JOEEP

e-ISSN: 2651-5318
Journal Homepage: http://dergipark.org.tr/joeep

Araştırma Makalesi ● Research Article

Corporate Investment Behavior: Uncertainty and Governance *

Kurumsal Yatırım Davranışı: Belirsizlik ve Yönetişim

Sena Erşan [a,**] & Ensar Yılmaz [b]

[a] Res. Assist., Bandırma Onyedi Eylül University, 10200, Balıkesir/Türkiye
ORCID: 0000-0001-5610-4923
[b] Prof. Dr., Yıldız Technical University, 34220, İstanbul/Türkiye
ORCID: 0000-0003-0870-1445

MAKALE BİLGİSİ

Makale Geçmişi:
Başvuru tarihi: 9 Ocak 2026
Düzeltme tarihi: 4 Mayıs 2026
Kabul tarihi: 23 Mayıs 2026

Anahtar Kelimeler:
Belirsizlik
Kurumsal Yatırım
İyi Yönetişim

ÖZ

Bu çalışma, belirsizlik ortamının kurumsal yatırım davranışları üzerindeki etkisini ve yönetişim kalitesinin bu ilişkideki rolünü, 2000–2023 döneminde Türkiye'de Borsa İstanbul'da ağırlıklı olarak imalat sektöründe faaliyet gösteren 158 firmadan oluşan panel veri setiyle incelemektedir. Firma düzeyindeki yatırım kararlarının belirsizlik gibi makroekonomik koşullardan bağımsız değerlendirilemeyeceği varsayımından hareketle çalışma, belirsizliğin yatırımlar üzerindeki etkisini yönetişim perspektifiyle birlikte ele almaktadır. Ampirik bulgular, belirsizliğin kurumsal yatırımları anlamlı biçimde baskıladığını ortaya koymaktadır. Bu durum, firmaların elverişsiz ekonomik koşullar karşısında yatırım harcamalarını erteleme eğilimini yansıtan "bekle-gör" davranışıyla tutarlılık göstermektedir. Yönetişim kalitesine ilişkin bulgular ise belirli model spesifikasyonları çerçevesinde iyi yönetişimin belirsizliğin olumsuz etkisini hafifletebildiğine işaret etmektedir. Bununla birlikte, bu hafifletici rolün yönetişimin farklı boyutları arasında heterojenlik gösterdiği ve özellikle ses ve hesap verebilirlik göstergesinde benzer bir etkinin gözlemlenmediği saptanmıştır. Çalışma aynı zamanda politika yapıcılara yönelik önemli çıkarımlar sunmakta; makroekonomik istikrarsızlık dönemlerinde yatırım kararlarının nasıl şekillendiğini ve bu süreçte yönetişim kalitenin üstlenebileceği rolü gözler önüne sermektedir.

ARTICLE INFO

Article history:
Received: January 9, 2026
Received in revised form: May 4, 2026
Accepted: May 23, 2026

Keywords:
Uncertainty
Corporate Investment
Good Governance

ABSTRACT

This study examines the impact of uncertainty on corporate investment behavior and the role of governance quality in this relationship with a panel dataset consisting of 158 firms operating mainly in the manufacturing sector on Istanbul Stock Exchange in Türkiye in the 2000–2023 period. Based on the assumption that firm-level investment decisions cannot be evaluated independently of macroeconomic conditions such as uncertainty, the study considers the impact of uncertainty on investments together with a governance perspective. Empirical findings reveal that uncertainty significantly suppresses corporate investments. This is consistent with the "wait-and-see" behavior, which reflects the tendency of firms to postpone investment expenditures in the face of unfavorable economic conditions. Findings on governance quality indicate that good governance within the framework of certain model specifications can alleviate the negative impact of uncertainty. However, it has been found that this mitigating role is heterogeneous between different dimensions of governance, and a similar effect has not been observed, especially in indicator such as voice and accountability. The study also offers important implications for policy makers by revealing how investment decisions are shaped in times of macroeconomic instability and the role that governance quality can play in this process.

1. Introduction

The growing instabilities of political and economic systems in the recent century have brought the concept of uncertainty to the forefront of academic discussions. Although the concept has already been part of the economic agenda in an earlier period, the impact of uncertainty has received much attention since the global financial crisis. The extant

* The study is derived from the author's PhD dissertation and an earlier version of this study is presented as an abstract at the 4th International Ege Congress on Scientific Research, held in Izmir, Türkiye, on January 23–25, 2026.

** *Sorumlu yazar/Corresponding author.*
e-mail: *sersan@bandirma.edu.tr*

Atıf/Cite as: Erşan, S. & Yılmaz, E. (2026). Corporate Investment Behavior: Uncertainty and Governance. *Journal of Emerging Economies and Policy*, 11(1), 160-172.

literature addresses the concept of uncertainty in a holistic manner and demonstrates that economic uncertainty leads to economic slowdown in terms of economic activity, employment, investment and productivity (Baker et al., 2016; Berger et al., 2022; Bhattacharya et al., 2017; Bloom, 2014; Gulen & Ion, 2016). In this sense, analyzing corporate investment behavior can be significant to comprehend the firm behavior under macroeconomic environments such as uncertainty.

Uncertainty can include a range of situations that reflect different economic conditions such as crises, political instability and elections. These situations reflect the delicate nature of the economic environment relevant to uncertainty. Since firms often operate in an environment where economic conditions change, uncertainty also leads to serious economic repercussions among firms' behavior (Bloom, 2009; Gulen & Ion, 2016; Lou et al., 2022). The most reasonable response of firms is increasingly inclined to delay investment activities in unpredictable regulatory environments (Azzimonti, 2018; Baker et al., 2016; Bernanke, 1983). This behavior can be attributed to managers' efforts to minimize the risk of potential mistakes, which can be explained by real options theory. According to theory, firms become more conservative, postpone investment projects and prefer "wait and see" that is related to the irreversibility of investment since they avoid making mistakes under uncertainty (Bernanke, 1983; Dixit & Pindyck, 1994).

Investment decisions are mainly explained by net present value in conventional theories such as Classical, Keynesian and Tobin Q theory (Tobin, 1969). These conventional theories are built on the assumption that irreversibility of investment, timing of investment, and uncertainty of future market conditions in decision-making processes are ignored (Dixit & Pindyck, 1994). Considering these limitations, the real options theory has become a highly controversial topic in the uncertainty agenda (Bernanke, 1983; Dixit & Pindyck, 1994; Gulen & Ion, 2016). Inspired by financial call options, real options theory gives firms options in deciding whether to conduct an investment project in real and fixed assets during uncertainty. The investment decision, according to Pindyck (1990), is based on the value of the project calculated by the net present value method must be greater than the option value waiting. Presence of unpredictable environments, however, causes the option value increases and companies become more conservative and postpone investment projects to act in uncertain environments that's why they prefer to wait and see (Bernanke, 1983; Dixit & Pindyck, 1994). This behavior is related to the irreversibility of investment since they avoid making mistakes under uncertainty. Bloom (2014) states that real option effects are not universal because of partial irreversibility, unavailability to wait, and imperfect competition. The other approach for the inverse effect of uncertainty is linked to risk and ambiguity aversion. If idiosyncratic risk rises, risk-averse firms decrease their investment (Panousi & Papanikolaou, 2012). This is also valid when risk-averse agents have worst case beliefs and lack confidence (Ilut & Schneider, 2013). Moreover, an increase in uncertainty can create financial constraints through either cash flow sensitivity (Fazzari et al., 1988), or credit spreads (Gilchrist et al., 2014), thus leading to diminished corporate investment levels. This is in line with the literature, which states that the corporate investment behavior of firms is shaped by political and economic uncertainty (Bernanke, 1983; Bloom, 2009; Pástor & Veronesi, 2012).

In light of the firm level reflections of uncertainty, the corporate investment response has become a much-discussed subject in economics literature. Corporate investment decisions, however, are affected by not only firm dynamics but also the investable economic and political environment. Discussions of corporate investment under uncertainty are developed by considering the role of governance quality in this relationship. Governance is the process of decision-making between government and non-governmental organizations, public and private institutions, based on coordination. The concept of governance is taken as a basis in order to explain not only institutional capacity that is limited to effective and efficient public resources but also represents a normative, institutional and structural order that directs economic and social interactions in society. Especially considering the impact of uncertain environments on economic and institutional structures, governance can be considered as a dynamic area that includes not only the effectiveness of decision-making processes but also the capacity of these processes to reduce uncertainty. Therefore, the response of corporate investment under uncertainty is further improved by including the role of good governance to analysis. The study tries to examine whether country governance quality can affect corporate investment decisions in uncertain environments. Intuitively, it is expected that the presence of strong, transparent, and predictable governance, which means good governance, can reduce the detrimental effects of uncertainty and encourage long-term investments. Conversely, poor governance, political instability, and high corruption can deter corporate investment, increasing uncertainty and associated costs. Nevertheless, to the best of our knowledge, a limited number of studies focus on the mitigating role of governance quality to remove detrimental effects of uncertainty. The improvement effects of good governance on uncertainty are analyzed by Farooq et al. (2022) for corporate investments for six Asian economies, which are China, India, Japan, Pakistan, Singapore, and South Korea., while it is researched by Wang et al. (2022) for bank liquidity creation. Wang et al. (2022) represent that good governance mitigates the negative impact of this on bank liquidity creation for 24 countries from different regions, while Ali et al. (2023) indicates role of governance quality on financial stability under uncertainty through a 23-country for the period 2005 to 2019. Moreover, Syed et al. (2024) shows the importance of governance to reduce negative consequences of economic political uncertainty on financial inclusion in the BRICS economies from 2004 to 2021. Although there are a few

studies examining the impact of good governance under uncertainty, as far as is known, there is a gap in the literature for Türkiye. As far as is known, the studies about the mitigating role of good governance on uncertainty are limited and a newly emerging field. To address this gap and provide a comprehensive view on the available evidence, the impact of good governance on corporate investment is investigated considering uncertain environments.

Current studies generally explore uncertainty dynamics in Türkiye by examining various macro effects (Bilgin et al., 2019; Cevik & Erduman, 2020; Erdem & Yamak, 2016; Ermişoğlu & Kanik, 2013; Kilic & Balli, 2024; Sahinoz & Cosar, 2018; Yıldırım & Alkan, 2018). However, there are a limited number of studies that examine the micro effects of uncertainty. The studies have focused on the analysis of corporate investment behavior in Türkiye under uncertainty, which is represented by Arslan et al. (2012), Ayaydin (2016), Aydın & Odabaşıoğlu (2016); Tan et al. (2022). Arslan et al. (2012) examines uncertainty and firm investment plans in Türkiye. The wait-and-see behavior is in line with studies in literature that pioneering papers by Bernanke (1983), Dixit (1989), Pindyck (1991), Rodrik (1991), Dixit & Pindyck (1994), Bloom et al. (2009) and Gulen & Ion (2016) that highlighted the impact of uncertainty on corporate investment decisions.

Our firm-level analysis is based on a dataset containing accounting information on 158 firms in Türkiye between 2000 and 2023, which can shed light on the corporate investment behavior under uncertainty literature in terms of the importance of good governance in emerging markets such as Türkiye.

Our paper relates and contributes to several strands of literature. Initially, the paper analyzes the effect of uncertainty on corporate investment activity of firms. In addition to the existing literature examining corporate behavior under uncertainty in previous periods, this study examines the phenomenon in a longer period, including the pandemic, in its current context and provides a comprehensive perspective by testing the validity of the existing literature. Consistent with previous literature, the results indicate that an increase in uncertainty leads to a decline in corporate investment in Türkiye for the period from 2000 to 2023.

Secondly, this study examines whether good governance can mitigate the adverse effects of uncertainty on corporate investments in Türkiye. Unlike previous studies, which are limited to the negative effects of uncertainty, this study focuses on the improvability of the macroeconomic environment for investment in an uncertain environment. Therefore, this research, which examines the effect of good governance on corporate investment behavior under uncertainty, can be one of the pioneer studies for Türkiye. The findings have suggested that it is possible to establish more resilient economic structures to uncertainty, which is consistent with existing literature. Therefore, the importance of good governance in combating the uncertainty arising from the economic and political environments in which companies operate is emphasized.

Finally, unlike static analyses in literature, this study examines the dynamic relationship between uncertainty and corporate investment, considering the mitigating role of good governance. Thus, this analysis can highlight the effects of uncertainty shocks on corporate investment by providing significant insights into the dynamic mechanisms. The results of the local projection analysis indicate that real options theory is valid and that corporate investment is expected to decrease in response to the uncertainty shock. These results are consistent with previous empirical findings represented by Dreyer & Schulz (2023) and Gulen & Ion (2016). On the other hand, good governance has mitigated the magnitude and duration of the negative impact of uncertainty shocks on corporate investments. This dynamic outcome highlights the importance of good governance under uncertainty for emerging countries like Türkiye.

The remainder of this paper is organized as follows: Section 2 outlines the data of the analysis. Section 3 details econometric models and methodology. Section 4 includes empirical results, starting with the analysis of the relationship between uncertainty and corporate investment. This is followed by an examination of the good governance on corporate investment under uncertainty. Additionally, the local projections analysis is performed to understand the dynamic relationship between uncertainty and corporate investment in Section 5. Section 6 contains robust analysis represented in two subsections. Section 7 represents conclusion.

2. Data

The study is used a panel dataset that brings together firm-level micro variables and country-level macroeconomic and governance indicators analyze the impact of uncertainty on corporate investment considering the role of good governance. The dataset comprises 158 listed firms in Istanbul Stock Exchange market in Türkiye for the period 2000 to 2023. Firm-level data is mostly obtained from Finnet, a data provider company, and benefits from Istanbul Stock Exchange (BIST) and Public Disclosure Platform.

Firm-level control variables include capital expenditure, cash flow, and sales growth in line with existing literature. Most of the literature accepts capital expenditures as corporate investment variables, however, the absence of capital expenditures in financial reports requires measuring firm-level investment. Therefore, *Investment* is defined as the annual change in period property, plant, and equipment plus depreciation scaled by beginning-of-year total assets following to (Asker et al., 2014). Cash Flow refers to generating cash from companies' operating activities. Operating cash flow is measured as net income plus depreciation and amortization scaled by beginning-of-year total assets following (Julio & Yook, 2012; Tan et al., 2022). Sales Growth is defined as the change in the firm's sales scaled by the sales of the previous year.

In addition to firm-level variables, country-level variables consist of macroeconomic variables to control possible spurious effects on uncertainty. The impact of uncertainty as main regressor measures by World Uncertainty Index following Ahir et al. (2022) respectively. Economic Growth as an annual percentage change and Inflation as measured by the annual growth rate of the GDP deflator, which are taken from the World Development Indicator database (Dreyer & Schulz, 2023). Governance indicators consist of Control of Corruption, Government Effectiveness, Political Stability and Absence of Violence/Terrorism, Rule of Law, and Voice and Accountability. The Worldwide Governance

Indicators (WGI) is a dataset developed by the World Bank to measure the governance quality of countries, retrieved from the World Development Indicator database. Each indicator is standardized on a scale from −2.5 to +2.5, where higher values indicate better governance. WGI is widely used in academic research and policy analysis to evaluate institutional quality and its impact on economic and social outcomes (World Bank, 2024)

Firm sample selection process from the listed in Türkiye stock exchange market based on factors following Gulen & Ion (2016) and Dreyer & Schulz (2023). Firms are required to have uninterrupted data for all firm-level variables for a minimum of three to four consecutive years. That's why firm-level variables with highly missing data have dropped due to this requirement. Moreover, firms operating in financial, or utility sectors are excluded to capture change in fixed investment, which is mostly analyzed by manufacturing firms. Finally, all firm-level variables are winsorized at 1% and 99th% percentiles to reduce the effect of outliers.

After the firm selection process, the sample includes 158 firms. At the firm level, corporate investment and cash flow variables comprise 3,730 observations each, while sales growth includes 3,712 observations due to missing firm-year data. At the country level, macroeconomic variables, uncertainty, economic growth, and inflation, comprise 3,792 observations, whereas governance indicators consist of 3,634 observations across six governance indicators. The dataset is an unbalanced panel, as not all firms have continuous data availability throughout the entire sample period. Consequently, the number of observations varies across model specifications depending on the availability of firm-level variables. Table 1 shows descriptive statistics of all variables.

Table 1: Descriptive Statistics

Firm-level Variables	**Obs.**	**Mean**	**Std. Dev.**	**Min**	**Max**
Corporate Investment	3,730	0.188	0.514	-0.798	17.937
Cash Flow	3,730	0.120	0.418	-2.625	16.168
Sales Growth	3,712	1.518	60.638	-2.670	3688.384
Country-level Variables	**Obs.**	**Mean**	**Std. Dev.**	**Min**	**Max**
Uncertainty	3,792	0.813	0.683	0.187	2.888
Economic Growth	3,792	5.112	4.204	-5.750	11.439
Inflation	3,792	21.56	22.79	5.446	96.036
Corruption	3,634	-0.162	0.215	-0.570	0.161
Effectiveness	3,634	0.109	0.204	-0.248	0.432
Stability	3,634	-1.079	0.343	-2.007	-0.590
Quality	3,634	0.163	0.205	-0.245	0.463
Law	3,634	-0.144	0.204	-0.512	0.117
Accountability	3,634	-0.375	0.339	-0.926	0.013

3. Econometric Methodology

The analysis begins with estimating two models: The baseline model explains the impact of uncertainty on corporate investment, while the other controls the influence of country-level governance indicators on this relationship. Therefore, models are constructed with the aim of capturing the role of good governance on corporate investment in an uncertain environment.

Baseline model, consistent with the literature based on the research conducted by Gulen & Ion (2016), highlights only corporate investment behavior in an environment of uncertainty. Additional to baseline analysis, role of good governance in this relation is attempted to be measured by adding into the baseline model following Dreyer & Schulz (2023). Thus, the governance regression model is an expanding version of the baseline model.

Governance regression model:

$$Investment_{it} = \alpha_i + \beta_0 Uncertainty_t + \beta_1 Uncertainty_t \times Governance_t + \beta_2 CashFlow_{it} + \beta_3 SalesGrowth_{it} + \beta_4 Growth_{it} + \beta_4 Growth_{it} + \beta_5 Inflation_t + \varepsilon_{it} \quad (1)$$

where i indexes firms, t indexes years and α_i indicate firm-specific effects. The dependent variable, $Investment$ represents corporate investment, is the annual change in period property, plant, and equipment plus depreciation scaled by beginning-of-year total assets. $Uncertainty$ represents the main explanatory variable, which is the World Uncertainty Index. In line with the literature, log transformation is applied for the uncertainty variable (Dreyer & Schulz, 2023; Gulen & Ion, 2016). Other variables are used at their original scales because theoretical expectations support the linear effect. As firm-level variables, $Cash\ Flow$ is operating cash flow scaled by beginning-of-year total assets, and $Sales\ Growth$ is change in the firm's sales scaled by the sales of the previous year. As country-level variables, $Growth$ represents economic growth, that is annual percentage change and $Inflation$ is measured by the annual GDP deflator. Additional to these variables, $Governance$ refers to six governance indicators that control corruption, government effectiveness, political stability and absence of violence/terrorism, rule of law, and voice and accountability. Following the literature, the fixed effects model is preferred to control time-invariant unobserved heterogeneity. Therefore, checking basic assumptions of the model selection, the fixed effects model is found to be statistically more reliable.

Controlling cross-sectional dependence in panel regression analysis is a critical methodological requirement for ensuring estimation consistency. In this study, the uncertainty indicator and other macroeconomic variables such as economic growth and inflation have the same value for all firms in the sample in a given year. These variables define the general macroeconomic environment in which firms operate; in other words, they reflect the external conditions common to all firms. However, this structural feature leads to a high degree of overlap between these variables and the year-fixed effects. This is because the year-fixed effects also control unobservable factors common to all firms every year. Consequently, time fixed effect can absorb a large portion of the variation in the macroeconomic variables. To mitigate the risk of perfect multicollinearity, the models are designed to include only firm-specific fixed effects and cross-sectional dependence is addressed by adjusting standard errors at the firm-group level in each specification.

Within this framework, macroeconomic variables and firm-level variables serve distinct analytical functions. The uncertainty indicator and other macro variables define the common external context to which firms are exposed, while firm-level variables capture the differences in responses to these conditions. Indeed, firm characteristics such as size, leverage ratio, or governance quality explain the different investment behaviors observed within the same macroeconomic environment. Therefore, interaction term between uncertainty and governance quality has also been incorporated into the model as a natural extension of this logic. The study examined whether the quality of corporate governance modifies the response to macroeconomic uncertainty.

This technical constraint is not the only determining factor in the choice of the fixed-effects model. The choice between the fixed-effects and random-effects estimators is tested using the Hausman test, which confirmed that the fixed-effects model is a consistent estimator. This finding is consistent with the corporate finance literature. Consequently, in studies of this nature where controlling unobserved firm-level heterogeneity is essential, the fixed-effects model has been adopted as the standard approach.

Estimation Results

The starting point of the empirical analysis is the estimation of corporate investment behavior under uncertainty in Türkiye for the annual period of 2000-2023. Previous studies have provided evidence of a negative relationship between uncertainty and the investment behavior of publicly listed firms (Baker et al., 2016; Dreyer & Schulz, 2023; Gulen & Ion, 2016; Kang et al., 2014). Therefore, the theoretical validity of the uncertainty-investment relationship must be examined as baseline analysis before improving the models. Estimation results of baseline model are indicated in Table 2.

Table 2. Baseline Analysis

Dependent Variable: Corporate Investment	
Uncertainty	-0.032***
	(-3.71)
Cash Flow	0.266***
	(4.27)
Sales Growth	0.147***
	(7.59)
Economic Growth	0.002**
	(1.97)
Inflation	0.004***
	(9.44)
Firm fixed effects	Yes
R-squared	0.431
Observations	3,712

Note: This table reports baseline regression model without interaction terms. The dependent variable is Corporate Investment, while independent variable is Uncertainty. Baseline regression shows the results for the impact of uncertainty on

corporate investment. All regressions include firm fixed effects and standard errors are clustered on firm. Robust t-statistics are reported in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

Consistent with previous literature, baseline analysis indicates that firms reduce their corporate investments in an uncertain environment, which can be evidence that the real options theory is valid. According to the regression results, uncertainty has a significant and negative impact on corporate investment; a 1 unit increase in uncertainty reduces the investment rate by approximately 0.032 points. Specifically, the coefficient on the natural logarithm of uncertainty is −0.032 and the corporate investment sample has a mean value of 0.188. This implies that a 10% rise in uncertainty causes a decline in corporate investment by approximately 2% ((0.032×0.10)/0.188) of the sample mean. The findings emphasize the sensitivity of corporate investment to changes in uncertainty, which underscores the strong deterrent effect of uncertainty on corporate investment behavior (Abel, 1983; Baker et al., 2016; Bernanke, 1983; Bloom, 2009; Dreyer & Schulz, 2023; Gulen & Ion, 2016; Pindyck, 1990).

In line with the previous literature, control variables are theoretically and statistically significant. In the case of an increase in cash flow and sales growth firms raise their investment level. According to the results, the strongest proportional effect on investment decisions stems from liquidity positions of firms and cash flow. In the second place, the sales growth plays a decisive role in investment decisions. These findings reveal that the effect of internal resources on investment is stronger and more direct compared to sales performance. Additionally, a 1% increase in economic growth and inflation leads to a 0.002 and 0.004 increase in the corporate investment rate, respectively. Economic growth and inflation create an environment with high growth potential for firms, thanks to increased demand and expanding markets. This favorable environment encourages companies to invest and has a significant and positive effect on investment decisions at the firm level.

Additionally, baseline analysis is developed by considering the role of good governance in this relationship. Good governance supports the creation of a stable economic environment by increasing predictability. Such an institutional framework enables investors to base their long-term investment decisions on a more solid rationale by reducing their perception of uncertainty, thereby creating positive effects on investments. Therefore, it is expected that firms operating in an economic environment with higher governance standards in terms of control of corruption, governance effectiveness, policy stability, regulatory quality, rule of law, voice and accountability, raise their investments even if uncertainty exists.

The aim of the study is to examine how good governance shapes the relationship between uncertainty and corporate investment. To do this, governance indicators are divided into two groups, low and high, based on their median values. This approach is chosen for two reasons. Firstly, governance indices vary continuously across countries and years, but direct interpretations of these values often make understanding difficult. Moreover, this distinction separates high and low governance environments, enabling a clearer comparison of investment behavior in different institutional governance models. Secondly, using the median values provides a classification with high representativeness without creating observation loss, as it divides the sample distribution symmetrically into two subgroups.

In practice, any observations above the median value are labeled as “Good Governance” and a dummy variable is created accordingly. The interaction term is then defined by multiplying this variable by the uncertainty indicator. This method not only measures the direct relationship between uncertainty and corporate investment but also reveals whether governance acts as a mitigating or balancing mechanism against the detrimental effects of uncertainty on firm level investment. Thus, the analysis comprehensively evaluates whether good governance can mitigate the economic consequences of uncertainty shocks. The role of good governance can be examined through the regression analysis of Equation (1), which is reported in Table 3. Since six proxy variables are used for governance indicators, six regressions have been made in this section.

Regression results have indicated that the impact of uncertainty on corporate investment decisions has changed significantly depending on the quality of governance. The initial effect of uncertainty represented a significant negative effect for each model except political stability and voice and accountability, which shows an insignificant and positive effect respectively. On the other hand, the interaction term between uncertainty and governance indicators (Uncertainty × Governance) is added to highlight the role of good governance on corporate investment under uncertainty.

The interaction term suggests that good governance can have an moderating effect on corporate investment and shows how an improvement in governance quality shapes investment decisions of firms under uncertainty. All governance indicators are analyzed separately, which has revealed positive and highly significant results in most models except voice and accountability. The findings provide partial evidence that good governance can mitigate the detrimental effects of uncertainty on corporate investment, though this relationship does not hold uniformly across all model specifications.

While the results are not entirely consistent across all model specifications, the overall pattern suggests that governance quality plays a moderating role in the relationship between uncertainty and corporate investment, consistent with prior evidence across different financial outcomes and institutional settings (Farooq et al., 2022; Wang et al., 2022; Ali et al., 2023; Syed et al., 2024).

Table 3. Governance Analysis

	Dependent Variable: Corporate Investment					
	Control of Corruption (1)	Governance Effectiveness (2)	Political Stability (3)	Regulatory Quality (4)	Rule of Law (5)	Voice and Accountability (6)
Uncertainty	-0.048***	-0.057***	-0.012	-0.070***	-0.058***	0.026**
	(-4.04)	(-5.01)	(-0.93)	(-6.11)	(-3.97)	(2.10)
Uncertainty× Governance	0.019***	0.028***	-0.017**	0.040***	0.025***	-0.049***
	(2.50)	(4.24)	(-2.10)	(6.20)	(2.90)	(-6.24)
Cash Flow	0.263***	0.259***	0.267***	0.258***	0.263***	0.273***
	(4.19)	(4.14)	(4.26)	(4.14)	(4.22)	(4.34)
Sales Growth	0.147***	0 .147***	0.150***	0.146***	0.146***	0.149***
	(7.57)	(7.58)	(7.45)	(7.56)	(7.55)	(7.72)
Economic Growth	0.001*	0.001	0.002**	0.001	0.001*	0.002**
	(1.80)	(1.31)	(2.01)	(1.33)	(1.78)	(2.10)
Inflation	0.004***	0.004***	0.004***	0.004***	0.004***	0.004***
	(8.95)	(8.58)	(8.86)	(8.81)	(9.13)	(10.46)
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.432	0.433	0.432	0.436	0.432	0.437
Observations	3,712	3,712	3,712	3,712	3,712	3,712

*Note: This table reports regression estimates of Eq. (1). The dependent variable is Corporate Investment. The independent variables are Uncertainty and Uncertainty*Governance, while Uncertainty is a Turkiye's World Uncertainty Index. Any observations above the median for each indicator are labeled as 'good governance' that stands for a measure of control of corruption, governance effectiveness, political stability, regulatory quality, rule of law, and voice and accountability. All regressions include firm fixed effects and standard errors are clustered on firm. Robust t-statistics are reported in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.*

The existing literature suggests that good governance indicators mitigate the negative effects of uncertainty on corporate investments. While our findings largely support this general expectation, a different pattern emerges in the model that considers only the interaction with Voice & Accountability (6). In this model, there is initially a positive relationship between uncertainty and corporate investments, but this turns negative when the effect of voice and accountability is added. More specifically, while good governance generally mitigates the deterrent effect of uncertainty, in environments with high voice and accountability, investors assess risks more rationally and transparently, making the potential costs of uncertainty more apparent and thereby strengthening the deterrent effect. This situation can be explained by the study of Dreyer & Schulz (2023), which demonstrates the impact of uncertainty on investments, considering differences in countries' institutional structures. In particular, it shows that in countries with investor protection mechanisms measured by the Anti-Self, Anti-Director, Disclosure and Liability indices, the negative effects of uncertainty shocks on investments are felt more severely. In other words, as the strong shareholder rights, transparency, and oversight mechanisms provided by the institutional structure limit the scope for managers to act independently in investment decisions, companies behave more cautiously in the face of uncertainty and reduce investments more significantly. This situation has a conceptual parallel with the Voice & Accountability model, which measures access to information and transparency in macro-level political processes, and explains why a high score on this indicator in an environment of uncertainty deepens the negative effects of uncertainty. The results therefore reveal that the uncertainty corporate investment relationship is not uniform, and that specific dimensions of the corporate context can mediate this relationship in unique ways.

It is important to note that the interaction terms capture the marginal effect of uncertainty at above median levels of each governance indicator. Therefore, a negative interaction coefficient does not necessarily imply that governance amplifies the detrimental effects of uncertainty in general, but rather that firms operating in environments with relatively higher levels of political stability or voice and accountability tend to be more sensitive to uncertainty shocks, likely because such institutional contexts foster longer-term investment planning and greater exposure to uncertainty-induced disruptions.

The analysis indicates that the overall impact of uncertainty on investments is determined by both the direct uncertainty variable and its interaction with governance indicators. In general, while uncertainty creates a negative effect on investments, the positive interaction with governance indicators can partially mitigate the severity of this negative effect. Therefore, although the overall effect remains negative, it is more limited than the deterrent effect that uncertainty alone would create. According to the empirical

results in Table 3 a 10% increase in uncertainty has led to a decrease in the average investment rate of about 1.53% (−2.20 % + 0.67%) in the face of uncertainty. This final decrease reflects the total average impact of uncertainty on corporate investments, both directly and indirectly via good governance. The average direct impact of uncertainty on investments is −2.20, which is statistically significant. In contrast, the interaction terms with the governance indicators provide a positive and significant contribution, averaging 0.67. This result applies to the five governance indicators except Political Stability. However, a different pattern emerges specifically for Voice and Accountability. In this model, uncertainty initially exhibits a positive relationship, but when the interaction term is added, the relationship becomes negative. Nevertheless, the overall effect is still negative, indicating that the accountability and participation dimension differs from other governance indicators in the uncertainty-investment relationship. Therefore, excluding Voice and Accountability, the negative impact of uncertainty rises to −3.10, while the average positive contribution of governance indicators increases to 1.49. In this case, the average decrease in investments amounts to 1.61% (−3.10% + 1.49%). Overall, the findings indicate that uncertainty has a deterrent effect on corporate investments, but this effect is partially mitigated through interactions with governance indicators. In other words, while good governance does not eliminate the negative impact of uncertainty, it limits this impact, thereby reducing the pressure on corporate investment decisions. Consequently, the results reveal that good governance can play a protective and balancing role in the uncertainty and corporate investment relationship. The coefficients of the control variables are generally significant and largely consistent with the existing literature, especially when considering the effects of control variables on corporate investment.

In conclusion, the governance regression model highlights that good governance can have substantial effects on corporate investment, which can encourage increased investment by reducing the detrimental impact of uncertainty. In other words, strong governance can have become even more important in an environment of uncertainty.

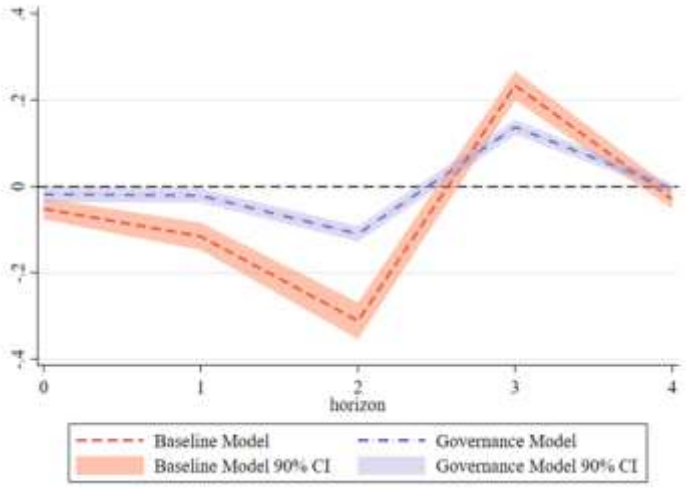
4. Dynamic Relationship Between Uncertainty and Corporate Investment Decisions

The dynamic relationship between uncertainty and corporate investment is also examined to be able to understand how this relation evolves over time. Local Projections (LP) method developed by Jordà (2005) has become an increasingly popular method for estimating impulse-response functions. In this approach, separate regressions are estimated for each period horizon, directly yielding the effects of shocks. Therefore, the LP method can be beneficial in capturing complex interactions among uncertainty shocks and identifying the impact of these shocks on corporate investment by allowing for more sophisticated analysis of dynamic relationships and interdependencies. This dynamic approach enables us to gain in-depth insight into understanding the interactive structure of uncertainty and corporate investment relationships. Therefore, the LP model is built on by using the dataset for the annual period 2000-2023, over 4 periods generating stable standard errors and confidence level. The governance regression model is estimated for each horizon, h, as follows:

$$y_{i,t+h} - y_{i,t-1} = \alpha_{i,h} + \beta_h x_t + \beta_{1,h} x_t g_t + \gamma_0 (y_{i,t-1} - y_{i,t-2}) + \delta_h Z_{i,t} + \varepsilon_{i,t,h} \quad (2)$$

for h = 0, 1, ..., 4 and where $y_{i,t+h}$ is corporate investment for firm i at period t. x_t is the uncertainty at period t, which is natural logarithm such that the estimated coefficient β_h reflects the one percentage of uncertainty shock. The significance of β_1 captures the presence of the effect of good governance on corporate investment. The vector of controls $Z_{i,t}$ includes firm-level cash flow sales growth and macro level economic growth and inflation. $\alpha_{i,h}$ is the firm fixed effect that absorbs time-varying characteristics. The impulse-response of the uncertainty shock is represented by Figure 1.

Figure 1. Effect of an Uncertainty Shock on Corporate Investment



The impulse-response functions obtained using the local projections method reveal the direct and interactive, in conjunction with good governance, effects of uncertainty shocks on corporate investments. As indicated in Figure 1, the baseline model indicated that corporate investment is decreased immediately following an increase in uncertainty shock, which is represented by the red line as an initial response. This immediate decline can be explained by the cautious behavior of firms when faced with uncertainty. Following the uncertainty shock, the corporate investment continued to decline and reached its trough point around the second period. The return to normality starts towards the third year due to the investment response around zero and

continues in later periods. In contrast, the blue line shows the effect of good governance under uncertainty. Although the uncertainty shock alone reduces investment, the presence of good governance limits the magnitude of this negative effect and causes it to fade more quickly over time. Moreover, in this model, the recovery process of investment begins earlier; the significance of the effect weakens in the first period and disappears completely after the second period. Therefore, the LP analysis shows that the negative effects of uncertainty shocks on corporate investments are more limited and temporary in the case of good governance.

In conclusion, the corporate investment decreased in response to the uncertainty shock, as anticipated based on theoretical expectations, real options theory, and prior empirical findings (Dreyer & Schulz, 2023; Gulen & Ion, 2016). However, in environments with good governance, the negative effects of uncertainty shocks are more restricted, and the recovery of corporate investments is faster. This demonstrates that good governance is a critical mechanism that increases predictability in investment decisions and balances the detrimental effects of uncertainty shocks in the economic environment.

5. Robustness

In this section, multiple specifications are applied to assess the robustness of the relationship between uncertainty and corporate investment. One of the potential concerns is that the uncertainty index can reflect any kind of economic, political and social crisis, which means that index can also include firm level uncertainties about operational issues due to macroeconomic uncertainty. Stock price volatility, the frequently preferred proxy variable in the literature, has been added into the model to capture general macroeconomic uncertainty as perceived by the stock market (Bloom, 2014; Gulen & Ion, 2016; Dreyer & Schulz, 2023). Thereby, stock price volatility is measured by using daily stock returns at the firm level regarding the methodology of Baum et al. (2008), which is used as a proxy for understanding macroeconomic uncertainty.

Another important concern is that since the uncertainty indicators used in such analyses are generally defined at a common macro level for all firms, it is not be possible to isolate the effects of uncertainty at the firm level. Kang et al. (2014) modelled uncertainty as an exogenous shock and attempted to examine the firm-specific effects of uncertainty by interacting this shock with the stock price volatility of firms. Therefore, in the Shock Model of the analysis, uncertainty is incorporated as a shock variable, which is obtained using a GARCH (1,1) model. This approach aims to capture unexpected and sudden fluctuations in uncertainty. Therefore, the differential effects of macroeconomic uncertainty at the firm level are analyzed in a second model, shock model, and the heterogeneity in the reactions of firms to uncertainty is tried to be revealed more meaningfully.

Table 4. Robustness Analysis

	Dependent Variable: Corporate Investment					
	Baseline Model			Shock Model		
	(1)	(2)	(3)	(4)	(5)	(6)
Uncertainty	-0.032***	-0.031***	0.028	-0.010***	-0.011***	-0.007
	(-3.71)	(-3.49)	(1.41)	(-3.70)	(-3.99)	(-1.26)
Stock Price Volatility	-	0.019	-0.210***	-	0.050**	0.064**
		(0.80)	(-3.03)		(2.08)	(2.23)
Uncertainty× Stock Volatility	-	-	-0.184***	-	-	-0.007
			(-3.15)			(-1.06)
Cash Flow	0.266***	0.268***	0.264***	0.270***	0.273***	0.270***
	(4.27)	(4.29)	(4.23)	(4.34)	(4.40)	(4.37)
Sales Growth	0.147***	0.147***	0.146***	0.147***	0.148***	0.149***
	(7.59)	(7.54)	(7.53)	(7.65)	(7.62)	(7.63)
Economic Growth	0.002**	0.002**	0.001	-0.000	-0.000	-0.000
	(1.97)	(2.11)	(1.50)	(-0.42)	(-0.40)	(-0.36)
Inflation	0.004***	0.004***	0.004***	0.004***	0.004***	0.004***
	(9.44)	(8.80)	(8.95)	(9.36)	(8.87)	(8.80)
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.431	0.431	0.433	0.431	0.432	0.433
Observations	3,712	3,712	3,712	3,712	3,712	3,712

*Note: The dependent variable is Corporate Investment. Baseline Model includes uncertainty index, while Shock Model includes uncertainty shock. Both models are analyzed including interaction of Uncertainty and Stock Price Volatility. All regressions include firm fixed effects and standard errors are clustered on firm. Robust t-statistics are reported in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.*

According to the Table 4, the "Baseline Model" analysis is the original model with the addition of the stock price volatility measured at the firm level. On the other hand, the "Shock Model" is based on the measurement approach that defines uncertainty as an exogenous shock. The purpose of including the interaction term in both models is to analyze

whether firms give different investment responses depending on the level of stock price volatility, in addition to the direct effect of uncertainty.

According to findings, the negative relationship between uncertainty and corporate investment is maintained strongly and consistently in both the baseline and shock models. It is shown that adding stock price volatility as a control variable maintains the significant and negative effect of uncertainty on corporate investment decisions in the baseline model, which is also supported by the shock model. On the other hand, the interaction term is significant only in the baseline model, indicating that firms with higher stock volatility are more sensitive to macro-level uncertainty and exhibit stronger investment contractions. However, the lack of significance in the shock model suggests that this effect is conditional and can be limited in capturing firm-level responses to uncertainty (Dreyer & Schulz, 2023; Kang et al., 2014). Control variables behave as expected and are consistent with the existing literature, supporting the overall empirical validity of the model. This strengthens the reliability of the study and reflects a result that is consistent with the literature that increasing uncertainty reduces firm level investment.

Additionally, a robustness analysis is conducted to test the validity of the role of governance quality. For this purpose, Principal Component Analysis (PCA) is preferred to perform dimensionality reduction in multivariate data. In addition to examining the individual effects of six governance indicators, it is aimed at measuring validity with different analysis by reducing the governance indicator to a single variable to examine. The first component explains approximately 71.2% of the total variance, which is a higher variance rate compared to the other components and largely represents the general structure of the data set. Therefore, the first component that is symbolized by the "Governance" variable in the interaction term, has been preferred in the robustness analysis. This component is interpreted as the "Good Governance" variable as it represents the overall governance structure. The role of good governance, as the first principal component, on corporate investment under uncertainty is exhibited in Table 5.

Table 5. The Role of Good Governance

Dependent Variable: Corporate Investment	
Uncertainty	-0.065*** (-4.83)
Uncertainty× Governance	0.033*** (4.17)
Cash Flow	0.260*** (4.17)
Sales Growth	0.146*** (7.57)
Economic growth	0.001 (1.22)
Inflation	0.004*** (8.60)
Firm fixed effects	Yes
R-squared	0.434
Observations	3,712

*Note: The dependent variable is Corporate Investment, while Uncertainty × Governance is the main independent variable. Governance represents the first principal component of six governance indicators. include firm fixed effects and standard errors are clustered on firm. Robust t-statistics are reported in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.*

The findings highlight that good governance has reduced the adverse effects of uncertainty on corporate investment corresponding to the results of the governance regression model. Therefore, the linkage between corporate investment behavior and governance quality cannot be ignored, and good governance can be one of the key factors to mitigate detrimental effects of uncertainty.

6. Conclusion

This study examines the impact of macroeconomic uncertainty on corporate investment behavior and the moderating role of governance quality, drawing on a panel dataset of 158 firms listed on Istanbul Stock Exchange over the period 2000–2023. The findings consistently demonstrate that uncertainty exerts a significant negative effect on corporate investment, supporting the real options theory whereby firms adopt a wait-and-see approach under uncertain conditions, deferring irreversible capital expenditures until the economic outlook becomes clearer (Bernanke, 1983; Dixit & Pindyck, 1994; Gulen & Ion, 2016). This result holds across alternative uncertainty measures and model specifications, underscoring the robustness of the relationship between macroeconomic uncertainty and firm-level investment decisions in an emerging market context.

Beyond the direct effect of uncertainty, the findings reveal that governance quality plays a meaningful moderating role in shaping how firms respond to uncertain environments, though this relationship is more nuanced than a uniform buffering effect. Specifically, four of the six governance dimensions examined — control of corruption, government effectiveness, regulatory quality, and rule of law — exhibit a statistically significant moderating effect, whereby higher governance quality attenuates the negative impact of uncertainty on corporate investment. This pattern is consistent with the argument that sound institutions reduce informational asymmetries, enhance policy credibility, and lower the perceived cost of long-term investment commitments, thereby encouraging firms to sustain capital expenditure even under adverse macroeconomic conditions (Farooq et al., 2022; Wang et al., 2022; Ali et al., 2023; Syed et al., 2024).

The remaining two governance dimensions, political stability and voice and accountability, do not follow this pattern and warrant careful interpretation. Political stability

exhibits low correlation with the other five governance indicators, suggesting that it captures a qualitatively distinct dimension of institutional quality that operates through different channels such as a structural feature that can explain the absence of a consistent moderating effect in this dimension (Murad, 2025). Voice and accountability, by contrast, produces a significant but negative interaction effect. In environments characterized by above-average levels of transparency, political participation, and accountability mechanisms, investors tend to assess risks more rationally and with greater informational precision. Under such conditions, the costs and uncertainties associated with investment become more visible and more carefully weighed, amplifying the cautionary response to macroeconomic uncertainty rather than dampening it (Dreyer & Schulz, 2023). Taken together, these results suggest that the relationship between uncertainty and corporate investment is not uniform across governance dimensions, and that certain institutional features can heighten rather than reduce investment sensitivity to uncertainty, which is a finding that itself constitutes a substantive contribution to literature. This heterogeneity in governance effects also resonates with broader evidence that the moderating influence of institutional quality on uncertainty varies across contexts and outcome measures (Ali et al., 2023).

The policy implications of these findings are both specific and actionable. Since the moderating effect of governance is concentrated in dimensions related to corruption control, regulatory quality, government effectiveness, and rule of law, policymakers seeking to sustain corporate investment under uncertainty should prioritize reforms targeting these institutional areas. Strengthening the institutional foundations that underpin regulatory predictability and the rule of law would not only reduce the direct costs of uncertainty for firms but also enhance the credibility of the broader economic environment in which investment decisions are made.

This study is subject to several limitations that should inform the interpretation of its findings and guide future research. First, the sample is confined to listed manufacturing firms in Turkey, which limits the generalizability of the results to other sectors, firm types, and institutional contexts. Second, while the governance indicators employed capture important dimensions of institutional quality, they aggregate country-level measures that cannot fully reflect the firm-level governance environment. Third, the use of firm fixed effects and clustered standard errors mitigates several sources of bias, future research employing instrumental variable approaches could further strengthen causal identification. Future research could extend this framework to broader cross-country samples, incorporate firm-level governance proxies, and employ identification strategies that more explicitly address reverse causality.

References

Abel, A. B. (1983). Optimal investment under uncertainty. The American Economic Review, 73(1), 228–233.

Ahir, H., Bloom, N., & Furceri, D. (2022). The World Uncertainty Index (Working Paper 29763). National Bureau of Economic Research. https://doi.org/10.3386/w29763

Ali, K., Hongbing, H., Liew, C. Y., & Jianguo, D. (2023). Governance perspective and the effect of economic policy uncertainty on financial stability: Evidence from developed and developing economies. Economic Change and Restructuring, 56(3), 1971–2002. https://doi.org/10.1007/s10644-023-09497-6

Arslan, Y., Demirhan, A. A., Hulagu, T., & Sahinoz, S. (2012). Belirsizlik altında yatırım planları. CBT Research Notes in Economics, Article 1213. https://ideas.repec.org/p/tcb/econot/1213.html

Asker, J., Farre-Mensa, J., & Ljungqvist, A. (2014). Corporate investment and stock market listing: A puzzle? (SSRN Scholarly Paper 1603484). https://doi.org/10.2139/ssrn.1603484

Ayaydin, H. (2016). Politik belirsizlik kaynağı olarak seçimler ve firma yatırım kararları: BIST'e kayıtlı firmalar üzerine bir araştırma. International Journal of Management Economics and Business, 12(icafr), 0–0. https://doi.org/10.17130/ijmeb.2016icafr22477

Aydın, C., & Odabaşıoğlu, F. G. (2016). Makroekonomik belirsizlik ve risk altında yatırım kararları: Türkiye örneği. Anemon Muş Alparslan Üniversitesi Sosyal Bilimler Dergisi, 4(2), 45–67. https://doi.org/10.18506/anemon.258549

Azzimonti, M. (2018). Partisan conflict and private investment. Journal of Monetary Economics, 93, 114–131. https://doi.org/10.1016/j.jmoneco.2017.10.007

Baker, S. R., Bloom, N., & Davis, S. J. (2016). Measuring economic policy uncertainty. The Quarterly Journal of Economics, 131(4), 1593–1636. https://doi.org/10.1093/qje/qjw024

Barsky, R. B., & Sims, E. R. (2012). Information, animal spirits, and the meaning of innovations in consumer confidence. American Economic Review, 102(4), 1343–1377. https://doi.org/10.1257/aer.102.4.1343

Baum, C. F., Caglayan, M., & Talavera, O. (2008). Uncertainty determinants of firm investment. Economics Letters, 98(3), 282–287. https://doi.org/10.1016/j.econlet.2007.05.004

Baum, C. F., Caglayan, M., & Talavera, O. (2010). On the sensitivity of firms' investment to cash flow and uncertainty. Oxford Economic Papers, 62(2), 286–306. https://doi.org/10.1093/oep/gpp015

Berger, A. N., Guedhami, O., Kim, H. H., & Li, X. (2022). Economic policy uncertainty and bank liquidity hoarding. Journal of Financial Intermediation, 49, 100893. https://doi.org/10.1016/j.jfi.2020.100893

Bernanke, B. S. (1983). Irreversibility, uncertainty, and cyclical investment. The Quarterly Journal of Economics, 98(1), 85–106. https://doi.org/10.2307/1885568

Bhattacharya, U., Hsu, P.-H., Tian, X., & Xu, Y. (2017). What affects innovation more: Policy or policy uncertainty? Journal of Financial and Quantitative Analysis, 52(5), 1869–1901. https://doi.org/10.1017/S0022109017000540

Bilgin, M. H., Demir, E., Gozgor, G., Karabulut, G., & Kaya, H. (2019). A novel index of macroeconomic uncertainty for Turkey based on Google-Trends. Economics Letters, 184, 108601. https://doi.org/10.1016/j.econlet.2019.108601

Bloom, N. (2009). The impact of uncertainty shocks. Econometrica, 77(3), 623–685. https://doi.org/10.3982/ECTA6248

Bloom, N. (2014). Fluctuations in uncertainty. Journal of Economic Perspectives, 28(2), 153–176. https://doi.org/10.1257/jep.28.2.153

Caldara, D., & Iacoviello, M. (2022). Measuring geopolitical risk. American Economic Review, 112(4), 1194–1225. https://doi.org/10.1257/aer.20191823

Cevik, S., & Erduman, Y. (2020). Measuring monetary policy uncertainty and its effects on the economy: The case of Turkey. Eastern European Economics, 58(5), 436–454. https://doi.org/10.1080/00128775.2020.1751109

Dixit, A. K., & Pindyck, R. S. (1994). Investment under uncertainty. Princeton University Press. https://doi.org/10.2307/j.ctt7sncv

Dreyer, C., & Schulz, O. (2023). Policy uncertainty and corporate investment: Public versus private firms. Review of Managerial Science, 17(5), 1863–1898. https://doi.org/10.1007/s11846-022-00603-y

Erdem, H., & Yamak, R. (2016). Measuring the optimal macroeconomic uncertainty index for Turkey. Economic Annals, 61(210), 7–22. https://doi.org/10.2298/EKA1610007E

Farooq, U., Tabash, M. I., Anagreh, S., & Saleh Al-Faryan, M. A. (2022). Economic policy uncertainty and corporate investment: Does quality of governance matter? Cogent Economics & Finance, 10(1), 2157118. https://doi.org/10.1080/23322039.2022.2157118

Fazzari, S., Hubbard, R. G., & Petersen, B. (1988). Financing constraints and corporate investment. Brookings Papers on Economic Activity, 19(1), 141–206. https://doi.org/10.2307/2534426

Fukuyama, F. (2016). Governance: What do we know, and how do we know it? Annual Review of Political Science, 19(1), 89–105. https://doi.org/10.1146/annurev-polisci-042214-044240

Gilchrist, S., Sim, J. W., & Zakrajšek, E. (2014). Uncertainty, financial frictions, and investment dynamics (Working Paper 20038). National Bureau of Economic Research. https://doi.org/10.3386/w20038

Gulen, H., & Ion, M. (2016). Policy uncertainty and corporate investment. The Review of Financial Studies, 29(3), 523–564. https://doi.org/10.1093/rfs/hhv050

Ilut, C., & Schneider, M. (2014). Ambiguous business cycles. American Economic Review, 104(8), 2368–2399. https://doi.org/10.1257/aer.104.8.2368

Jordà, Ò. (2005). Estimation and inference of impulse responses by local projections. American Economic Review, 95(1), 161–182. https://doi.org/10.1257/0002828053828518

Julio, B., & Yook, Y. (2012). Political uncertainty and corporate investment cycles. The Journal of Finance, 67(1), 45–83. https://doi.org/10.1111/j.1540-6261.2011.01707.x

Kang, W., Lee, K., & Ratti, R. A. (2014). Economic policy uncertainty and firm-level investment. Journal of Macroeconomics, 39, 42–53. https://doi.org/10.1016/j.jmacro.2013.10.006

Keynes, J. M. (1937). The general theory of employment. The Quarterly Journal of Economics, 51(2), 209–223. https://doi.org/10.2307/1882087

Kilic, I., & Balli, F. (2024). Measuring economic country-specific uncertainty in Türkiye. Empirical Economics, 67(4), 1649–1689. https://doi.org/10.1007/s00181-024-02594-z

Knight, F. H. (1921). Risk, uncertainty, and profit. August M. Kelley.

Lou, Z., Chen, S., Yin, W., Zhang, C., & Yu, X. (2022). Economic policy uncertainty and firm innovation: Evidence from a risk-taking perspective. International Review of Economics & Finance, 77, 78–96. https://doi.org/10.1016/j.iref.2021.09.014

Panousi, V., & Papanikolaou, D. (2012). Investment, idiosyncratic risk, and ownership. The Journal of Finance, 67(3), 1113–1148. https://doi.org/10.1111/j.1540-6261.2012.01743.x

Pindyck, R. S. (1990). Irreversibility, uncertainty, and investment (Working Paper 3307). National Bureau of Economic Research. https://doi.org/10.3386/w3307

Sahinoz, S., & Cosar, E. E. (2018). Economic policy uncertainty and economic activity in Turkey. Applied Economics Letters, 25(21), 1517–1520. https://doi.org/10.1080/13504851.2018.1438580

Syed, Q. R., Ahmed, T., & Bouri, E. (2024). Economic policy uncertainty and corporate outcomes: A comprehensive review and dynamic panel data analysis. Journal of International Financial Markets, Institutions and Money, 90, 101892. https://doi.org/10.1016/j.intfin.2023.101892

Tan, O., Cavlak, H., Cebeci, Y., & Güneş, N. (2022). Does uncertainty affect corporate investment decisions? Evidence from Turkish firms. Asian Academy of Management Journal of Accounting and Finance, 18(2), 87–107. https://doi.org/10.21315/aamjaf2022.18.2.5

Tobin, J. (1969). A general equilibrium approach to monetary theory. Journal of Money, Credit and Banking, 1(1), 15–29. https://doi.org/10.2307/1991374

Wang, C.-W., Lee, C.-C., & Chen, M.-C. (2022). The effects of economic policy uncertainty and country governance on banks' liquidity creation: International evidence. Pacific-Basin Finance Journal, 71, 101708. https://doi.org/10.1016/j.pacfin.2022.101708

World Bank. (2024). Worldwide Governance Indicators. https://www.worldbank.org/en/publication/worldwide-governance-indicators

Yıldırım, D. H., & Alkan, B. (2018). Türkiye için bir makroekonomik belirsizlik endeksi önerisi. Sosyoekonomi, 26(38), 11–26. https://doi.org/10.17233/sosyoekonomi.2018.04.01