	1.624	4.000	4.676	5.788	447
Financial development	-0.183	0.694	-0.701	-0.264	0.405	368
Property rights	1.478	1.536	0.103	2.088	2.840	467
Panel B: Firm-year sample						
Tobin's Q	2.024	1.401	1.197	1.588	2.299	27,045
Assets (\$ millions)	7,226.032	21,929.990	300.864	1,041.794	3,963.186	27,045
Employment (thousands)	13.483	26.585	0.966	3.600	11.800	26,922
Leverage	0.461	0.254	0.311	0.472	0.643	27,045
ROA	0.005	0.174	-0.006	0.039	0.078	27,043
R&D	0.049	0.080	0.000	0.016	0.069	27,045
Dividends	0.426	0.495	0.000	0.000	1.000	27,045
Foreign sales	0.261	0.214	0.102	0.206	0.359	26,744
Foreign subsidiaries	0.871	0.228	0.792	0.994	1.000	27,045
Capital intensity						
Tangible capital	246.851	3,164.733	20.722	39.279	82.650	26,840
Intangible capital	257.5167	470.237	64.938	147.300	303.723	25,578
Financial constraints						
SA index	-5.362	1.324	-6.423	-5.437	-4.399	24,381
Unrated	0.197	0.398	0.000	0.000	0.000	27,045
Panel C: Firm-year-country–subsidiary sample						
Subsidiary assets (\$ millions)	346.783	2,679.81	3.141	19.565	101.175	158,503
Subsidiary employment (thousands)	0.285	1.253	0.013	0.055	0.189	73,307

foreign subsidiary levels, respectively. *Tobin's Q* has a mean of 2.0 and a standard deviation of 1.4. The median subsidiary has assets of \$19.6 million and 55 employees.

4. Host-country EPU and MNC value: average effect

4.1 Baseline results

In this section, we estimate the average effect of EPU in host countries on MNC value. Such an effect reflects investors' assessment of the overall impact of EPU on the value of MNCs' assets in place and growth opportunities. We estimate the following model:

$$\text{Tobin's } Q_{i,t} = \alpha_i + \theta_t + \beta \text{Ln}(EPU)_{i,t} + \delta X_{i,t} + \omega Z_{i,t-1} + \varepsilon_{i,t} \quad (1)$$

where i indexes firms and t indexes years. *Tobin's Q* measures firm value and is defined as the ratio of the market to book value of assets. $\text{Ln}(EPU)$ is the log transformation of the

weighted average EPU in the host countries where MNCs have operations.¹¹ We weight each country exposure within a firm–year proportionately to the number of times the country’s name is recorded in a company’s annual Exhibit 21, a proxy for the number of subsidiaries a firm has in a country.¹² X and Z represent our previously discussed vectors of country-level and firm-level controls, respectively. Each country control variable is the weighted average across an MNC’s host countries. Country-level variables are measured contemporaneously with MNC value, while firm-level control variables are lagged by 1 year. α_i and θ_t denote firm and year fixed effects, respectively. We cluster standard errors at the firm level. Table 3, Panel A, columns (1)–(3) present the estimation results.

In column (1), a regression of *Tobin’s Q* on $\ln(EPU)$ with firm and year fixed effects but without firm-level controls produces a significantly negative coefficient on $\ln(EPU)$. This finding suggests that increased exposure to EPU through foreign subsidiaries reduces US MNC value. In column (2), we include lagged firm-level controls that could be correlated with firm value. The coefficient remains stable and significant at the 1 percent level. In column (3), we include the contemporaneous level of GDP, GDP growth, and exchange rates to control for country-level macroeconomic conditions. With these country controls, the point estimate in column (3) becomes slightly more negative and is still significant at the 1 percent level. This result suggests that the negative effect of EPU on valuations is not driven by contemporaneous changes in aggregate economic activity at the country level.

One concern about this model specification is that the level of EPU may not be directly comparable across countries. In this case, taking the average of EPU across countries may not be appropriate. We thus estimate a weighted regression model at the firm–country–year level. We use a scheme that, similar to equation (1), weights each firm-year observation equally, and each country exposure within a firm–year proportionately to the number of times the country’s name is recorded in a company’s annual Exhibit 21.¹³ This specification enables us to include country fixed effects, γ , which absorb cross-country differences in the level of EPU as well as any persistent country-level factors (e.g., physical distance, spoken language, culture, legal origin, etc.).¹⁴ The model we estimate is:

$$\text{Tobin's } Q_{i,j,t} = \alpha_i + \gamma_j + \theta_t + \beta \ln(EPU)_{j,t} + \delta X_{j,t} + \omega Z_{i,t-1} + \varepsilon_{i,j,t} \quad (2)$$

where i indexes firms, j indexes countries, and t indexes years. Country variables are measured at the country-year level and are no longer cross-country averages as in equation (1). Standard errors are clustered at the firm and country levels.

Table 3, Panel A, columns (4)–(6) report the results. The point estimates remain statistically significant at the 1 percent level. In terms of economic significance, a 10 percent

¹¹ In Table OA2 of Supplementary Appendix, we show consistent results when we do not log transform EPU. We also note that our measure of host-country EPU does not include US EPU. Since our study focuses exclusively on US MNCs, the common impact of US EPU should be largely absorbed by the inclusion of year fixed effects. That said, US MNCs may have different exposures to United States and foreign markets, in which case US EPU could still affect them differently. To address this, we examine how host-country EPU affects MNC value when we also control for the interaction between US EPU and a firm’s overall foreign exposure, measured by the shares of foreign sales or foreign subsidiaries. The results are presented in Table OA3 of Supplementary Appendix. Interestingly, the results show that foreign exposure helps mitigate the negative effect of U.S. EPU on firm value.

¹² The implicit assumption behind this weighting scheme is that MNCs have larger exposures to countries where they operate more subsidiaries. Table OA4 of Supplementary Appendix shows that our results are robust if we weight each country equally instead.

¹³ Specifically, the weight of a regression observation in our model is $\left(\frac{N_{ijt}}{\sum_{j=1}^J N_{ijt}}\right)^2$, where N_{ijt} is the number of times firm i mentions country j in its Exhibit 21 in year t and J is the set of countries where firm i has subsidiaries in year t . An alternative weighting scheme is to use the asset size of each subsidiary. However, Exhibit 21 data do not contain financial information, and we only have financials for a small subset of subsidiaries from Orbis starting in 2009, which would dramatically reduce the sample for the analysis in this section.

¹⁴ As noted above, we use the log of EPU as the main independent variable, which, combined with country fixed effects, assumes that firm value is affected by the percent deviation from a country’s average level of EPU. This specification further addresses concerns about comparability of EPU levels across countries.

Table 3. MNC value and EPU.

Four-panel regression results table showing that host-country EPU reduces US MNC valuations, with robustness checks controlling for macroeconomic conditions and country risks, and extensions to real firm outcomes, including assets, investment, and employment. Panel A presents the baseline regression specifications. Panel B presents specifications that control for countries' first-moment economic shocks and financial uncertainty. Panel C presents specifications that control for country risk. Panel D presents regressions where Tobin's Q is replaced with assets, investment, and employment. The sample in Panel A, columns (1)–(3), is a panel of 26,524 firm–year observations from 3,314 US MNCs. The sample in Panel A, columns (4)–(6), and Panels B, C, and D is a panel of 186,999 firm–year–subsidiary–country observations from 3,314 US MNCs. The sample period is 1996–2019. *Tobin's Q* is the ratio of the market to book value of assets. *Ln(EPU)* measures the economic policy uncertainty in a country. *Ln(Industrial Production)* is the log of industrial production. *Financial Uncertainty* is the global financial uncertainty measure from [Caggiano and Castelnuovo \(2023\)](#). *Orthogonalized Ln(EPU)* is the log EPU orthogonalized to the log of industrial production and financial uncertainty using a VAR approach. *Political Risk*, *financial Risk*, and *Economic Risk* are composite indices representing country-specific political, financial, and economic risks, respectively. These indices are derived from the International Country Risk Guide (ICRG) dataset and are constructed as the first principal component of the corresponding ICRG sub-indices for financial, political, and economic risk. Before taking the first principal component, we transform the sub-indices by subtracting the index values from their maximum. Higher index values correspond to higher risk. *Geopolitical Risk* is the news-based geopolitical risk measure from [Caldara and Iacoviello \(2022\)](#). The specifications in Panel A, columns (1)–(3) are estimated with OLS, including firm and year fixed effects, and standard errors are clustered at the firm level. The specifications in Panel A, columns (3)–(6), and Panels B, C, and D are estimated with a weighted regression approach, where we weight each country exposure within a firm–year proportionately to the number of times a country's name is recorded in a given company's annual Exhibit 21, and then weight firm–years equally. The set of control variables in Panel A is also included in Panels B, C, and D, but their coefficient estimates are omitted for brevity. The specifications include firm, year, and country fixed effects, and standard errors clustered at the firm and country levels. *P*-values are reported in parentheses and ***, **, * denote significance at the 1, 5, and 10 percent significance level, respectively. Detailed definitions for all variables are presented in [Appendix A](#).

Panel A: MNC value and economic policy uncertainty

	Tobin's Q					
	Firm–year			Firm–year–subsidiary country		
	(1)	(2)	(3)	(4)	(5)	(6)
Ln(EPU)	−0.183*** (0.006)	−0.177*** (0.005)	−0.185*** (0.003)	−0.127*** (0.000)	−0.110*** (0.000)	−0.105*** (0.000)
Ln(GDP)			0.072* (0.091)			0.138* (0.088)
GDPG			0.004 (0.543)			0.011*** (0.008)
FX rate			0.132 (0.280)			−0.023 (0.563)
Ln(Assets)		−0.464*** (0.000)	−0.462*** (0.000)		−0.453*** (0.000)	−0.454*** (0.000)
Leverage		−0.177* (0.091)	−0.178* (0.089)		−0.230** (0.040)	−0.232** (0.038)
ROA		1.217*** (0.000)	1.213*** (0.000)		0.922*** (0.000)	0.922*** (0.000)
R&D		2.789*** (0.000)	2.784*** (0.000)		2.974*** (0.002)	2.975*** (0.002)
Dividends		−0.002 (0.973)	−0.001 (0.985)		0.064 (0.141)	0.063 (0.152)
Foreign sales		−0.184* (0.083)	−0.180* (0.090)		−0.072 (0.450)	−0.073 (0.445)

(continued)

Table 3. (continued)**Panel A: MNC value and economic policy uncertainty**

	Tobin's Q					
	Firm-year			Firm-year-subsidiary country		
	(1)	(2)	(3)	(4)	(5)	(6)
Foreign subsidiaries		-0.090 (0.129)	-0.090 (0.130)		-0.094 (0.342)	-0.098 (0.322)
Fixed effects						
Year	Yes	Yes	Yes	Yes	Yes	Yes
Firm	Yes	Yes	Yes	Yes	Yes	Yes
Country	No	No	No	Yes	Yes	Yes
Observations	26,524	26,524	26,524	186,999	186,999	186,999
Adj. R ²	.61	.65	.65	.68	.71	.71

Panel B: Controlling for industrial production and financial uncertainty

	Tobin's Q					
	Linear controls			VAR		
	(1)	(2)	(3)	IP (4)	FU (5)	Both (6)
Ln(EPU)	-0.102*** (0.000)	-0.100*** (0.000)	-0.102*** (0.000)			
Ln(Industrial Production)	-0.114 (0.441)		-0.115 (0.418)			
Financial uncertainty		0.002 (0.887)	-0.001 (0.974)			
Orthogonalized Ln(EPU)				-0.096*** (0.003)	-0.063** (0.048)	-0.060** (0.040)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Fixed effects						
Year	Yes	Yes	Yes	Yes	Yes	Yes
Firm	Yes	Yes	Yes	Yes	Yes	Yes
Country	Yes	Yes	Yes	Yes	Yes	Yes
Observations	179,334	179,334	179,334	179,334	179,334	179,334
Adj. R ²	.71	.71	.71	.71	.71	.71

Panel C: Controlling for country risk

	Tobin's Q				
	(1)	(2)	(3)	(4)	(5)
Ln(EPU)	-0.103*** (0.000)	-0.098*** (0.001)	-0.107*** (0.001)	-0.109*** (0.001)	-0.107*** (0.000)
Political risk	-0.021 (0.404)				-0.038 (0.144)
Financial risk		-0.042* (0.073)			-0.051* (0.054)
Economic risk			-0.005 (0.832)		-0.027 (0.295)
Geopolitical risk				-0.096** (0.020)	-0.114*** (0.008)

(continued)

Table 3. (continued)**Panel C: Controlling for country risk**

	Tobin's Q				
	(1)	(2)	(3)	(4)	(5)
Controls	Yes	Yes	Yes	Yes	Yes
Fixed effects					
Year	Yes	Yes	Yes	Yes	Yes
Firm	Yes	Yes	Yes	Yes	Yes
Country	Yes	Yes	Yes	Yes	Yes
Observations	186,999	186,999	186,999	169,850	169,850
Adj. R^2	.71	.71	.71	.71	.71

Panel D: Firm-level real effects

	Assets		Investment	Employment	
	Ln(Assets) (1)	Assets growth (2)		Ln(Employment) (4)	Employment growth (5)
Ln(EPU)	-0.011* (0.072)	-0.015** (0.041)	-0.001* (0.079)	0.009 (0.557)	-0.012*** (0.004)
Controls	Yes	Yes	Yes	Yes	Yes
Fixed effects					
Year	Yes	Yes	Yes	Yes	Yes
Firm	Yes	Yes	Yes	Yes	Yes
Country	Yes	Yes	Yes	Yes	Yes
Observations	186,999	186,999	185,310	186,379	186,047
Adj. R^2	.99	.37	.69	.98	.34

increase in EPU is associated with a 0.5 percent decrease in firm value relative to its mean. Because these coefficient estimates do not rely on the assumption that EPU is comparable in levels across countries, we continue to use [equation \(2\)](#) as our main specification in the rest of our study, but note that our results are robust to performing the estimations at the firm-year level.

An important concern with the results presented thus far is that they may be confounded by host-country macroeconomic fundamentals that are not captured by our control variables. [Ludvigson, Ma, and Ng \(2021\)](#) point out that increases in EPU may result from negative shocks to industrial production, while uncertainty about financial markets appears to be a source of output fluctuations. We address this concern in several ways. First, we control for key macroeconomic variables that could explain EPU dynamics by including them directly in our regressions and creating EPU measures orthogonal to them. Second, we exploit variation in EPU from national elections. Lastly, we examine the impact of the rise in EPU following the UK's Brexit vote on US MNCs exposed to the UK, while controlling for potential first-moment effects of Brexit.

4.2 Differentiating EPU from macroeconomic conditions

We first control for industrial production and financial uncertainty directly in our main specification. Data on industrial production come from the IMF International Financial Statistics. For financial uncertainty, [Ludvigson, Ma, and Ng \(2021\)](#) constructed a financial uncertainty index for the United States using an extensive list of financial indicators, a methodology that cannot be feasibly replicated for our international sample due to limited

data availability and comparability outside the United States. We thus turn to a measure developed by [Caggiano and Castelnovo \(2023\)](#), which is based on realized financial volatility across stock markets, exchange rates, and government bond yields in a broad international sample. Although the [Caggiano and Castelnovo \(2023\)](#) measure covers fewer variables, it has a relatively high correlation of 0.68 with the [Ludvigson, Ma, and Ng \(2021\)](#) index for the United States ([Caggiano and Castelnovo 2023](#)), suggesting substantial overlap between the two financial uncertainty measures. The first three columns of [Table 3](#), Panel B, report the results. The coefficient of EPU remains virtually unchanged when controlling for industrial production, financial uncertainty, or both, while the coefficients on industrial production and financial uncertainty are not significantly different from zero.

One could argue that directly including these variables in a regression may not adequately account for their dynamic and structural relationships. We address this concern by employing a vector autoregressive (VAR) approach following [Baker, Bloom, and Davis \(2016\)](#). Specifically, we perform a Cholesky decomposition of industrial production, financial uncertainty, and EPU at a monthly frequency, with this specific ordering of variables. This approach allows for the extraction of EPU innovations that are orthogonal to both lagged and contemporaneous shocks to industrial production and financial uncertainty. Our baseline VAR model includes three lags of all variables, consistent with [Baker, Bloom, and Davis \(2016\)](#), but the results remain robust when longer lags are used. The correlation between the orthogonalized and raw EPU at the monthly frequency is approximately 0.5. We then average the monthly orthogonalized EPU to obtain an annual measure.

In column (4), where EPU is orthogonalized only with respect to industrial production, the coefficient of orthogonalized EPU is -0.096 and highly significant. In columns (5) and (6), where EPU is orthogonalized with respect to either financial uncertainty or both industrial production and financial uncertainty, the coefficient decreases to -0.063 and -0.060 , respectively, significant at the 5 percent level in each case. This attenuation may be partly due to increased noise in the orthogonalized EPU measure.¹⁵ Overall, the results indicate that host-country EPU negatively affects the value of US MNCs, and this impact is distinct from first-moment shocks and measures of financial uncertainty.

These findings collectively suggest that the negative relationship between host-country EPU and MNC value is not simply a manifestation of broader macroeconomic conditions. Rather, EPU appears to capture distinct uncertainty about government policy decisions that affects firm value through channels separate from general economic or financial market uncertainty. This interpretation is further supported by untabulated analyses incorporating alternative measures of macroeconomic uncertainty, such as those developed by [Ozturk and Sheng \(2018\)](#) based on professional forecast dispersion and by [Dibiasi and Sarferaz \(2023\)](#) using GDP forecast revisions. These measures do not exhibit significant relationships with MNC value when included alongside EPU.

¹⁵ In [Figures OA3 and OA4 of Supplementary Appendix](#), we plot the impulse responses of EPU to shocks in industrial production and financial uncertainty, respectively. We find little evidence that EPU responds significantly to shocks in industrial production. In contrast, financial uncertainty shocks lead to a significant increase in EPU in some countries, with effects persisting for several months. These increases are primarily driven by a positive contemporaneous correlation between EPU and financial uncertainty, while lagged financial uncertainty values are generally insignificantly related to EPU. Reducing the number of lags in the VAR tends to lessen the attenuation of the orthogonalized EPU coefficient. For instance, with just one lag in the VAR estimation, the EPU coefficient orthogonalized with respect to financial uncertainty is -0.083 and significant at the 5 percent level. Alternatively, when orthogonalizing EPU using only contemporaneous financial uncertainty through OLS, the orthogonalized EPU coefficient is -0.104 and significant at the 1 percent level. In [Table OA5 of Supplementary Appendix](#), we report the results of orthogonalizing EPU with respect to additional macroeconomic variables beyond industrial production and financial uncertainty. These variables include log GDP, exchange rates, CPI, and monetary policy rates. While these additional variables introduce more noise and further attenuate the effects, the results maintain statistical significance and remain consistent with our baseline estimation.

The distinct impact of EPU likely reflects its specific focus on uncertainty surrounding policy decisions, such as tax regulations, trade agreements, and regulatory frameworks. These policies directly shape the operational environments of multinational firms through compliance costs, tariffs, and market access—factors particularly critical for companies with extensive cross-border operations and integrated supply chains. In contrast, other uncertainty measures may capture broader local economic volatility that is less directly relevant to MNCs' strategic decisions and performance.¹⁶

4.3 Differentiating EPU from major country risks

In a similar vein to our last section, it is important to distinguish EPU from the potential effects of major country risks. In this section, we evaluate the robustness and sensitivity of our baseline results to measures of country *Political Risk*, *Financial Risk*, and *Economic Risk*. The data are sourced from the PRS Group's International Country Risk Guide.¹⁷ We also separately control for a specific type of risk that has gained prominence in recent years—geopolitical risk. For this, we use [Caldara and Iacoviello \(2022\)](#)'s country-specific geopolitical risk index, which is based on automated text searches of electronic newspaper archives and is calculated as the share of articles each month mentioning a country or its major cities in the context of adverse geopolitical events. Higher values of these risk measures indicate more risk.

[Table 3](#), Panel C presents results where *Political Risk*, *Financial Risk*, *Economic Risk*, and *Geopolitical Risk* are added as explanatory variables to [equation \(1\)](#). Across all specifications, including these risk measures does not change the conclusions from our baseline model. The point estimates of $\ln(EPU)$ range between -0.109 and -0.098 , compared to -0.105 without these controls, showing minimal sensitivity. Additionally, $\ln(EPU)$ remains highly statistically significant. These findings confirm that our baseline results are robust to accounting for major country risks, and host-country EPU is a distinct factor in MNC valuations.¹⁸

4.4 National elections as shocks to EPU

We now exploit plausible exogenous variation in EPU from host-country national elections as a way to address concerns about omitted country-level variables more generally. Elections can significantly increase EPU as different political parties often adopt different economic policies to serve the interests of their constituencies ([Alesina 1987](#)). Incumbents may also try to adopt opportunistic policies around elections to maximize their chance of getting reelected, leading to “political business cycles” ([Nordhaus 1975](#); [MacRae 1977](#); [Alesina 1987](#); [Rogoff and Sibert 1988](#)).

¹⁶ In a similar vein, prior empirical literature has also shown that different volatility and uncertainty measures have distinct predictive power for economic outcomes. For instance, [Bloom \(2009\)](#) finds that stock market volatility shocks are associated with a short-term decline in economic activity, followed by a quick rebound and overshoot, whereas [Baker, Bloom, and Davis \(2016\)](#) show that an increase in EPU is associated with a more persistent decline in industrial production and employment.

¹⁷ Specifically, *Political Risk* is the first principal component of ICRG's twelve variables that capture government stability, socioeconomic conditions, investment profile, internal conflict, external conflict, corruption, military in politics, religion in politics, law and order, ethnic tensions, democratic accountability, and bureaucracy quality. *Financial Risk* is the first principal component of ICRG's five variables that capture foreign debt (% of GDP), foreign debt services (% of exports of goods and services), current account (% of exports of goods and services), net international liquidity as months of import cover, and exchange rate stability. Finally, *Economic Risk* is the first principal component of ICRG's five variables that capture GDP per capita, real GDP growth, annual inflation rate, budget balance (% of GDP), and current account (% of GDP). For each composite index, we transform the sub-indices by subtracting the index values from their maximum before taking the first principal component, ensuring that higher composite index values correspond to higher risk.

¹⁸ In untabulated results, we find that the pairwise correlations between $\ln(EPU)$ and the country risk measures are small to modest. Specifically, the correlations of $\ln(EPU)$ with the political and financial risk measures are under 10 percent in absolute value, while those with the economic and geopolitical risk measures are below 30 percent.

Baker et al. (2020) examine patterns of EPU around national elections in a panel of twenty-three countries and find that EPU values are significantly higher in the month of and the month prior to a national election. Motivated by this finding, we turn to monthly data to examine the relation between elections, EPU, and firm value. Specifically, we use as an instrument for EPU an election indicator variable, $Election (= 1)$, that equals one if there is a national election in a given month or the following month, and zero otherwise. Firm value is measured as the market to book value of assets. The unit of observation is a firm–country–month.

For the exclusion restriction to be satisfied in our setting, host-country national elections should affect the valuation of MNCs solely through their impact on host-country EPU. This assumption is generally plausible when the timing of elections is exogenous to local economic conditions (Julio and Yook 2012). However, in parliamentary systems where elections can be called early by parliament, the timing of elections may be influenced by local economic conditions, potentially violating the exclusion restriction. To mitigate this issue, we focus on what we call “non-reactionary elections” by excluding elections in parliamentary systems where the timing may coincide with worsening economic conditions.¹⁹ We show in Table OA7 of Supplementary Appendix that non-reactionary elections indeed have no statistically significant correlations with host-country economic fundamentals, including the level and growth of GDP, currency exchange rates, and industrial production.

In Panel A of Figure 2, we examine how EPU changes around non-reactionary national elections in our sample. Similar to Baker et al. (2020), we construct the figures by examining how $Ln(EPU)$ changes in the 6 months before and after an election relative to the average $Ln(EPU)$ in the 12 months before and after the 6-month election window. Specifically, we estimate the following regression in the 18 months before and after an election:

$$Ln(EPU)_{j,t} = \gamma_j + \theta_t + \sum_{m=-6}^6 \beta \mathbb{1}(Election\ date_{j,t+m} = 1) + \varepsilon_{j,t} \quad (3)$$

where j indexes countries and t months. The figure shows a peak increase of 12 percent in EPU in the month before non-reactionary elections relative to the average EPU outside the 6-month election window, which is consistent with the changes in EPU around elections documented by Baker et al. (2020).

In Panels B and C of Figure 2, we also examine how EPU changes around a subset of non-reactionary elections expected to lead to more pronounced increases in EPU—specifically, non-reactionary contested elections and non-reactionary elections with high policy disagreement among the leading political parties. Using the Varieties of Democracy (V-Dem) database of Lindberg et al. (2022), we define a contested election as one where the vote margin between the winning candidate and the runner-up is less than 10 percentage points. Using the Varieties of Party Identity and Organization (V-Party) database of Coppedge et al. (2024), we define an election with high economic policy disagreement as one where the absolute difference in the V-Party *Economic left-right scale* index between the winning party and the runner-up exceeds one point.²⁰ The two panels show that, as expected, the increase in EPU tends to be higher during contested elections and elections with high economic policy disagreement relative to other non-reactionary elections. For example, EPU is nearly 20 percent higher in the month before a non-reactionary election with high economic policy disagreement relative to the average EPU outside the 6-month election period.

¹⁹ Table OA6 of Supplementary Appendix lists the excluded elections and the reason for their exclusion.

²⁰ The index ranks candidates’ political parties in each election in terms of their overall ideological stance on economic issues, including privatization, taxes, regulation, government spending, and welfare policies. The scale ranges from far-left (0) to far-right (6). See Lindberg et al. (2022) for more details.

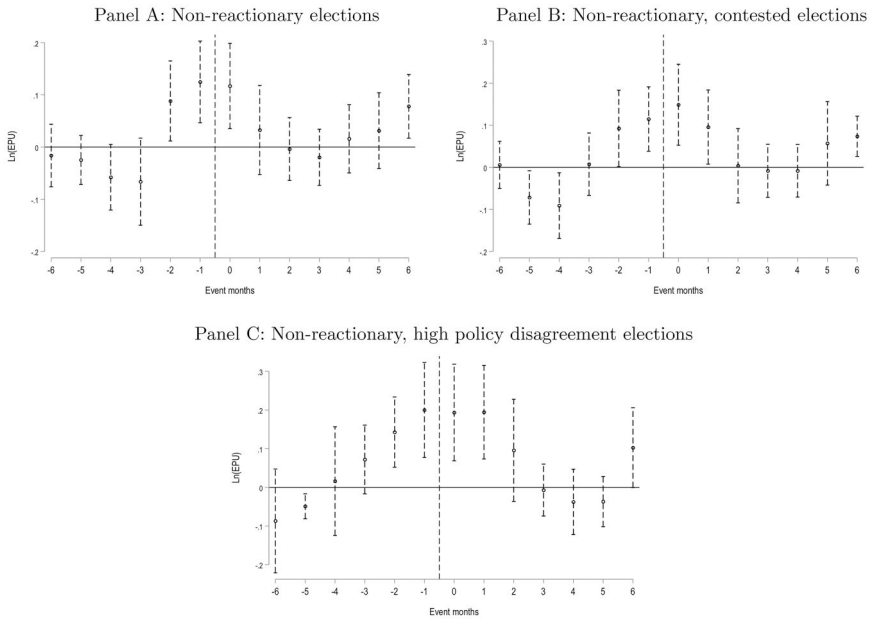


Figure 2. Evolution of EPU around non-reactive elections. Plots of the difference in monthly EPU between non-reactive election and non-election periods, showing that host-country EPU peaks around national elections. Panel A plots this difference for all non-reactive elections, while Panels B and C focus on contested and high economic policy disagreement elections, respectively. Similar to Baker et al. (2020), the plots show the estimated β coefficients and 95 percent confidence intervals from the following regression: $\ln(\text{EPU})_{j,t} = \gamma_j + \theta_t + \sum_{m=-6}^6 \beta_1 (\text{Election date}_{j,t+m} = 1) + \varepsilon_{j,t}$, where j indexes countries and t months. These regressions are estimated within an 18-month window around each non-reactive election. The β coefficients capture how log EPU in a 6-month window around a non-reactive election differs from the average log EPU in the 12 months before and after the 6-month window within the 18-month period. γ and θ denote country and month fixed effects, respectively. Non-reactive elections are those where election timing is independent of local economic conditions. Contested elections are elections where the vote difference between the winning candidate and the runner-up is less than 10 percentage points. High economic policy disagreement elections are elections where the absolute difference in the V-Party *Economic left-right* index between the political party of the winning candidate and the runner-up is greater than one point.

Table 4 reports IV results using the three *Election* ($= 1$) indicators described above as instruments for EPU. Columns (1), (3), and (5) present the first-stage results. In all three specifications, the estimated coefficients of the instruments are positive and highly significant, confirming the evidence in Figure 2 that EPU is significantly higher in the month of and the month before non-reactive elections. Notably, the F -statistics range from 13.19 to 19.86 across the three specifications and are above the critical threshold for weak instruments (Stock and Yogo 2005), suggesting our estimations do not suffer from a weak-instrument problem. Columns (2), (4), and (6) present the second-stage results, using the non-reactive, non-reactive and contested, and non-reactive elections with high economic policy disagreement indicator variables as instruments for EPU. The instrumented $\ln(\text{EPU})$ coefficients are -0.253 , -0.364 , and -0.334 , respectively, and are significant at the 5 percent level or better. Compared to the ordinary least squares (OLS) estimates reported in Panel A of Table 3, the instrumented coefficients are more economically significant but also less precisely estimated with larger standard errors. One explanation for the larger effect is that firms are more sensitive to EPU induced by uncertain election outcomes than other sources of EPU. In unreported specifications, we also estimate the reduced-form effect of non-reactive elections by using the election dummies as the

Table 4. MNC value and EPU around host-country national elections.

Instrumental variables regression results using non-reactory elections as instruments for EPU that confirm the negative effect of EPU on firm value. The sample is a panel of 2,136,083 firm-month-subsidary-country observations from 3,314 US MNCs over the period January 1996–December 2019. *Tobin's Q* is the ratio of the market to book value of assets. $\ln(EPU)$ is the log of economic policy uncertainty in a country. We use *Election* (=1) as an instrument for $\ln(EPU)$. In columns (1) and (2), *election* (=1) is an indicator variable that equals one if a country holds a non-reactory national election in month t or $t + 1$ and zero otherwise. In columns (3) and (4) and (5) and (6), *Election* (=1) equals one if a country holds a non-reactory national election that is contested or characterized by high economic policy disagreement among the leading candidates, respectively, in month t or $t + 1$ and zero otherwise. We weight each country exposure within a firm-month proportionately to the number of times a country's name is recorded in a given company's annual Exhibit 21, and then weight firm-months equally. All specifications include firm, month, and country fixed effects, and standard errors are clustered at the firm and country levels. Columns (1), (3), and (5) present first-stage results, and columns (2), (4), and (6) present second-stage results. Control variables ($\ln(GDP)$, $GDPG$, FX Rate, $\ln(Assets)$, *Leverage*, *ROA*, *R&D*, *Dividends*, *Foreign Sales*, and *Foreign Subsidiaries*) are included, but their coefficient estimates are omitted for brevity. *P*-values are reported in parentheses, and ***, **, * denote significance at the 1, 5, and 10 percent significance level, respectively. Detailed definitions for all variables are presented in [Appendix A](#).

	All		Contested		High economic policy disagreement	
	First-stage (1)	Second-stage (2)	First-stage (3)	Second-stage (4)	First-stage (5)	Second-stage (6)
Election (=1)	0.092*** (0.000)		0.103*** (0.000)		0.113*** (0.000)	
Instrumented $\ln(EPU)$		-0.253** (0.022)		-0.364*** (0.005)		-0.334** (0.023)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Fixed effects						
Month	Yes	Yes	Yes	Yes	Yes	Yes
Firm	Yes	Yes	Yes	Yes	Yes	Yes
Country	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,136,083	2,136,083	2,136,083	2,136,083	2,136,083	2,136,083
First-stage KP <i>F</i> -statistic	14.53		13.19		19.86	
Adj. R^2		.05		.03		.03

main independent variables. The election dummy coefficients range between -0.023 and -0.038 , significant at the 5 percent level or better. The results suggest that the value of US MNCs is lowered by 1.1 percent in the months leading up to host-country non-reactory elections, and by 1.8 percent when these elections are contested or involve significant economic policy disagreement among leading candidates.

Taken together, these results lend a causal interpretation to the negative relation between host-country EPU and MNC valuations. These results are also consistent with the findings of [Brogaard et al. \(2020\)](#), who show that US elections lead to a decline in global asset prices. The findings in this section suggest that foreign elections can impact US asset prices through the foreign exposures of US MNCs.

4.5 Evidence from the Brexit referendum

The United Kingdom's referendum to rescind the country's European Union membership ("Brexit") on June 23, 2016, presents an additional laboratory to test the effect of host-country EPU on MNC value. The unexpected vote of the UK to leave the European Union introduced unprecedented levels of uncertainty regarding the future economic relationship

between the UK and the E.U., including trade policies, regulatory standards, and immigration laws.²¹ In this section, we provide evidence on the evolution of the value of US MNCs exposed to the UK around Brexit. Importantly, we control for the first-moment impacts of Brexit using measures constructed by [Hassan et al. \(2024\)](#).

We estimate a DiD model with continuous treatment intensity around the UK Brexit vote:

$$\begin{aligned} \text{Tobin's } Q_{i,t} = & \alpha_i + \theta_t + \beta_1 \text{Post}_t \times \text{U.K. Exposure}_{i,t-1} + \beta_2 \text{U.K. Exposure}_{i,t-1} \\ & + \beta_3 \text{Brexit Sentiment}_{i,t} + \Omega Z_{i,t-1} + \varepsilon_{i,t} \end{aligned} \quad (4)$$

where i indexes firms and t indexes quarters. *Post* is an indicator variable equal to one for the post-Brexit-vote period after 2016: Q2. *UK Exposure* is the number of mentions of the United Kingdom divided by the total number of distinct country mentions in Exhibit 21 in quarter $t-1$. *Brexit Sentiment* is [Hassan et al.'s \(2024\)](#) time-varying firm-level measure of Brexit's first moment impact. It quantifies whether Brexit is perceived as good or bad news by analysts and senior management of a given company based on textual analysis of the transcripts of the company's quarterly earnings conference calls. Z includes the firm-level controls from [equation \(2\)](#). α and θ denote firm and quarter fixed effects, respectively. We estimate the model with window lengths of 1–4 quarters around the Brexit vote. The period of 2016: Q1–Q2 corresponds to the announcement and occurrence of the Brexit referendum and is thus excluded from the analysis. [Table 5](#) presents the results, with columns (1), (3), (5), and (7) excluding *Brexit Sentiment* as a control, while columns (2), (4), (6), and (8) include it.

Column (1) shows the estimated coefficient on the interaction term *Post* \times *UK Exposure* is 0.269, significant at the 10 percent level. The result suggests that relative to MNCs with no exposure to the UK, a US MNC with an average exposure (12.4 percent for MNCs with UK presence) experiences a reduction in *Tobin's Q* following the Brexit vote of 1.6 percent relative to its mean value. Columns (3), (5), and (7) show that the coefficient estimates increase slightly as the window length around the Brexit referendum expands.

To visually explore the dynamic effect and check the parallel pre-trend assumption underlying our DiD estimation, we estimate a variant of [equation \(4\)](#), where we interact *UK Exposure* with each quarter in the period of 2014: Q4–2016: Q4 except for 2015: Q4, the baseline quarter. [Figure 3](#), Panel B plots the resulting coefficients. The figure shows that, conditional on controls, the differences in the valuations of treated and control firms are statistically insignificant before 2016: Q1, when the Brexit referendum was announced. Treated firms' value starts to decline relative to control firms as Brexit uncertainty began to increase in the first quarter of 2016, as shown in [Figure 3](#), Panel A.

[Table 5](#), columns (2), (4), (6), and (8) show that the decline in the value of UK-exposed firms following the referendum is not accounted for by [Hassan et al.'s \(2024\)](#) proxy for Brexit's first-moment effects. While *Brexit Sentiment* is statistically significant in three out of the four specifications, controlling for *Brexit Sentiment* has minimal effects on the coefficient estimates of *Post* \times *UK Exposure*. Overall, these results suggest that rising policy uncertainty following the Brexit referendum played an important and independent role in the market value losses of US MNCs exposed to the UK.²²

²¹ Panel A of [Figure 3](#) plots EPU in the U.K. during the period around the Brexit referendum. Consistent with the notion that the event generated significant policy uncertainty, EPU increased modestly in 2016: Q1 when the Brexit referendum was first announced and then increased substantially in 2016: Q2 during the quarter of the referendum. The level of EPU for the U.K. increased from 249 in January of 2016 to 479 in March. By June, EPU had reached 800.

²² In additional analysis reported in [Table OA8](#) of [Supplementary Appendix](#), we further account for first-moment effects by including in our DiD estimations the interaction between forecasted quarterly U.K. GDP growth (obtained from Bank of England Inflation Reports) and MNCs' U.K. exposure. The coefficient on *Post* \times *U.K. Exposure* remains negative and statistically significant, suggesting that our results are not driven by

Table 5. Evidence from the Brexit referendum.

Difference-in-differences regression results examining UK-exposed firms around the Brexit referendum, showing negative valuation effects across different time windows. The sample is a panel of firm-quarter observations over different windows during the period 2015: Q1–2017: Q2. *Tobin's Q* is the ratio of the market to book value of assets. *Post* is an indicator variable equal to one for the period after 2016: Q2, and zero otherwise. *UK Exposure* is the number of UK mentions divided by the total number of distinct country mentions in Exhibit 21 in quarter $t-1$. *Brexit Sentiment* is the textual net Brexit sentiment measure from Hassan et al. (2024). The pre-Brexit and post-Brexit sample is restricted to 2015: Q4 and 2016: Q3, respectively, in column (1); 2015: Q3–2015: Q4 and 2016: Q3–2016: Q4, respectively, in column (2); 2015: Q2–2015: Q4 and 2016: Q3–2017: Q1, respectively, in column (3); and 2015: Q1–2015: Q4 and 2016: Q3–2017: Q2, respectively, in column (4). We include firm and quarter fixed effects and cluster standard errors at the firm level in all specifications. Firm-level control variables (*Ln(Assets)*, *Leverage*, *ROA*, *R&D*, *Dividends*, *Foreign Sales*, and *Foreign Subsidiaries*) are included, but their coefficient estimates are omitted for brevity. *P*-values are reported in parentheses, and ***, **, * denote significance at the 1, 5, and 10 percent significance level, respectively. Detailed definitions for all variables are presented in Appendix A.

	Tobin's Q							
	+/-1 Quarter		+/-2 Quarters		+/-3 Quarters		+/-4 Quarters	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post × UK exposure	-0.269*	-0.271*	-0.267*	-0.271*	-0.311**	-0.311**	-0.280*	-0.280*
	(0.089)	(0.087)	(0.086)	(0.082)	(0.047)	(0.046)	(0.051)	(0.051)
Brexit sentiment		0.002		0.002**		0.003***		0.002***
		(0.130)		(0.019)		(0.001)		(0.001)
UK exposure	0.138	0.135	0.043	0.042	0.190	0.188	0.123	0.123
	(0.543)	(0.547)	(0.876)	(0.878)	(0.625)	(0.630)	(0.571)	(0.572)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fixed effects								
Quarter	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,384	2,384	5,118	5,118	7,658	7,658	10,130	10,130
Adj. R ²	.93	.93	.93	.93	.91	.91	.9	.9

4.6 Placebo tests: random reassignment of EPU

We next design and implement placebo tests to rule out further the possibility of spurious correlation between EPU and MNC value. We conduct simulation exercises where we randomly draw and assign EPU values for each country–year and estimate the effect of EPU based on the simulated data using equation (2). We adopt two different data simulation methods. First, for any country i , we randomly pick another country, j , from the set of twenty-one countries and assign its EPU values to country i for the same year.²³ Second, in any given year, t , we randomly pick another year, s , and assign the EPU values of the same countries from year s to year t . In both cases, the values are reassigned with replacement.

Figure 4 presents the distributions of 1,000 $\ln(EPU)$ coefficients for each simulation methodology estimated using the same model specification as in Table 3, Panel A, column (6). The dotted lines show where the estimate based on the real sample, -0.105 , lies. If policy uncertainty is what reduces MNC value, we should find that our randomized EPU variable would have no impact on MNC value. Consistent with this premise, we find that the coefficient of the “placebo” EPU is centered around 0. In the two simulation exercises, out

changes in growth expectations following the referendum. The results are similar when using realized instead of forecasted GDP growth.

²³ One concern about this approach is that country EPU maybe more correlated among certain groups of countries, such as those in Europe. In untabulated results, we find similar evidence if we alternatively reassign EPU values among European countries and among those outside of Europe.

Panel A: U.K. economic policy uncertainty



Panel B: Difference-in-differences coefficients

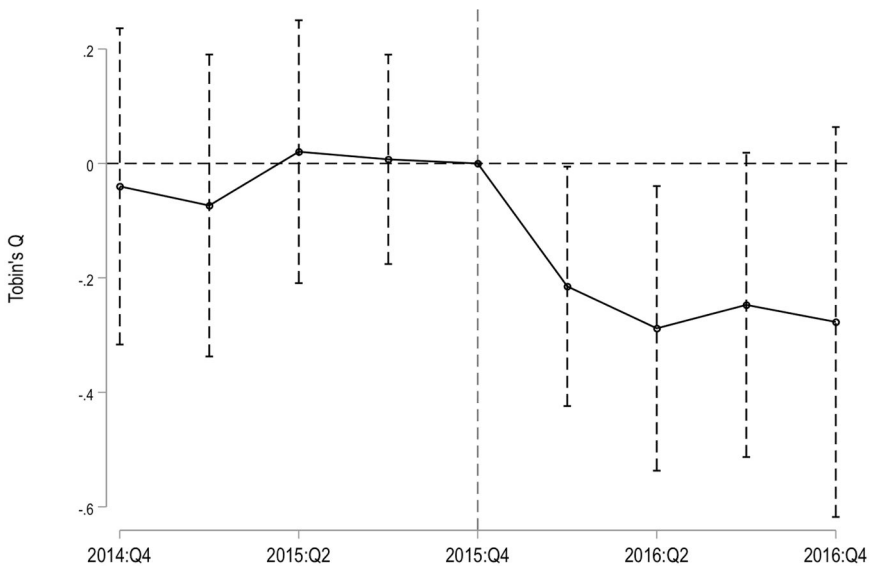


Figure 3. MNC value and the Brexit referendum. Two-panel plots show a spike in UK EPU following the 2016 Brexit referendum and DiD estimates indicating that US MNCs with UK subsidiaries experienced a relative decline in market valuation after the vote, compared to those without UK exposure. Panel A plots the log of quarterly UK EPU, while Panel B displays estimated β coefficients and 95 percent confidence intervals from the following regression, estimated over 2014: Q4–2016: Q4: $Tobin's Q_{i,t} = \alpha_i + \sum_{t=1}^T \gamma_t Quarter_t + \theta U.K.; Exposure_{i,t-1} + \sum_{t=1}^T \beta_t Quarter_t \times U.K.; Exposure_{i,t-1} + \delta Z_{i,t-1} + \epsilon_{i,t}$, where i indexes firms and t quarters. *Tobin's Q* is the ratio of the market to book value of assets. *UK Exposure* is the number of UK mentions divided by the total number of distinct country mentions in Exhibit 21 in quarter $t-1$. Z is a vector of firm-level controls. $Quarter_t$ is a vector of indicator variables for each quarter between 2014: Q4 ($t = 1$) and 2016: Q4 ($t = T$) except for 2015: Q4. α denotes firm fixed effects. The dashed vertical line at 2015: Q4 indicates the last quarter of the pre-Brexit period.

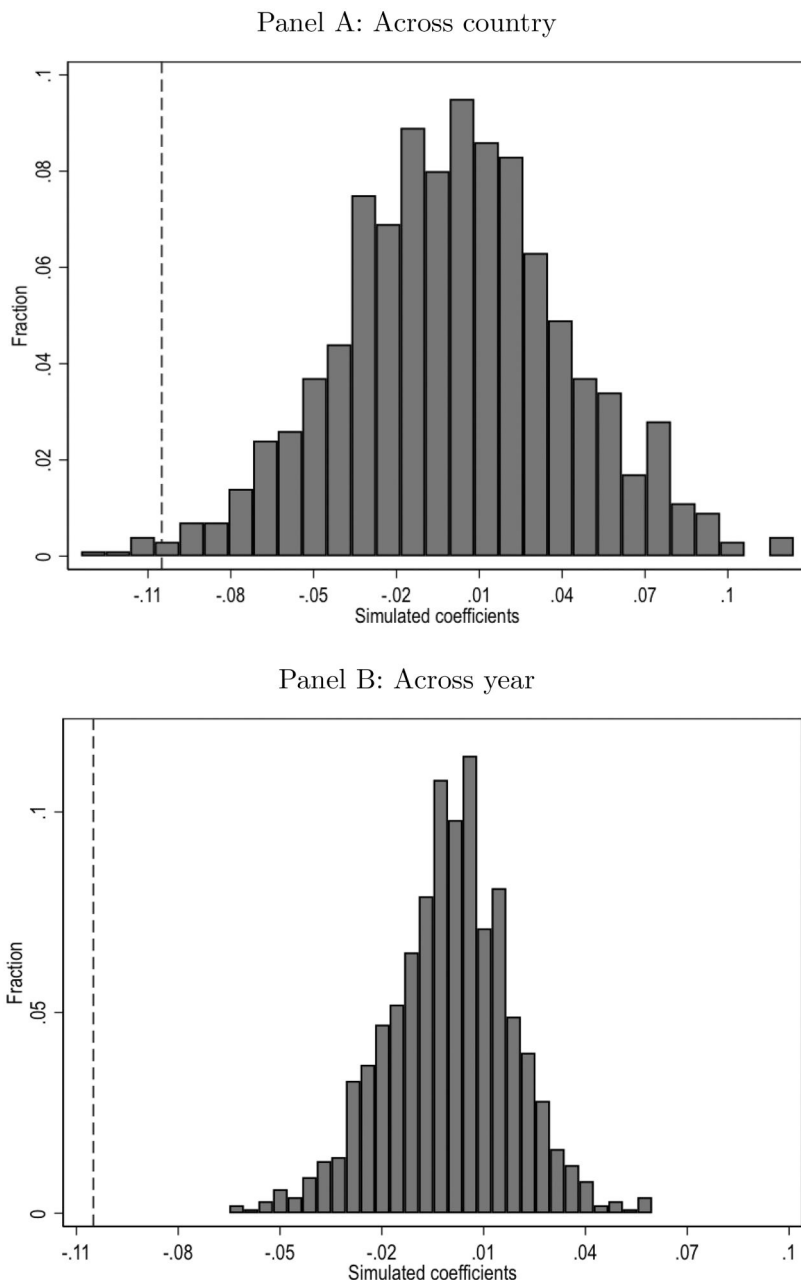


Figure 4. Random EPU assignment. Histograms from placebo tests showing the distribution of estimated EPU coefficients based on randomly assigned EPU values across countries or years, with the actual coefficient lying in the extreme left tail—indicating the effect is unlikely due to chance. To generate these distributions, the figure uses estimates from Table 3, Panel A, Model (6), based on simulated samples in which EPU is randomly assigned using two alternative methods. In Panel A, for any country i , we randomly pick another country, j , from the set of twenty-one countries and assign its EPU values to country i for the same year. In Panel B, in any given year, t , we randomly pick another year, s , and assign the EPUs of the same countries from year s to year t . In both cases, the values are reassigned with replacement. Each panel is based on 1,000 simulations. The dotted line shows the point estimate based on the real sample, -0.105 .

of the 1,000 simulations, six and zero simulations, respectively, yield an estimated coefficient that is more negative than the point estimate based on real data.

5. Host-country EPU and local MNC subsidiaries

Section 4 shows that EPU in host countries has a material, adverse effect on MNC value. This finding suggests that despite their diversified operations, MNCs remain exposed to the negative impact of host-country policy uncertainty shocks and cannot costlessly mitigate these shocks by reallocating resources within their geographic networks. In this section, we take a step further and conduct analyses to better understand the impact of EPU on MNCs' subsidiary operations. We focus on subsidiary total assets and employment, which reflect a firm's real decisions on capital and labor adjustment in response to EPU.²⁴ We examine both the direct effects within the host countries and the indirect spillover effects across host-country borders.

5.1 Direct effects

We first investigate how existing subsidiaries' growth varies with host-country EPU. We estimate the following model:

$$Y_{i,j,k,t} = \alpha_i + \mu_{k,t} + \beta \text{Ln}(EPU_{j,t}) + \delta X_{j,t} + \varepsilon_{i,j,k,t} \quad (5)$$

where i indexes subsidiaries, j indexes countries, k indexes firms, and t indexes years. The outcome variables, Y , are at the MNC subsidiary level and include log total assets and log number of employees. The vector X contains the same country-level controls we use in equation (2), namely GDP growth, log GDP, and foreign exchange rates. The estimation includes subsidiary fixed effects, α , to absorb time-invariant differences across subsidiaries, including persistent country characteristics. We also present results with firm \times year fixed effects, μ , which control for time-varying firm characteristics or firm-level shocks that could influence a firm's decision to invest in host countries. Standard errors are clustered at the firm and country levels.

Table 6 presents the results. Column (1) shows that subsidiary assets are significantly negatively related to host-country EPU. The point estimate indicates that a 10 percent increase in EPU is associated with a 1.4 percent decline in subsidiary assets. Column (2) reports a similar result when we include firm \times year fixed effects, indicating that the negative relation between subsidiary assets and EPU persists when estimated for subsidiaries within the same firm.

Columns (3) and (4) report the estimated elasticity of employment with respect to EPU. Similar to total assets, subsidiary employment is also significantly negatively related to host-country EPU. The magnitude of the coefficients in columns (3) and (4) is similar to those in columns (1) and (2). These results suggest that MNCs cut back investment and hiring at their foreign subsidiaries when the host-country EPU rises.

5.2 Cross-border spillover effects

In this section, we take a step further and examine whether EPU propagates via MNC subsidiary networks. Specifically, we examine whether a subsidiary's total assets and employment are affected by the policy uncertainty of other countries where the MNC has subsidiaries using specifications similar to equation (5):

²⁴ Although capital expenditures are commonly examined in studies investigating policy uncertainty impacts, Orbis does not provide this financial information for foreign subsidiaries of US MNCs. We thus focus on total assets, which capture a firm's investment and divestment decisions with regards to fixed and current assets.

Table 6. Subsidiary growth—direct effects of host-country EPU.

Regression results table showing a negative relationship between host-country EPU and subsidiary-level asset and employment growth. The sample is a panel of firm–year–country–subsidiary observations from 23,889 subsidiaries of 859 US MNCs over the period 2009–2019. $\ln(\text{Subsidiary Assets})$ and $\ln(\text{Subsidiary Employment})$ are the natural log transformations of subsidiary-level total assets and employment, respectively. $\ln(\text{EPU})$ measures the economic policy uncertainty in a country. Specifications in columns (1) and (3) include subsidiary and year fixed effects. Specifications in columns (2) and (4) include subsidiary and firm \times year fixed effects. Standard errors are clustered at the firm and country levels in all specifications. Control variables ($\ln(\text{GDP})$, GDPG , and FX Rate) are included, but their coefficient estimates are omitted for brevity. P -values are reported in parentheses, and ***, **, * denote significance at the 1, 5, and 10 percent significance level, respectively. Detailed definitions for all variables are presented in [Appendix A](#).

	Ln(Subsidiary Assets)		Ln(Subsidiary Employment)	
	(1)	(2)	(3)	(4)
Ln(EPU)	-0.138* (0.053)	-0.121** (0.041)	-0.084** (0.018)	-0.085** (0.029)
Fixed effects				
Subsidiary	Yes	Yes	Yes	Yes
Firm \times year	No	Yes	No	Yes
Year	Yes	No	Yes	No
Observations	158,503	158,503	73,307	73,307
Adj. R^2	.92	.92	.91	.91

$$Y_{i,j,k,t} = \alpha_i + \mu_{i,t} + \beta \ln(\text{Weighted Average EPU})_{i,-j,k,t} + \delta X_{i,-j,k,t} + \omega Z_{k,t-1} + \varepsilon_{i,j,k,t} \quad (6)$$

where i indexes subsidiaries, j indexes countries, k indexes firms, and t indexes years. The outcome variables, Y , are $\ln(\text{Assets})$ and $\ln(\text{Employment})$. $\text{Weighted Average EPU}_{i,-j,k,t}$ is the average EPU in all countries where firm k has subsidiaries in year t other than country j of subsidiary i , weighted by the total assets of subsidiaries in those countries. The vector X includes the average of GDP growth, log GDP, and foreign exchange rates, in all countries where firm k has subsidiaries in year t other than country j of subsidiary i , weighted by the total assets of subsidiaries in those countries. These controls ensure that any effect we document is distinct from the propagation of economic conditions (e.g., [Bena, Dinc, and Erel 2022](#)). The vector Z includes the full set of firm-level controls discussed in Section 3.4. The estimation includes subsidiary fixed effects, α , to absorb time-invariant differences across subsidiaries. We also include country \times year fixed effects, μ , to absorb any time-varying country effects (including country j 's EPU). This specification allows us to compare how MNCs' activities within the same country are affected by the MNCs' differential EPU exposures (via subsidiaries) elsewhere. Standard errors are clustered at the firm and country levels.

[Table 7](#), Panel A, presents the results. The coefficient of $\ln(\text{Weighted Average EPU})$ is indistinguishable from 0 in all four columns. We find no evidence of cross-border spillover effects on either asset or employment growth when we examine subsidiaries in the sample without differentiating across types of production linkages.

The propagation of EPU shocks across subsidiaries, however, likely depends on whether subsidiaries are substitutes or complements in production networks. International trade theories emphasize two types of subsidiary linkages: horizontal, where subsidiaries engage in the same production activities, and vertical, where subsidiaries share input–output

Table 7. Subsidiary growth—cross-border EPU spillovers.

Three-panel regression results table examining cross-border spillover effects of EPU across subsidiary networks, showing limited average spillovers but negative effects among vertically linked large subsidiaries. The sample is a panel of firm–year–country–subsidiary observations from 23,889 subsidiaries of 859 US MNCs over the period 2009–2019. Panel A presents average subsidiary growth results without regard to a subsidiary's supply-chain position. Panel B separately considers vertical and horizontal subsidiary links. Panel C separately considers vertical and horizontal subsidiary links but focuses on large subsidiaries only (i.e., with over \$50 million in assets, on average, through the period). Subsidiaries in other countries are: (1) horizontally integrated if they operate in the same four-digit NAICS industry; (2) vertically integrated with the subsidiary in the focal country if they are in downstream or upstream industries based on the Bureau of Economic Analysis 2012 input–output table; (3) non-integrated if they are not horizontally or vertically integrated. \ln (*Subsidiary Assets*) and \ln (*Subsidiary Employment*) are the natural log transformations of subsidiary-level total assets and employment, respectively. In Panel A, \ln (*Weighted Average EPU*) measures the average EPU in all countries where an MNC has subsidiaries other than the focal country, weighted by the total assets of subsidiaries in those countries. Country-level variables are constructed as the average of each variable in all countries where a firm has subsidiaries other than the focal country, weighted by the total assets of subsidiaries in those countries. In Panels B and C, the same weighting principle scheme applies for \ln (*Weighted Average EPU*) and country-level variables, but including only countries hosting subsidiaries of a specific type (horizontal, vertical, or non-integrated). Specifications in Panel A, columns (1) and (3) include subsidiary and year fixed effects. Specifications in Panel A, columns (2) and (4) include subsidiary and country \times year fixed effects. Specifications in Panels B and C include subsidiary and country \times year fixed effects. Standard errors are clustered at the firm and country levels in all specifications. Control variables (\ln (*Assets*), *Leverage*, *ROA*, *R&D*, *Dividends*, *Foreign Sales*, *Foreign Subsidiaries*, \ln (*GDP*), *GDPG*, and *FX Rate*) are included, but their coefficient estimates are omitted for brevity. *P*-values are reported in parentheses, and ***, **, * denote significance at the 1, 5, and 10 percent significance level, respectively. Detailed definitions for all variables are presented in [Appendix A](#).

Panel A: Subsidiary asset and employment growth

	Ln(Assets)		Ln(Employment)	
	(1)	(2)	(3)	(4)
Ln(Weighted Average EPU)	0.067 (0.285)	−0.011 (0.802)	0.019 (0.582)	−0.009 (0.782)
Fixed effects				
Subsidiary	Yes	Yes	Yes	Yes
Country \times year	No	Yes	No	Yes
Year	Yes	No	Yes	No
Observations	100,481	100,481	62,255	62,255
Adj. R^2	.92	.92	.90	.91

Panel B: Production linkages, all subsidiaries

	Horizontal		Vertical		Non-integrated	
	Ln	Ln	Ln	Ln	Ln	Ln
	(Assets)	(Employment)	(Assets)	(Employment)	(Assets)	(employment)
	(1)	(2)	(3)	(4)	(5)	(6)
Ln(Weighted Average EPU)	−0.021 (0.469)	−0.019 (0.511)	−0.027 (0.604)	−0.043** (0.044)	0.028 (0.463)	−0.047 (0.100)
Fixed effects						
Subsidiary	Yes	Yes	Yes	Yes	Yes	Yes
Country \times year	Yes	Yes	Yes	Yes	Yes	Yes

(continued)

Table 7. (continued)**Panel B: Production linkages, all subsidiaries**

	Horizontal		Vertical		Non-integrated	
	Ln	Ln	Ln	Ln	Ln	Ln
	(Assets)	(Employment)	(Assets)	(Employment)	(Assets)	(employment)
	(1)	(2)	(3)	(4)	(5)	(6)
Observations	58,934	38,453	26,967	17,475	99,256	61,102
Adj. R^2	.83	.91	.83	.89	.81	.90

Panel C: Production linkages, large subsidiaries

	Horizontal		Vertical		Non-integrated	
	Ln	Ln	Ln	Ln	Ln	Ln
	(Assets)	(Employment)	(Assets)	(Employment)	(Assets)	(employment)
	(1)	(2)	(3)	(4)	(5)	(6)
Ln(Weighted Average EPU)	0.013 (0.774)	-0.019 (0.628)	-0.144** (0.021)	-0.097** (0.032)	-0.015 (0.759)	-0.056 (0.300)
Fixed effects						
Subsidiary	Yes	Yes	Yes	Yes	Yes	Yes
Country \times year	Yes	Yes	Yes	Yes	Yes	Yes
Observations	22,772	15,186	12,065	8,094	36,268	22,504
Adj. R^2	.69	.89	.69	.85	.65	.89

linkages (Alfaro and Chen 2012). To the extent that MNCs can shift production among horizontally linked subsidiaries, an increase in EPU might lead to an expansion of horizontally linked subsidiaries located elsewhere. In contrast, EPU shocks could have a negative spillover effect on vertically integrated subsidiaries through input–output (i.e., supply-chain) linkages.

Following prior literature (e.g., Acemoglu, Johnson, and Mitton 2009; Alfaro and Charlton 2009), we classify subsidiary pairs into three types: horizontally integrated, vertically integrated, or non-integrated. A subsidiary pair within the same MNC is classified as horizontally integrated if both subsidiaries operate in the same industry, as defined by a four-digit North American Industry Classification System (NAICS) code. A subsidiary pair is classified as vertically integrated if they have input–output linkages with each other's industry. We proxy for vertical relations using the BEA input–output table (2012) and designate vertical integration based on the total requirements coefficient, which measures one industry's required direct and indirect purchases from another industry to produce one dollar of output. Specifically, two subsidiaries are vertically integrated if their corresponding sectors have a total requirement coefficient of at least 0.05 (i.e., a sector's output used as an input in another sector accounts for at least 5 percent of every dollar of output produced), following Alfaro and Charlton (2009). Finally, subsidiaries that are not horizontally or vertically integrated are classified as non-integrated.²⁵

²⁵ A few subsidiaries have a first two-digit NAICS code of 55, which is used for holding companies. Given that we do not know the actual industries that these subsidiaries are in, we exclude these subsidiaries from the analyses of spillover effects as a function of production linkages. We also note that a subsidiary can be simultaneously vertically and horizontally linked to other subsidiaries within the same firm.

After classifying subsidiaries into the three groups—horizontal, vertical, or non-integrated—we re-estimate [equation \(6\)](#) separately for each group. We also redefine the *Weighted Average EPU* variable for each group, including only those countries in which a firm has subsidiaries of a given type. [Table 7](#), Panel B, presents the results. We again find no spillover effect among horizontal subsidiaries or subsidiaries that do not share clear horizontal or vertical production linkages. For vertical linkages, column (4) indicates that a subsidiary's employment is significantly negatively impacted by an increase in the EPU of other countries with vertically linked subsidiaries.

The average subsidiary size in Orbis is small. We next repeat the analyses using a subset of relatively large subsidiaries, those with average assets of over \$50 million during the sample period. The idea here is that relatively larger subsidiaries are more likely to engage in cross-border transactions with other entities. Smaller subsidiaries, in contrast, may provide administrative or support services to other subsidiaries and not directly engage in large-scale production activities. The results in [Table 7](#), Panel C, show that there is a negative spillover effect among large vertically linked subsidiaries. The estimates indicate that a 10 percent increase in a host country's EPU is associated with a 1.4 percent and 1 percent decline in the assets and employment of vertically linked subsidiaries in other countries. There again appears to be little spillover effect among horizontally linked or non-integrated subsidiaries.

Overall, we find that subsidiary growth is negatively affected by EPU in host countries, and that slower subsidiary growth (in host countries with higher EPU) is not counterbalanced by faster subsidiary growth elsewhere. Rather, there is some evidence of negative EPU spillover across borders along vertically linked subsidiaries.²⁶ Based on these findings, MNCs do not appear to utilize their diversified subsidiary networks to shift operation and resources to mitigate the adverse effects of EPU, which is consistent with the negative valuation effect documented in the previous section. Instead, the findings are consistent with alternative theories of internationalization that posit that foreign subsidiaries are often established to either take advantage of international factor-price differentials (vertical FDI) or reduce trade costs when serving foreign markets (horizontal FDI).

One natural follow-up question is whether the effects of EPU on subsidiary-level activities in host countries translate into a significant overall effect on activities at the firm level. To shed light on this question, we revert to our firm-level data and model specification in [equation \(2\)](#) to examine the impact of host-country EPU on firm-level outcomes. In addition to total assets and total employment, we also examine investment, a common focus in the uncertainty literature, but not directly observable in the subsidiary-level data. We measure investment by total capital expenditures divided by lagged total assets.

[Table 3](#), Panel D, columns (1) and (3) show that rising host-country EPU is associated with a significant decline in firm total assets and investment. Column (4) shows an insignificant effect of EPU on employment. We next examine the growth rates of assets and employment as alternative outcome variables while continuing to include firm fixed effects to control for differential trends in growth across firms. Columns (2) and (5) show a negative and significant effect of EPU on firm-level asset and employment growth. Overall, the evidence suggests that rising host-country EPU leads to a significant reduction in investment and growth at the firm level. While the adverse impact of EPU on investment has been widely documented in a single-country setting, the results in this section provide novel evidence on how host-country EPU impacts MNCs both at the subsidiary and consolidated firm levels.

²⁶ In comparison, [Campello et al. \(2022\)](#) find a negative spillover effect of Brexit uncertainty on US investment and hiring and [Sarkar \(2022\)](#) finds a positive spillover effect of policy uncertainty across borders for a sample of mining firms. Our findings, based on a large number of subsidiaries and EPU shocks in a large number of countries, complement these studies and add to our understanding of the extent to which policy uncertainty transmits across borders through MNCs.

6. MNC value effects: cross-sectional heterogeneity

In this section, we extend the baseline results in Section 4 by exploring the heterogeneous effects of EPU on firm value across firm- and country-level characteristics. Examining the factors that influence the relation between EPU and MNC value helps us better understand the channels through which EPU operates. In addition, the identification of differential EPU effects across MNCs that should be ex-ante more sensitive to EPU helps sharpen the causal interpretation of our results (Gulen and Ion 2015; Baker, Bloom, and Davis 2016).

6.1 Firm-level factors for the EPU effect

We start by examining the heterogeneity of the EPU valuation effect across firms. We focus on two dimensions—capital intensity and financial constraints—identified by prior theoretical literature as important factors that influence the effect of uncertainty on firm-level activities.

We first examine if the effect of EPU varies with a firm's capital intensity based on the notion that capital is less reversible than labor and FDI usually incurs large sunk costs (Helpman, Melitz, and Yeaple 2004). The large, irreversible costs associated with FDI could potentially exacerbate the adverse impact of policy uncertainty. In Fillat and Garetto (2015), the higher sunk costs of establishing foreign affiliates increase MNCs' exposure to negative shocks because MNCs may be reluctant to exit immediately and instead prefer to bear losses generated by the existence of fixed operating costs.

Motivated by studies that emphasize potential heterogeneous effects of uncertainty on different forms of capital (e.g., Bansal et al. 2021), we distinguish tangible from intangible capital when examining capital intensity. *Tangible capital intensity* is defined as the ratio of property, plant, and equipment to total employees. Because intangible capital does not appear on a firm's balance sheet unless it is externally acquired, we follow the recent development in the literature to use the estimated internally generated intangible capital by capitalizing investment in intangible assets.

Specifically, we use the values of knowledge capital and organization capital from Ewens, Peters, and Wang (2024), which capitalize research and development expenses and a fraction of sales, general, and administrative expenses, respectively. We measure total intangible capital intensity as the ratio of the sum of knowledge capital, organization capital, and externally acquired intangibles to total employees. We next create an indicator equal to one if a firm has a value above the sample median, and zero otherwise, for each measure of capital intensity. Finally, we interact $\ln(EPU)$ with the measures of capital intensity and test the interaction terms' significance in regression specifications similar to equation (2).

Table 8, Panel A, columns (1) and (2) present the results. The interaction between EPU and tangible capital intensity is close to zero and not statistically significant, indicating no evidence that EPU is more detrimental to firms with higher physical capital intensity. In contrast, the interaction between EPU and intangible capital intensity is negative and highly statistically significant.²⁷ This finding suggests that the negative valuation effect of host-country EPU is stronger for firms with high intangible capital, which are typically more R&D intensive. Economically, a 10 percent increase in EPU is associated with a 1.2 percent decline in value for MNCs with above-the-median intangible capital intensity, while the effect is indistinguishable from zero for firms with low intangible capital intensity.

This finding is consistent with results in Bloom and Van Reenen (2002) and Bansal et al. (2021) that uncertainty shocks are more disruptive to innovative firms. One explanation of the result is that intangible capital is costlier to adjust than tangible capital (e.g., Brown, Fazzari, and Petersen 2009; Peters and Taylor 2017; Haskel and Westlake 2017). Another explanation is that Tobin's Q increasingly reflects rents associated with market power and intangible capital (Lee, Shin, and Stulz 2021; Crouzet and Eberly 2023; Corhay, Kung, and

²⁷ If we separately interact $\ln(EPU)$ with indicators for above-median knowledge capital and above-median organization capital, and include both variables in the estimation, both interaction terms are negative and statistically significant. The effect of knowledge capital is twice as large as organization capital.

Table 8. Cross-sectional heterogeneity in EPU effect on MNC value.

Two-panel regression results table showing how EPU effects vary by firm and country characteristics. The sample is a panel of 186,999 firm–year–subsidiary–country observations from 3,314 US MNCs over the period 1996–2019. *Tobin's Q* is the ratio of the market to book value of assets. *Ln(EPU)* measures the economic policy uncertainty in a country. In Panel A, *Ln(EPU)* is interacted with firm-level measures of capital intensity and financial constraints. In column (1), *Indicator* equals one if a firm has an above-median ratio of property, plant, and equipment to total number of employees, and zero otherwise. In column (2), *Indicator* equals one if a firm has an above-median ratio of intangible capital to total number of employees, and zero otherwise. In column (3), *Indicator* equals one if a firm has an above-median financial constraints index, and zero otherwise. In column (4), *Indicator* equals one if a firm does not have a long-term issuer credit rating, and zero otherwise. In Panel B, *Ln(EPU)* is interacted with country-level measures of financial development, economic growth, institutional quality, and reliance on government spending. In column (1), *Indicator* equals one for countries with above median financial development, and zero otherwise. In column (2), *Indicator* equals one for countries with above median GDP growth, and zero otherwise. In column (3), *Indicator* equals one for countries with above median quality of property rights institutions, and zero otherwise. In column (4), *Indicator* equals one for countries above median index capturing government consumption as a share of total country consumption and zero otherwise. The specifications are estimated via a weighted regression approach, where we weight each country exposure within a firm–year proportionately to the number of times a country's name is recorded in a given company's annual Exhibit 21, and then weight firm–years equally. All specifications include firm, year, and country fixed effects and standard errors clustered at the firm and country levels. Control variables (*Ln(GDP)*, *GDPG*, *FX Rate*, *Ln(Assets)*, *Leverage*, *ROA*, *R&D*, *Dividends*, *Foreign Sales*, and *Foreign Subsidiaries*) are included, but their coefficient estimates are omitted for brevity. *P*-values are reported in parentheses, and ***, **, * denote significance at the 1, 5, and 10 percent level, respectively. Detailed definitions for all variables are presented in [Appendix A](#).

Panel A: Firm-level factors

	Tobin's Q			
	Capital intensity		Financial constraints	
	Tangible capital (1)	Intangible capital (2)	SA index (3)	Unrated (4)
Ln(EPU)	-0.085** (0.022)	-0.017 (0.570)	0.001 (0.980)	-0.051* (0.064)
Indicator	0.042 (0.693)	-0.126** (0.025)	0.027 (0.550)	0.190*** (0.003)
Ln(EPU) × indicator	-0.004 (0.928)	-0.187*** (0.006)	-0.157** (0.014)	-0.180** (0.015)
Control	Yes	Yes	Yes	Yes
Fixed effects				
Year	Yes	Yes	Yes	Yes
Firm	Yes	Yes	Yes	Yes
Country	Yes	Yes	Yes	Yes
Observations	186,999	186,999	165,333	165,333
Adj. <i>R</i> ²	.71	.71	.71	.71

Panel B: Country-level factors

	Tobin's Q			
	Financial development (1)	Economic growth (2)	Property rights (3)	Government size (4)
Ln(EPU)	-0.126** (0.024)	-0.120*** (0.001)	-0.137*** (0.008)	-0.073** (0.035)
Indicator	-0.089* (0.059)	-0.032** (0.041)	-0.002 (0.938)	0.205*** (0.001)

(continued)

Table 8. (continued)

Panel B: Country-level factors

	Tobin's Q			
	Financial development (1)	Economic growth (2)	Property rights (3)	Government size (4)
Ln(EPU) × indicator	0.076 (0.198)	0.068** (0.043)	0.092* (0.099)	-0.073* (0.087)
Controls	Yes	Yes	Yes	Yes
Fixed effects				
Year	Yes	Yes	Yes	Yes
Firm	Yes	Yes	Yes	Yes
Country	Yes	Yes	Yes	Yes
Observations	170,183	186,999	186,999	170,183
Adj. R ²	.72	.71	.71	.72

Schmid 2025), and the market value of rents associated with intangible capital is more negatively affected by rising EPU through a risk premium channel (Bansal et al. 2021).²⁸

We next examine whether the effect of EPU on firm value is exacerbated by firm-level financial constraints. Such an effect could be expected for two reasons. First, firms' future cash flows become more uncertain, and expected bankruptcy costs increase more for financially constrained firms as policy uncertainty rises. Second, policy uncertainty in host markets increases external financing costs in those markets (McDonald and Siegel 1985; Pástor and Veronesi 2013; Gilchrist, Sim, and Zakrajšek 2014; Alfaro, Bloom, and Lin 2024; Brogaard et al. 2020; Kaviani et al. 2020), intensifying capital frictions for constrained MNCs as they depend on local markets for financing (Jang 2017; Bilir, Chor, and Manova 2019). We also come back to this point in our next section, when we examine country-level factors that condition the relation between MNC value and host-country EPU.

We use two measures of financial constraints at the firm level. The first measure is based on a firm's Size-Age (SA) index from Hadlock and Pierce (2010). The second measure is based on the availability of an outstanding credit rating. A firm is considered to be financially constrained if it has an above-median SA index or if it does not have an S&P domestic long-term issuer credit rating. We next interact $Ln(EPU)$ with our measures of financial constraints and test the interaction terms' significance. Table 8, Panel A, columns (3) and (4) present the results. In both specifications, the coefficients on the interaction terms load negatively and are statistically significant at the 5 percent level. This finding suggests that the negative relation between EPU in host markets and MNC valuation is amplified for firms that are ex-ante financially constrained. In terms of economic magnitude, a 10 percent increase in EPU is associated with a 0.8–0.9 percent incremental decrease in value for more financially constrained MNCs.

6.2 Country-level factors for the EPU effect

We next examine the effect of several country-level factors that could plausibly amplify or attenuate the relation between EPU on MNC valuation. Here, we draw from prior

²⁸ Alternatively, rising uncertainty could enhance the value of R&D through a real-options channel (e.g., Kulatilaka and Perotti 1998; Campello et al. 2022). In that case, the impact of uncertainty on the value of and investment in R&D activities is an empirical question whose answer likely depends on the nature of uncertainty shocks and the relative strength of competing effects. Echoing this theoretical ambiguity, Atanassov, Julio, and Leng (2024) find that government policy uncertainty induced by US gubernatorial elections stimulates firm R&D activities. In contrast, Bhattacharya et al. (2017) find in a cross-country sample of firm innovation activities that such activities decrease significantly around national elections.

literature that examines EPU in the context of financing costs, country institutional quality, and government spending.

As previously noted, EPU in host markets may exacerbate MNC financial constraints through higher financing costs, hampering MNCs' operations and investment. The EPU-induced financial constraints should be particularly severe and binding in less financially developed host markets due to the lack of viable alternative external financing sources. Relatedly, the adverse effects of EPU should be more pronounced in adverse economic conditions when access to external capital is more difficult and costly. For example, [Pástor and Veronesi \(2013\)](#) find that policy uncertainty commands a risk premium whose magnitude is larger in weaker economic conditions.²⁹

To test these amplification mechanisms, we calculate measures of financial development and economic growth. Similar to [Levine \(2002\)](#), we measure financial development as the first principal component of three World Bank financial development indices: a country's private credit by financial institutions, stock market capitalization, and stock market value traded, all three indices calculated as a proportion of GDP. Economic conditions are measured by GDP growth. We then interact $\ln(EPU)$ with indicator variables for above-median financial development and economic growth, respectively. [Table 8](#), Panel B, columns (1) and (2) present the results. The positive coefficients on the interaction terms suggest that the negative relation between EPU and MNC valuation is exacerbated when host countries are less financially developed or when economic activity is sluggish. Economically, a 10 percent increase in EPU is associated with a 0.3–0.4 percent additional decrease in value for MNCs operating in countries with relatively weaker financial development or slower economic growth. However, while the interaction coefficient between EPU and economic growth is statistically significant at the 5 percent level, the interaction between EPU and financial development is insignificant at conventional levels (P -value of .2) and should be interpreted with caution.

The quality of country property rights, and the associated risk of expropriation, is another factor that could impact the relation between EPU and MNC valuation.³⁰ Upon investment in a country, an MNC becomes exposed to a potential degradation of host-country institutional quality and the possible expropriation of local host-market assets. In countries with poor property rights, EPU may thus generate uncertainty not only about policy changes but also expropriation risk due to changes in investor protection laws, regulatory regimes, and monetary and fiscal policies ([Julio and Yook 2016](#)). The effect of EPU on MNC valuations should thus be particularly pronounced when host countries have poor property rights.

To test this hypothesis, we measure country property rights similar to [Lin et al. \(2019\)](#) as the first principal component of three World Bank governance indices: rule of law, control of corruption, and voice and accountability. We then create an indicator variable, which equals one for countries with above-median property rights, and zero otherwise, and test the significance of the interaction term of $\ln(EPU)$ with this indicator in [Table 8](#), Panel B, column (3). The coefficient on the interaction loads positively and is significant at the 10 percent level, suggesting that the negative relation between EPU and MNC valuation is amplified in host countries with weaker property rights. Specifically, a 10 percent increase in EPU is associated with a 0.5 percent incremental decrease in value for MNCs operating in countries with relatively weaker property rights.

Finally, prior research documents elevated exposure to EPU derived from firms' reliance on government purchases of goods and services (e.g., [Baker, Bloom, and Davis 2016](#)). In our context, this suggests that MNCs operating in countries with large government sectors

²⁹ We also note that the effect of EPU could be a function of economic conditions through the "good" versus "bad" uncertainty effects highlighted in [Segal, Shaliastovich, and Yaron \(2015\)](#).

³⁰ Foreign investors have been shown to have limited protection from host countries' legal and political institutions ([Dixit 2011](#)) and courts in destination countries oftentimes have a bias toward domestic firms in cases of disputes ([Bhattacharya, Galpin, and Haslem 2007](#)).

that have a significant footprint on the economy should be more prominently exposed to host-country policy uncertainty. To test this idea, we use the Fraser Institute's Economic Freedom of the World database to create an indicator variable set to one for countries above the median in average government consumption and zero otherwise. Table 8, Panel B, column (4) shows that the coefficient of the interaction term between $\ln(EPU)$ and the indicator variable is significantly negative at the 10 percent level, suggesting that the negative relation between host-country EPU and MNC valuation is particularly pronounced among MNCs with subsidiaries in countries where government expenditures account for a large share of economic output. The magnitude of the coefficient on the interaction term indicates that a 10 percent increase in EPU is associated with a 0.4 percent incremental decrease in MNC value when MNCs are operating in countries with high government spending.

7. Conclusion

Our study provides novel evidence on how EPU around the world influences the market values and real activities of US MNCs. We find that rising EPU in host countries where MNCs have material subsidiary operations leads to significant declines in MNC value. Moreover, we find consistent results using plausible exogenous variation in EPU around host-country national elections and the Brexit referendum in the UK. We document significant heterogeneity in the sensitivity to host-country EPU across key firm and country characteristics such as intangible capital intensity, financial constraints, and country institutional quality.

Consistent with the negative valuation effect, we find that subsidiaries in high-EPU environments experience slower asset and employment growth. We do not find significant spillover effects, whereby EPU shocks in one country are associated with a reallocation of resources to subsidiaries in other countries. When we consider different types of production linkages, we still do not find significant spillover effects among horizontally linked subsidiaries. However, we find some evidence of negative spillover effects on subsidiary growth among vertically linked subsidiaries. The combined direct and indirect spillover effects from rising EPU in host countries lead to a significant decline in firm-level investment and growth. Overall, despite the often-cited operating flexibility associated with multinational activities, we find little evidence that such flexibility helps MNCs mitigate the negative effects of EPU in local markets.

Acknowledgments

We thank Geoffrey Tate (the editor) and an anonymous referee for their invaluable comments and suggestions. We also thank Scott Baker, Itzhak Ben-David, Dave Denis, Bob DeYoung, Serdar Dinc, Mara Faccio, Larry Fauver, Isil Erel, Jeremiah Harris (discussant), Tarek Hassan, Jie (Jack) He, Victoria Ivashina, Russell Jame, Brandon Julio, Gaurav Kankanhalli, Nina Karnaukh, Hyunseob Kim, April Knill, Jack Liebersohn, Felix Meschke, Kelly Shue, René Stulz, Michael Weisbach, Gregory Weitzner (discussant), Jide Wintoki, as well as seminar and conference participants at the Ohio State University, University of Kansas, 2022 Northern Finance Association Annual Meeting, and 2022 Financial Management Association Annual Meeting for helpful feedback and discussions. All errors are ours alone.

Supplementary material

[Supplementary material](#) is available at *Review of Finance* online.

Funding

None declared.

Conflicts of interest

None declared.

Data availability

The data used in this article are obtained from a combination of publicly available and licensed sources. Foreign subsidiary location data are constructed from Exhibit 21 disclosures in firms' 10-K filings, accessed via the US Securities and Exchange Commission's EDGAR database. The processed Exhibit 21 data used in the analysis are available from the authors upon request. Subsidiary-level financial information is sourced from the Orbis database provided by Bureau van Dijk, firm-level financials are from Compustat, and stock return data used to construct firm valuation measures are from CRSP; all three datasets are available under institutional license. Macroeconomic controls are obtained from the World Bank and the IMF. Country risk measures are drawn from the International Country Risk Guide (ICRG) by the PRS Group, also under institutional license. Country-level economic policy uncertainty indices are from Baker, Bloom, and Davis (2016) and are publicly available at <http://www.policyuncertainty.com>. Geopolitical risk data are from Caldara and Iacoviello (2022). Additional public data include US BEA input–output tables and the V-Dem and V-Party datasets on electoral and policy characteristics. The replication codes have been provided to the Review of Finance. Due to licensing restrictions, we are unable to share raw proprietary data (e.g., Orbis, Compustat, CRSP, ICRG). However, pseudo-data and sample replication scripts are available from the authors upon request for researchers with access to the required data sources.

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Appendix A. Variable definitions

- Dividends**—An indicator variable equal to one if a firm's dividends per share are positive, and zero otherwise. Source: Compustat.
- Economic risk**—First principal component of five ICRG variables covering economic risk factors. Higher values indicate higher risk. Source: PRS ICRG.
- Election (=1)**—An indicator variable equal to one if a country holds a non-reactionary national election in month t or $t + 1$ and zero otherwise.
- Financial development**—First principal component of private credit, stock market capitalization, and value traded (all as % of GDP). Source: World Bank GFDD.
- Financial risk**—First principal component of five ICRG variables covering financial risk factors. Higher values indicate higher risk. Source: PRS ICRG.
- Foreign sales**—A firm's percentage of international sales. Source: Compustat.
- Foreign subsidiaries**—A firm's percentage of foreign subsidiaries. Source: Exhibit 21.
- FX rate**—The exchange rate of the US dollar and the currency of a given country divided by 1,000. Source: IMF IFS.
- GDGP**—A country's real GDP growth. Source: World Bank Development Indicators.
- Geopolitical risk**—A news-based geopolitical risk measure. Source: [Caldara and Iacoviello \(2022\)](#).
- Government size**—Government consumption divided by total country consumption. Source: Fraser Institute EFW Index.
- Intangible capital intensity**—The ratio of a firm's knowledge capital, organization capital, and externally acquired intangibles to the total number of employees. Sources: Compustat and [Ewens, Peters, and Wang \(2024\)](#).
- Investment**—Capital expenditures divided by lagged total assets. Source: Compustat.
- Leverage**—A firm's common equity divided by total assets. Source: Compustat.
- Ln(Assets)**—The log of a firm's total assets. Source: Compustat.
- Ln(Employment)**—The log of a firm's total employees. Source: Compustat.
- Ln(EPU)**—The log of a country's EPU. Source: [Baker, Bloom, and Davis \(2016\)](#).
- Ln(EPU) orthogonal to Ln(World EPU)**—The log of a country's EPU orthogonalized to the log of EPU of the world. Source: [Baker, Bloom, and Davis \(2016\)](#).

- Ln(GDP)**—The log of a country's GDP in constant 2005 USD. Source: World Bank Development Indicators.
- Ln(Industrial Production)**—The log of a country's industrial production. Source: IMF IFS.
- Ln(Subsidiary Assets)**—The log of the total assets of a firm's foreign subsidiary. Source: Orbis.
- Ln(Subsidiary Employment)**—The log of the number of employees of a firm's foreign subsidiary. Source: Orbis.
- Ln(Weighted Average EPU)**—The log of the asset-weighted average EPU in all countries where a firm has subsidiaries, or countries where a firm has horizontal, vertical, or non-integrated subsidiaries, excluding the focal country. Source: Baker, Bloom, and Davis (2016).
- Orthogonalized Ln(EPU)**—Log EPU orthogonalized to the log of industrial production and financial uncertainty using a VAR approach.
- Political Risk**—First principal component of twelve transformed ICRG variables covering various political risk factors. Higher values indicate higher risk. Source: PRS ICRG.
- Property Rights**—The first principal component of three country-level institutional quality indices: rule of law, control of corruption, and voice and accountability. Source: World Bank WG Indicators.
- R&D**—A firm's R&D intensity, calculated as research and development expenses divided by total assets (set to 0 if missing). Source: Compustat.
- ROA**—A firm's return on assets, calculated as income before extraordinary items divided by total assets. Source: Compustat.
- SA Index**—The Hadlock and Pierce (2010) financial constraints SA index. Source: Compustat.
- Tangible Capital Intensity**—The ratio of the firm's property, plant, and equipment to the total number of employees. Source: Compustat.
- Tobin's Q**—The ratio of an MNC's market value of assets to the book value of assets. It is calculated as $(AT - BE + ME) / AT$, where AT is a firm's total assets, BE is the book value of equity, and ME is the market value of equity. AT and BE are calculated as the average over year t and year $t-1$. ME is calculated as the average of the monthly ME over year t . Source: CRSP and Compustat.
- Unrated**—An indicator variable equal to one if a firm does not have an S&P domestic long-term issuer credit rating, and zero otherwise. Source: Compustat.