Volume 8 • Number 1
APRIL 2026

International Journal of Uncertainty and Innovation Research

ISSN: 2617-9571 • Published by the Chinese Grey System Association

International Journal of Uncertainty and Innovation Research

ISSN 2617-9571 Web Address: http://www.grey.org.tw

Managerial Overconfidence and Corporate Cash Holdings under Tariff Uncertainty: Evidence from Taiwanese Family Firms

Chih-Hsien Chen

Abstract

The paper examines the impact of managerial overconfidence on corporate cash holdings in family firms and investigates whether trade policy uncertainty serves as a boundary condition for this relationship. Using a sample of Taiwan-listed family firms from 2017 to 2021, the analysis integrates upper echelons theory with behavioral corporate finance perspectives. Managerial overconfidence is proxied by industry-median-adjusted capital expenditures, and regression analysis is employed to test the proposed relationships empirically. The results reveal a significant negative association between managerial overconfidence and corporate cash holdings, consistent with the overinvestment argument in the behavioral corporate finance literature. By contrast, the interaction between trade policy uncertainty and managerial overconfidence is not statistically significant, indicating that exogenous trade policy uncertainty does not materially alter the relationship between managerial psychological traits and cash holding behavior in the sampled firms. Overall, the paper contributes empirical evidence on the link between managerial psychological characteristics and corporate liquidity decisions.

Keywords: Family firms, Managerial overconfidence, Cash holdings, Trade policy uncertainty

1.Introducrion

When external uncertainty rises, corporate financial decisions increasingly depend on the subjective judgment of managers rather than strictly adhering to the optimality assumptions of traditional rational models. The behavioral corporate finance literature demonstrates that managerial psychological characteristics systematically influence how managers perceive risk and allocate resources, which in turn shapes a firm's financial policies. Among these, managerial overconfidence has been identified as a key psychological trait causing corporate resource allocation to deviate from rational benchmarks, with prior research finding that overconfident managers exhibit systematic behavioral biases in their investment and financingdecisions[1,2].

Corresponding Author: Chih-Hsien Chen is with the Ph. D. Program of Business, Feng Chia University, Taichung, Taiwana
E-mail: gordon0816@gmail.com
Received: January 12, 2026
Revised:March 04, 2026
Accepted:March 10, 2026

ISSN-2617-9571

Prior studies have extensively examined the direct effects of managerial overconfidence on corporate investment, financing, and cash holding decisions. However, empirical evidence remains limited on whether this relationship remains stable when firms face severe exogenous macroeconomic shocks. Changes in the external policy environment not only alter firms' operational risks but may also reshape managers' precautionary motives for holding cash. Examining how psychological characteristics influence decision-making in dynamic environments therefore represents a meaningful avenue for empirical inquiry.

Against this backdrop, the paper introduces trade policy uncertainty (TPU) as an exogenous macroeconomic uncertainty measure to examine whether the relationship between managerial overconfidence and cash holdings is sensitive to environmental volatility. TPU is conceptualized as an external contextual factor, with the aim of testing whether shifts in the institutional environment constitute a boundary condition governing how managerial psychological traits shape financial decisions. This design clarifies whether managerial behavioral biases continue to manifest consistently in corporate cash holding decisions when market signals are obscured by policy uncertainty.

Corporate governance structures may also mediate the extent to which managerial traits translate into decision outcomes. Compared with non-family firms, family firms are characterized by high ownership-management overlap, which confers greater managerial discretion. This feature makes family firms an ideal empirical setting for observing how managerial behavioral biases materialize into concrete financial behavior, though the family firm context serves as the research setting rather than the theoretical centerpiece of the paper.

Using a sample of Taiwan-listed family firms from 2017 to 2021, the paper examines the impact of managerial overconfidence on corporate cash holdings and investigates whether TPU affects the stability of this relationship, providing empirical insights through the joint consideration of managerial behavioral traits and external shocks.

2.Literature Review

2.1 Managerial Overconfidence and Cash Holding Decisions

Corporate cash holding strategy has long been regarded as a critical financial decision through which firms manage uncertainty and external financing frictions. However, traditional corporate finance models grounded in full rationality often struggle to adequately explain why firms operating under similar financial conditions still exhibit markedly different cash holding levels.

ISSN-2617-9571

This observation suggests that beyond firm-level financial characteristics, managerial personal traits may also play an important role in shaping cash policies.

Upper echelons theory posits that a firm's strategic choices and financial policies partly reflect the psychological characteristics and bounded cognition of top management, rather than purely rational or optimizing decision-making[3,4]. When firms face high uncertainty, information complexity, or broad managerial discretion, managers' subjective judgments are more likely to translate into observable financial behavior[6]. Within this theoretical framework, managerial overconfidence has been identified as one of the key psychological traits influencing corporate financial decisions.

The behavioral corporate finance literature indicates that managerial overconfidence may distort managers' assessments of investment opportunities, financing costs, and resource allocation, which is reflected in corporate cash holding policies. Nevertheless, empirical studies have yet to reach a consistent conclusion on the direction of this effect. Some evidence suggests that overconfident managers tend to hold less cash, reflecting optimistic expectations about future investment returns and a preference for deploying internal funds into investment[1,2]. In contrast, other studies find that under certain operating or financing constraints, overconfidence may lead to higher cash holdings, with cash serving as a strategic resource to support future investment and preserve decision-making flexibility[7,8].

The relationship between managerial overconfidence and corporate cash holdings may be context-dependent rather thanuniform in direction and magnitude. In settings characterized by high managerial discretion and concentrated decision-making authority, individual managerial traits are more likely to be reflected directly in liquidity policies. Family firms, with their typical concentration of ownership and management, afford managers greater discretion over financial decisions, providing a suitable context for examining how managerial psychological traits translate into cash holding decisions[9].

Building on the theoretical and empirical foundations outlined above, the paper focuses on the association between managerial overconfidence and corporate cash holdings, conducting empirical tests in the context of family firms to determine whether this psychological trait is systematically linked to the level of corporate cash holdings. Accordingly, the following hypothesis is proposed:

H1: In the context of family firms, there is a systematic association between the degree of managerial overconfidence and the level of corporate cash holdings.

ISSN-2617-9571

2.2 Trade Policy Uncertainty (TPU) and Corporate Cash Holdings

In the corporate finance literature, corporate cash holdings are generally viewed as a liquidity allocation outcome driven by operating needs and external financing frictions. As macroeconomic policy and economic uncertainty intensifies, cash holdings are increasingly seen as a fundamental risk buffer against future cash flow volatility. Prior research indicates that policy uncertainty has an exogenous and institutional character that shapes firms' risk assessments of the future operating environment, influencing investment and capital allocation behavior[10]. Caldara et al. further developed the TPU index to measure the aggregate impact of uncertainty arising from tariff policies and international trade institutions[8]. Empirical findings consistently show that when TPU rises, firms generally delay investment decisions and increase their liquidity positions to buffer against future cash flow uncertainty.

From a real options perspective, heightened uncertainty increases the risk of investment irreversibility, prompting firms to defer capital expenditures and maintain higher liquidity buffers to preserve future flexibility[9,10]. Related research also suggests that TPU may raise firms' operational and capital formation risks, inducing more conservative liquidity management in the near term[13]. Trade policy uncertainty(TPU) can thus be regarded as a fundamental exogenous environmental factor influencing corporate cash holdings. Accordingly, the paper incorporates TPU into the empirical framework to capture firms' baseline financial responses to policy uncertainty prior to accounting for managerial behavioral traits, and proposes the following hypothesis.

H2: TPU is positively associated with corporate cash holdings.

2.3 The Moderating Role of Trade Policy Uncertainty: TPU and Overconfidence

1.The context-dependence of managerial overconfidence and the moderation question

The behavioral corporate finance literature indicates that the effect of managerial overconfidence on corporate financial decisions is not uniform across all situations but may vary depending on the external decision-making environment. When external financing conditions are relatively stable and capital is readily accessible, overconfident managers may reduce their demand for precautionary cash-driven by their optimistic expectations about future investment opportunities and cash flows-thereby maintaining lower cash holding

 ISSN-2617-9571

levels. In contrast, as external uncertainty rises, managers may place greater weight on the availability of internal funds to meet potential financial pressures and operational risks.

The observation suggests that managerial overconfidence does not necessarily produce any single, predictable change in corporate cash holdings; rather, its effect may be conditioned by the surrounding decision-making context. Whether contextual factors can moderate how managerial psychological traits translate into financial decision outcomes therefore becomes an empiricalquestion worth examining.

2.Trade policy uncertainty(TPU) as a boundary condition

Managerial discretion theory argues that whether managerial personal traits are reflected in organizational decision outcomes depends on the degree of discretion afforded by the external environment[14]. When institutional rules and market expectations are relatively clear, organizational and institutional constraints may reduce the influence of individual traits on decisions. Conversely, under conditions of heightened external uncertainty, the constraining effect of established decision-making guidelines may weaken, elevating the role of managerial subjective judgment in resource allocation.

In this context, TPU can be regarded as a macroeconomic environmental factor with exogenous and institutional characteristics, whose variation originates outside firm-level decisions and instead reflects changes in the predictability of the policy environment. Accordingly, TPU provides an appropriate contextual variable for examining whether external policy uncertainty moderates the association between managerial overconfidence and corporate cash holdings.

3.The moderating effect of trade policy uncertainty(TPU): overconfidence and cash holdings

Taken together, the effect of managerial overconfidence on corporate cash holding policy may vary according to the external policy environment. Whether trade policy uncertainty(TPU) amplifies, attenuates, or leaves unchanged the effect of managerial overconfidence on cash holdings, however, remains an empirical question to be resolved through statistical analysis. The paper treats trade policy uncertainty(TPU) as a moderating contextual factor and proposes the following hypothesis:

H3: TPU moderates the association between managerial overconfidence and the level of corporate cash holdings

ISSN-2617-9571

2.4 Summary of Hypotheses and Research Framework

Building on the preceding literature review and theoretical discussion, the paper constructs a research framework centered on managerial psychological characteristics to examine how managerial overconfidence affects corporate cash holding decisions, while incorporating trade policy uncertainty(TPU) as an external environmental condition.

The behavioral corporate finance literature indicates that managerial overconfidence may systematically distort managers' assessments of future cash flows and investment opportunities, which in turn manifests in corporate capital allocation behavior. On this basis, the first hypothesis tests whether there is a systematic association between managerial overconfidence and corporate cash holdings in the family firm context (H1).

The policy uncertainty literature indicates that as external policy environment uncertainty rises, firms face increased investment risk and cash flow volatility, which may affect their liquidity allocation decisions. Accordingly, the second hypothesis examines the association between TPU and the level of corporate cash holdings (H2). Finally, the paper treats trade policy uncertainty(TPU) as an external boundary condition to examine whether the effect of managerial overconfidence on corporate cash holdings varies with the level of external policy uncertainty, yielding the moderation hypothesis (H3).

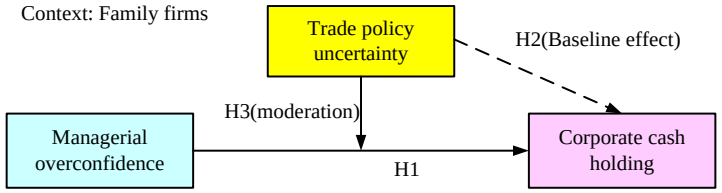

Fig. 1 the research framework

Fig. 1 presents the research framework, illustrating the relationships among managerial overconfidence, trade policy uncertainty(TPU), and corporate cash holdings.

3. Research Methodology

3.1 Research Design and Empirical Framework

1.Research objectives and empirical strategy

The paper employs quantitative empirical analysis to examine the association between managerial psychological traits and corporate financial

ISSN-2617-9571

decisions, further incorporating exogenous institutional uncertainty as a contextual variable. Specifically, the study focuses on managerial overconfidence and tests whether it is systematically associated with corporate cash holdings, while integrating TPU into the empirical framework to assess whether the external policy environment affects this association.

In accordance with the proposed hypotheses, the empirical objectives of the paper can be organized into three levels:

(1)Testing whether there is a systematic association between managerial overconfidence and the level of corporate cash holdings(H1).

(2)Testing whether trade policy uncertainty(TPU), as an exogenous institutional shock, is associated with corporate cash holdings-establishing the baseline effect for subsequent moderation analysis (H2)

(3)Testing whether trade policy uncertainty(TPU) moderates the association between managerial overconfidence and corporate cash holdings(H3).

The paper uses family firms as the research context, primarily because family firms are generally characterized by high ownership-management overlap, relatively limited external oversight, and greater managerial discretion-features that make it more likely for individual managerial traits to be reflected in corporate decisions. Family firms in the paper, however, serve only as the sample setting rather than as a core theoretical variable. The study does not compare family and non-family firms, nor is family firm status incorporated into hypothesis development or the empirical models, in order to avoid introducing additional theoretical complexity.

2.Research framework and hypothesis mapping

Based on the research objectives outlined above, the overall research framework is shown in Fig. 1. The framework treats managerial overconfidence as the primary independent variable and corporate cash holdings as the dependent variable, while introducing trade policy uncertainty(TPU) as an external environmental factor to jointly test both its direct association and its moderating role.

Within the research framework, the first pathway(H1) tests the direct association between managerial overconfidence and the level of corporate cash holdings. The second pathway (H2) tests the association between trade policy uncertainty(TPU) and corporate cash holdings, representing the baseline effect of the external policy environment. The third pathway (H3) incorporates the interaction term between managerial overconfidence and trade policy uncertainty(TPU) to test whether the external policy environment moderates theassociation between managerial overconfidence and corporate cash holdings.

ISSN-2617-9571

3.Empirical models corresponding to each hypothesis

To test the hypotheses stated above, the paper constructs the following three empirical models:

(1)Model (1): Main effect model (H1)-tests whether managerial overconfidence exerts a systematic influence on corporate cash holding policy.

$$Cash_{i,t} = \alpha + \beta_1 Overconfidence_{1,t} + Controls + \varepsilon_{i,t} \quad (1)$$

(2)Model (2): Baseline effect of exogenous shock (H2)-extends the main effect model by incorporating trade policy uncertainty(TPU) to test corporate cash holding responses to this exogenous institutional shock.

$$Cash_{i,t} = \alpha + \beta_1 Overconfidence_{1,t} + \beta_2 TPU_t + Controls + \varepsilon_{i,t} \quad (2)$$

(3)Model (3): Moderation model (H3)-further introduces the interaction term between managerial overconfidence and trade policy uncertainty(TPU); the coefficient of primary interest is β_3, which tests whether TPU moderates the association between managerial overconfidence and corporate cash holdings.

$$\begin{aligned} Cash_{i,t} = {} & \alpha + \beta_1 Overconfidence_{1,t} + \beta_2 TPU_t + Controls \\ & + \beta_3 (Overconfidence_{1,t} \times TPU_t) + Controls \varepsilon_{i,t} \end{aligned} \quad (3)$$

3.2 Sample Selection and Study Population

1.Sample scope and study period

The study population consists of Taiwan Stock Exchange- and OTC-listed family firms, with the sample period spanning from 2017 to 2021. The period was selected primarily because the TPU index exhibited substantial and sustained fluctuation during these years, providing a time series with meaningful variation in the external environment for empirical analysis.

Prior literature indicates that policy uncertainty indicators with sufficient variability within the sample period facilitate identification of their association with corporate financial decisions. Compared with periods of greater stability in long-run averages, the 2017–2021 period featured pronounced swings in trade policy uncertainty(TPU), providing the necessary time-series information for subsequent empirical estimation.

It is important to clarify that the paper focuses not on specific political figures, individual policy events, or short-term shocks, but on the institutional uncertainty characterizing the broader trade policy environment during this period. This approach supports treating trade policy uncertainty(TPU) as an exogenous macroeconomic factor rather than an event variable endogenous to firm-level decisions, consistent with the empirical design's treatment of external uncertainty.

 ISSN-2617-9571

2.Definition and identification of family firms

The family firm sample is identified and selected using the family firm classification provided by the Taiwan Economic Journal (TEJ) database. TEJ's classification is based on publicly available information, taking into account family ownership structure as well as actual family participation in the board of directors or senior management team-an approach widely adopted in empirical research on Taiwanese family firms.

To avoid disputes arising from varying definitional standards, the paper does not establish independent classification thresholds or introduce highly subjective or difficult-to-replicate criteria, relying instead entirely on TEJ's existing classification results as the sample selection basis. This enhances the replicability of the findings and ensures consistency between the research design and the data source.

Furthermore, socioemotional wealth (SEW) and succession-related issues are not incorporated into the hypothesis development or empirical models; family firms serve solely as the research context. This choice maintains the focus on how managerial overconfidence and trade policy uncertainty(TPU) affect corporate cash holding decisions, while avoiding additional theoretical layers and potential endogeneity concerns.

3.3 Measurement of Key Variables

The main variables in the paper include corporate cash holdings (the dependent variable), managerial overconfidence (the independent variable), trade policy uncertainty(TPU) (the moderating variable), and their interaction term. Each variable is operationalized following established practices in the literature and in accordance with data availability, consistent with the empirical model specifications.

1.Dependent variable: corporate cash holdings

The paper uses corporate cash holdings as the dependent variable, operationalized as the ratio of cash and cash equivalents to total assets (Cash Ratio), following established corporate finance literature[15,16]. The specific measurement is as follows.

$$Cash_{1,t} = \frac{Cash\,and\,cash\,equivalents_{i,t}}{Total\,assete_{i,t-1}} \tag{4}$$

where: $Cash\,and\,cash\,equivalents_{i,t}$ is for firm i in year t the end-of-period cash and cash equivalents, and $Total\,assete_{i,t-1}$ is total assets in the same year.

ISSN-2617-9571

2.Independent variable: managerial overconfidence

The paper employs an investment behavior-based proxy variable to measure managerial overconfidence. The behavioral corporate finance literature indicates that managerial overconfidence tendencies can be observed through investment decision behavior[1,2].

Specifically, the paper uses the annual capital expenditure ratio (CAPEX Ratio) as the foundational indicator of investment behavior, calculated as follows.

$$CAPEX\_Ratio_{1,t} = \frac{CAPEX_{i,t}}{Total\,assete_{i,t-1}} \tag{5}$$

To assess each firm's investment behavior relative to its industry peers, the median *CAPEX Ratio* is computed by industry and year, and a dummy variable for managerial overconfidence is constructed. When a firm's *CAPEX Ratio* in a given year exceeds the industry median, the *Overconfidence* variable is set to 1; otherwise it is set to 0.

3.Industry median adjustment (industry median adjustment)

Given that industries differ in their investment structures and capital requirements, the paper employs the industry median as a relative benchmark when measuring managerial overconfidence. Specifically, the median CAPEX Ratio for each industry is computed by industry and year and used as that industry's reference investment level. A firm's investment behavior in a given year is compared against its industry's median for that year to determine whether capital expenditures exceed the industry-median level. Through this approach, each firm's relative investment position by industry and year is used to construct the managerial overconfidence proxy.

4.Trade policy uncertainty(TPU)

Trade policy uncertainty(TPU) serves as the moderating variable in the paper. The TPU index developed by[17~20] is adopted, using the annual-level TPU measure *TPUt* to match the time frequency of firm-level financial data.

5.Interaction term

To test whether trade policy uncertainty(TPU) moderates the association between managerial overconfidence and corporate cash holdings, an interaction term between managerial overconfidence and trade policy uncertainty(TPU) is constructed, defined as follows.

$$Interact\_TPU\_Over_{i,t} = Overconfidence_{1,t} \times TPU_t \tag{6}$$

where: $Overconfidence_{1,t}$ is for firm *i* in year *t* the managerial overconfidence

ISSN-2617-9571

dummy variable, TPU_t is the annual-level trade policy uncertainty(TPU) index. By incorporating this interaction term, the study can test for a moderating relationship between the two variables after controlling for their direct effects.

3.4 Control Variables

The paper includes firm size (Size) as a control variable in the regression models to account for the potential influence of size differences on cash holding levels. Firm size is measured as the natural logarithm of total assets, defined as follows.

$$Size_{i,t} = \ln(Total\ Assest_{i,t}) \tag{7}$$

where: $Total\ Assest_{i,t}$ is obtained from the firm's annual financial data in the TEJ database.

Taking the natural logarithm of total assets mitigates the potential distortive effects of skewed distributions on regression estimates. Firm size serves solely as a technical control variable; the primary focus remains on the associations among managerial overconfidence, trade policy uncertainty(TPU), and corporate cash holdings.

3.5 Empirical Model Specification

1.Main effect model: managerial overconfidence and cash holdings (H1)

The paper first constructs the main effect model to test whether managerial overconfidence is systematically associated with the level of corporate cash holdings. The model includes the managerial overconfidence variable and control variables, corresponding to the first research hypothesis (H1) and serving as the baseline for subsequent model comparisons.

2.Baseline effect model: trade policy uncertainty(TPU)(H2)

Building on the main effect model, the paper further incorporates trade policy uncertainty(TPU) to test whether this external policy factor is associated with corporate cash holdings. This model corresponds to the second research hypothesis (H2) and presents the baseline effect of the exogenous macroeconomic variable.

3.Moderation model: the boundary condition effect of trade policy uncertainty (TPU)(H3)

The interaction term between managerial overconfidence and trade policy uncertainty(TPU) is added to the preceding model to test whether trade policy uncertainty(TPU) moderates the association between managerial overconfidence

 ISSN-2617-9571

and corporate cash holdings. The model corresponds to the third research hypothesis (H3).

3.6 Industry Classification

Following the industry classification framework of the Taiwan Stock Exchange(TWSE) and the industry description fields provided by the TEJ database, sample firms are categorized into two groups: the "electronics sector" and the "general industry sector." The classification is based on observable information already available in the database, ensuring consistency and replicability.

In constructing the sample, the paper follows the standard practice in empirical corporate finance research by excluding financial institutions and financial holding companies. Given that financial firms differ fundamentally from non-financial firms in their asset structures, regulatory frameworks, and liquidity management mechanisms, their inclusion could obscure the relationship between managerial behavior and corporate cash holding decisions; accordingly, the study focuses exclusively on non-financial firms.

In practice, firms are further classified based on the industry description text disclosed in TEJ. Firms whose industry description contains the keywords "semiconductor," "optoelectronics," "telecommunications," "electronics," "computer," or "information" are classified in the electronics sector; all remaining non-financial firms are classified in the general industry sector. This classificationrelies on existing database information to minimize the impact of variation in classification criteria.

It should be noted that the industry classification in the paper does not serve as the basis for theoretical reasoning or hypothesis development, nor is it used as a primary explanatory variable. The central focus remains on the relationships among managerial overconfidence, trade policy uncertainty(TPU), and corporate cash holdings. Industry grouping is used solely as an operational partition to examine whether the main empirical results hold across different industry structures, providing supplementary context without altering the core research framework or hypotheses.

4.Empirical Results

4.1 Data Overview and Descriptive Statistics

Table 1 summarizes the descriptive statistics for the main variables in the paper, including the cash ratio, managerial overconfidence, TPU, the interaction

ISSN-2617-9571

term (Overconfidence times TPU), and firm size.

Regarding the cash ratio, the sample mean is 0.178, with a minimum approaching 0 and a maximum approaching 1, indicating substantial cross-firm variation in liquidity management and reflecting the heterogeneity of corporate cash policies.

The managerial overconfidence variable is a binary proxy with a mean of 0.348, indicating that approximately one-third of firms in a given year invest above the industry median, demonstrating that the variable has meaningful distributional variation across the sample.

The TPU index exhibits substantial volatility over the study period, with values spanning environments from relative stability to high uncertainty. Since TPU is an annual-level macroeconomic variable, its mean is identical across industry subsamples, consistent with its role as an exogenous institutional environment indicator. Table 1 and Table 2 also report descriptive statistics for the electronics and general industry subsamples as supplementary reference. Industry grouping is not the theoretical core of the paper, nor is it incorporated into hypothesis development; it is used solely to examine whether the main empirical results are consistent across different industry structures.

Table 1 Descriptive statistics for main variables

Variable	Full sample			
	Mean	Std. Dev	Min.	Max.
Cash Ratio(Y)	0.178	0.139	0.000	0.989
Overconfidence(X)	0.348	0.476	0.000	1.000
TPU(M)	333.3	268.9	42.2	797.1
Interact_TPU_Over(XxM)	116.4	224.9	0.000	797.1
Size (control)	14.75	1.82	2.40	22.51
Observations	5,576			

Table 2 Descriptive statistics for main variables-cont.

Variable	By industry	
	Electronics(Model 2)	General Industry (Model 3)
Cash Ratio(Y)	0.213	0.154
Overconfidence(X)	0.362	0.337
TPU(M)	333.3	333.3
Interact_TPU_Over(XxM)	118.9	114.76
Size (control)	14.85	14.68
Observations	2,254	3,322

(operational grouping) and is not used as a theoretical variable or incorporated into hypothesis development.
Note: Industry grouping serves solely as an operational classification for descriptive statistics

ISSN-2617-9571

The descriptive statistics indicate that the main variables exhibit sufficient variability over the sample period, providing a sound basis for the subsequent regression analyses.

4.2 Managerial Overconfidence and Corporate Cash Holdings: Main Effect Test (H1)

The section tests whether managerial overconfidence is systematically associated with corporate cash holdings. Based on the empirical models developed in Section 3, and after controlling for firm size and year fixed effects, the paper estimates the main effect of managerial overconfidence on corporate cash holdings using the full sample,with industry-grouped results provided as supplementary analysis.

Table 3 summarizes the regression results of the main effect model. In the full sample (Model 1), the coefficient on managerial overconfidence is negative and statistically significant at the 1% level, indicating a significant negative association between managerial overconfidence and corporate cash holdings, which supports Hypothesis H1.

Examining the industry-grouped results, the coefficient on managerial overconfidence is likewise negative and statistically significant in the electronics sector sample (Model 2). In the general industry sample (Model 3), the estimated coefficient is directionally consistent but does not reach statistical significance.

The main effect model results indicate a robust negative association between managerial overconfidence and corporate cash holdings. The industry-grouped results serve only as supplementary evidence of how this relationship manifests across different sample structures and do not alter the overall main effect conclusion.

Table 3 Main effect model estimation results

Variable	Full sample (Model 1)	Electronics (Model 2)	General industry (Model 3)
Overconfidence (X)	-0.017***(-2.82)	-0.034***(-3.66)	-0.010(-1.28)
Size	-0.015***(-14.36)	-0.010***(-5.62)	-0.018***(-15.11)
Fixed effects	Yes	Yes	Yes
Observations	5,576	2,254	3,322
Adjusted R^2	0.043	0.034	0.068

Note: t-values in parentheses. *** $p< 0.01$, ** $p< 0.05$, * $p< 0.10$. All models include year fixed effects.

ISSN-2617-9571

4.3 Trade Policy Uncertainty(TPU) and Corporate Cash Holdings: Baseline Effect (H2)

The section tests whether TPU exerts a direct effect on corporate cash holdings. Based on the empirical models developed in Section 3, and after controlling for managerial overconfidence and firm size, the paper incorporates TPU as an annual-level exogenous policy environment variable to test its main effect on corporate cash holdings.

Table 4 presents the regression results incorporating TPU. In the full sample (Model 1), the coefficient on TPU does not reach statistical significance, indicating that after controlling for other factors, trade policy uncertainty(TPU) does not exert a significant direct effect on corporate cash holdings.

Examining the industry-grouped results, the coefficient on TPU is likewise statistically insignificant in both the electronics sector (Model 2) and general industry (Model 3) subsamples. Overall, the empirical results indicate that trade policy uncertainty(TPU) does not constitute a significant main effect on corporate cash holdings during the study period. This result serves as the comparative baseline for subsequently testing the moderating role of trade policy uncertainty(TPU).

Table 4 TPU regression results

Variable	Full sample (Model 1)	Electronics (Model 2)	General industry (Model 3)
Overconfidence (X)	-0.017*** (-2.82)	-0.034*** (-3.66)	-0.010 (-1.28)
TPU (M)	-0.000007 (-0.83)	0.000003 (0.21)	-0.000016 (-1.57)
Size	-0.015*** (-14.36)	-0.010*** (-5.62)	-0.018*** (-15.11)
Fixed effects	Yes	Yes	Yes
Observations	5,576	2,254	3,322
Adjusted R^2	0.044	0.035	0.069

Note: t-values in parentheses. *** $p< 0.01$, ** $p< 0.05$, * $p< 0.10$. All models include year fixed effects.

4.4 The Moderating Effect of Trade Policy Uncertainty: TPU × Managerial Overconfidence (H3)

This section tests whether TPU serves as an external institutional boundary condition that moderates the relationship between managerial overconfidence and corporate cash holdings. Following the empirical model specifications in Section 3, after incorporating the main effects of managerial overconfidence and trade policy uncertainty(TPU), the interaction term (Overconfidence times TPU) is further added to assess whether external trade policy uncertainty(TPU) alters the effect of managerial psychological traits on corporate cash holding decisions.

ISSN-2617-9571

Table 5 presents the regression results of the moderation model. In the full sample (Model 1), the interaction term between managerial overconfidence and trade policy uncertainty(TPU) does not reach statistical significance(p>0.1), indicating that after controlling for other factors, trade policy uncertainty(TPU) does not significantly moderate the relationship between managerial overconfidence and corporate cash holdings.

Table 5 Moderating effect of trade policy uncertainty(TPU)

Variable	Full sample (Model 1)	Electronics (Model 2)	General industry (Model 3)
Overconfidence (X)	-0.017*** (-2.82)	-0.034*** (-3.66)	-0.010 (-1.28)
TPU (M)	-0.0000069 (-0.83)	0.0000027 (0.21)	-0.000016 (-1.57)
Interact (X times M)	-0.0000036 (-0.25)	-0.0000076 (-0.35)	0.000006 (0.34)
Size	-0.0145*** (-14.36)	-0.010*** (-5.62)	-0.018*** (-15.11)
Fixed Effects	Yes	Yes	Yes
Observations	5,576	2,254	3,322
Adjusted R^2	0.044	0.035	0.069

Note: t-values in parentheses. *** p< 0.01, ** p< 0.05, * p< 0.10. All models include year fixed effects.

These results remain consistent in the industry-grouped analyses. In both the electronics sector (Model 2) and general industry (Model 3) subsamples, the interaction term does not reach statistical significance, indicating that trade policy uncertainty(TPU) does not significantly alter the association between managerial overconfidence and corporate cash holdings across different industry structures.

Although the interaction term does not reach statistical significance, the main effect of managerial overconfidence remains significant in both the full sample and the electronics sector subsample, and its direction is consistent with the earlier main effect analysis. This result indicates that the effect of managerial overconfidence on corporate cash holding decisions does not exhibit systematic variation with changes in the level of trade policy uncertainty(TPU) during the study period.

The empirical results do not support Hypothesis H3, that is, in the context of the paper, TPU does not constitute a significant boundary condition moderating the relationship between managerial overconfidence and corporate cash holding.

5.Conclusions

Using publicly listed Taiwanese family firms as the study population, this research examines how managerial overconfidence affects corporate cash

ISSN-2617-9571

holding decisions and tests whether trade policy uncertainty(TPU) constitutes an external boundary condition. Through empirical analysis covering 2017–2021, the paper arrives at the following key conclusions.

The empirical results reveal a significant and robust negative association between managerial overconfidence and corporate cash holdings. After controlling for firm size and year fixed effects, managers with higher degrees of overconfidence tend to maintain lower cash holdings. This finding indicates that corporate cash policy is not determined solely by firm size or institutional conditions; managerial psychological characteristics can empirically translate into observable differences in liquidity decisions. These results are consistent with the behavioral corporate finance literature on how managerial overconfidence affects resource allocation, and resonate with the core proposition of upper echelons theory that corporate decisions reflect the characteristics of senior management.

Industry-grouped analysis reveals that the negative effect of managerial overconfidence on cash holdings is concentrated primarily in the electronics sector subsample. In the general industry subsample, the relationship points in the same direction but does not reach statistical significance. This suggests that the extent to which managerial psychological traits influence financial decisions may vary across industry contexts. In industries with faster investment cycles and greater volatility in growth opportunities, managerial subjective judgment is more readily reflected into cash deployment strategies. By contrast, in industries with more stable operating structures, existing institutional frameworks and organizational inertia may partially attenuate the influence of individual traits.

The paper further tests whether trade policy uncertainty(TPU) moderates the relationship between managerial overconfidence and corporate cash holdings. The empirical results show that the interaction term does not reach statistical significance in either the full sample or the industry-grouped analyses, indicating that external trade policy uncertainty(TPU) does not significantly alter the effect of managerial overconfidence on corporate cash holding decisions during the study period.

Overall, the empirical findings indicate that managerial psychological characteristics exert a meaningful influence on the formation of corporate cash policies, with this effect being more pronounced in certain industry contexts. In contrast, trade policy uncertainty(TPU), as an exogenous institutional environmental factor, did not constitute an effective moderating boundary condition during the study period.

The primary contribution of the paper to the existing literature lies in providing empirical evidence from Taiwanese family firms, from a behavioral corporate finance perspective, on how managerial overconfidence affects

 ISSN-2617-9571

corporate cash holding decisions. Compared with prior research that predominantly focuses on investment or financing behavior, the paper shifts the analytical focus to corporate liquidity policy, supplementing the literature on how managerial psychological characteristics influence corporate financial decisions.

The paper incorporates trade policy uncertainty(TPU) into the analytical framework and employs a moderation model to examine whether external institutional uncertainty affects the process through which managerial psychological traits translate into financial behavior. Although the empirical results do not support the existence of a moderating effect, this null finding nonetheless helps clarify the relative roles of managerial psychological characteristics and external environmental shocks, providing a concrete empirical foundation for future research.

The paper is subject to several limitations that warrant further investigation. The use of an investment behavior-based proxy variable to measure managerial overconfidence, while common in the existing literature, may not fully capture the multidimensional nature of managerial psychological characteristics. Future research could consider combining additional behavioral indicators to enhance measurement precision.

The external generalizability of the findings is necessarily limited by the focus on Taiwan-listed family firms. Future research could extend the analysis to different countries or institutional environments to test whether the findings hold consistently across different contexts.

References

[1]K. Handley, N. Limão, Policy uncertainty, trade, and welfare: Theory and evidence for China and the United States, American Economic Review, vol. 107, no. 9, pp. 2731-2783, 2017.

[2]W. Drobetz, S. El. Ghoul, and O. Guedhami, et al., Policy uncertainty, investment, and the cost of capital, Elsevier, vol. 39, pp. 28-45, 2018.

[3]J. Li, Y. I. Tang, CEO hubris and firm risk taking in China: The moderating role of managerial discretion, Academy of Management Journal, vol. 53, no. 1, pp. 45-68, 2010.

[4]Y. R. Chen, K. Y. Ho, and C. W. Yeh, CEO overconfidence and corporate cash holdings, Journal of Corporate Finance, vol. 62, pp. 101577, 2020.

[5]D. J. Denis, V. Sibilkov, Financial constraints, investment, and the value of cash holdings, Review of Financial Studies, vol. 23, no. 1, pp. 247-269, Jan. 2010.

[6]T. Opler, L. Pinkowitz, and R. Stulz, et al., The determinants and implications of corporate cash holdings, Journal of Financial Economics, vol. 52, no. 1, pp. 3-46, 1999.

[7]N. Aktas, C. Louca, and D. Petmezas, CEO overconfidence and the value of

 ISSN-2617-9571

corporate cash holdings, Journal of Corporate Finance, vol. 54, pp. 85-106, 2019.
[8]D. Caldara, M. Iacoviello, and P. Molligo, et al., The economic effects of trade policy uncertainty, Journal of Monetary Economics, vol. 109, pp. 38-59, 2020
[9]R. C. Anderson, D. M. Reeb, Founding-family ownership and firm performance: Evidence from the S&P 500, Journal of Finance, vol. 58, no. 3, pp. 1301-1328, 2003.
[10]S. R. Baker, N. Bloom, and S. J. Davis, Measuring economic policy uncertainty, Quarterly Journal of Economics, vol. 131, no. 4, pp. 1593-1636, 2016.
[11]B. S. Bernanke, Irreversibility, uncertainty, and cyclical investment, Journal of Economics, vol. 98, no. 1, pp. 85-106, 1983.
[12] U. Bhattacharya, P. H. Hsu, and X. Tian, What affects innovation? Policy uncertainty, Journal of Financial and Quantitative Analysis, vol. 52, no. 5, pp. 1869-1901, 2017.
[13]D. C. Hambrick, P. A. Mason, Upper echelons: The organization as a reflection of its top managers, Academy of Management Review, vol. 9, no. 2, pp. 193-206, 1984.
[14]D. C. Hambrick, Upper echelons theory: An update, Academy of Management Review, vol. 32, no. 2, pp. 334-343, 2007.
[15]T. W. Bates, K. M. Kahle, and R. M. Stulz, Why do US firms hold so much more cash than they used to?, Journal of Finance, vol. 64, no. 5, pp. 1985-2021, 2009.
[16]D. A. Moore, D. M. Cain, Overconfidence and underconfidence: When and why people underestimate (and overestimate) the competition, Organizational Behavior and Human Decision Processes, vol. 103, no. 2, pp. 197-213, 2007.
[17]C. J. Chiu, A. Y. F. Ho, and L. F. Tsai, Effects of financial constraints and managerial overconfidence on investment-cash flow sensitivity, International Review of Economics & Finance, vol. 82, pp. 135-155, 2022.
[18]P. H. Ho, C. W. Huang, and C. Y. Lin, et al., CEO overconfidence and financial crisis: Evidence from bank lending and leverage," Journal of Financial Economics, vol. 120, no. 1, pp. 194-209, 2016.
[19]C. Miao, J. E. Coombs, and S. Qian, et al., CEO overconfidence and firm performance: A meta-analytic review and future research agenda, Journal of Management & Organization, pp. 1-23, 2023.
[20]N. Bloom, The impact of uncertainty shocks, Econometrica, vol. 77, no. 3, pp. 623-685, 2009.

ISSN-2617-9571

Chih-Hsien Chen is the Director of the Materials Procurement Department at Maxxis Tires (Cheng Shin Rubber Ind. Co., Ltd.). He holds a master's degree in Management from Feng Chia University. His research interests include corporate finance, behavioral finance, family succession, and supply chain finance. He is also keen to expand AI applications to enhance daily work efficiency and support capital market trend analysis. He is currently a doctoral student at Feng Chia University in Taichung, Taiwan.

ISSN-2617-9571

Information for Authors

Types of Contributions

Upon acceptance of a paper, authors will be requested to supply their biographies (100 to 200 words) and the final version of their manuscript on a computer diskette along with the hard copy. The manuscripts should be typed by Microsoft Word 7.0 (or upgrade version) and submitted to Chief Editor or Executive Editor. Electronic submission (in doc, or zip compressed postscript) of manuscripts is required.

Manuscripts

Submitted manuscripts must be typewritten in English. All submitted manuscripts should be as concise as possible, and the regular papers are normally limited to 30 typed pages.

Style for Manuscript

Papers should be arranged in the following order of presentation:

1. First page must contain: Title of paper (without Symbols); Author(s); Abstract, 4 to 6 suggested keywords; Completed affiliation(s), email address and mailing address of correspondence author.
2. The text(insert the Tables and Figures)
3. Acknowledgements of financial or other support (if any).
4. References

[1]F. C. Chuang, C. M. Hu, and M. H. Chang, The discussion on innovative early warning fatigue driving system, International Journal of Uncertainty and Innovation Research, vol. 5, no. 2, pp. 81-94, 2023.

[2]L. Y. Huo, B. W. Liu, and J. T. Li, An ERP system selection model based on fuzzy grey TOPSIS for SMEs, Proceedings of 6th International Conference on Fuzzy System, pp. 244-248, 2009.

[3]K. L. Wen, M. L. You, Apply soft computing in data mining, 3rd Edition, Taiwan Kansei Information Association, Taichung, Taiwan, 2023.

[4]Taiwan Tobacco and Liquor Corporation, The product of wine and Tabaco, http://www.ttl.com.tw/, Taipei, 2024.

5. Appendix(if necessary)

Style for Illustrations

1. Original drawings should be in black ink on white background. Maximum size is not large than 15 by 22.7 cm.
2. All lettering should be large enough to permit legible reduction of the Figure to column width, sometimes as small as one quarter of the original size.

Review

The submitted papers will be under double-blind peer review process.

Page Charges

After a manuscript has been accepted for publication, the publication fee is US$: 200 for 30 print pages. A mandatory over length page charge of US$: 10 are required for each page in excess of 10 pages for a paper.

Copyright

It is the policy of the CGSA to own the copyright to the technical contributions it publishes on behalf of the interests of the CGSA. The copyright will create after paper publication.

Mail all Manuscripts to Journal

Chief Editor: Ting-Cheng Chang. E-mail: tcchang0615@gmail.com
Executive Editor: Kun-Li Wen. E-mail:grey@ctu.edu.tw, klw@ctu.edu.tw

International Journal of Uncertainty and Innovation Research

Volume 08, No.1 April, 2026

CONTENTS