## **Endogenous Policy Uncertainty\***

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#### **ABSTRACT**

We examine the dynamic relationship between economic conditions and text-based proxies for policy uncertainty. Bad economic conditions predict higher future measures of policy uncertainty. More than 50% of the time series variation in most uncertainty proxies can be explained by lagged macroeconomic factors. We decompose the indices into two parts: a macro component explained by past economic innovations and a residual component containing shocks that are orthogonal to lagged economic activity. We find that the negative relationship between policy uncertainty proxies and corporate investment is driven solely by the macro component. The results suggest that text-based proxies for uncertainty include significant first-moment shocks that confound inferences about the causal impact of policy uncertainty on investment.

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## 1. Introduction

A large and recent literature has examined the importance of government policy uncertainty on investment, asset pricing, and corporate financial policies. There are different theories of how uncertainty affects firm decisions and asset prices, highlighting different mechanisms and directional predictions. For example, Some theories predict a negative relationship between corporate investment and uncertainty based on irreversible investment and the value of waiting (McDonald and Siegel (1986); Dixit et al. (1994)), some predict a positive relationship between uncertainty and investment due to convexity, growth options, and investment lags (Hartman (1972); Abel (1983); Oi (1961); Bar-Ilan and Strange (1996)). Pástor and Veronesi (2013) predict that policy uncertainty commands a risk premium in asset prices. As policy uncertainty is inherently unobservable, testing theories of the impact of policy uncertainty requires the construction of proxies that capture periods when future government policy becomes relatively unpredictable.

The most significant innovation in the measurement of policy uncertainty in recent years is the "text as data" approach (Gentzkow et al. (2019)). In this approach, researchers analyze digital text from media and other sources to construct different proxies of policy uncertainty. The construction of a time-series proxy is generally based on the relative frequency of researcher-specified terms and phrases related to policy uncertainty contained in the text over time. The approach also allows for more specific types of policy uncertainty, such as overall general economic policy uncertainty using general uncertainty-related keywords (Baker et al. (2016))

or a more specific measure of, for example, monetary policy uncertainty (Husted et al. (2018)) using more focused keywords related to monetary policy.

As an example, the most popular measure of policy uncertainty is the Economic Policy Uncertainty (EPU) index of Baker et al. (2016). The EPU is an index of aggregate policy uncertainty based mainly on textual analysis of the digital archives of ten newspapers counting articles that contains certain policy uncertainty-related key words. Baker et al. (2016) present evidence that EPU index is associated with investment and employment at both the firm and aggregate levels. Since the creation of the EPU index, many studies have used it for predicting corporate decisions and stock returns.<sup>1</sup>

Another possibility, which we explore in this paper, is that policy uncertainty is a byproduct of declining economic activity rather than the cause of it. There are both practical
and theoretical reasons to suggest that policy uncertainty, or uncertainty in general, is endogenously determined by economic conditions. Pastor and Veronesi (2013) model the effect of
political uncertainty on stock prices in a general equilibrium framework. In their model, the
level of political uncertainty is endogenous and depends on economic activity. When the economy is strong, there is very little political uncertainty because the government is expected to
keep current policies. However, when economic conditions are bad, political uncertainty is
higher because policy is expected to change but the specific policy is unknown. Bachmann
and Moscarini (2012) and Fostel and Geanakoplos (2012) show that uncertainty can arise from

<sup>&</sup>lt;sup>1</sup>Brogaard and Detzel (2015) show that economic political uncertainty, as measured by EPU index, helps forecast log excess returns on stocks and is priced cross-sectionally. Gulen and Ion (2016) find that corporate investment is negatively and persistently related to economic policy uncertainty. Bonaime et al. (2018) find that policy uncertainty is strongly negatively associated with merger and acquisition activity at the macro and firm level.

first moment shocks. Declines in economic activity lead firms to review their strategies and become more risky, leading to higher aggregate uncertainty/volatility. Bachmann et al. (2013) show empirically that a measure of economic uncertainty based on surveys is more likely a by-product of business cycles and that uncertainty is driven by first-moment economic shocks.

In newspapers and other forms of media, writers are more likely to write about policies and uncertainty during periods of relatively poor economic conditions compared to when economic conditions are relatively strong. Mullainathan and Shleifer (2005) argue that news produced by the media is equilibrium outcome where consumer preferences, competition, and technology determine what news gets reported. The media is then likely to reflect both the state of the economy (Bybee et al. (2020)) and consumer demand for economic policies to address current economic conditions. Thus, discussion of policy uncertainty in the media may arise endogenously from economic conditions.

The fact that policy uncertainty and proxies for policy uncertainty can be endogenous creates a difficulty for identifying the effects of policy uncertainty on firm behavior and asset prices. If a rise in a policy uncertainty proxy comes from a shock that is uncorrelated with the other determinants of firm investment, then the causal effect is easier to identify. If, however, the rise in the policy uncertainty proxy arises from a contraction in economic activity, then a negative correlation between the proxy and firm investment is difficult to attribute entirely to heightened policy uncertainty. In this paper, we examine the extent to which macroeconomic conditions cause variation in policy uncertainty proxies and whether this relationship confounds inferences about the causal effect of policy uncertainty on corporate investment.

We begin by examining common variation in the proxies over time. The proxies are are strongly positively correlated with each other, suggesting a high degree of common variation. We find that for most proxies, more than 50% of the time-series variation in the proxy can be explained by a simple set of lagged macroeconomic factors. The proxies tend to be high following relatively weak economic conditions and low when economic conditions are relatively strong. We also find that, using the news topic attention data of Bybee et al. (2020), the proxies are highly correlated with the occurrence of economy-related topics in the news.

To investigate the impact of macroeconomic conditions the proxies and how this affects inferences about the effects of uncertainty on investment, We decompose each proxy into two components. The first component captures the variation in a proxy that is explained by recent economic conditions. We estimate this component by projecting the proxy onto several lagged macroeconomic variables: wages, the Consumer Price Index (CPI), employment, industrial production, consumer sentiment, and GDP. We obtain the "macro" component of the index by obtaining the predicted values from the regression. This is the part of the proxy that is explained by recent macroeconomic conditions. The second component represents the residual from the regression, that is, the part of the index that is orthogonal to macroeconomic conditions. The residual component captures shocks that are unrelated to recent macroeconomic conditions. We find that the residual component still captures many of the large uncertainty shocks over time, such as the 9/11 attacks and the debt ceiling dispute, and presidential elections.

We then estimate corporate investment regressions using the raw proxy, the macro component of each proxy, and the residual component containing uncertainty shocks unrelated to macroeconomic conditions. We replicate the result that corporate investment is strongly negatively correlated with the raw index. This effect is persistent, lasting for four quarters into the future. We then repeat the regressions on the macro and residual components and find that the negative relationship between investment and policy uncertainty is driven entirely by the macro component. The residual component has no effect on investment in most regressions, and sometimes the coefficient turns positive. Note that the regression on the residual component is equivalent to regressing investment on the raw index and lagged macroeconomic controls. This result demonstrates that the endogenous nature of the policy uncertainty proxies confounds inferences about the effect of uncertainty on investment. Policy uncertainty that is not related to macroeconomic conditions does not predict changes in corporate investment. We repeat the analysis for merger volume and stock returns. Merger volume is negatively correlated only with the macro component of the proxies but not the residual component. Likewise, the macro component predicts future stock returns but the residual component does not.

Note that these results do not necessarily imply that policy uncertainty does not matter for corporate decisions and asset prices. Rather, it highlights that the proxies confound uncertainty and macroeconomic conditions so that a regression on the proxy cannot identify the causal effect of uncertainty on investment. It could be that the macro component of the index contains real uncertainty, but the effect cannot be distinguished from the effects of macroeconomic

conditions. Another possibility is that the direction of causality runs in the other direction in that uncertainty shocks lead to deteriorating macroeconomic conditions.

To investigate the dynamic relationship between macroeconomic conditions and policy uncertainty proxies, we estimate a series structural vector autoregressions (SVAR) with event-based inequality constraints. Our results are similar in spirit to Ludvigson et al. (2021a) who find that their proxy for macroeconomic uncertainty appears to be an endogenous response to business cycles, while their proxy for financial uncertainty tends to lead business cycles. Our SVAR results suggest that the direction of causality runs from economic conditions to the uncertainty proxies. That is, economic shocks predict significant and persistent increases in the proxies, but shocks to uncertainty proxies do not predict changes in macroeconomic conditions.

We conduct a battery of robustness checks. Since stock returns and consumer sentiment may contain expectations that are affected by uncertainty, we repeat the analysis with these two factors omitted. Our main findings remain strong and significant with alternative the macroeconomic factors. We also use different lag structures, using information from 12 lags, nine lags, six lags, and three lags. The results are robust to the choice of number of lags.

Our work is related to several papers investigating the the impact of the economic and institutional setting on inferences based on proxies and changes in law, tax and regulation. Jurado et al. (2015) argue that a large amount of variation in popular uncertainty proxies, including those based on textual analysis, is not driven by uncertainty and construct their own measure of macroeconomic uncertainty. Ludvigson et al. (2021a) examine the possible endo-

geneity of uncertainty and find that macroeconomic uncertainty appears to be an endogenous response to business cycles while their measure of financial uncertainty leads business cycles. Their results also suggest that policy uncertainty may result from business cycles rather than causing them. Karpoff and Wittry (2018) examine antitakeover laws and find that they are largely determined by institutional and political economy factors which are essentially omitted variables, and controlling for these factors can significantly change inferences about the causal effects of antitakeover laws. Carroll et al. (1994) demonstrate that while the Index of Consumer Sentiment (ICS) has strong predictive power for consumption on its own, the predictive power diminishes significantly when controlling for spending growth. Thus, the correlations between sentiment and spending may reflect that people cut spending and also report low sentiment responses when economic conditions are poor.

We contribute to the literature on the effects of political uncertainty by showing that popular proxies for policy uncertainty confound the effect of first-moment determinants of investment with second-moment effects. Proxies for policy uncertainty increase when economic conditions are relatively poor. Controlling for lagged economic conditions, the proxies lose their predictive power for investment and stock returns. Therefore, while the proxies do contain useful information about levels of uncertainty and how uncertainty evolves over time, they are not suitable for identifying the effects of uncertainty on investment because they are largely confounded with other important determinants of investment.

The rest of the paper is organized as follows. We introduce the various policy uncertainty proxies and other data using in the analysis in section 2. In section 3, we decompose the EPU

index into the macro and residual components and and examine which of these two components drives the predictive power for corporate investment. Section 4 presents the results from the SVAR estimation. We conclude in section 5.

## 2. Economic Policy Uncertainty Indices

Economic policy uncertainty is challenging to measure. Many studies have attempted to quantify policy-related economic uncertainty. These research efforts have largely relied on either political events, such as elections (Julio and Yook, 2012), or textual analyses of the digital archives of news articles (Baker et al., 2016; Caldara et al., 2020). Based on these measures, recent years have seen a growing trend in the use of policy uncertainty indices based on frequency counts or textual analyses of economic policy-related keywords in empirical studies.

We aim to investigate the effectiveness of text-based indices in identifying variations in economic policy uncertainty. To achieve this objective, we select various text-based economic policy uncertainty measures and examined their relationship with macroeconomic conditions. In our main analysis, we mainly focus on the most commonly used policy uncertainty indices, including the economic policy uncertainty (EPU and News-EPU) index developed by Baker et al. (2016), the world uncertainty index (WUI) by Ahir et al. (2022), the polarization (partisan) index by Azzimonti and Talbert (2014), the newspaper-based equity market volatility index (Policy-EMV) by Baker et al. (2019), and the monetary policy uncertainty index (MPU)

by Husted et al. (2018). We also examine the geopolitical risk index (GPR) by Caldara and Iacoviello (2022), the news implied volatility (NVIX) by Manela and Moreira (2017), the financial stress indicator (FSI) by Püttmann (2018), the trade policy uncertainty index (TPU) by Caldara et al. (2020), the migration fear index (MFU) and the migration policy uncertainty index (MiPU) based on Baker et al. (2016) in the robustness checks. Appendix B provides a description of these economic policy uncertainty measures.

The text-based indices discussed in this study share a common characteristic: they rely heavily on frequency counts of specific keywords in the digital archive of newspaper articles. One example is the EPU index developed by Baker et al. (2016), which is composed of three components and begins in January 1985.<sup>2</sup> The EPU is a weighted average of three components. The first component, with the highest weighting, is based on the frequency of keywords in newspaper articles. It is created by searching the digital archives of ten newspapers and monthly counting articles that include the terms "uncertainty" or "uncertain," "economic" or "economy," and one of several policy-related terms such as "Congress" or "White House." The keywords count is then adjusted based on newspaper volume across newspapers and time, and normalized to a mean of 101.8 from January 1985 through December 2009. The other three components of the EPU index primarily focus on uncertainty surrounding specific types of economic policies: uncertainty about future tax codes, disagreement among professional forecasters over future consumer prices, and disagreement with respect to government purchases. The first component of the EPU index (the news-based policy uncertainty index) is the most

<sup>&</sup>lt;sup>2</sup>Monthly data for the EPU index and its sub-components can be obtained from the authors' website: http://www.policyuncertainty.com/.

important component in the final version of Baker et al. (2016) and is also used as a measure of policy uncertainty.<sup>3</sup>

As described in Appendix B, most other indices rely on counting the frequency of specific combinations of keywords. For example, the Monetary Policy Uncertainty (MPU) index (Husted et al., 2018) is based on policy-related, monetary-related, and Federal-related keywords. Another commonly used measure of uncertainty related to economic policy is the polarization index developed by Azzimonti and Talbert (2014), which evaluates the frequency of news articles reporting disagreements among federal-level politicians within a given month. Although this index is not directly based on the counting of specific keywords, it assumes that certain patterns, such as an increased prevalence of disagreements or the use of particular keywords in news articles, indicate higher levels of policy uncertainty. This keyword-related construction scheme is used in all these text-based measures. All indices are obtained from the Federal Reserve Bank of Philadelphia or the authors' websites. Table 1 presents summary statistics of the policy uncertainty measures.

#### [Insert Table 1 Here]

In the following section, we aim to explore the potential impact of macroeconomic factors on economic policy uncertainty. We expect that economic conditions confound with policy uncertainty indices when conducting empirical studies that analyze the impact of economic policy uncertainty on corporate activities. We refrain from participating in the argument con-

<sup>&</sup>lt;sup>3</sup>In addition to being the component with the highest weighting (1/2), the news-based measure is also the most direct proxy for economic policy uncertainty in the model of Pástor and Veronesi (2013).

cerning the differentiation between economic uncertainty and policy uncertainty, or the extent to which policy uncertainty serves as a conduit for economic uncertainty to impact economic outcomes. Instead, our focus is on examining the effectiveness of text-based policy uncertainty indices in capturing policy-related uncertainty in empirical studies.

## 3. Policy Uncertainty and Macroeconomic Conditions

In this section, we aim to examine the relationship between policy uncertainty measures and macroeconomic conditions. To begin with, Figure 1 provides a comparison of three indices: the economic policy uncertainty (EPU) index, the partisan conflict (Partisan) index, and the monetary policy uncertainty (MPU) index.<sup>4</sup> The graph demonstrates that these indices display comparable patterns of fluctuation, with shared spikes occurring during events, such as wars and crises. This finding further supports the notion that policy uncertainty measures are related to a common set of information. In this study, we aim to explore whether macroeconomic conditions constitute an essential element in this set of information.

#### [Insert Figure 1 Here]

To further investigate the relationship between macroeconomic conditions and policy uncertainty indices, we examine their correlation coefficients. Table 2 displays the correlations between policy uncertainty indices, including the economic policy uncertainty (EPU

<sup>&</sup>lt;sup>4</sup>For brevity, only these indices are reported in this figure, but the comparison of other indices is also comparable.

and News-EPU) index developed by Baker et al. (2016), the polarization (partisan) index by Azzimonti and Talbert (2014), the geopolitical risk index (GPR) by Caldara and Iacoviello (2022), the monetary policy uncertainty index (MPU) by Husted et al. (2018), the news implied volatility (NVIX) by Manela and Moreira (2017), the financial stress indicator (FSI) by Püttmann (2018), the trade policy uncertainty index (TPU) by Caldara et al. (2020), the Newsbased equity market volatility index (Policy-EMV) by Baker et al. (2019), the migration policy uncertainty index (MiPU), the world uncertainty index (WUI) by Ahir et al. (2022), and the migration fear index (MFU) based on Baker et al. (2016), and the macroeconomic variables including wage, the consumer price index (CPI), employment, industrial production index (IndPro), consumers' sentiment (Sentiment), and GDP. And \* representing significance at the 1% level.

We find that most correlation coefficients are significant at the 1% level, indicating a strong correlation between text-based policy uncertainty measures and macroeconomic factors, suggesting that they capture comparable information.

#### [Insert Table 2 Here]

Recent studies have also employed textual analysis techniques to quantify economic conditions. For example, Bybee et al. (2020) propose indices as a proxy for people's attention to economic-related topics, such as "economic growth," "recession," and "bond yields." Bybee et al. (2020) estimate a topic model over the content of the Wall Street Journal articles from 1984 to 2017 and create a series of indices for various topics that precisely monitor economic

activities. They find this measure performs well in forecasting macroeconomic results. Relying on these topic attention proxies, we examine the correlation between text-based policy uncertainty and economic condition measures.

#### [Insert Table 3 Here]

Table 3 reports the correlation between policy uncertainty measures and attention to economic-related topics in business news (Bybee et al., 2020). Specifically, we focus on monthly reported policy uncertainty measures and business news' attention to topics such as "recession," "economic growth," "job cuts," and "bond yields." The results suggest that widely used policy uncertainty measures are highly correlated with text-based economic topic attention indices. For instance, the correlation coefficients between attention to recession and EPU, EMV, and MPU are 0.4437, 0.5844, and 0.1789, respectively, all of which are statistically significant at the 1% level.

#### [Insert Figure 2 Here]

In addition, Figure 2, which displays scatter plots of attention to the recession/economic growth and news-based EPU in panel A/B, provides additional evidence that economic policy uncertainty tends to be higher when individuals pay more attention to recession and economic growth. Taken together, our findings imply that journalists tend to report more on policy-related uncertainties when there is greater attention to the economic outlook.

## 3.1. Policy Uncertainty and Macroeconomic Forces

Given the strong correlation between economic policy uncertainty and macroeconomic factors, we employ the following regression to quantitatively examine whether observed macroeconomic conditions can explain policy uncertainty variations:

$$Y_t = a + \sum_{i=1}^{i=12} b_i' X_{t-i} + e_t \tag{1}$$

where  $Y_t$  represents the policy uncertainty measure,  $X_t$  is a vector of macroeconomic factors, and  $e_t$  denotes the regression residual. Our selection of variables on the right-hand side is based on previous studies that have examined the relationship between economic variables and uncertainty (Jurado et al., 2015; Bloom, 2009). We choose two sets of variables: the first set includes average employee wage (Wage), consumer price index (CPI), employment, industrial production index (IndPro), consumers' sentiment (Sentiment), and GDP. The second set comprises the S&P 500, federal fund rates (FFR), average employee wage (Wage), consumer price index (CPI), working hours (Hour), and consumers' sentiment (Sentiment). From variable set 1 and variable set 2, we select federal funds rate (FFR), average employee wage (Wage), and consumer price index (CPI) as variable set 3. Additionally, principal component analysis is conducted, and we choose the first three principal components, pc1, pc2, and pc3, as variable set 4. We are interested in the R-squared statistic of the model as it reflects the extent to which observable macroeconomic variables can explain fluctuations in economic policy uncertainty measures.

Table 4 presents our findings. The first row of Panel A shows the results obtained using variable set 1 to explain the proportion of variations in text-based economic policy uncertainty indices. The R-squared statistics indicate that a significant proportion of the variations in these measures can be attributed to observable macroeconomic factors. For instance, based on variable set 1, Equation 1 can explain approximately 69.1%, 66.4%, and 59.0% of the variations in the EPU index, the TPU index, and the FSI index, respectively. The proportion of variations explained varies from 33.1% (EMV) to 73.8% (MiPH).<sup>5</sup> As shown in the second row, Equation 1 can explain approximately 62.4%, 37.3%, and 61.3% of the variations in the EPU index, the TPU index, and the FSI index, respectively. The proportion of variations explained ranges from 38.4% (MPU) to 68.2% (Partisan). In the third row, we use three main macroeconomic factors on the right-hand side. Using variable set 3, Equation 1 can explain approximately 50.0%, 19.0%, and 48.5% of the variations in the EPU index, the TPU index, and the Partisan index, respectively. The R-squared statistics of Equation 1 range from 16.4% (MFU) to 50.2% (FSI). Lastly, we utilize the first three principal components of macroeconomic factors in the variable sets on the right-hand side. Employing variable set 4, Equation 1 can explain approximately 35.8%, 24.0%, and 26.4% of the variations in the EPU index, the MPU index, and the PolicyEMV index, respectively. The R-squared statistics range from 14.4% (TPU) to 49.2% (Partisan).

#### [Insert Table 4 Here]

<sup>&</sup>lt;sup>5</sup>The results obtained using variable set 2 are similar.

To gain a better understanding of how recent macroeconomic conditions impact policy uncertainty, we restrict our lagged macroeconomic variables to the past six months in Panel B and to the past three months in Panel C. In Panel B and C, although we observe a slight reduction in all R-squared statistics in Panel B and Panel C as we incorporate fewer lagged macroeconomic variables, observable past macroeconomic conditions still account for a significant proportion of the fluctuations in economic policy uncertainty. For instance, in Panel B, we find that six monthly lags of variable set 1 can explain approximately 65.2%, 61.3%, and 54.1% of the variations in the EPU index, the TPU index, and the FSI, respectively. These values are marginally lower than those in Panel A, which are 69.1%, 66.4%, and 59.0%, respectively. Similarly, in panel C, we find three lags of variable set 2 can explain approximately 63.6%, 30.1%, and 22.3% of the variations in the EPU index, the MPU index, and the Policy-EMV index, respectively. Overall, our findings suggest that nearly 50% of the variations in policy uncertainty indices can be explained by recent economic conditions.

## 3.2. Policy Uncertainty Decomposition

Utilizing the regression specification in Equation 1, it is possible to decompose each economic policy uncertainty index into two components: the macroeconomic-related component (e.g., PU\_Macro) and the residual policy uncertainty component (e.g., PU\_Residual). The macroeconomic-related component can be calculated as  $a + \sum_{i=1}^{i=12} b'_i X_{t-i}$ , which represents the proportion of the policy uncertainty index that can be explained by recent macroeconomic conditions. Then, the residual policy uncertainty component (e.g., PU\_Residual) is set to equal

 $e_t$ , representing the proportion of the policy uncertainty index that is unrelated to macroeconomic conditions.

In Figure 3, we present a comparison between the policy uncertainty indices (EPU) and its residual policy uncertainty component (EPU\_Residual). We find that the residual component of the EPU exhibits similar fluctuations as the original policy uncertainty measure. Particularly, the residual component still captures large uncertainty shocks over time, such as wars and crises. Nevertheless, it is crucial to note that the identification of the macroeconomic-related component and the residual component hinges on the choice of macroeconomic variables. Therefore, it is essential to interpret and analyze these components jointly with our selection of macroeconomic variables.

### [Insert Figure 3 Here]

## 4. Empirical Implications

When examining the impact of economic policy uncertainty, the relationship between policy uncertainty indices and observable macro variables presents an empirical challenge that can be viewed as an omitted variable problem. This issue raises questions about causal inference based on text-based economic policy uncertainty indices. In this section, we present the outcomes of different sets of tests that demonstrate the potential bias linked with the omitted variable problem in empirical testing.

Empirical studies that examine the impact of policy uncertainty usually follow the structure below:

$$Y_{i,t+l} = \alpha + \beta Index_t + \theta X_{i,t} + e_{i,t+l}$$
 (2)

The dependent variable  $Y_{i,t+l}$  represents economic outcomes such as corporate investment, while  $Index_t$  denotes the economic policy uncertainty index at time t, and  $X_{i,t}$  is a vector of control variables.<sup>6</sup> If  $Index_t$  has explanatory power to economic activities, the coefficient estimate of  $\beta$  should significantly differ from zero. Based on the results in the previous section, a considerable proportion of  $Index_t$  can be forecasted by past macroeconomic factors, which also potential determinants for corporate activities. Therefore, a better-specified empirical model should incorporate these omitted variables:

$$Y_{i,t+l} = \alpha + \beta Index_t + \theta X_{i,t} + \gamma O_t + e_{i,t+l}$$
(3)

where  $O_t$  is a vector of macroeconomic variables that contain first-moment effects on economic outcomes. To quantitatively compare the explanatory power attributable to the first-moment shocks from  $O_t$  and the explanatory power of economic policy uncertainty, we decompose  $Index_t$  into a macroeconomic variable-related component that related to past macroeconomic conditions (Index\_Macro) and a residual policy uncertainty component that unrelated

<sup>&</sup>lt;sup>6</sup>Depending on the dependent variables,  $X_{i,t}$  comprises various control variables at both the firm level (e.g., firm-level characteristics such as cash flows, Tobin's q, etc.) and the aggregate level (e.g., GDP).

to past economic conditions (Index\_Residual). Then, instead of the regression as Equation 3, we run the regression below:

$$Y_{i,t+l} = \alpha + \beta_1 Index\_Macro_t + \beta_2 Index\_Residual_t + \theta X_{i,t} + e_{i,t+l}$$
 (4)

where  $\beta_1$  represents the magnitude of effects from the macroeconomic-related component of economic policy uncertainty indices, that is, the marginal effects from the index that could be attributed to past economic conditions, while  $\beta_2$  represents the magnitude of marginal effects from the residual component of economic policy uncertainty index, i.e., the effect from "residual" uncertainty.

## 4.1. Policy Uncertainty and Corporate Investment

In this section, we investigate the importance of policy uncertainty in affecting corporate activities, with a specific focus on corporate investment. The real options theory emphasizes the trade-off between the benefits and costs of delaying investment. One line of theory underscores that, if investment projects are (partially) irreversible, firms have the incentive to postpone their investment during periods of high uncertainty (Rodrik, 1991; McDonald and Siegel, 1986; Dixit et al., 1994). However, some researchers have raised doubts about the advantages of delaying investment under uncertainty, given the multi-stage nature of investment projects. Thus, high uncertainty may expedite investment under certain circumstances (Bar-Ilan and Strange, 1996). Many empirical attempts have been made regarding this issue and

studies have found evidence supporting the notion that policy uncertainty suppresses corporate investment activities (Gulen and Ion, 2016).

Empirically, we utilize quarterly Compustat files for corporate investment and perform regressions following prior studies:

$$Y_{i,t+l} = a + \beta_1 P U_t + \beta_2 T Q_{i,t} + \beta_3 C F_{i,t} + \beta_4 S G_{i,t} + \beta_5 X_t + e_t$$
 (5)

where Y represents corporate investment rates, PU denotes the policy uncertainty measure. Our regression analysis includes controls consistent with prior studies, such as Tobin's q, cash flow, sales growth, GDP growth, election indicator, and a set of fiscal and calendar quarter indicators. Furthermore, we incorporate firm-fixed effects to account for unobservable firm-specific factors that may influence corporate investment.

#### [Insert Table 5 Here]

Table 5 employs several commonly used policy uncertainty indices as proxies for policy uncertainty. In Panel A, we utilize the economic policy uncertainty index (EPU and News-EPU) and the world uncertainty index (WUI) as the primary proxies for policy uncertainty. Specifically, columns (1)-(4) present results based on the economic policy uncertainty index (EPU), columns (5)-(8) report results based on the news-based economic policy uncertainty index (News-EPU), and columns (9)-(12) report results based on the world uncertainty index (WUI). In Panel B, we examine the partisan conflict index (Partisan) in columns (1) to (4), the policy-related EMV (Policy-EMV) in columns (5) to (8), and the monetary policy uncertainty

index (MPU) in columns (9) to (12). In all regressions, we include all control variables, calendar quarters dummies, and firm-level fixed effects.

Results in Table 5 indicate that policy uncertainty measures exhibit a negatively significant impact on corporate investment. For instance, columns (1) to (4) of Panel A present the outcomes based on the policy uncertainty measure EPU, with coefficients of -0.052, -0.051, -0.043, and -0.043, all of which are significant at the 1% level. Similarly, columns (9) to (12) report coefficients of the world uncertainty index (WUI) as -0.047, -0.055, -0.048, and -0.053, which are also significant at the 1% level. Consistently, we find that coefficients of Partisan, Policy-EMV, and MPU are all negatively significant. Overall, in line with the results reported in previous studies, the outcomes presented in Table 5 provide evidence that policy uncertainty exerts a negative impact on corporate investment.

## 4.2. Decomposition of Economic Policy Uncertainty Indices

In the previous section, we demonstrated that policy uncertainty has a depressing impact on corporate investment using various policy uncertainty measures. However, as policy uncertainty measures can be decomposed into a macroeconomic-related component and a residual policy uncertainty component, a natural followup question is, which component is more important? Specifically, can we consider the macroeconomic-related component as an omitted variable-related component that may undermine the causal inference based on the economic policy uncertainty indices?

To address this question, instead of relying on the regression specification in Equation 2, we perform regressions using the specification presented in Equation 8, with *PU* replaced by its macroeconomic-related component and residual component. Specifically, we first decompose each policy uncertainty measure into components based on the method outlined in Section 3.2. Then, we replace the original policy uncertainty index in Equation 8 with its macroeconomic-related component and residual component as below:

$$Y_{i,t+l} = a + \beta_1 PU Macro_t + \beta_2 PU Residual_t + \beta_3 TQ_{i,t} + \beta_4 CF_{i,t} + \beta_5 SG_{i,t} + \beta_6 X_t + e_t \quad (6)$$

where  $PU\_Macro_t$  represents the macroeconomic-related component of the policy uncertainty index, and  $PU\_Residual_t$  denotes the residual component. All other variables are the same as defined in Equation 8.

Table 6 presents the results. In Panel A, we employ the economic policy uncertainty index (EPU and News-EPU) and the world uncertainty index (WUI) as the main proxies for policy uncertainty. Columns (1)-(4) present findings based on the economic policy uncertainty index (EPU), columns (5)-(8) report results based on the news-based economic policy uncertainty index (News-EPU), and columns (9)-(12) present results based on the world uncertainty index (WUI). In Panel B, we examine the partisan conflict index (Partisan) in columns (1) to (4), the policy-related EMV (Policy-EMV) in columns (5) to (8), and the monetary policy uncertainty index (MPU) in columns (9) to (12).

[Insert Table 6 Here]

In Table 6, we find that coefficients on the macroeconomic-related components consistently drive the depressing impact of policy uncertainty. For instance, columns (1) to (4) of Panel A present the results based on EPU. The coefficients on its macroeconomic component, denoted as News-EPU\_Macro, are -0.088, -0.087, -0.089, and -0.077, all of which are significant at the 1% level. In contrast, the coefficients on the residual component are 0.008, 0.003, 0.013, and -0.003, which are either statistically insignificant or of the opposite sign. Consistently, we find that coefficients on the macroeconomic-related components of News-EPU, WUI, Partisan, Policy-EMV, and MPU are all negatively significant, while coefficients on their residual components are either statistically insignificant or positive. These results are consistent with the proposition that the explanatory power of economic uncertainty indices is confounded by recent macroeconomic conditions.<sup>7</sup>

An alternative approach to investigate the role of macroeconomic conditions is to perform regressions using the full model as presented in Equation 3. In particular, we augment the basic model in Equation 8 with lagged macroeconomic variables (*Z*):

$$Y_{i,t+l} = a + \beta_1 P U_t + \beta_2 T Q_{i,t} + \beta_3 C F_{i,t} + \beta_4 S G_{i,t} + \beta_5 X_t + \beta_6 Z_t + e_t$$
 (7)

<sup>&</sup>lt;sup>7</sup>In this table, we perform the decomposition procedure using variable set 1, which includes wage, CPI, employment, industrial production index, consumers' sentiment, and GDP. Conducting the decomposition based on variable set 2 produces similar results. Additionally, if the components are constructed based on six lagged macroeconomic factors, the findings remain qualitatively the same.

By conducting regressions based on the augmented model, we can explore whether the explanatory power of the policy uncertainty measures is partially confounded by macroeconomic conditions.

#### [Insert Table 7 Here]

Table 7 presents the results. In Panel A, columns (1)-(4) report results based on the economic policy uncertainty index (EPU), columns (5)-(8) present findings based on the news-based economic policy uncertainty index (News-EPU), and columns (9)-(12) present results based on the world uncertainty index (WUI) as the main explanatory variable. In Panel B, we examine the partisan conflict index (Partisan) in columns (1) to (4), the policy-related EMV (Policy-EMV) in columns (5) to (8), and the monetary policy uncertainty index (MPU) in columns (9) to (12). In both panels, we augment the baseline specification by including four quarterly lags of variable set 1, including wage, CPI, employment, industrial production index, consumers' sentiment, and GDP.

We find that coefficients on all policy uncertainty measures become either statistically insignificant or of substantially smaller magnitude compared to those in Table 5. These results are consistent with that in Table 6, where the explanatory power of economic uncertainty indices is mainly driven by the component related to past macroeconomic conditions. In conclusion, these results raise concerns about using text-based indices to capture exogenous variations in economic policy uncertainty, particularly in empirical studies that seek to draw causal inferences between economic policy uncertainty and its economic outcomes.

## 4.3. Aggregate Capital Investment and Economic Policy Uncertainty

Previous sections have demonstrated that causal inferences relying on text-based economic policy uncertainty measures are compromised by the fact that these measures can be predicted by observable macroeconomic conditions. We have shown that text-based economic uncertainty measures is associated with depressed corporate investments in the following periods. To understand the dynamic relationship between economic policy uncertainty and corporate investment, we employ VARs at the aggregate level and construct impulse response functions (IRFs) to qualitatively illustrate how corporate investments are affected by shocks to economic policy uncertainty. Specifically, we estimate a VAR model using the news-based EPU index, consumers' sentiment, the cross-sectional mean of Tobin's q, operating cash flow to total assets, sales growth, and the aggregated corporate investment. The VAR is based on quarterly data during 1985Q1 and 2022Q3, with four lags.<sup>8</sup>

The IRFs are presented in Figure 4. We find that, at the aggregate level, a one-unit shock to policy uncertainty, as measured by the News-based EPU index, significantly depresses capital investment for up to four quarters into the future. However, by conducting VARs using the macroeconomic-related component and the residual component of News-based EPU, we find that the IRFs based on shocks to the macroeconomic-related component have a significantly negative impact on capital investments for up to four quarters, while no such effect is observed from shocks to the residual component. These results further provide evidence that macroe-

<sup>&</sup>lt;sup>8</sup>The results of using eight lags are qualitatively the same.

conomic factors may compromise the causal inference based on text-based policy uncertainty measures.

#### [Insert Figure 4 Here]

## 5. Further Analysis

# 5.1. Lead-lag Effect between Macroeconomic Condition and Policy Uncertainty

To further investigate the dynamic relationship between macroeconomic conditions and economic policy uncertainty, we employ VARs to explore the dynamic responses of economic policy uncertainty indices to innovations in macro variables. We use a structural VAR model with event constraints to examine the lead-lag effects between macroeconomic conditions and policy uncertainty. Following prior literature (Mertens and Ravn, 2014; Ludvigson et al., 2021b), we construct a VAR model with constraints based on historical extreme events. The event constraints require identified shocks to have properties that resembles that shown by the historical data, which, in turn, narrow down the set of solutions that enables a better fit of the SVAR model. Specifically, we establish a VAR system with  $X_t = (M_{1t}, U_t, M_{2t})^t$ , where  $M_{1t}$  and  $M_{2t}$  represent macroeconomic variables, and  $U_t$  denotes the measure for policy uncertainty. We use six lags in the VAR model. With respect to event constraints, we restrict that innovations to macroeconomic variables in the VARs fall below the 85% of possible values

during the financial crisis in 2007 and 2009, the debt ceiling crisis in 2011, and the Covid-19 pandemic in 2020.<sup>9</sup>

By constructing IRFs based on the SVAR model, we quantitatively demonstrate the response of variables to shocks to the system. In Figure 6, we first construct a SVAR of X = (GDP, PU, S&P500)', where GDP, PU, and S&P500 represent GDP growth, policy uncertainty, and the monthly return of the S&P500, respectively. Panel A of displays the outcomes. The panels on top demonstrate the response of EPU to shocks on GDP and S&P500. The IRFs show that positive shocks to GDP or S&P500 lead to declined EPU, which lasts for approximately 30 perieds. In contrasts, the bottom panels demonstrate the IRFs of shocks to EPU. The results show that GDP and S&P500 do not change significantly following shocks on EPU. These findings support the conjecture that macroeconomic condition changes leads to fluctuations in policy uncertainty.

In panel B, we perform analysis based on an alternative system X = (IndPro, PU, FFR)', where IndPro, PU, and FFR represent the industrial production index, policy uncertainty, and Federal funds rates, respectively. Similarly, the results suggest that shocks to IndPro and FFR depress policy uncertainty, which shocks to EPU do not cause statistical significant changes in IndPro and FFR. These results are consistent in that better macroeconomic conditions (IndPro and FFR) lead to decreased policy uncertainty, but not vice versa.

#### [Insert Figure 6 Here]

<sup>&</sup>lt;sup>9</sup>Here, we restrict innovations to macroeconomic variables to be below their fifteenth percentile value, while using twenty-fifth percentile or tenth percentile cutoffs yields similar results.

Taken together, these results suggest that text-based policy uncertainty indices contain significant first-moment shocks from macroeconomic forces. A substantial portion of the variation in these indices can be predicted by observable macro variables. One plausible explanation is that PU\_Macro and PU\_Residual capture different sets of information: the macroeconomic-related component of a policy uncertainty index reflects the information set that coincides with past macroeconomic conditions, while the residual policy uncertainty captures unexpected variation in real policy uncertainty.

## 5.2. Asset Redeployability and Corporate Investment

Previous studies examining the impact of uncertainty on corporate investment often high-light the moderating effect of asset redeployability. According to the real options theory, firms may choose to postpone investments during periods of high uncertainty, particularly when investment projects are irreversible (McDonald and Siegel, 1986; Dixit et al., 1994). Subsequent empirical studies using various measures for asset irreversibility have found evidence that asset irreversibility and redeployability mitigate the negative effects of uncertainty (Gulen and Ion, 2016; Kim and Kung, 2017). Therefore, a natural follow-up question is whether the moderating effect of asset deployability is associated with its interaction with macroeconomic-related uncertainty or its correlation with the residual uncertainty component.

To investigate this question, we augment the original specification with a measure for asset redeployability and its interactions with the macro-related and residual components of policy uncertainty as below:

$$Y_{i,t+l} = a + \beta_1 PU \_Macro_t * Redeployability + \beta_2 PU \_Macro_t + \beta_3 PU \_Residual_t * Redeployability + \beta_4 PU \_Residual_t + \beta_5 Redeployability + \beta_6 TQ_{i,t} + \beta_7 CF_{i,t} + \beta_8 SG_{i,t} + \beta_9 X_t + e_t$$

$$(8)$$

where Y represents corporate investment rates,  $PU\_Macro$  and  $PU\_Residual$  denote the macroeconomic-related component and residual component of policy uncertainty measures. Redeployability represents asset redeployability, which we construct based on the usability of assets across all industries following Kim and Kung (2017). To construct the macroeconomic-related component and the residual uncertainty component, we perform the regression  $Y_t = a + \sum_{i=1}^{i=12} b'_i X_{t-i} + e_t$  based on variable set 1, while results based on variable set 2 are comparable. The results are presented in Table 9.

Table 9 presents the results. Panel A focuses on EPU (columns (1) to (4)), the news-based EPU measure (columns (5) to (8)), and the world uncertainty index (columns (9) to (12)). Panel B examines the partisan conflict index (columns (1) to (4)), policy-EMV (columns (5) to (8)), and the monetary policy uncertainty index (MPU) (columns (9) to (12)).

The variables of interest in this analysis are the interaction between the macroeconomicrelated component and asset redeployability, and the interaction between the residual uncertainty component and asset redeployability. Our results indicate that the coefficients on the interaction between the macroeconomic-related component and asset redeployability are statistically significant for most policy uncertainty measures. In contrast, the coefficients on the interaction between the residual uncertainty component and asset redeployability are all statistically insignificant. These findings further support the argument that the "macro" component of policy uncertainty measures are the driving factor that dampens corporate investment.

#### [Insert Table 9 Here]

## 6. Conclusion

Innovations in textual analysis have allowed for the construction of proxies for policy uncertainty, based largely on digital text from global media sources. These proxies provide important insights into how perceptions of policy uncertainty change over time. This paper examines the time-series variation in these text-based proxies for policy uncertainty. We find that between 50% and 70% of the variation in the policy uncertainty measures can be explained by lagged macroeconomic conditions, suggesting that policy uncertainty is endogenous, consistent with Pástor and Veronesi (2013).

Our results suggest that while these proxies contain valuable information about policy uncertainty, they are not suitable for identifying causal effects of uncertainty on firm decisions and asset prices. Statistical inferences about the effect of policy uncertainty are confounded because economic conditions predict future changes in the uncertainty proxies. We decompose the proxies into two components, one explained by recent macroeconomic activity and

the other containing variation orthogonal to economic conditions. The macro component is strongly, negatively correlated with corporate investment, merger volume, and stock returns, while the orthogonal component does not predict changes in investment, mergers or returns. In other words, the negative effect of uncertainty disappears when the regression includes lagged macroeconomic conditions as control variables. Note that this does not imply that policy uncertainty is not important. It does however mean that inferences based on the proxies are confounded by other important first-moment determinants of investment and returns.

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## Table 1 Summary Statistics

This table presents summary statistics for the main variables used in this study. Panel A presents summary statistics of macroeconomic variables, while Panel B displays summary statistics of firm-level variables. We mainly focus on the economic policy uncertainty (EPU and News-EPU) index (Baker et al., 2016), the polarization (partisan) index (Azzimonti and Talbert, 2014), the geopolitical risk index (GPR) (Caldara and Iacoviello, 2022), the monetary policy uncertainty index (MPU) (Husted et al., 2018), the news implied volatility (NVIX) (Manela and Moreira, 2017), the financial stress indicator (FSI) (Püttmann, 2018), the trade policy uncertainty index (TPU) (Caldara et al., 2020), the US equity market volatility index (Policy-EMV) (Baker et al., 2019), the migration policy uncertainty index (MiPU), the world uncertainty index (WUI) (Ahir et al., 2022), and the migration fear index (MFU) based on Baker et al. (2016). The sample period covers from January 1985 to September 2022, except for NVIX, which concludes in March 2016, and FSI, which concludes in December 2016.

VARIABLES	N	Mean	SD
Panel A: Macroeconomic Variables			
EPU	453	114.8	39.78
News-EPU	453	122.4	57.43
Partisan	453	110.7	33.96
GPR	453	100.4	48.15
MPU	453	114.0	62.08
NVIX	374	24.48	5.998
FSI	384	101.1	0.794
TPU	453	44.62	34.78
EMV	453	19.89	8.144
Policy-EMV	453	9.623	4.129
MiPU	393	165.0	141.8
WUI	151	0.162	0.155
MFU	131	110.3	40.68
Panel B: Firm-level Variables			
Investment(Capx/Lagged Total Assets)	378,410	0.016	0.021
TQ	378,410	1.988	1.580
CF	378,410	0.008	0.058
SG	378,410	0.200	0.699
PPE (PPE/Lagged Total Assets)	378,410	0.282	0.239

Table 2
Correlation Matrix

index (WUI) by Ahir et al. (2022), and the migration fear index (MFU) based on Baker et al. (2016). With respect to the macroeconomic variables, we use This table presents the correlations between policy uncertainty measures and macroeconomic variables. We mainly focus on the economic policy uncertainty (EPU and News-EPU) index developed by Baker et al. (2016), the polarization (partisan) index by Azzimonti and Talbert (2014), the geopolitical risk index (GPR) by Caldara and Iacoviello (2022), the monetary policy uncertainty index (MPU) by Husted et al. (2018), the news implied volatility (NVIX) by Manela and Moreira (2017), the financial stress indicator (FSI) by Püttmann (2018), the trade policy uncertainty index (TPU) by Caldara et al. (2020), the News-based equity market volatility index (Policy-EMV) by Baker et al. (2019), the migration policy uncertainty index (MiPU), the world uncertainty several indices that reflect economic conditions, including wage, consumer price index (CPI), employment, industrial production index (IndPro), consumers' sentiment (Sentiment), and GDP. The sample period spans from January 1985 to September 2022, with the exception of NVIX, which concludes in March 2016, and FSI, which concludes in December 2016. Asterisks (\*) indicate significance at the 1% level.

	EPU	News-EPU Partisan	Partisan	GPR	MPU	NVIX	FSI	TPU	EMV	Policy-EMV	MiPU	WUI	MFU	Wage	CPI	Employment	IndPro	Sentiment	GDP
EPU	1																		
NewsEPU	0.9214*	1																	
Partisan	0.2392*	0.2483*	-																
GPR	0.1317*	0.1584*	-0.0751	-															
MPU	0.3360*	0.4847*	0.2323*	0.3014*	-														
NVIX	0.6145*	0.6548*	0.2193*	0.073	0.125	-													
FSI	0.1682*	0.2915*	-0.4617*	0.1663*	0.0592	0.4224*	-												
TPU	0.2059*	0.3280*	0.3563*	-0.013	0.3909*	-0.2360*	-0.105	-											
EMV	0.3727*	0.4826*	-0.1877*	-0.0027	0.2321*	0.5583*	0.6384*	-0.0152	-										
Policy-EMV	0.3805*	0.5041*	-0.1368*	0.0544	0.2606*	0.5542*	0.6456*	0.0551	0.9718*	1									
MiPU	0.4609*	0.5515*	0.5664*	-0.0287	0.3021*	0.2293*	-0.3084*	0.4516*	-0.0173	0.0133	-								
WUI	0.3537*	0.4196*	0.2071*	0.114	0.3284*	0.3338*	0.04	0.2744*	0.2154*	0.2691*	0.2006*	-							
MFU	-0.0164	0.1353*	*0968:0	0.1958*	0.3400*	-0.1922*	-0.109	0.4465*	-0.0864	-0.0435	0.5974*	0.0935	-						
Wage	0.3691*	0.4682*	0.4769*	-0.0082	0.3637*	0.3205*	-0.111	0.2744*	0.1796*	0.2071*	0.5766*	0.4476*	0.3117*	-					
CPI	0.3207*	0.4280*	0.4556*	-0.0161	0.3490*	0.2936*	-0.0912	0.2469*	0.1828*	0.2103*	0.5533*	0.4347*	0.3014*	0.9944*	-				
Employment	0.1659*	0.3333*	0.3703*	-0.0049	0.3708*	0.2315*	0.0029	0.2643*	0.2296*	0.2658*	0.4683*	0.4248*	0.3849*	0.9504*	0.9630*	-			
IndPrio	0.111	0.2563*	0.3131*	-0.0233	0.2886*	0.2032*	-0.0091	0.1415*	0.2323*	0.2660*	0.3030*	0.3943*	0.2434*	0.9154*	0.9349*	0.9772*	1		
Sentiment	-0.5338*	-0.3785*	-0.0637	-0.1649*	-0.0818	-0.4464*	-0.1485*	0.1766*	-0.1434*	-0.1237*	-0.0706	-0.1266*	0.2321*	-0.3150*	-0.3158*	-0.1391*	-0.1321*	-	
GDP	0.3090*	0.4224*	0.4550*	-0.0149	0.3551*	0.2793*	-0.0961	0.2618*	0.1829*	0.2121*	0.5485*	0.4395*	0.3212*	*0966.0	*240.0	*400.0	0.9428*	-0.2813*	-

Table 3
Correlation Between Topics Attention and Economic Policy Uncertainty

This table presents the correlations between policy uncertainty measures and business attention on topics in news articles (Bybee et al., 2020). Our main focus is on the monthly reported policy uncertainty measures used in this study and indices that measure business news' attention to economic-related topics, such as "recession," "economic growth," "job cuts," "bond yields," etc.. We restrict the sample period to between January 1985 and June 2017 to match the sample period of the topic attention. Asterisks (\*) indicate significance at the 1% level.

	EPU	News-EPU	Partisan	EMV	MPU	Recession	Growth	JobCuts	BondYields	Elections	FinancialCrisis
EPU	1										
News-EPU	0.9131*	1									
Partisan	0.3013*	0.3463*	1								
EMV	0.3469*	0.4825*	-0.1368*	1							
MPU	0.3644*	0.5244*	0.2323*	0.2606*	1						
Recession	0.4437*	0.5287*	-0.0479	0.5844*	0.1789*	1					
Growth	0.4086*	0.4226*	0.3461*	0.1860*	0.105	0.5477*	1				
JobCuts	0.2943*	0.2395*	0.1445*	-0.110	-0.0512	0.2160*	0.2545*	1			
BondYields	0.2644*	0.3444*	0.5620*	0.117	0.2039*	0.2427*	0.5113*	0.127	1		
Elections	0.1932*	0.2699*	0.4061*	0.114	0.2335*	0.2734*	0.3436*	-0.0419	0.3706*	1	
FinancialCrisis	0.4440*	0.4130*	0.2590*	0.3590*	-0.0247	0.6744*	0.6208*	0.124	0.4592*	0.4138*	1

# Table 4 Policy Uncertainty Measures and Macroeconomic Factors

This table presents the results of the regression analysis in which policy uncertainty measures are regressed on sets of macroeconomic variables using the specification as follows:  $Y_t = a + \sum_{i=1}^{i=12} b_i' X_{t-i} + e_t$ , where  $Y_t$  is the policy uncertainty measure,  $X_t$  is a series of macroeconomic variables, and  $e_t$  is the regression residual.

The reported R-squared statistics represent the variations explained by the macroeconomic variables. Policy uncertainty measures presented in this table are the economic policy uncertainty (EPU and News-EPU) index (Baker et al., 2016), the polarization (partisan) index (Azzimonti and Talbert, 2014), the geopolitical risk index (GPR) (Caldara and Iacoviello, 2022), the monetary policy uncertainty index (MPU) (Husted et al., 2018), the news implied volatility (NVIX) (Manela and Moreira, 2017), the financial stress indicator (FSI) (Püttmann, 2018), the trade policy uncertainty index (TPU) (Caldara et al., 2020), the US equity market volatility index (Policy-EMV) (Baker et al., 2019), the migration policy uncertainty index (MiPU), the world uncertainty index (WUI) (Ahir et al., 2022), and the migration fear index (MFU) based on Baker et al. (2016).

This table examines four sets of macroeconomic variables. The first variable set includes average employee wage (Wage), consumer price index (CPI), employment, industrial production index (IndPro), consumers' sentiment (Sentiment), and GDP. The second set comprises the S&P 500, federal fund rates (FFR), average employee wage (Wage), consumer price index (CPI), working hours (Hour), and consumers' sentiment (Sentiment). The third set consists of federal fund rates (FFR), average employee wage (Wage), and consumer price index (CPI). At last, the fourth set is composed of the first three principal components of all factors in variable sets 1 and 2.

In panel A, we use twelve monthly lagged values of macroeconomic variables as explanatory variables in columns 1 through 8 (monthly reported indices) and four quarterly lags in columns 9-13 (quarterly reported indices). In panels B and C, we include 6 and 3 monthly (2 and 1 quarterly) lags, respectively.

		EPU	News EPU	MPU	TPU	FSI	GPR	Partisan	NVIX	EMV	Policy- EMV	WUI	MiPU	MFU
Number of lags	VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
						Pa	nel A							
12	Set 1	69.1%	64.1%	39.6%	66.4%	59.0%	28.6%	67.2%	68.7%	33.1%	35.4%	34.7%	73.8%	50.6%
12	Set 2	62.4%	57.8%	38.4%	37.3%	61.3%	39.4%	68.2%	51.3%	41.1%	40.6%	41.5%	63.4%	39.2%
12	Set 3	50.0%	48.1%	23.6%	19.0%	50.2%	20.3%	48.5%	32.3%	19.0%	17.8%	25.6%	44.6%	16.4%
						Pa	nel B							
6	Set 1	65.2%	58.2%	34.5%	61.3%	54.1%	22.2%	60.3%	61.6%	26.6%	28.7%	26.0%	69.0%	45.0%
6	Set 2	58.9%	52.3%	31.3%	28.2%	51.1%	23.8%	61.2%	39.8%	35.1%	35.4%	32.4%	57.2%	27.1%
6	Set 3	45.8%	43.8%	21.1%	18.1%	34.0%	14.7%	41.3%	26.7%	14.7%	13.9%	24.1%	41.8%	15.1%
						Pa	nel C							
3	Set 1	63.6%	55.8%	30.1%	58.7%	49.5%	15.9%	52.6%	59.3%	22.3%	23.7%	23.3%	65.7%	43.3%
3	Set 2	57.8%	49.1%	25.4%	24.8%	45.8%	15.4%	57.6%	34.3%	30.5%	29.9%	25.6%	55.7%	25.9%
3	Set 3	43.0%	41.0%	18.1%	17.4%	19.5%	9.8%	34.1%	22.2%	9.5%	9.1%	20.6%	41.0%	14.1%

# Table 5 Policy Uncertainty and Capital Investments

This table presents the results of regressions that examine the relationship between policy uncertainty measures and capital investments. The regression model is specified following prior studies:

$$Y_{i,t+1} = a + \beta_1 P U_t + \beta_2 T Q_{i,t} + \beta_3 C F_{i,t} + \beta_4 S G_{i,t} + \beta_5 X_t + e_t$$

where Y represents corporate investment rates, PU denotes the policy uncertainty measure, and TQ, CF, and SG represent firm-level Tobin's Q, cash flow, and sales growth, respectively. The model also includes control variables, including GDP growth, election dummies, and a series of calendar quarter dummies. In panel A, we mainly examine the economic policy uncertainty index (EPU and News-EPU) and the world uncertainty index (WUI). Specifically, columns (1)-(4) report results based on the economic policy uncertainty index (EPU), columns (5)-(8) present results based on the news-based economic policy uncertainty index (News-EPU), and columns (9)-(12) report results based on the world uncertainty index (WUI), respectively. In panel B, we examine the partisan conflict index (Partisan) in columns (1) to (4), policy-related EMV (Policy-EMV) in columns (5) to (8), and the monetary policy uncertainty index (MPU) in columns (9) to (12). In all regressions, we include firm-level and macroeconomic control variables, calendar quarter dummies, and firm-level fixed effects. Standard errors are clustered at the firm and year levels, and robust t-statistics are reported in parentheses, with \*, \*\*, and \*\* indicating significance at the 10%, 5%, and 1% levels, respectively.

Panel A:												
		Based on EPU	n EPU			Based on ]	Based on News-EPU			Based on WUI	IUW nc	
	(1)	(2)	(3)	(4)	(5)	(9)	(7)	(8)	(6)	(10)	(11)	(12)
	$Inv_{t+1}$	$Inv_{t+2}$	$Inv_{t+3}$	$Inv_{t+4}$	$Inv_{t+1}$	$Inv_{t+2}$	$Inv_{t+3}$	$Inv_{t+4}$	$Inv_{t+1}$	$Inv_{t+2}$	$Inv_{t+3}$	$Inv_{t+4}$
EPU	-0.052***	-0.051***	-0.043***	-0.043***								
	(-3.64)	(-3.62)	(-3.23)	(-3.17)								
News-EPU					-0.061***	-0.064***	-0.058***	-0.060***				
					(-4.76)	(-5.23)	(-4.83)	(-4.73)				
WUI									-0.047***	-0.055***	-0.048***	-0.053***
									(-4.80)	(-5.31)	(-4.70)	(-4.81)
Adjusted R-Squared	0.42	0.43	0.43	0.43	0.42	0.43	0.43	0.43	0.42	0.43	0.43	0.43
Effect as Pct of Avg. Inv.	4.99%	3.68%	4.20%	3.41%	1.71%	3.02%	2.89%	4.07%	3.58%	4.19%	3.66%	4.04%
Controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Quarter Dummies	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	¥
Cluster	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year
Number of Obs	378245	361420	345961	333383	378245	361420	345961	333383	378245	361420	345961	333383

Firm Year 333383 -0.042\*\*\* (-3.19) 0.43 3.20% (12)  $Im_{t+4}$ Firm Year 345961 -0.038\*\* (-2.67) (11)  $Im_{t+3}$ 0.43 Based on MPU Firm Year Firm Year 378245 378245 -0.030\*\* (-2.69) (10)  $Inv_{t+2}$ 0.42 2.29% -0.030\*\* (-2.69)  $Inv_{t+1}$ 0.42 2.29% 6 Firm Year 333383 -0.031\*\*(-2.54) 0.43  $(8) Im_{t+4}$ Firm Year Firm Year 361420 345961 -0.022\*\* Based on Policy-EMV (-2.20)(7)  $Im_{t+3}$ 0.43 -0.023\*\* (-2.05) 9  $Inv_{t+2}$ 0.43 Firm Year 378245 -0.013 (-1.26) 0.42 (5)  $Imv_{t+1}$  
 Firm Year
 Firm Year
 Firm Year
 Firm Year

 378245
 361420
 345961
 333383
 0.43  $-0.026^{*}$ (-1.89) $(4) Im_{t+4}$ 0.43 -0.032\*\* (-2.49)  $(3) Im_{t+3}$ Based on Partisan -0.028\*\* (-2.27)(2)  $Imv_{t+2}$ 0.43 -0.038\*\*\* 0.42 (-3.04)  $Inv_{t+1}$  $\widehat{\exists}$ Effect as Pct of Avg. Inv. Adjusted R-Squared Quarter Dummies Number of Obs Plicy-EMV Firm FE Controls Cluster Partisan MPU

Panel B:

Table 6 Components of Policy Uncertainty and Corporate Investments

the two components, we perform the regression:  $Y_t = a + \sum_{i=1}^{i=1} b_i' X_{t-i} + e_t$ , where  $Y_t$  is the policy uncertainty measure,  $X_t$  is a series of macroeconomic variables, and  $e_t$  is the regression residual. Then, the  $e_t$  is defined as the residual policy uncertainty (PU\_Residual) and  $\sum_{i=1}^{i=1} b_i' X_{t-i}$  is defined as the with each economic policy uncertainty measure replaced by its macroeconomic-related component and the residual uncertainty component. To construct This table re-examines the relationship between policy uncertainty and capital investments. We repeat the baseline specification the same as that in Table 5, macroeconomic-related policy uncertainty (PU\_Macro). We here perform the decomposition procedure using variable set 1, which includes Wage, CPI, Employment, IndPro, Sentiment, and GDP. Performing the decomposition based on variable set 2 provides similar results.

EPU), and columns (9)-(12) report results based on the world uncertainty index (WUI), respectively. In panel B, we examine the partisan conflict index to (12). All control variables, calendar quarter dummies, and firm-level fixed effects are included in all regressions, and standard errors are clustered at the In Panel A, we examine the economic policy uncertainty index (EPU and News-EPU) and the world uncertainty index (WUI). Columns (1)-(4) report results based on the economic policy uncertainty index (EPU), columns (5)-(8) present results based on the news-based economic policy uncertainty index (News-(Partisan) in columns (1) to (4), policy-related EMV (Policy-EMV) in columns (5) to (8), and the monetary policy uncertainty index (MPU) in columns (9) firm and year levels. Robust t-statistics are reported in parentheses, with \*, \*\*, and \*\* indicating significance at the 10%, 5%, and 1% levels, respectively.

		Based on EPU	on EPU			Based on News-EPU	News-EPU			Based on WUI	n WUI	
	$Inv_{r+1}$	$(2)$ $Inv_{t+2}$	$(3)$ $Inv_{t+3}$	$(4) Inv_{t+4}$	$(5)$ $Inv_{t+1}$	(6) Inv <sub>t+2</sub>	$(7)$ $Inv_{t+3}$	$(8) Inv_{t+4}$	$(9)$ $Inv_{t+1}$	$(10)$ $Inv_{t+2}$	$(11)$ $Inv_{t+3}$	$(12)$ $Inv_{t+4}$
PU_Macro	-0.068***	-0.064***	-0.063***	-0.050***								
PU_Residual	0.009	0.005	0.016**	-0.002								
PU_News_Macro					-0.088***	-0.087***	-0.089***	-0.077***				
PU_News_Residual					0.008	0.003	$0.013^{*}$	-5.23)				
					(1.23)	(0.46)	(1.96)	(-0.33)				
WUI_Macro									-0.108***	-0.113***	-0.113***	-0.105***
									(-10.97)	(-11.59)	(-10.78)	(-9.27)
WUI_Residual									-0.004	-0.009	-0.002	-0.011
									(-0.55)	(-1.28)	(-0.29)	(-1.43)
Adjusted R-Squared	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.44	0.43	0.43	0.44	0.44
Controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Quarter Dummies	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Cluster	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year
Number of Obs	378245	361420	345961	333383	378245	361420	345961	333383	377902	361076	345628	333057

Panel A:

Firm Year 333383 -0.075\*\*\* (-4.74) (-0.95) $Inv_{t+4}$ 0.43 (12) 
 Firm Year
 Firm Year
 Firm Year
 Firm Year
 Firm Year

 345961
 333383
 378245
 361420
 345961
 -0.074\*\*\* (-4.44)  $Inv_{t+3}$ (-0.46)(11) 0.43 Based on MPU -0.059\*\*\* (-3.49) -0.015 (-1.60)  $Inv_{t+2}$ (10) 0.43 -0.053\*\*\* (-3.27) (-0.34) $Inv_{t+1}$ 0.42 6 -0.052\*\*\* (-5.25)  $Inv_{t+4}$ 0.006 (0.77) 0.43 8 -0.053\*\*\* Based on Policy-EMV (-5.83) 0.017\*\*\*  $Inv_{t+3}$ (3.06) 0.43 6 Firm Year Firm Year Firm Year 333383 378245 361420 -0.044\*\*\* (-4.21)  $Inv_{t+2}$ 0.008 0.43 9 -0.036\*\*\* (-3.16) 0.013\*\* (2.23)  $Inv_{t+1}$ 0.42 (5) -0.029\* (-1.81) -0.005 (-0.47)  $Inv_{t+4}$ 0.43 4 Firm Year 345961 -0.036\*\* (-2.43) -0.006 (-0.55)  $Inv_{t+3}$ 0.43 Based on Partisan (3) Firm Year 361420 -0.041\*\*\*  $Inv_{t+2}$ (-2.74) 0.004 (0.29) 0.43 9 Firm Year 378245 -0.047\*\*\* (-3.35) -0.003 (-0.26)  $Inv_{t+1}$ 0.42  $\exists$ Policy-EMV\_Residual Policy-EMV\_Macro Adjusted R-Squared Quarter Dummies Partisan\_Residual Partisan\_Macro Number of Obs MPU\_Residual MPU\_Macro Controls Firm FE Cluster

Panel B:

Policy Uncertainty and Capital Investments with Lagged Macroeconomic Controls Table 7

This table re-examines the relationship between policy uncertainty and capital investments by augmenting the baseline specification with lagged macroeconomic variables. We here augment the baseline specification with four quarterly lags of variable set 1, which includes wage, CPI, employment, IndPro, Sentiment, and GDP. Augmented models with variable set 2 provide similar results.

and columns (9)-(12) report results based on the world uncertainty index (WUI), respectively. In panel B, we examine the partisan conflict index (Partisan) All control variables, calendar quarters dummies, and firm-level fixed effects are included in all regressions, and standard errors are clustered at the firm and Panel A examines the economic policy uncertainty index (EPU and News-EPU) and the world uncertainty index (WUI). Columns (1)-(4) report results based on the economic policy uncertainty index (EPU), columns (5)-(8) present results based on the news-based economic policy uncertainty index (News-EPU), in columns (1) to (4), policy-related EMV (Policy-EMV) in columns (5) to (8), and the monetary policy uncertainty index (MPU) in columns (9) to (12). year levels. Robust t-statistics are reported in parentheses, with \*, \*\*, and \*\*\* indicating significance at the 10%, 5%, and 1% levels, respectively.

Panel A:												
		Based on EPU	on EPU			Based on News-EPU	News-EPU			Based on WUI	m WUI	
	$(1) Inv_{t+1}$	(2) Inyr+2	(3) Inv <sub>i+3</sub>	(4) Inv <sub>1+4</sub>	$(5)$ $Iny_{t+1}$	(6)	(7) Inv:+3	(8) Inv <sub>r+4</sub>	(9) Inv <sub>r+1</sub>	$(10)$ $Iny_{t+2}$	(11) Invr+3	(12) Inv <sub>2+4</sub>
EPU	0.001	-0.008	0.007	-0.013	:	-	-	-		1-	-	
News-EPU	(0.11)	(-0.82)	(0.64)	(-1.03)	-0.002	-0.012	-0.000	-0.015				
					(-0.31)	(-1.67)	(-0.06)	(-1.64)				
WUI									-0.003	-0.010**	-0.004	-0.012*
									(-0.82)	(-2.05)	(-0.72)	(-1.97)
Adjusted R-Squared	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46
Controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Macro Controls	4 lags	4 lags	4 lags	4 lags	4 lags	4 lags	4 lags	4 lags	4 lags	4 lags	4 lags	4 lags
Quarter Dummies FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Cluster	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year
Number of Obs	305371	292984	281268	271366	305371	292984	281268	271366	305371	292984	281268	271366

 
 Firm Year
 <t -0.013\*\*(-2.37) 4 lags 0.46 (12)  $Imv_{t+4}$ -0.008  $Im_{t+3}$ Y 4 lags 0.46 MPU -0.019\*\*\* (-3.90) Y 4 lags  $Inv_{t+2}$ 0.46 -0.000 (-0.03)  $Inv_{t+1}$ Y 4 lags Y 0.46 6 -0.000 Y 4 lags Y Y 0.46 8 Y 4 lags Y 0.009\*\*  $Inv_{t+3}$ 0.46 6 PolicyEMV -0.001 (6)  $Im_{t+2}$ Y 4 lags Y 0.46 0.009\*\* (2.39) Y 4 lags Y Y (5)  $Imv_{t+1}$ 0.46  $Inv_{t+4}$ -0.005 (-0.62) Y 4 lags 0.46 4 Y 4 lags Y -0.001  $Inv_{t+3}$ 0.46 (3) Partisan 0.016\*\* Y 4 lags Y (2)  $Inv_{t+2}$ 0.46 Y 4 lags  $Inv_{t+1}$ 0.009 (1.39) 0.46  $\equiv$ Quarter Dummies FE Adjusted R-Squared Macro Controls Number of Obs Policy-EMV Firm FE Controls Partisan Cluster MPU

Panel B:

Table 8
Policy Uncertainty and Capital Redeployability

This table examines the impact of asset redeployability on how policy uncertainty depresses corporate investment. We augment Equation 4 with a measure of asset redeployability and its interaction with macro-related components and residual uncertainty components of policy uncertainty indices. We here measure asset redeployability based on the usability of assets across all industries following Kim and Kung (2017) To construct the two components, we perform the regression:  $Y_t = a + \sum_{i=1}^{j=12} b_i' X_{t-i} + e_t$ , where  $Y_t$  is the policy uncertainty measure,  $X_t$  is a series of macroeconomic variables, and  $e_t$  is the regression residual. Then,  $e_t$  is defined as the residual policy uncertainty (e.g., PU\_Residual) and  $\sum_{i=1}^{i=12} b_i' X_{t-i}$  is defined as the macroeconomic-related policy uncertainty (e.g., PU\_Macro). We perform the decomposition procedure using variable set 1, which includes wage, CPI, employment, IndPro, Sentiment, and GDP. Performing the decomposition based on variable set 2 provides similar results.

and the monetary policy uncertainty index (MPU) (columns (9) to (12)). All control variables, calendar quarter dummies, and firm-level fixed effects are included in all regressions, and standard errors are clustered at the firm and year levels. Robust t-statistics are reported in parentheses, with \*, \*\*, and \*\*\* In Panel A, we focus on EPU (columns (1) to (4)) and the news-based EPU measure (columns (5) to (8)), and the world uncertainty index (WUI) (columns (9) to (12)). In Panel B, we examine the partisan conflict index (Partisan) (columns (1) to (4)), the policy-related EMV (Policy-EMV) (columns (5) to (8)), indicating significance at the 10%, 5%, and 1% levels, respectively.

		Based on EPU	ın EPU			Based on News-EPU	News-EPU			Based on WUI	n WUI	
	$Inv_{t+1}$	$Inv_{t+2}$	$\lim_{t \to 3} (3)$	$Iw_{t+4}$	$Im_{l+1}$	$Inv_{t+2}$	$Inv_{t+3}$	$Inv_{t+4}$	$Im_{t+1}^{(9)}$	$\frac{(10)}{Inv_{t+2}}$	(11) Inv <sub>t+3</sub>	$\frac{(12)}{Imv_{t+4}}$
EPU_Macro	-0.172***	-0.170***	-0.169***	-0.133***								
EPU_Macro * Redeployability	0.380***	0.392***	0.380***	0.323***								
EPU_Residual	0.019	(4.07) 0.023	0.035*	0.020								
EPU_Residual * Redeployability	-0.008 -0.008	-0.028 -0.028	-0.032	-0.035 -0.035								
News-EPU_Macro	(-0.22)	(-0.70)	(-0.70)	(-0.72)	-0.192***	-0.204***	-0.219***	-0.175***				
News-EPU_Macro * Redeployability					0.390***	0.435***	0.445***	0.379***				
News-EPU_Residual					(4.23) 0.013	0.001	(4.83) 0.021	(3.91) -0.004				
News-EPU_Residual * Redeployability					(0.73) -0.000 -0.000	0.021	(0.88) -0.009	0.023				
WULMacro					(-0.00)	(0:00)	(-0.13)	(15.0)	-0.170***	-0.186***	-0.159***	-0.132***
WULMacro * Redeployability									0.207*	0.235**	0.155	0.100
WULResidual									(2.01) -0.015	(2.31) -0.024	(1.62) -0.014	(0.98) -0.046
WULResidual * Redeployability									0.041	0.059	0.052	(-1.98) 0.121
Redeployability	-0.656*** (-4.01)	-0.690*** (-4.33)	-0.726*** (-4.41)	-0.710*** (-4.35)	-0.617*** (-3.76)	-0.637*** (-3.96)	-0.666*** (-4.04)	-0.658*** (-4.01)	-0.736*** (-4.29)	-0.775*** (-4.76)	-0.848*** (-5.00)	-0.840*** (-4.91)
Adjusted R-Squared	0.43	0.43	0.43	0.44	0.43	0.43	0.43	0.44	0.43	0.44	0.44	0.44
Controls	Y	Y	Ϋ́	Y	Y	Y	Y	Y	Y	Y	Ϋ́	Y
Cuatrer Dummes Firm FE	- γ	- >-	- >-	- >-	- >-	- >-	- >-	- <b>&gt;</b>	- >-	- >-	- >-	Υ
Cluster Number of Obs	Firm Year 325648	Firm Year 316007	Firm Year 305839	Firm Year 296405	Firm Year 325648	Firm Year 316007	Firm Year 305839	Firm Year 296405	Firm Year 325309	Firm Year 315668	Firm Year 305510	Firm Year 296081

Panel A:

I allel D.												
		Based on	Based on Partisan			Based on P	Based on Policy-EMV			Based on MPU	n MPU	
	$Im_{t+1}$	$\lim_{Inv_{t+2}} (2)$	$Inv_{t+3}$	$Inv_{t+4}$	$Inv_{t+1}$	$Inv_{t+2}$	$Inv_{t+3}$	(8) <i>Im</i> <sub>r+4</sub>	$Im_{t+1}^{(9)}$	$\lim_{t \to 2} Imv_{t+2}$	$Im_{r+3}$	$\frac{(12)}{Imv_{t+4}}$
Partisan_Macro	-0.052	-0.035	-0.032	-0.022								
Partisan_Macro * Redeployability	0.079	0.058	0.061	0.070								
Partisan_Residual	(0.62) -0.032	0.000	-0.031 -0.031	-0.013								
Partisan_Residual * Redeployability	0.081	0.022	0.075	0.051								
PolicyEMV_Macro	(1.37)	(0.57)	(1.14)	(76.0)	-0.035	-0.062**	-0.092***	-0.089***				
PolicyEMV_Macro * Redeployability					0.020	0.077	0.130*	0.128				
PolicyEMV_Residual					(0.30) 0.015	(1.16) -0.002	(1./6) 0.015	0.008 0.008				
PolicyEMV_Residual * Redeployability					(0.88) 0.014	0.044	0.019	0.010				
MPU_Macro					(0.20)	(0.97)	(0.40)	(0.10)	0.067	0.025	-0.051	-0.065
MPU_Macro * Redeployability									(1.14) -0.151	(0.45) -0.048	0.082	0.118
MPU_Residual									-0.027	-0.054* -0.054*	-0.013	(0.89) -0.017
MPU_Residual * Redeployability									0.069	0.113	0.037	0.038
Redeployability	-0.743*** (-4.42)	-0.793*** (-4.82)	-0.817*** (-4.73)	-0.782*** (-4.58)	-0.767*** (-4.69)	-0.804*** (-5.24)	-0.829*** (-5.29)	-0.803*** (-5.18)	-0.827*** (4.79)	-0.828*** (-4.87)	-0.804*** (-4.59)	(0.31) -0.763*** (-4.32)
Adjusted R-Squared	0.43	0.43	0.43	0.44	0.43	0.43	0.43	0.44	0.43	0.43	0.43	0.44
Controls Onarter Dummies	<b>&gt;&gt;</b>	>>	>>	>>	>>	>>	>>	>>	<b>&gt;</b> >	<b>&gt;&gt;</b>	>>	>>
Firm FE	<b>- &gt;</b> -	·	<b>,</b> Y	<b>,</b> Y	<b>,</b> >-	<b>,</b> Y	· <b>&gt;</b> '	· >- <sup>1</sup>	· <b>&gt;</b>	<b>,</b> Y	· >- <sup>1</sup>	· <b>&gt;</b> '
Cluster Number of Obs	Firm Year 325648	Firm Year 316007	Firm Year 305839	Firm Year 296405	Firm Year 325648	Firm Year 316007	Firm Year 305839	Firm Year 296405	Firm Year 325648	Firm Year 316007	Firm Year 305839	Firm Year 296405

Table 9
Additional Results on M&A

Panel A: Economic policy uncertainty and M&A

i	•	•				
	(1) M&A	(2) M&A	(3) M&A	(4) M&A	(5) M&A	(6) M&A
EPU	-0.094***					
EPU						
DUA	(-2.88)	0.120***				
PU_News		-0.128***				
		(-3.53)				
WUI			-0.010			
			(-0.28)			
Partisan				-0.152***		
				(-6.25)		
PlicyEMV				( /	0.106***	
,					(3.73)	
MDH					(3.73)	0.001*
MPU						-0.091*
						(-1.72)
Controls	Y	Y	Y	Y	Y	Y
Industry FE	Y	Y	Y	Y	Y	Y
Cluster	Year	Year	Year	Year	Year	Year
Adjusted R-Squared						
Number of Obs	125851	125851	125851	125851	125851	125851

Panel B: Economic policy uncertainty and M&A: Based on components

	(1) M&A	(2) M&A	(3) M&A	(4) M&A	(5) M&A	(6) M&A
PU_Macro	-0.132***					
	(-4.19)					
PU_Residual	0.017					
	(0.72)					
PU_News_Macro		-0.153***				
		(-4.77)				
PU_News_Residual		-0.001				
		(-0.03)				
WUI_Macro			-0.003			
			(-0.07)			
WUI_Residual			-0.008			
			(-0.26)			
Partisan_Macro				-0.138***		
				(-4.29)		
Partisan_Macro				-0.055***		
				(-3.67)		
PolicyEMV_Macro					0.062***	
					(2.84)	
PolicyEMV_Residual					0.062**	
					(2.27)	
MPU_Macro						-0.159***
						(-3.26)
MPU_Residual						-0.008
						(-0.26)
Controls	Y	Y	Y	Y	Y	Y
Industry FE	Y	Y	Y	Y	Y	Y
Cluster	Year	Year	Year	Year	Year	Year
Adjusted R-Squared						
Number of Obs	125851	125851	125851	125851	125851	125851

Panel C: Economic policy uncertainty and M&A: With lagged macro controls

1						
	(1) M&A	(2) M&A	(3) M&A	(4) M&A	(5) M&A	(6) M&A
EPU	0.045					
21 0	(1.08)					
PU_News	(-100)	-0.009				
		(-0.24)				
WUI			-0.022			
			(-0.85)			
Partisan				-0.151***		
				(-3.25)		
PlicyEMV					0.103***	
					(3.37)	
MPU						-0.050
						(-1.17)
Controls	Y	Y	Y	Y	Y	Y
Industry FE	Y	Y	Y	Y	Y	Y
Cluster	Y	Y	Y	Y	Y	Y
Adjusted R-Squared	Year	Year	Year	Year	Year	Year
Number of Obs						
N	125851	125851	125851	125851	125851	125851

Figure 1. Residual Economic Policy Uncertainty

This figure depicts the comparison of several representative policy uncertainty indexes. Here we present the EPU index (Baker et al., 2016), the partisan conflict index (Partisan) (Azzimonti and Talbert, 2014), and the monetary policy uncertainty index (MPU) by (Husted et al., 2018) during January 1985 to September 2022.

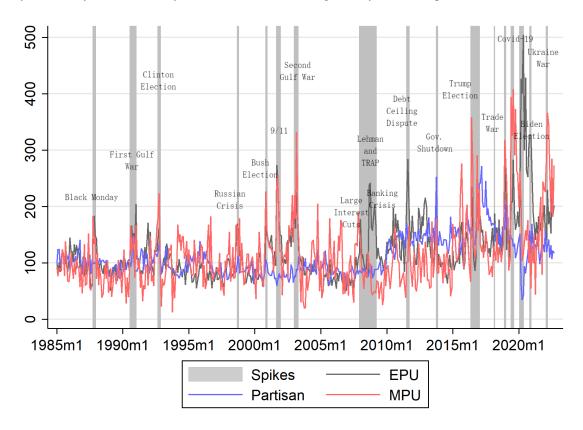
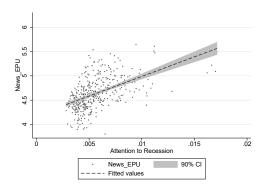


Figure 2. Attention to Topics and Economic Policy Uncertainty

This figure depicts the relationship between policy uncertainty and the attention given to specific topics in business news. Here we rely on measures for business news' attention on specific economic topics proposed by Bybee et al. (2020). Panel A examines the correlation between news articles' attention to "recession" and newsbased economic policy uncertainty, while Panel B focuses on the correlation between news articles' attention to "economic growth" and news-based economic policy uncertainty. To ensure consistency in the sample period for topic attention, we restrict the sample to January 1985 to June 2017. Statistical significance at the 1% level is denoted by an asterisk (\*).

Panel A: Attention to recession and policy uncertainty



Panel B: Attention to growth and policy uncertainty

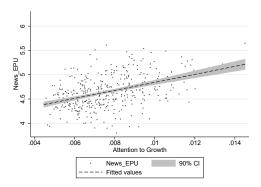
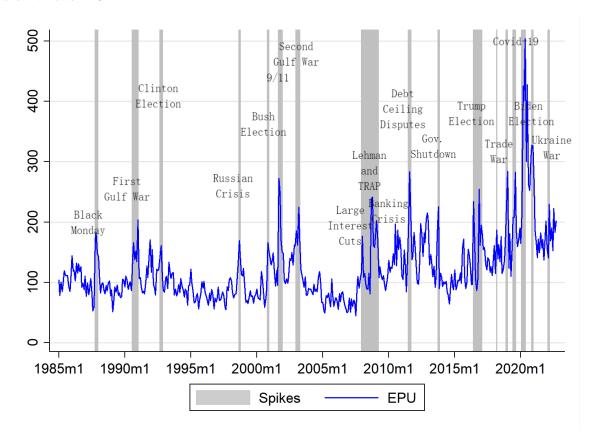


Figure 3. Residual Economic Policy Uncertainty

The graph compares the economic policy uncertainty measure (News-EPU) (Baker et al., 2016) and its residual component. To construct the residual policy uncertainty component, we perform the regression:  $Y_t = a + \sum_{i=1}^{i=12} b_i' X_{t-i} + e_t$ , where  $Y_t$  represents the News-EPU.  $X_t$  is a series of macroeconomic variables, and  $e_t$  is the regression residual. Here, we define the  $e_t$  as the residual policy uncertainty. We perform the decomposition procedure using variable set 1, which includes wage, CPI, employment, IndPro, Sentiment, and GDP. Performing the decomposition based on variable set 2 provides similar results.

Panel A: News-EPU



Panel B: The residual policy uncertainty

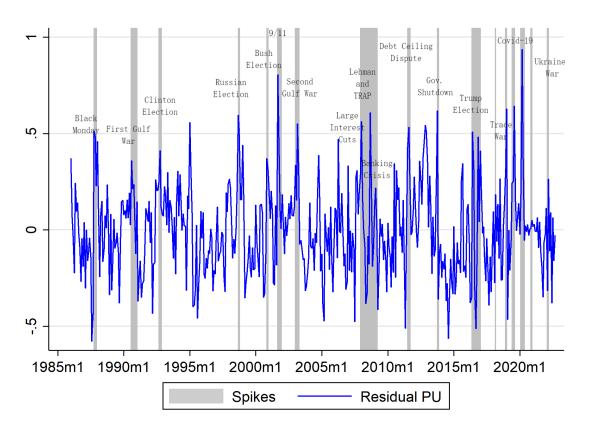


Figure 4. Aggregate IRF

This figure presents the impulse response function (IRF) that quantifies the impact of increasing policy uncertainty on aggregate investment. The IRFs are obtained by estimating vector auto-regressions (VARs) using the following variables: policy uncertainty, the Michigan Consumer Confidence Index, aggregate measures of Tobin's q, operating cash flows to total assets, sales growth, and capital investment to total assets. Aggregate measures are obtained by taking an average of firm-level proxies.

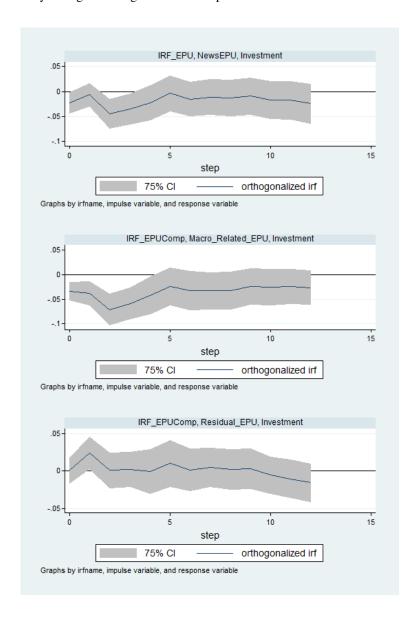
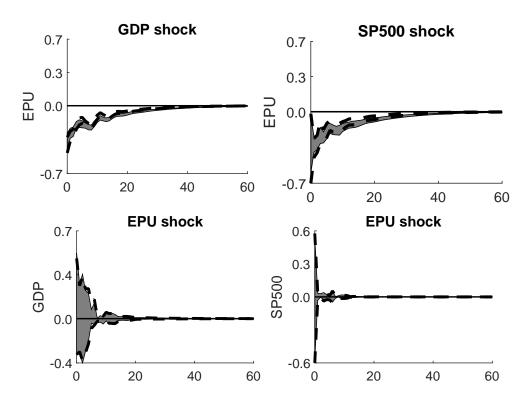


Figure 5. IRFs with Event Constraints

This figure examines the dynamic relationship between macroeconomic conditions and economic policy uncertainty. We use structural vector auto-regressions (SVARs) with event constraints to construct impulse response functions (IRFs) that depict the dynamic responses of economic policy uncertainty indices to innovations in macro variables. Specifically, we construct a VAR system with  $X_t = (M_{1t}, U_t, M_{2t})^t$ , where  $M_{1t}$  and  $M_{2t}$  represent macroeconomic variables and  $U_t$  denotes the measure for policy uncertainty. We use six lags in the VARs. Additionally, we restrict innovations to macroeconomic variables in the VARs to fall below 85% of possible values during the financial crisis of 2007-2009, the debt ceiling crisis in 2011, and the COVID-19 pandemic in 2020.

In Panel A, we construct the IRFs based on X = (GDP, PU, S&P500)', where GDP, PU, and S&P500 represent GDP growth, policy uncertainty, and the monthly return of the S&P500 index, respectively. Panel B presents IRFs based on X = (IndPro, PU, FFR)', where IndPro, PU, and FFR represent the industrial production index, policy uncertainty, and Federal funds rates, respectively. The sample period spans from January 1985 to September 2022.

Panel A: This figure reports an identified set of the impulse response to positive, one standard deviation shocks for system X = (GDP, PU, S&P500)', where GDP, PU, and S&P500 represent GDP growth, policy uncertainty, and monthly return of the S&P500 index, respectively.



Panel B: This figure reports identified set of impulse response to positive, one standard deviation shocks for system X = (IndPro, PU, FFR)', where IndPro, PU, and FFR respresent industrial production index, policy uncertainty, and Federal funds rates, respectively.

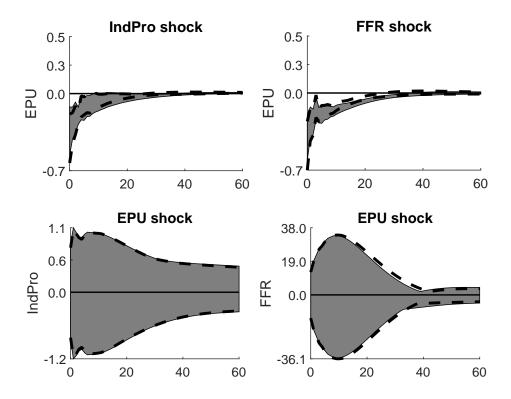
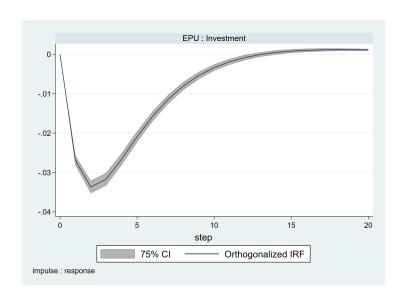
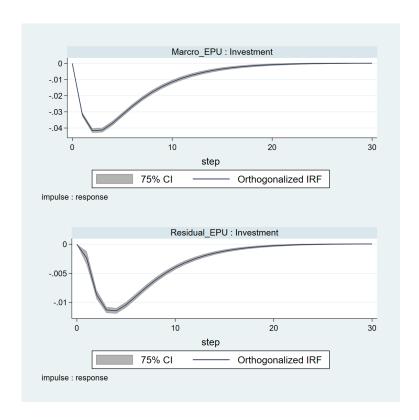


Figure 6. IRFs based on Panel VAR Model





# **Appendix A: More Tables and Figures**

Appendix Table A1: Policy uncertainty and corporate investment (based on other measures)

		GPR	Ä,			Ŋ	NVIX			FSI	15	
	(1)	(2)	(3)	(4)	(5)	(9)	(7)	(8)	(6)	(10)	(11)	(12)
	$Inv_{t+1}$	$Inv_{t+2}$	$Inv_{t+3}$	$Inv_{t+4}$	$Inv_{t+1}$	$Inv_{t+2}$	$Inv_{t+3}$	$Inv_{t+4}$	$Inv_{t+1}$	$Inv_{t+2}$	$Inv_{t+3}$	$Inv_{t+4}$
GPR	-0.030***	-0.028***	-0.025**	-0.021**								
	(-3.13)	(-3.21)	(-2.66)	(-2.45)								
NVIX					-0.007	-0.017	-0.020	-0.022				
					(-0.50)	(-1.23)	(-1.38)	(-1.57)				
FSI									0.009	0.003	0.004	-0.005
									(0.58)	(0.22)	(0.24)	(-0.36)
Adjusted R-Squared	0.42	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.42	0.43	0.43	0.44
		TPU	U.			W	MFU			MiPU	Ωċ	
	(1)	(2)	(3)	(4)	(5)	(9)	(7)	(8)	(6)	(10)	(11)	(12)
	$Inv_{t+1}$	$Inv_{t+2}$	$Inv_{t+3}$	$Inv_{t+4}$	$Inv_{t+1}$	$Inv_{t+2}$	$Inv_{t+3}$	$Inv_{t+4}$	$Inv_{t+1}$	$Inv_{t+2}$	$Inv_{t+3}$	$Inv_{t+4}$
TPU	-0.016	-0.011	-0.014	-0.013								
	(-1.19)	(-0.64)	(-0.76)	(-0.61)								
MFU					$-0.020^{*}$	-0.023*	-0.024**	$-0.020^{*}$				
					(-1.70)	(-1.95)	(-2.26)	(-1.78)				
MiPU									-0.049***	-0.049***	-0.034**	-0.038***
									(-3.08)	(-3.08)	(-2.27)	(-2.84)
Adjusted R-Squared	0.42	0.43	0.43	0.43	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
Quarter Dummies	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Cluster	Firm Year	Firm Year Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year
Number of Obs	378245	361420	345961	333383	339513	326150	313787	303724	344261	330618	318033	307809
ymean	0.7601	0.7671	0.7729	0.7776	0.7893	0.7948	0.7993	0.8027	0.7861	0.7918	0.7963	0.8001

Appendix Table A2: Policy uncertainty and coporate investment with macro controls (based on other measures)

		GPR	<u>۳</u>			Ž	NVIX			FSI	SI	
	(1)	(2)	(3)	(4)	(5)	(9)	(7)	(8)	(6)	(10)	(11)	(12)
	$Inv_{t+1}$	$Inv_{t+2}$	$Inv_{t+3}$	$Inv_{t+4}$	$Inv_{t+1}$	$Inv_{t+2}$	$Inv_{t+3}$	$Inv_{t+4}$	$Inv_{t+1}$	$Inv_{t+2}$	$Inv_{t+3}$	$Inv_{t+4}$
GPR	-0.011**	-0.014***	-0.009	-0.006								
	(-2.64)	(-3.80)	(-1.45)	(-1.18)								
NVIX					0.028***	0.006	$0.014^{*}$	0.004				
					(5.72)	(0.82)	(1.73)	(0.44)				
FSI									0.008	0.002	0.017**	-0.001
									(1.54)	(0.29)	(2.59)	(-0.16)
Adjusted R-Squared	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46
		TPU	U.			M	MFU			MiPU	PU	
	(E)	(2)	(3)	(4)	(5)	(9)	(7)	(8)	(6)	(10)	(11)	(12)
	$Inv_{t+1}$	$Inv_{t+2}$	$Inv_{t+3}$	$Inv_{t+4}$	$Inv_{t+1}$	$Inv_{t+2}$	$Inv_{t+3}$	$Inv_{t+4}$	$Inv_{t+1}$	$Inv_{t+2}$	$Inv_{t+3}$	$Inv_{t+4}$
TPU	0.000	0.005	-0.014*	-0.016								
	(0.00)	(0.63)	(-1.71)	(-1.54)								
MFU					-0.000	-0.008	-0.007	0.004				
					(-0.02)	(-1.27)	(-1.29)	(0.56)				
MiPU									900.0	9000	$0.014^{*}$	-0.005
									(1.11)	(1.11)	(1.83)	(-0.59)
Adjusted R-Squared	0.46	0.46	0.46	0.46	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47
Quarter Dummies	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Cluster	Firm Year											
Number of Obs	305371	292984	281268	271366	274806	264936	255548	247626	278484	268421	258867	250815
ymean	0.7450	0.7547	0.7627	0.7686	0.7708	0.7793	0.7864	0.7912	0.7681	0.7767	0.7839	0.7891

and capital investments based on the baseline specification in Table 5 with the economic policy uncertainty measure replaced by its macroeconomic-related Appendix Table A3: Components of policy uncertainty and capital investments This table reexamines the relationship between policy uncertainty component and the residual economic policy uncertainty. To construct the two components, we perform the regression:  $Y_t = a + \sum_{i=1}^{t-1} b_i' X_{t-i} + e_t$ , where  $Y_t$ is the policy uncertainty measure,  $X_t$  is a series of macroeconomic variables, and  $e_t$  is the regression residual. Then, the  $e_t$  is defined as the residual economic policy uncertainty component  $\sum_{i=1}^{i=12} b_i' X_{i-i}$  is defined as the macroeconomic-related component.

federal fund rates, wage, and CPI. Panel A report results based on the economic policy uncertainty index (PU), and panel B report results based on the news-based economic policy uncertainty index (News-PU). In all regressions, firm-level fixed effects are included, and standard errors are clustered at the consumers' sentiment, and GDP. In columns (5) to (8), we perform the decomposition procedure using variable set 2, including S&P 500, federal fund rates, wage, CPI, working hours, and consumers' sentiment. In columns (9) to (12), we perform the decomposition procedure using variable set 3, including In columns (1) to (4), we perform the decomposition procedure using variable set 1, including wage, CPI, employment, industry production index, firm and year levels. Robust t-statistics are reported in parentheses, with \*, \*\*, and \*\*\* representing significance at the 10%, 5%, and 1%, respectively.

Panel A: results based on PU

		Based on Variable Set	rriable Set 1			Based on Ve	Based on Variable Set 2			Based on Va	Sased on Variable Set 3	
	$lw_t $ (1)	$Im_{t+1}$ (2)	$Inv_{t+2} $ $(3)$	$Inv_{r+3} $ (4)	$Inv_t $ (5)	$Inv_{t+1} $ (6)	$Im_{t+2} $ $(7)$	$\frac{Inv_{t+3}}{(8)}$	$Imv_t$ (9)	$Inv_{t+1} $ $(10)$	$\frac{Inv_{t+2}}{(11)}$	$\frac{Inv_{t+3}}{(12)}$
PU_Macro	-0.068***	-0.064***	-0.063***	-0.050***								
PU_Residual	0.009	0.005	0.016**	-0.002								
PU_Macro	(1.24)	(96.70)	(60.7)	(-0.21)	-0.068***	-0.070***	-0.068***	-0.060***				
PU_Residual					0.002	0.005	0.014 (1.44)	(-3.06) 0.004 (0.36)				
PU_Macro									-0.084***	-0.082***	-0.081***	-0.075***
DIT Desidend									(-5.29)	(-5.19)	(-5.30)	(-4.75)
ro_nesidual									(1.13)	(1.05)	(2.34)	(1.28)
Tobin's q	0.168***	0.158***	0.144***	0.130***	0.166***	0.155***	0.140***	0.128***	0.167***	0.157***	0.143***	0.129***
	(15.90)	(17.56)	(16.64)	(14.96)	(15.52)	(17.14)	(16.30)	(14.93)	(15.72)	(17.30)	(16.38)	(14.65)
Cash Flow	0.068***	0.081***	0.082***	0.072***	0.067***	0.080***	$0.081^{***}$	0.071***	0.066***	0.079***	0.080***	0.070***
	(14.77)	(14.81)	(16.24)	(15.68)	(14.62)	(14.54)	(15.78)	(15.20)	(14.00)	(14.11)	(15.38)	(14.94)
Sales Growth	0.03/***	0.041***	0.038***	0.030***	0.03/***	0.040***	0.038***	0.030***	0.036***	0.040***	0.03/***	0.029***
GDP Growth	0.010	0.012	0.014	0.021	0.005	0.006	0.007	0.017	0.013*	0.015	0.016	0.024
	(1.39)	(0.98)	(1.56)	(1.36)	(0.56)	(0.57)	(0.92)	(1.21)	(1.70)	(1.10)	(1.58)	(1.43)
Election	-0.001	-0.006	-0.013	-0.016	-0.004	-0.010	-0.017	-0.019	0.002	-0.003	-0.009	-0.012
	(-0.03)	(-0.23)	(-0.44)	(-0.46)	(-0.13)	(-0.35)	(-0.55)	(-0.54)	(0.08)	(-0.14)	(-0.35)	(-0.39)
Controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Quarter Dummies	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	¥
Firm FE	¥	Y	¥	Y	Y	Y	¥	Y	¥	Y	Y	¥
Cluster	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year
Number of Obs	378245	361420	345961	333383	378245	361420	345961	333383	378245	361420	345961	333383

Panel B: results based on news-based PU. 12 monthly lags of macroeconomic variable are used to construct components

Sased on Variable Set 1	Based on V	Based on Variable Set 2			Based on Va	Based on Variable Set 3	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$Inv_{t+1} $ $(6)$	$Im_{t+2} $ $(7)$	$ \begin{array}{c c} Inv_{t+3} \\ (8) \end{array} $	$Imv_t$ (9)	$Im_{r+1} $ $(10)$	$Inv_{t+2} $ $(11)$	$Im_{r+3} $ $(12)$
-0.087*** -0.077***							
7	٦	***860.0-	-0.093***				
(-6.28) -0.001 (-0.13)	5) (-0.65) 11 0.003 3) (0.36)	0.012	0.005				
				-0.110***	-0.110***	-0.113***	-0.108***
				(-8.36)	(-8.63)	(-8.97) 0.012*	(-8.26) 0.005
1				(0.94)	(0.55)	(1.72)	(0.58)
0.142*** 0.128*** 0.164***	3) (17.46)	0.137***	0.124***	0.166***	0.155***	0.140***	0.127***
0.070***		0.079***	0.069***	0.065***	0.078***	0.079***	0.069***
(15.02)		(14.92)	(14.33)	(13.80)	(13.89)	(15.05)	(14.48)
0.029***	_	0.036***	0.028***	0.034***	0.038***	0.034***	0.026***
$\begin{array}{cccc} (12.69) & (10.29) & (10.27) \\ 0.001 & 0.011 & -0.003 \end{array}$	7) (12.42)	(11.67)	(9.48)	(10.16)	(12.60)	(11.88)	(9.09)
(0.93)		(-0.58)	(0.57)	(0.62)	(0.47)	(0.83)	(1.08)
-0.012 -0.014 0.002 (-0.43) (-0.44) (0.06)		-0.009	-0.012	0.002	-0.002	-0.007	-0.010
<b>X</b>		`   <b>&gt;</b>	\ \ \	`   ×	`   <b>&gt;</b>	`   <b>&gt;</b>	`   <b>&gt;</b>
Y	Y	Y	Y	Y	Y	Y	Y
Y Y	Y	Y	Y	Y	Y	Y	Y
r Firm Year	щ	Firm Year 345961	Firm Year	Firm Year	Firm Year	Firm Year 345961	Firm Year
	Y Firm Y 3782	Y Y Firm Year Firm Year 378245 361420	Y Firm Year 1 361420	Y Y Firm Year Firm Year 361420 345961	Y Y Y Y Firm Year Firm Year 361420 345961 333383	Y Y Y Y Y Y Y Y Y Y Y Firm Year Firm Year 361420 345961 333383 378245	Y Y Y Y Y Y Y Y Y Y Y Y Y Firm Year Firm Year Firm Year 781420 345961 333383 378245 361420

Panel C: results based on other policy uncertainty indice. In this table, 12 monthly lags of macroeconomic variable set 1 is used to constructs the components of policy uncertainty.

		Based on MPU	n MPU			Based on P	Based on Polarization			Based on PolicyEMV	olicyEMV	
	(1) Inv.	$(2) Inv_{t+1}$	$(3) Inv_{t+2}$	$(4)$ $Iw_{t+3}$	(5) Inv.	(6) Inv <sub>t+1</sub>	$(7) Inv_{t+2}$	$(8) Inv_{t+3}$	$(9)$ $Inv_t$	(10)	(11) Inv <sub>t+2</sub>	$(12)$ $Inv_{t+3}$
MPU_Macro	-0.034*	-0.033	-0.049**	-0.051***								
MPU_Residual	0.003	-0.009	0.002	-0.002								
GPR_Macro	(0.34)	(-0.89)	(0.24)	(-0.24)								
GPR_Residual												
Partisan_Macro					-0.047***	-0.041***	-0.036**	-0.029*				
Partisan_Macro					(-3.35) -0.003	(-2.74) 0.004	(-2.43)	(-1.81)				
					(-0.26)	(0.29)	(-0.55)	(-0.47)				
PolicyEMV_Macro									-0.036***	-0.044***	-0.053***	-0.052***
PolicyEMV_Residual									$(-3.16)$ $0.013^{**}$	(-4.21) 0.008	(-5.83) 0.017***	(-5.25)
									(2.23)	(1.10)	(3.06)	(0.77)
Tobin's q	0.175***	0.163***	0.149***	0.135***	0.174***	0.164***	0.149***	0.135***	0.173***	0.161***	0.146***	0.131***
	(17.13)	(18.84)	(18.19)	(15.99)	(16.86)	(18.64)	(17.88)	(15.84)	(17.51)	(19.75)	(18.90)	(16.67)
Cash Flow	***890.0	0.081***	0.082***	0.072***	***690.0	0.082***	0.083***	0.072***	0.067***	0.079***	0.080***	0.070***
	(15.33)	(15.34)	(16.71)	(15.98)	(15.76)	(15.65)	(17.24)	(16.55)	(15.27)	(14.84)	(16.03)	(14.99)
Sales Growth	0.040***	0.043***	0.040***	0.032***	0.039***	0.043***	0.040***	0.032***	0.039***	0.042***	0.039***	0.030***
GDP Growth	0.019	0.020	0.020	0.029	0.023*	0.024	$0.025^{*}$	0.034	0.012	0.012	0.011	0.019
	(1.68)	(1.22)	(1.46)	(1.44)	(1.92)	(1.31)	(1.77)	(1.67)	(1.11)	(0.79)	(0.98)	(1.15)
Election	-0.008	-0.013	-0.020	-0.023	-0.008	-0.015	-0.019	-0.022	-0.003	-0.007	-0.013	-0.016
	(-0.25)	(-0.44)	(-0.63)	(-0.68)	(-0.28)	(-0.53)	(-0.57)	(-0.62)	(-0.08)	(-0.24)	(-0.44)	(-0.50)
Controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Quarter Dummies	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Cluster	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year
Adjusted R-Squared	0.42	0.43	0.43	0.43	0.42	0.43	0.43	0.43	0.42	0.43	0.43	0.43
Number of Obs	378245	361420	345961	333383	378245	361420	345961	333383	378245	361420	345961	333383

Panel D: results based on other policy uncertainty indice. In this table, 12 monthly lags of macroeconomic variable set 2 is used to constructs the components of policy uncertainty

		Based on MPU	n MPU			Based on F	Based on Polarization			Based on F	Based on PolicyEMV	
	(1) <i>Im</i>	$(2)$ $Inv_{t+1}$	$(3) Inv_{t+2}$	$Iw_{t+3}$	(5) Inv,	(6) Inv <sub>r+1</sub>	$(7)$ $Im_{t+2}$	(8) Inv <sub>t+3</sub>	(9) Inv <sub>t</sub>	$(10)$ $Inv_{t+1}$	(11) Inv <sub>t+2</sub>	$(12)$ $Inv_{t+3}$
MPU_Macro	-0.033	-0.042**	-0.052**	-0.062***								
MPU_Residual	0.003	(-2.04) -0.002 (-0.21)	0.006	0.006								
Partisan_Macro	(200)		(2000)	(20:0)	-0.040***	-0.036**	-0.035**	-0.033*				
Partisan_Macro					-0.012 -0.12 (-1.16)	-0.002	-0.008	-0.002 -0.002 -0.15)				
PolicyEMV_Macro							(Give)		-0.027**	-0.041***	-0.047***	-0.050***
PolicyEMV_Residual									0.006	0.006	0.012	0.004
Tobin's q	0.173***	0.162***	0.146**	0.132***	0.174***	0.164***	0.149***	0.135***	(0.67) $0.173***$	$(0.65)$ $0.160^{***}$	(1.37)	$(0.37)$ $0.131^{***}$
•	(16.73)	(18.28)	(17.45)	(15.65)	(16.89)	(18.70)	(17.89)	(15.86)	(17.43)	(19.80)	(18.65)	(16.33)
Cash Flow	0.068***	0.081***	$0.081^{***}$	0.071***	0.069***	0.082***	0.083***	0.073***	0.067***	0.079***	0.080***	$0.070^{***}$
,	(15.10)	(14.97)	(16.35)	(15.59)	(15.69)	(15.64)	(17.27)	(16.69)	(15.41)	(14.78)	(15.80)	(14.69)
Sales Growth	0.040***	0.043***	0.041***	0.032***	0.039***	0.043***	0.040***	0.031***	0.039***	0.042***	0.039***	0.031***
GDP Growth	0.018	0.019	0.018	0.027	0.024**	0.024	0.025*	0.034	0.010	0.007	0.005	0.013
Election	(1.61) -0.002 (-0.05)	(1.22) -0.007 (-0.26)	(1.51) -0.010 (-0.39)	(1.52) -0.013 (-0.46)	(2.11) -0.005 (-0.14)	(1.43) -0.011 (-0.38)	(1.86) -0.016 (-0.50)	(1.68) -0.021 (-0.59)	0.000	(0.49) -0.003 (-0.09)	(0.48) -0.007 (-0.25)	(0.87) -0.010 (-0.33)
Controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Quarter Dummies	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Cluster	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year
Adjusted R-Squared Number of Obs	0.42 378245	0.43 361420	0.43 345961	0.43 333383	0.42 378245	0.43 361420	0.43 345961	0.43 333383	0.42 378245	0.43 361420	0.43 345961	0.43 333383

Panel E: results based on news-based PU. 6 monthly lags of macroeconomic variable are used to construct components

		Based on Variable Set 1	riable Set 1			Based on Va	Based on Variable Set 2			Based on Va	Sased on Variable Set 3	
	$Inv_t $ (1)	$Inv_{t+1} $ (2)	$Inv_{t+2} $ (3)	$lmv_{t+3} $ (4)	$Inv_t $ (5)	$Inv_{t+1} $ $(6)$	$Inv_{t+2} $ $(7)$	$lm_{t+3}$ (8)	$Inv_t$ (9)	$Im_{t+1} $ $(10)$	$Inv_{t+2} $ $(11)$	$Inv_{t+3} $ (12)
PU_News_Macro	-0.095***	-0.095***	-0.095***	-0.082***								
PU_News_Residual	0.007	0.003	0.010	-0.004								
PU_News_Macro					-0.099***	-0.104***	-0.108***	-0.105***				
PU_News_Residual					0.005	0.006	0.016*	0.010				
PU_News_Macro									-0.120***	-0.116***	-0.118***	-0.116***
PU_News_Residual									0.008	0.001	0.009	0.004
									(0.95)	(0.22)	(1.31)	(0.52)
Tobin's q	0.168***	0.157***	0.142***	0.128***	0.163***	0.152***	0.137***	0.123***	0.166***	0.155***	0.141***	0.127***
	(16.56)	(18.33)	(17.39)	(15.29)	(15.80)	(17.46)	(16.36)	(14.48)	(16.24)	(17.81)	(16.83)	(14.69)
Cash Flow	0.066***	0.079	0.080***	0.070***	0.066***	0.078***	0.079***	0.069***	0.065	0.078***	0.079	0.069***
	(14.46)	(14.51)	(15.82)	(15.25)	(13.90)	(13.91)	(15.00)	(14.36)	(14.03)	(14.16)	(15.43)	(14.91)
Sales Growth	0.035***	0.039***	0.036***	0.028***	0.036***	0.039***	0.036***	0.028***	0.034***	0.037***	0.034***	0.026***
	(10.65)	(12.82)	(12.41)	(10.01)	(10.29)	(12.51)	(11.74)	(9.41)	(10.17)	(12.64)	(11.79)	(8.91)
GDP Growth	0.001	0.002	0.002	0.012	-0.005	-0.005	-0.005	0.003	0.004	0.005	0.005	0.013
	(0.12)	(0.21)	(0.38)	(0.97)	(-0.69)	(-0.52)	(-0.95)	(0.30)	(0.65)	(0.44)	(0.71)	(0.95)
Election	-0.008	-0.012	-0.019	-0.019	0.005	0.000	-0.004	-0.007	0.001	-0.003	-0.008	-0.011
	(-0.30)	(-0.48)	(-0.67)	(-0.58)	(0.18)	(0.01)	(-0.17)	(-0.25)	(0.06)	(-0.16)	(-0.37)	(-0.37)
Controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Quarter Dummies	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Cluster	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year
Adjusted R-Squared	0.43	0.43	0.43	0.44	0.43	0.43	0.44	0.44	0.43	0.44	0.44	0.44
Number of Obs	378245	361420	345961	333383	378245	361420	345961	333383	378245	361420	345961	333383

Panel F: results based on news-based PU. 3 monthly lags of macroeconomic variable are used to construct components

		Based on Variable Set	riable Set 1			Based on Va	3 ased on Variable Set 2			Based on Va	3 ased on Variable Set	
	$Im_t$ (1)	$Inv_{t+1} $ (2)	$Im_{t+2} $ (3)	$Inv_{t+3}$ (4)	$Imv_t$ (5)	$Im_{t+1} $ $(6)$	$Inv_{t+2} $ (7)	$Im_{t+3}$ (8)	$Inv_t$ (9)	$Inv_{t+1} $ (10)	$Inv_{t+2} $ $(11)$	$Inv_{t+3}$ (12)
PU_News_Macro	-0.100***	-0.098***	-0.102***	-0.086***								
PU_News_Residual	0.008	0.003	0.012*	-0.003								
PU_News_Macro					-0.107***	-0.111***	-0.115***	-0.111***				
PU_News_Residual					0.008	0.007	0.016**	0.010				
PU_News_Macro						,	,	,	-0.131***	-0.126***	-0.126***	-0.124***
PU_News_Residual									0.010	0.003	0.009	0.005
									(1.20)	(0.49)	(1.31)	(0.59)
Tobin's q	$0.167^{***}$	$0.156^{***}$	$0.141^{***}$	0.128***	$0.164^{***}$	0.153***	0.138***	0.124***	0.167***	$0.156^{***}$	0.141***	0.128***
	(16.56)	(18.34)	(17.37)	(15.27)	(15.91)	(17.55)	(16.50)	(14.56)	(16.41)	(17.87)	(16.92)	(14.73)
Cash Flow	0.066***	0.079	0.080***	0.070***	0.066***	0.079***	0.080***	0.069***	0.066***	0.079***	0.080***	0.069***
	(14.33)	(14.41)	(15.68)	(15.11)	(13.84)	(13.90)	(15.12)	(14.36)	(14.09)	(14.22)	(15.62)	(15.21)
Sales Growth	0.035***	0.038***	0.035***	0.028***	0.036***	0.039***	0.036***	0.027***	0.033***	0.037***	0.034***	0.026***
	(10.81)	(13.08)	(12.53)	(9.92)	(10.20)	(12.43)	(11.71)	(90.6)	(6.85)	(12.16)	(11.41)	(8.70)
GDP Growth	0.000	0.001	0.002	0.011	-0.006	-0.005	-0.006	0.003	0.001	0.003	0.003	0.011
Flection	(0.05)	(0.17)	(0.29)	(0.96)	(-0.88)	(-0.58) -0.004	(-1.00)	(0.22)	(0.20)	(0.21)	(0.34)	(0.70)
	(-0.48)	(-0.63)	(-0.83)	(-0.68)	(0.03)	(-0.18)	(-0.40)	(-0.42)	(-0.22)	(-0.46)	(-0.65)	(-0.58)
Controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Quarter Dummies	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Cluster	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year
Adjusted R-Squared	0.43	0.43	0.43	0.44	0.43	0.43	0.44	9.4	0.43	0.44	9.4	0.44
Number of Obs	378245	361420	345961	333383	378245	361420	345961	333383	378245	361420	345961	333383

Appendix Table A4: Policy uncertainty and capital investments with lagged macroeconomic controls This table reexamines the relationship

between policy uncertainty and capital investments by augmenting the baseline specification in Table 5 with lagged macroeconomic variables. In columns lags of variable set 3, including federal fund rates, wage, and CPI. Panel A report results based on the economic policy uncertainty index (PU), and panel B report results based on the news-based economic policy uncertainty index (News-PU). In all regressions, firm-level fixed effects are included, and standard (1) to (4), we augment the baseline specification with four quarterly lags of variable set 1, including wage, CPI, employment, industry production index, federal fund rates, wage, CPI, working hours, and consumers' sentiment. In columns (9) to (12), we augment the baseline specification with four quarterly errors are clustered at the firm and year levels. Robust t-statistics are reported in parentheses, with \*, \*\*, and \*\*\* representing significance at the 10%, 5%, consumers' sentiment, and GDP. In columns (5) to (8), we augment the baseline specification with four quarterly lags of variable set 2, including S&P 500, and 1%, respectively.

Panel A: Results based on PU with 4 quarterly lagged macroeconomic variable.

		Variable Set	e Set 1			Variab	Variable Set 2			Variab	Variable Set 3	
	$Inv_t $ (1)	$Iw_{t+1} $ (2)	$Inv_{t+2} $ (3)	$Iw_{t+3} $ (4)	$Imv_t$ (5)	$Inv_{t+1} $ $(6)$	$Inv_{t+2} $ (7)	$Inv_{t+3}$ (8)	$Inv_t$ (9)	$Inv_{t+1} $ $(10)$	$Inv_{t+2} $ $(11)$	$Inv_{t+3} $ $(12)$
PU	0.001	-0.008	0.007	-0.013	-0.002	-0.000	0.007	0.000	0.007	0.002	0.014	0.008
	(0.11)	(-0.82)	(0.64)	(-1.03)	(-0.32)	(-0.06)	(0.84)	(0.03)	(0.64)	(0.26)	(1.50)	(0.73)
Tobin's q	0.159***	0.151***	0.138***	0.125***	0.158***	0.150***	0.138***	0.126***	0.160***	0.153***	0.141***	0.128***
	(17.11)	(18.92)	(17.79)	(14.86)	(16.93)	(18.53)	(17.55)	(14.86)	(17.21)	(19.15)	(18.16)	(15.11)
Cash Flow	0.066***	0.079***	0.080***	0.070***	0.067***	0.079***	0.080***	0.070***	0.067***	0.079***	0.081***	0.071***
	(15.39)	(14.97)	(14.50)	(13.28)	(15.65)	(15.29)	(14.62)	(13.28)	(16.18)	(15.66)	(15.18)	(13.71)
Sales Growth	0.030***	0.032***	0.028***	0.019***	0.030***	0.032***	0.028***	0.019***	0.031***	0.033***	0.029***	0.019***
	(09.60)	(9.15)	(7.65)	(4.89)	(6.50)	(9.29)	(7.80)	(4.82)	(6.39)	(9.46)	(8.16)	(4.97)
GDP Growth	0.003	-0.003	-0.000	900.0	0.008**	0.005	0.000	0.007	0.012***	0.010	0.010**	0.016
	(0.69)	(-0.39)	(-0.06)	(0.57)	(2.05)	(0.74)	(0.10)	(0.77)	(2.80)	(1.24)	(2.17)	(1.49)
Election	0.014	0.005	0.003	-0.003	0.001	-0.005	-0.001	-0.006	0.003	0.000	-0.000	-0.009
	(1.66)	(0.80)	(0.33)	(-0.21)	(0.15)	(-0.63)	(-0.09)	(-0.41)	(0.19)	(0.02)	(-0.01)	(-0.48)
Macro Controls	4 lags	4 lags	4 lags	4 lags	4 lags	4 lags	4 lags	4 lags	4 lags	4 lags	4 lags	4 lags
Quarter Dummies FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Cluster	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year
Adjusted R-Squared	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46
Number of Obs	305371	292984	281268	271366	305371	292984	281268	271366	305371	292984	281268	271366

Panel B: Results based on PU with 2 quarterly lagged macroeconomic variable.

$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			Variable Set	e Set 1			Variab	Variable Set 2			Variable Set 3	Set 3	
in's q (-0.006		$Inv_t$ (1)	$Inv_{t+1} $ (2)	$Inv_{t+2} $ (3)	$Inv_{t+3}$ (4)	$Imv_t$ (5)	$Inv_{t+1} $ $(6)$	$Inv_{t+2} $ (7)	$Inv_{t+3}$ (8)	$Imv_t$ (9)	$Inv_{t+1} $ (10)	$Inv_{t+2} $ $(11)$	$Inv_{t+3}$ (12)
(-0.67)         (-1.75)         (-0.49)         (-1.51)         (0.24)         (-0.81)         (0.52)         (-0.08)           0.159***         0.150***         0.136***         0.124***         0.159***         0.137***         0.126***           (18.42)         (19.07)         (16.09)         (18.04)         (19.20)         (18.60)         (15.99)           0.065***         0.077***         0.068***         0.065***         0.077***         0.088***         0.068***           (14.75)         (15.38)         (14.95)         (13.51)         (14.75)         (15.56)         (14.90)         (15.89)           0.031***         0.033***         0.029***         0.021***         0.031***         0.039***         0.029***         0.011**           0.001         0.002         0.004         0.002         0.0031***         0.010         0.004         0.011**           0.013         0.003         0.004         0.000         0.006         0.006         0.006         0.006         0.006         0.006         0.007           0.022         0.030         0.004         0.030         0.030         0.033         0.030         0.030         0.030         0.030         0.030         0.033         0.045 <td>PU</td> <td>-0.006</td> <td>-0.015*</td> <td>-0.005</td> <td>-0.021</td> <td>0.002</td> <td>-0.006</td> <td>0.004</td> <td>-0.001</td> <td>0.002</td> <td>-0.004</td> <td>900.0</td> <td>0.000</td>	PU	-0.006	-0.015*	-0.005	-0.021	0.002	-0.006	0.004	-0.001	0.002	-0.004	900.0	0.000
0.159***         0.136***         0.124***         0.159***         0.137***         0.126***           (18.42)         (19.07)         (16.09)         (18.04)         (19.20)         (18.60)         (15.99)           0.065***         0.067***         0.065***         0.065***         0.067***         0.030***         0.068***           (14.75)         (15.38)         (14.95)         (13.51)         (14.75)         (15.56)         (14.90)         (13.58)           0.031***         0.033***         0.029***         0.021***         0.033***         0.029***         0.021***           0.001         -0.002         0.004         0.002         0.003**         0.001         0.001         0.021***           0.003         -0.004         0.002         0.008**         0.010         0.004         0.012           0.022         -0.004         -0.007         -0.005         -0.006         -0.005         -0.007           0.023         -0.004         -0.007         -0.005         -0.006         -0.005         -0.007           0.221         (2.39)         (0.30)         (0.33)         (0.50)         (0.54)         (0.71)         (0.45)           0.222         1ags         2 lags		(-0.67)	(-1.75)	(-0.49)	(-1.51)	(0.24)	(-0.81)	(0.52)	(-0.08)	(0.24)	(-0.45)	(0.69)	(0.04)
(18.42)         (19.02)         (19.07)         (16.09)         (18.04)         (19.20)         (18.60)         (15.99)           0.065***         0.065***         0.065***         0.065***         0.067***         0.080***         0.068***           (14.75)         (15.38)         (14.95)         (13.51)         (14.75)         (15.56)         (14.90)         (13.58)           0.031***         0.033***         0.029***         0.021***         0.031***         0.033***         0.029***         0.021***           0.001         0.002         0.004         0.002         0.0031***         0.010         0.002**         0.011**           0.003         0.003         0.004         0.007         0.006         0.006         0.005         0.007           0.022         0.003         0.004         0.007         0.006         0.006         0.005         0.007           0.022         0.030         0.004         0.007         0.006         0.006         0.005         0.006           0.18s         2 lags           1         1         1         1         1         1         1	Tobin's q	0.159***	0.150***	0.136***	0.124***	0.159***	0.150***	0.137***	0.126***	0.161***	0.152***	0.139***	0.127***
0.065***         0.077***         0.080***         0.065***         0.077***         0.080***         0.068***           (14.75)         (15.38)         (14.95)         (13.51)         (14.75)         (15.56)         (14.90)         (13.58)           0.031***         0.031***         0.033***         0.029***         0.029***         0.021***           0.34)         (10.95)         (10.29)         (6.46)         (9.39)         (11.01)         (10.52)         (6.41)           0.001         -0.002         -0.004         0.002         0.008**         0.010         0.001         0.011           0.013         -0.028         -0.004         -0.007         -0.006         -0.006         -0.007         -0.006         -0.006         -0.007           0.022         0.033         -0.044         -0.007         -0.006         -0.006         -0.005         -0.007           0.229         0.330         -0.530         -0.540         -0.011         -0.45)         -0.45)           0.229         0.340         -0.54         -0.71         -0.45)         -0.45)           0.229         0.330         -0.33         -0.50         -0.54         -0.45           0.220         0.34		(18.42)	(19.92)	(19.07)	(16.09)	(18.04)	(19.20)	(18.60)	(15.99)	(18.24)	(19.70)	(19.05)	(16.09)
(14.75)         (15.38)         (14.95)         (13.51)         (14.75)         (15.56)         (14.90)         (13.58)           0.031***         0.033***         0.029***         0.021***         0.033***         0.029***         0.021***           0.34)         (10.95)         (10.29)         (6.46)         (9.39)         (11.01)         (10.52)         (6.41)           0.001         -0.002         -0.004         0.002         0.008**         0.010         0.004         0.012           0.013         -0.028         -0.041         0.022         0.006**         0.006         -0.005         -0.006           0.022         0.033         -0.044         -0.007         -0.006         -0.006         -0.007         -0.007           0.222         0.330         -0.33)         (0.50)         -0.54         (0.71)         -0.45)         -0.45)           2 lags           Y         Y         Y         Y         Y         Y         Y           Y         Y         Y         Y         Y         Y           Y         0.45         0.45         <	Cash Flow	0.065***	0.077	0.080***	0.068***	0.065***	0.077	0.080***	0.068***	0.066***	0.078***	0.081***	0.069***
0.031***         0.033***         0.029***         0.021***         0.033***         0.029***         0.029***         0.021***           0.34)         (10.95)         (10.29)         (6.46)         (9.39)         (11.01)         (10.52)         (6.44)           -0.001         -0.002         -0.004         0.002         0.008**         0.010         0.004         0.012           (-0.13)         (-0.28)         (-0.81)         (0.22)         (2.33)         (1.27)         (0.93)         (1.21)           0.003         -0.004         -0.007         -0.005         -0.006         -0.005         -0.007           0.22)         (0.30)         (-0.33)         (-0.50)         (-0.54)         (-0.71)         (-0.45)         (-0.45)           2 lags         4 y         y           Y         Y         Y         Y         Y         Y         Y         Y           Y         Y         Y         Y         Y         Y         Y         Y         Y           X         X         X         X         X         X         X         X		(14.75)	(15.38)	(14.95)	(13.51)	(14.75)	(15.56)	(14.90)	(13.58)	(15.36)	(16.05)	(15.61)	(14.15)
(9.34)         (10.95)         (10.29)         (6.46)         (9.39)         (11.01)         (10.52)         (6.44)           -0.001         -0.002         -0.004         0.002         0.008**         0.010         0.004         0.012           (-0.13)         (-0.28)         (-0.81)         (0.22)         (2.33)         (1.27)         (0.93)         (1.21)           0.003         -0.004         -0.007         -0.005         -0.006         -0.005         -0.007           0.022)         (0.30)         (-0.33)         (-0.50)         (-0.54)         (-0.71)         (-0.45)         (-0.45)           2 lags           Y         Y         Y         Y         Y         Y         Y           Y         Y         Y         Y         Y         Y         Y           Y         0.45         0.45         0.45         0.45         0.45         0.45         0.45	Sales Growth	0.031***	0.033***	0.029***	0.021***	0.031***	0.033***	0.029***	0.021***	0.032***	0.034***	$0.031^{***}$	0.021***
-0.001         -0.002         -0.004         0.002         0.008***         0.010         0.004         0.012           (-0.13)         (-0.28)         (-0.81)         (0.22)         (2.33)         (1.27)         (0.93)         (1.21)           0.003         0.004         -0.004         -0.007         -0.005         -0.006         -0.005         -0.007           0.22)         (0.30)         (-0.33)         (-0.50)         (-0.54)         (-0.71)         (-0.45)         (-0.45)           2 lags           Y         Y         Y         Y         Y         Y         Y           Y         Y         Y         Y         Y         Y         Y           M         0.45         0.45         0.45         0.45         0.45         0.45         0.45		(9.34)	(10.95)	(10.29)	(6.46)	(6.39)	(11.01)	(10.52)	(6.44)	(6.50)	(11.09)	(10.91)	(6.61)
(-0.13) (-0.28) (-0.81) (0.22) (2.33) (1.27) (0.93) (1.21) (0.003 0.003 -0.004 -0.007 -0.005 -0.006 -0.005 -0.007 (0.22) (0.30) (-0.33) (-0.50) (-0.54) (-0.71) (-0.45	GDP Growth	-0.001	-0.002	-0.004	0.002	0.008**	0.010	0.004	0.012	0.012**	0.011	0.010*	0.016
0.003         0.004         -0.004         -0.007         -0.005         -0.006         -0.005         -0.055         -0.045         -0.055         -0.045         -0.055         -0.045         -0.055         -0.045         -0.45 <td></td> <td>(-0.13)</td> <td>(-0.28)</td> <td>(-0.81)</td> <td>(0.22)</td> <td>(2.33)</td> <td>(1.27)</td> <td>(0.93)</td> <td>(1.21)</td> <td>(2.70)</td> <td>(1.24)</td> <td>(1.73)</td> <td>(1.49)</td>		(-0.13)	(-0.28)	(-0.81)	(0.22)	(2.33)	(1.27)	(0.93)	(1.21)	(2.70)	(1.24)	(1.73)	(1.49)
(0.22)         (0.30)         (-0.33)         (-0.50)         (-0.54)         (-0.71)         (-0.45)         (-0.45)           2 lags           Y         Y         Y         Y         Y         Y         Y         Y           Firm Year	Election	0.003	0.003	-0.004	-0.007	-0.005	-0.006	-0.005	-0.007	-0.000	-0.003	-0.005	-0.010
2 lags         2 lags<		(0.22)	(0.30)	(-0.33)	(-0.50)	(-0.54)	(-0.71)	(-0.45)	(-0.45)	(-0.01)	(-0.26)	(-0.36)	(-0.54)
Firm Year I O45 045 045 045 046	Macro Controls	2 lags	2 lags	2 lags	2 lags	2 lags	2 lags	2 lags	2 lags	2 lags	2 lags	2 lags	2 lags
Firm Year Firm Y	Quarter Dummies FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	¥	Y	Y
Firm Year Firm Y	Firm FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
nared 0.45 0.45 0.45 0.46 0.45 0.45 0.45 0.46	Cluster	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year
1/0000 F11000 0/1000 00//00 1/0000 F11000 0/1000 00//00	Adjusted R-Squared	0.45	0.45	0.45	0.46	0.45	0.45	0.45	0.46	0.45	0.45	0.45	0.45
350083 322/03 309331 29826/ 350083 322/03 309331 29826/	Number of Obs	336683	322763	309551	298267	336683	322763	309551	298267	336683	322763	309551	298267

Panel C: Results based on PU with 1 quarterly lagged macroeconomic variable.

$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$			Variable Set	e Set 1			Variab	Variable Set 2			Variable Set 3	Set 3	
-0.002         -0.013         -0.020         -0.020         -0.004         -0.004         -0.005         -0.004         -0.001         -0.005         -0.004         -0.001         -0.005         -0.004         -0.001         -0.005         -0.004         -0.001         -0.005         -0.004         -0.001         -0.005         -0.004         -0.001         -0.005         -0.004         -0.001         -0.004         -0.001         -0.005         -0.004         -0.014         -0.014         -0.014<		$Inv_t$ (1)	$Inv_{t+1} $ (2)	$Inv_{t+2} $ (3)	$Inv_{t+3}$ (4)	$Imv_t$ (5)	$Inv_{t+1} $ $(6)$	$Inv_{t+2} $ (7)	$Inv_{t+3}$ (8)	$Inv_t$ (9)	$Inv_{t+1} $ $(10)$	$Inv_{t+2} $ $(11)$	$Inv_{t+3} $ (12)
(-0.17)         (-1.43)         (-0.27)         (-1.48)         (0.46)         (-0.51)         (-0.09)         (-0.40)         (-0.40)         (-0.15)***         (-1.16)           0.161***         0.150***         0.150***         0.122***         0.160***         0.153***         0.163***         0.153***           (18.41)         (20.16)         (19.44)         (16.47)         (17.76)         (19.32)         (18.91)         (16.27)         (18.11)         (19.81)           0.064***         0.077***         0.064***         0.064***         0.064***         0.065***         0.065***         0.078***           (14.55)         (15.01)         (15.31)         (14.51)         (15.17)         (16.72)         (18.11)         (19.81)           0.033***         0.034***         0.064***         0.064***         0.077***         0.065***         0.078***         0.078***           0.033***         0.034***         0.022***         0.031***         0.033***         0.065***         0.065***         0.074***           (10.12)         (11.21)         (742)         (9.67)         (11.47)         (11.17)         (748)         (9.76)         (11.23)           0.002         -0.003         -0.001         -0.014***	PU	-0.002	-0.013	-0.003	-0.020	0.003	-0.004	-0.001	-0.005	-0.004	-0.011	-0.007	-0.013
0.150***         0.137***         0.122***         0.150***         0.155***         0.153***         0.153***           (18.41)         (20.16)         (19.44)         (16.47)         (17.76)         (19.32)         (18.91)         (16.27)         (18.11)         (19.81)           0.064***         0.077***         0.064***         0.064***         0.064***         0.064***         0.065***         0.065***         0.078***           (14.55)         (15.01)         (15.31)         (14.51)         (15.17)         (15.72)         (14.78)         (15.00)         (15.63)           0.033***         0.034***         0.064***         0.031***         0.039***         0.065***         0.078***         0.078***         0.078***           (10.12)         (11.21)         (742)         (9.67)         (11.47)         (11.17)         (748)         (9.76)         (11.23)           0.002         -0.003         -0.001         -0.014***         (0.15***         0.015***         0.012***         0.011**         0.011           0.041)         (-0.49)         (-0.23)         (-0.14)         (3.32)         (2.72)         (3.73)         (2.56)         (2.81)         (1.20)           0.052         -0.006         (-0.14)		(-0.17)	(-1.43)	(-0.27)	(-1.48)	(0.46)	(-0.51)	(-0.09)	(-0.46)	(-0.39)	(-1.16)	(-0.69)	(-1.14)
(18.41) (20.16) (19.44) (16.47) (17.76) (19.32) (18.91) (16.27) (18.11) (19.81) (10.64*** 0.064*** 0.064*** 0.064*** 0.064*** 0.064*** 0.064*** 0.077*** 0.064*** 0.064*** 0.064*** 0.064*** 0.064*** 0.064*** 0.064*** 0.064*** 0.064*** 0.064*** 0.064*** 0.064*** 0.064*** 0.064*** 0.064*** 0.064*** 0.064*** 0.064*** 0.024*** 0.034*** 0.024*** 0.024*** 0.024*** 0.024*** 0.024*** 0.024*** 0.024*** 0.024*** 0.024*** 0.024*** 0.034*** 0.034*** 0.034*** 0.034*** 0.034*** 0.004** 0.0001 0.014*** 0.015*** 0.015*** 0.012*** 0.011** 0.011 0.001 0.014*** 0.015*** 0.015*** 0.011** 0.011 0.004 0.011 0.011** 0.011 0.008 0.010 0.013** 0.011 0.007 0.00	Tobin's q	0.161***	0.150***	0.137***	0.122***	0.160***	0.151***	0.138***	0.125***	0.163***	0.153***	0.139***	0.126***
0.064***         0.077***         0.068***         0.064***         0.077***         0.069***         0.065***         0.078***           (14.55)         (15.01)         (15.31)         (14.33)         (14.51)         (15.17)         (15.72)         (14.78)         (15.00)         (15.63)           0.033***         0.034***         0.029***         0.032***         0.022***         0.033***         0.034***           (10.12)         (11.76)         (11.21)         (7.42)         (9.67)         (11.47)         (11.17)         (7.48)         (9.76)         (11.23)           0.002         -0.003         -0.001         -0.001         0.014***         0.015***         0.021**         0.012**         0.034***         0.034***           0.004         -0.004         -0.001         -0.014**         (3.32)         (2.72)         (3.73)         (2.56)         (2.81)         (1.20)           -0.005         -0.006         -0.011         -0.008         -0.013         -0.013         -0.003         -0.007           -0.027         (-0.46)         (-0.78)         (-0.78)         (-0.85)         (-0.99)         (-0.97)         (-0.71)         (-0.25)           1 lags         1 lags         1 lags         1 lags<		(18.41)	(20.16)	(19.44)	(16.47)	(17.76)	(19.32)	(18.91)	(16.27)	(18.11)	(19.81)	(19.41)	(16.56)
(14.55)         (15.01)         (15.31)         (14.53)         (14.51)         (15.17)         (15.72)         (14.78)         (15.00)         (15.63)           0.033***         0.034***         0.029***         0.029***         0.022***         0.033***         0.034***           (10.12)         (11.76)         (11.21)         (7.42)         (9.67)         (11.47)         (11.17)         (7.48)         (9.76)         (11.23)           0.002         -0.003         -0.001         -0.001         0.014***         0.015***         0.021**         0.012**         0.011           0.005         -0.006         -0.011         -0.008         -0.010         -0.013         -0.013         -0.012**         0.011           0.027)         (-0.49)         (-0.78)         (-0.14)         (3.32)         (2.72)         (3.73)         (2.56)         (2.81)         (1.20)           0.005         -0.006         -0.011         -0.008         -0.010         -0.013         -0.013         -0.003         -0.007           (-0.27)         (-0.46)         (-0.78)         (-0.78)         (-0.85)         (-0.99)         (-0.97)         (-0.71)         (-0.54)           1 lags         1 lags         1 lags         1	Cash Flow	0.064***	0.077	0.079***	0.068***	0.064***	0.077	0.080**	0.069***	0.065***	0.078***	0.081***	0.070***
0.033***         0.034***         0.029***         0.033***         0.029***         0.033***         0.034***           (10.12)         (11.76)         (11.21)         (7.42)         (9.67)         (11.47)         (11.17)         (7.48)         (9.76)         (11.23)           0.002         -0.003         -0.001         -0.001         0.014***         0.015***         0.021**         0.012**         0.011           0.005         -0.006         -0.011         -0.008         -0.010         -0.013         -0.013         -0.003         -0.007           -0.027         (-0.46)         (-0.78)         (-0.77)         (-0.85)         (-0.99)         (-0.013         -0.013         -0.003         -0.007           (-0.27)         (-0.46)         (-0.78)         (-0.77)         (-0.85)         (-0.99)         (-0.97)         (-0.72)         (-0.54)           (-0.27)         (-0.46)         (-0.78)         (-0.78)         (-0.99)         (-0.97)         (-0.07)         (-0.54)           1 lags		(14.55)	(15.01)	(15.31)	(14.33)	(14.51)	(15.17)	(15.72)	(14.78)	(15.00)	(15.63)	(16.26)	(15.34)
(10.12) (11.76) (11.21) (7.42) (9.67) (11.47) (11.17) (7.48) (9.76) (11.23) (0.002 -0.003 -0.001 -0.001 -0.014*** 0.015*** 0.015*** 0.021*** 0.012*** 0.011**	Sales Growth	0.033***	0.034***	0.029***	0.022***	$0.031^{***}$	0.033***	0.029***	0.022***	0.033***	0.034***	$0.031^{***}$	0.023***
0.002         -0.003         -0.001         -0.001         0.014***         0.015***         0.021***         0.012***         0.011**         0.011**         0.011           (0.41)         (-0.49)         (-0.23)         (-0.14)         (3.32)         (2.72)         (3.73)         (2.56)         (2.81)         (1.20)           -0.005         -0.006         -0.011         -0.008         -0.010         -0.013         -0.013         -0.003         -0.007           (-0.27)         (-0.46)         (-0.78)         (-0.77)         (-0.85)         (-0.99)         (-0.97)         (-0.77)         (-0.54)           1 lags         1 lags<		(10.12)	(11.76)	(11.21)	(7.42)	(6.67)	(11.47)	(11.17)	(7.48)	(9.76)	(11.23)	(11.02)	(7.74)
(041) (-0.49) (-0.23) (-0.14) (3.32) (2.72) (3.73) (2.56) (2.81) (1.20) (1.20) (-0.005 -0.006 -0.011 -0.008 -0.010 -0.013 -0.013 -0.003 -0.007 (-0.27) (-0.46) (-0.78) (-0.77) (-0.85) (-0.99) (-0.97) (-0.77) (-0.77) (-0.54) (-0.54) (-0.97) (-0.77) (-0.77) (-0.54) (-0.54) (-0.54) (-0.78) (-0.77) (-0.85) (-0.99) (-0.99) (-0.97) (-0.77) (-0.22) (-0.54) (-0.54) (-0.88)	GDP Growth	0.002	-0.003	-0.001	-0.001	0.014***	0.015***	0.015***	0.021**	0.012***	0.011	0.011*	0.016
-0.005         -0.006         -0.011         -0.008         -0.010         -0.013         -0.013         -0.003         -0.007           (-0.27)         (-0.46)         (-0.77)         (-0.85)         (-0.99)         (-0.97)         (-0.77)         (-0.54)           1 lags           Y         Y         Y         Y         Y         Y         Y         Y         Y           Y         Y         Y         Y         Y         Y         Y         Y         Y           Firm Year         Firm Y		(0.41)	(-0.49)	(-0.23)	(-0.14)	(3.32)	(2.72)	(3.73)	(2.56)	(2.81)	(1.20)	(1.77)	(1.46)
(-0.27)	Election	-0.005	-0.006	-0.011	-0.011	-0.008	-0.010	-0.013	-0.013	-0.003	-0.007	-0.012	-0.017
liags   liag		(-0.27)	(-0.46)	(-0.78)	(-0.77)	(-0.85)	(-0.99)	(-0.97)	(-0.77)	(-0.22)	(-0.54)	(-0.72)	(-0.82)
Y         Y	Macro Controls	1 lags	1 lags	1 lags	1 lags	1 lags	1 lags	1 lags	1 lags	1 lags	1 lags	1 lags	1 lags
Firm Year Firm Y	Quarter Dummies FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Firm Year Firm Y	Firm FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
0.44 0.45 0.45 0.45 0.44 0.45 0.45 0.45	Cluster	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year
355717 340443 326456 314486 355717 340443 326456 314486 355717 340443 3	Adjusted R-Squared	0.44	0.45	0.45	0.45	0.44	0.45	0.45	0.45	0.44	0.45	0.45	0.45
	Number of Obs	355717	340443	326456	314486	355717	340443	326456	314486	355717	340443	326456	314486

Panel D: Results based on news-based PU with 4 quarterly lags.

		Variable Set	e Set 1			Variab	Variable Set 2			Variabl	Variable Set 3	
	$Inv_t$ (1)	$Inv_{t+1} $ (2)	$Inv_{t+2} $ (3)	$Inv_{t+3}$ (4)	$Inv_t$ (5)	$Inv_{t+1}$ (6)	$Inv_{t+2} $ (7)	$Inv_{t+3}$ (8)	$Inv_t$ (9)	$Inv_{t+1} $ $(10)$	$Inv_{t+2} $ $(11)$	$Inv_{t+3} $ (12)
PU_News	-0.002	-0.012	-0.000	-0.015	-0.006	-0.006	0.003	-0.003	0.003	-0.004	0.006	-0.002
	(-0.31)	(-1.67)	(-0.00)	(-1.64)	(-1.04)	(-0.97)	(0.41)	(-0.38)	(0.31)	(-0.62)	(0.71)	(-0.25)
Tobin's q	0.159***	0.151***	0.138***	0.125***	0.157***	0.150***	0.137***	0.125***	0.160***	0.153***	0.140***	0.127***
	(17.15)	(18.79)	(17.76)	(14.88)	(16.97)	(18.54)	(17.60)	(14.89)	(17.20)	(19.07)	(18.16)	(15.12)
Cash Flow	0.066***	0.079***	0.080***	0.070***	0.067***	0.079	0.080***	0.070***	0.067***	0.079***	0.081***	0.071***
	(15.39)	(14.96)	(14.51)	(13.24)	(15.65)	(15.27)	(14.63)	(13.29)	(16.23)	(15.62)	(15.22)	(13.71)
Sales Growth	$0.030^{***}$	0.032***	0.028***	0.019***	0.030***	0.032***	0.028***	0.019***	0.031***	0.033***	0.029***	0.019***
	(6.59)	(9.15)	(7.66)	(4.88)	(0.50)	(9.29)	(7.80)	(4.81)	(9.34)	(9.42)	(8.13)	(4.94)
GDP Growth	0.002	-0.004	-0.003	9000	*700.0	0.004	-0.001	0.007	0.010***	0.008	*200.0	0.013
	(0.51)	(-0.64)	(-0.60)	(0.56)	(1.92)	(0.62)	(-0.14)	(0.71)	(2.83)	(1.13)	(1.77)	(1.34)
Election	0.014	0.005	0.004	-0.003	0.002	-0.004	-0.000	-0.005	0.003	0.001	0.001	-0.008
	(1.64)	(0.83)	(0.43)	(-0.24)	(0.18)	(-0.57)	(-0.01)	(-0.39)	(0.22)	(0.06)	(0.06)	(-0.42)
Macro Controls	4 lags	4 lags	4 lags	4 lags	4 lags	4 lags	4 lags	4 lags	4 lags	4 lags	4 lags	4 lags
Quarter Dummies FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	⊁
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Cluster	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year
Adjusted R-Squared	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46
Number of Obs	305371	292984	281268	271366	305371	292984	281268	271366	305371	292984	281268	271366

Panel E: Results based on news-based PU with 2 quarterly lags.

		Variable Set	e Set 1			Variab	Variable Set 2			Variabl	Variable Set 3	
	$Im_t$ (1)	$Im_{t+1} $ (2)	$Inv_{t+2} $ (3)	$Im_{t+3}$ (4)	$Imv_t$ (5)	$Inv_{t+1} $ $(6)$	$Inv_{t+2} $ (7)	$Inv_{t+3}$ (8)	$Inv_t$ (9)	$Inv_{t+1} $ $(10)$	$Inv_{t+2} $ $(11)$	$Inv_{t+3} $ (12)
PU_News	-0.007	-0.014**	-0.009	-0.021**	-0.003	-0.010*	-0.001	-0.005	-0.000	-0.009	-0.001	-0.008
	(-1.19)	(-2.05)	(-1.17)	(-2.18)	(-0.53)	(-1.72)	(-0.10)	(-0.58)	(-0.04)	(-1.47)	(-0.13)	(-0.92)
Tobin's q	0.159***	0.150***	0.136***	0.124***	0.158***	0.150***	0.136***	0.126***	0.161***	0.152***	0.139***	0.127***
	(18.41)	(19.81)	(19.03)	(16.09)	(18.06)	(19.16)	(18.61)	(16.03)	(18.19)	(19.62)	(19.05)	(16.13)
Cash Flow	0.065***	0.077	0.080***	0.068***	0.065***	0.077	0.080***	0.068***	0.066***	0.077	0.081***	***690.0
	(14.73)	(15.32)	(14.93)	(13.43)	(14.75)	(15.52)	(14.91)	(13.56)	(15.39)	(15.96)	(15.62)	(14.06)
Sales Growth	0.031***	0.033***	0.029***	0.021***	0.031***	0.033***	0.029***	0.021***	0.032***	0.034***	$0.030^{***}$	0.021***
	(9.34)	(10.95)	(10.29)	(6.46)	(9.38)	(11.00)	(10.50)	(6.42)	(9.48)	(11.07)	(10.89)	(6.59)
GDP Growth	-0.001	-0.001	-0.005	0.003	*700.0	0.009	0.003	0.011	0.011**	0.010	0.008	0.014
	(-0.18)	(-0.16)	(-1.12)	(0.31)	(2.01)	(1.22)	(0.66)	(1.15)	(2.65)	(1.19)	(1.51)	(1.40)
Election	0.003	0.003	-0.003	-0.007	-0.005	-0.006	-0.005	-0.007	0.000	-0.003	-0.004	-0.010
	(0.24)	(0.29)	(-0.28)	(-0.50)	(-0.50)	(-0.72)	(-0.41)	(-0.44)	(0.02)	(-0.22)	(-0.30)	(-0.50)
Macro Controls	2 lags	2 lags	2 lags	2 lags	2 lags	2 lags	2 lags	2 lags	2 lags	2 lags	2 lags	2 lags
Quarter Dummies FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Cluster	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year
Adjusted R-Squared	0.45	0.45	0.45	0.46	0.45	0.45	0.45	0.46	0.45	0.45	0.45	0.45
Number of Obs	336683	322763	309551	298267	336683	322763	309551	298267	336683	322763	309551	298267

Panel F: Results based on news-based PU with 1 quarterly lag.

		Variable Set	e Set 1			Variab	Variable Set 2			Variabl	Variable Set 3	
	$Inv_t$ (1)	$Inv_{t+1}$ (2)	$Inv_{t+2} $ (3)	$Inv_{t+3}$ (4)	$Im_t$ (5)	$Inv_{t+1}$ (6)	$Inv_{t+2} $ (7)	$Inv_{t+3}$ (8)	$Inv_t$ (9)	$Inv_{t+1} $ (10)	$Inv_{t+2} $ $(11)$	$Iw_{t+3} $ $(12)$
PU_News	-0.002	-0.013*	-0.004	-0.019**	-0.003	-0.010	-0.007	-0.012	-0.007	-0.016**	-0.013	-0.020**
	(-0.25)	(-1.70)	(-0.42)	(-2.04)	(-0.48)	(-1.68)	(-0.96)	(-1.41)	(-0.81)	(-2.24)	(-1.61)	(-2.20)
Tobin's q	0.161***	0.150***	0.137***	0.122***	0.160***	0.150***	0.137***	0.125***	0.162***	0.153***	0.139***	0.125***
	(18.47)	(20.13)	(19.44)	(16.52)	(17.75)	(19.25)	(18.82)	(16.27)	(18.05)	(19.73)	(19.36)	(16.57)
Cash Flow	0.064***	0.077***	0.079***	0.068***	0.064***	0.077	0.080***	***690.0	0.065***	0.078***	0.081***	0.070***
	(14.54)	(14.97)	(15.30)	(14.27)	(14.47)	(15.07)	(15.64)	(14.65)	(14.97)	(15.49)	(16.12)	(15.13)
Sales Growth	0.033***	0.034***	0.029***	0.022***	0.031***	0.033***	0.029***	0.022***	0.033***	0.034***	$0.030^{***}$	0.023***
	(10.12)	(11.76)	(11.20)	(7.42)	(99.6)	(11.46)	(11.14)	(7.44)	(9.75)	(11.22)	(11.03)	(7.73)
GDP Growth	0.002	-0.002	-0.001	-0.000	0.013***	0.013**	0.013***	0.019**	0.011***	0.010	*600.0	0.014
	(0.42)	(-0.43)	(-0.28)	(-0.01)	(2.79)	(2.58)	(3.51)	(2.48)	(2.81)	(1.15)	(1.74)	(1.42)
Election	-0.004	-0.006	-0.011	-0.011	-0.007	-0.009	-0.013	-0.013	-0.003	-0.007	-0.011	-0.016
	(-0.27)	(-0.47)	(-0.79)	(-0.77)	(-0.77)	(-0.95)	(-0.94)	(-0.73)	(-0.20)	(-0.51)	(-0.68)	(-0.79)
Macro Controls	1 lags	1 lags	1 lags	1 lags	1 lags	1 lags	1 lags	1 lags	1 lags	1 lags	1 lags	1 lags
Quarter Dummies FE	Y	Y	Y	¥	Y	Y	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Cluster	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year
Adjusted R-Squared	0.44	0.45	0.45	0.45	0.44	0.45	0.45	0.45	0.44	0.45	0.45	0.45
Number of Obs	355717	340443	326456	314486	355717	340443	326456	314486	355717	340443	326456	314486

Panel G: Results based on other policy uncertainty indice. In this table macroeconomic variable set 1 is used as control variables.

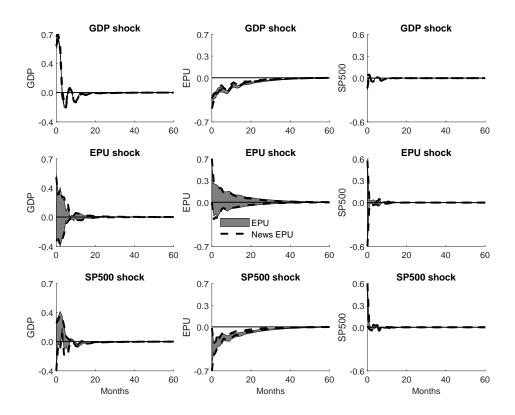
		MPU	Ū			Par	Partisan			Polic	PolicyEMV	
	(1) Inv <sub>t</sub>	$(2)$ $Inv_{t+1}$	$(3)$ $Inv_{r+2}$	$(4)$ $Inv_{t+3}$	(5) Inv <sub>t</sub>	(6) Inv <sub>r+1</sub>	$(7)$ $Inv_{t+2}$	(8) Inv <sub>t+3</sub>	(9) Inv <sub>t</sub>	(10) Inv <sub>t+1</sub>	(11) Inv <sub>t+2</sub>	(12) Imv <sub>t+3</sub>
MPU	0.003	-0.013**	-0.004	-0.007								
Partisan	(20:0)	(Control of the control of the contr	(20:00)		0.009	0.016**	-0.001	-0.005				
GPR					(1.39)	(2.34)	(-0.17)	(-0.62)				
PolicyEMV									**600.0	-0.001	0.009**	-0.000
									(2.39)	(-0.20)	(2.30)	(-0.03)
Tobin's q	0.159***	0.150***	0.138***	0.125***	0.159***	$0.151^{***}$	0.138***	$0.126^{***}$	0.159***	0.151***	0.139***	0.126***
	(17.17)	(18.77)	(17.54)	(14.81)	(17.26)	(19.06)	(17.78)	(14.97)	(17.05)	(18.80)	(17.67)	(15.00)
Cash Flow	0.066***	0.079***	0.080***	0.070***	0.066***	0.079***	0.080***	0.070***	0.066***	0.079***	0.080***	0.070***
	(15.38)	(15.00)	(14.51)	(13.30)	(15.40)	(14.97)	(14.47)	(13.26)	(15.51)	(14.82)	(14.56)	(13.23)
Sales Growth	$0.030^{***}$	0.032***	0.028***	0.019***	0.030***	$0.032^{***}$	0.028***	0.019***	$0.030^{***}$	0.032***	0.028***	0.019***
	(9.52)	(9.16)	(7.62)	(4.88)	(9.56)	(9.22)	(7.58)	(4.90)	(6.49)	(9.17)	(7.50)	(4.87)
GDP Growth	0.003	-0.001	-0.003	0.010	0.002	-0.002	-0.002	0.011	0.005	0.000	-0.000	0.011
	(0.84)	(-0.21)	(-0.76)	(1.06)	(0.53)	(-0.28)	(-0.54)	(1.37)	(1.31)	(0.01)	(-0.08)	(1.08)
Election	0.014	0.004	0.004	-0.005	0.013	0.003	0.004	-0.004	0.013	0.004	0.003	-0.004
	(1.57)	(0.63)	(0.43)	(-0.34)	(1.52)	(0.48)	(0.43)	(-0.29)	(1.57)	(0.63)	(0.28)	(-0.32)
Macro Controls	4 lags	4 lags	4 lags	4 lags	4 lags	4 lags	4 lags	4 lags	4 lags	4 lags	4 lags	4 lags
Quarter Dummies FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Cluster	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year
Adjusted R-Squared	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46
Number of Obs	305371	292984	281268	271366	305371	292984	281268	271366	305371	292984	281268	271366

Panel H: results based on other policy uncertainty indice. In this table macroeconomic variable set 2 is used as control variables.

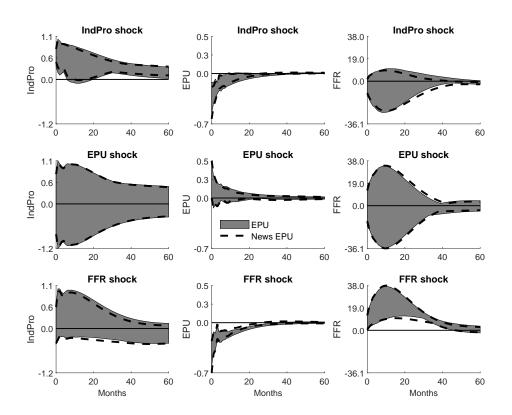
		MPU	Ω			Part	Partisan			Policy	PolicyEMV	
	(1) Inv.	(2) Inv:+1	(3) Inv <sub>t+2</sub>	(4) Inv:+3	(5) Inv.	(6)	(7) Inv:+3	(8) Inv:+3	(9) Inv.	(10)	(11) Invest	(12) Investa
MPU	0.002	-0.007	-0.003	-0.004		:	-	2		-		2
Partisan	(0)	(-1.29)	(-0.03)	(-0.92)	-0.008	0.002	-0.003	0.001				
GPR					(-1.24)	(0.22)	(-0.32)	(0.14)				
PolicyEMV									0.007	-0.001	0.006	0.000
E	***************************************	**************************************	***	***	**************************************	** ** **	***	**	(1.36)	(-0.20)	(1.06)	(0.05)
lobin's q	0.159****	(19.24)	(18.52)	0.126****	(18.08)	(19.20)	(18.59)	(16.11)	(17.80)	(19.04)	(18.39)	0.126**** (15.99)
Cash Flow	0.065***	0.077	0.080***	0.068***	0.065***	0.077***	0.080***	***890.0	0.065***	0.077***	0.080***	***890.0
	(14.74)	(15.58)	(14.85)	(13.58)	(14.72)	(15.59)	(14.85)	(13.58)	(14.81)	(15.42)	(14.89)	(13.50)
Sales Growth	0.031***	0.033***	0.029***	0.021***	0.031***	0.033***	0.029***	0.021***	0.031***	0.033***	0.029***	$0.021^{***}$
	(9.38)	(11.00)	(10.46)	(6.42)	(9.36)	(11.03)	(10.47)	(6.43)	(9.38)	(11.02)	(10.45)	(6.40)
GDP Growth	0.008***	0.011	0.003	0.012	$0.010^{***}$	0.011	0.004	0.012	$0.010^{***}$	0.011	0.004	0.012
	(2.73)	(1.43)	(0.79)	(1.23)	(3.02)	(1.32)	(0.86)	(1.29)	(3.05)	(1.36)	(1.06)	(1.19)
Election	-0.005	-0.007	-0.005	-0.007	-0.005	-0.007	-0.005	-0.007	-0.005	-0.007	-0.005	-0.007
	(-0.50)	(-0.84)	(-0.42)	(-0.46)	(-0.50)	(-0.80)	(-0.40)	(-0.46)	(-0.59)	(-0.77)	(-0.43)	(-0.46)
Macro Controls	4 lags	4 lags	4 lags	4 lags	4 lags	4 lags	4 lags	4 lags	4 lags	4 lags	4 lags	4 lags
Quarter Dummies FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Cluster	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year	Firm Year
Adjusted R-Squared	0.45	0.45	0.45	0.46	0.45	0.45	0.45	0.46	0.45	0.45	0.45	0.46
Number of Obs	336683	322763	309551	298267	336683	322763	309551	298267	336683	322763	309551	298267

### Appendix Figure A1: Full figure of IRFs based on SVARs 0.2in

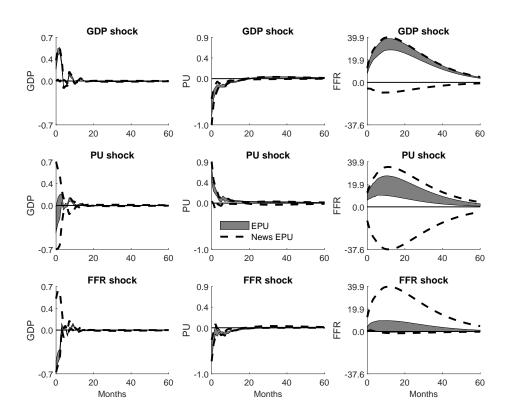
Panel A: This figure reports identified set of impulse response to positive, one standard deviation shocks for system X = (GDP, PU, S&P500)', where GDP, PU, and S&P500 respresent GDP growth, policy uncertainty, and monthly return of the S&P500 index, respectively.



Panel B: This figure reports identified set of impulse response to positive, one standard deviation shocks for system X = (GDP, PU, S&P500)', where GDP, PU, and S&P500 respresent GDP growth, policy uncertainty, and monthly return of the S&P500 index, respectively.



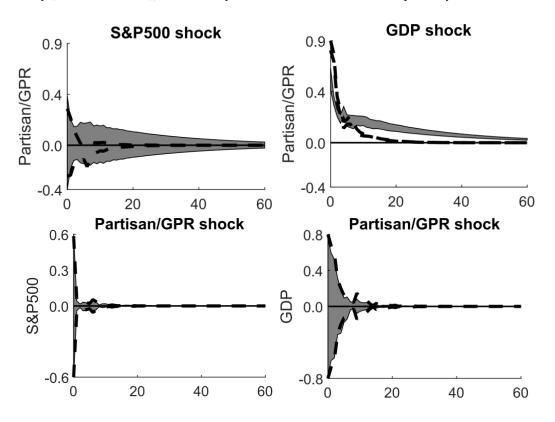
Panel C: This figure reports identified set of impulse response to positive, one standard deviation shocks for system X = (GDP, PU, S&P500)', where GDP, PU, and S&P500 respresent GDP growth, policy uncertainty, and monthly return of the S&P500 index, respectively. The PU represents PolicyEMV (shaded area) and WUI (dashed area), respectively.



### **Appendix Figure A2:** More IRFs with Event Constaints

This figure presents the results based on other main proxies for policy uncertainty. We use structural VARs with event constraints to construct the impulse response functions (IRF) that depict the dynamic responses of economic policy uncertainty indices to innovations in macro variables. Specifically, we construct a VAR system with  $X_t = (M_{1t}, U_t, M_{2t})'$ , where  $M_{1t}$  and  $M_{2t}$  represent macroeconomic variables, and  $U_t$  denotes the measure for policy uncertainty. Here, we use six lags in the VARs, while twelve lags give similar results. Additionally, we restrict innovations to macroeconomic variables in the VARs fall below 0 during the financial crisis during 2007 and 2009, the debt ceiling crisis in 2011, and the Covid-19 pandemic in 2020. In panel A, we construct the IRFs based on X = (GDP, PU, S&P500)', where GDP, PU, and S&P500 represent GDP growth, policy uncertainty (Partisan and EMV), and monthly return of the S&P500 index, respectively. Panel B presents IRFs based on X = (IndPro, PU, FFR)', where IndPro, PU, and IndPro,

Panel A: This figure reports identified set of impulse responses to positive, one standard deviation shocks for system X = (GDP, PU, S&P500)', where GDP, PU, and S&P500 represent GDP growth, policy uncertainty (as measured by (Partisan and GPR)), and monthly return of the S&P500 index, respectively.



## **Appendix B: Variable Descriptions**

This table lists and describes the main text-based economic policy uncertainty indices in the prior literature.

Variable	Description
Economic Policy Uncertainty Index (EPU)	The index of economic policy uncertainty based on the counting of the frequency of joint occurrences of the economy policy-related keywords and uncertainty across major newspapers (Baker, Bloom, and Davis (2016)). In this paper, the data for EPU Index spans from 1985:m1 to 2022:m9.
News-based Economic Policy Uncertainty (News-EPU)	The news component of the EPU index by Baker, Bloom, and Davis (2016). In this paper, the data for this index spans from 1985:m1 to 2022:m9.
Monetary policy uncertainty Index (MPU)	The monthly index constructed by scaling frequency counts of newspaper articles that discuss monetary policy uncertainty across major newspapers (Husted, Rogers, and Sun (2017)). In this paper, the data for this index spans from 1985:m1 to 2022:m9.
Trade policy uncertainty (TPU)	The monthly index of trade policy uncertainty by counting the frequency of joint occurrences of the trade policy and uncertainty terms across major newspapers (Caldara et al. (2020)). In this paper, the data for this index spans from 1985:m1 to 2022:m9.
Financial stress indicator (FSI)	A monthly index of financial stress that is based on occurrences of financial stress-related keywords and uncertainty across five major US newspapers (Püttmann (2018)). In this paper, the data for this index spans from 1985:m1 to 2016:m12.
Geopolitical Risk Index (GPR)	A monthly index that is based on an automated text search of geopolitical risk-related articles across 11 national and international newspapers (Caldara and Iacoviello (2018)). In this paper, the data for this index spans from 1985:m1 to 2022:m9
Partisan conflict (polarization) index (Partisan)	Partisan Conflict Index from Federal Reserve Bank of Philadelphia

Table Continued

Variable	Description
News implied volatility (NVIX)	A uncertainty tracker based on the counts of articles on the WSJ that related to policy uncertainty (Manela and Moreira (2017)). In this paper, the data for this index spans from 1985:m1 to 2016:m3.
US equity market volatility index (EMV)	A news paper-based equity market volatility tracker based on the counting of keywords in the economic, stock market, and volatility categories (Baker et al. (2019)). In this paper, the data for this index spans from 1985:m1 to 2022:m9
Policy-Related EMV tracker (Policy-EMV)	The measure that is constructed using the same approach to the EMV, but only focuses on the policy-related keywords. In this paper, the data for this index spans from 1985:m1 to 2022:m9.
World uncertainty index (WUI)	The quarterly index of economic uncertainty based on frequency counts of uncertainty-related keywords in the quarterly Economist Intelligence Unit country reports (Ahir, Bloom, and Furceri(2018)). In this paper, the data for this index spans from 1985:Q1 to 2022:Q3.
Migration policy uncertainty index (MiPU)	The quarterly index of migration fear intensity based on frequency counts of "migration", "fear", "economy", "policy", "uncertainty", and their related keywords in major news articles. In this paper, the data for this index spans from 1990:Q1 to 2022:Q3.
Migration fear index (MFU)	A measure constructed by the same approach to MiPU, except that a different scaler is used. In this paper, the data for this index spans from 1990:Q1 to 2022:Q3.