Strategic boldness with public backing: How government subsidies influence corporate strategic aggressiveness in China

Shengqi Fu[1]*, Zixiao Jiang[2], Kuang Liu[3], Shiou Yih Lee[4]

[1]*Faculty of Tourism, Hainan Vocational University, Haikoui, China.*
[1]*Faculty of Business and Communication, INTI International University, Nilai 71800, Malaysia.*
[2]*Faculty of Health and Life Sciences, INTI International University, Nilai 71800, Malaysia.*
[3]*Faculty of Liberal Arts, Shinawatra University, Pathum Thani 12160, Thailand.*
[4]*Faculty of Health and Life Sciences, INTI International University, Nilai 71800, Negeri Sembilan, Malaysia.*
[4]*Wekerle Sándor Üzleti Főiskola, H-1083, Budapest, Hungary.*
[4]*International Institute of Management and Business, Minsk, Slavinsky 1/3, Belarus.*

Corresponding author: Shengqi Fu (*Email: tgzhuanyong2025@163.com*)

Abstract

This study aims to explore the strategic consequences of government subsidies, specifically how financial support from the government influences the strategic aggressiveness of firms in China. While existing literature has primarily focused on the performance and innovation outcomes of subsidies, this research investigates their impact on corporate strategic behavior, addressing a gap in the literature. The study employs a panel dataset of Chinese A-share listed firms from 2009 to 2024. Using fixed effects regression models and instrumental variable techniques, the research analyzes the causal relationship between government subsidies and corporate strategic aggressiveness. Mediation analysis is also used to examine the roles of investment efficiency and financing constraints as intermediary mechanisms, while moderating effects of internal control quality and firm-level heterogeneity, such as ownership structure and firm life cycle, are also considered. The results indicate that government subsidies significantly promote strategic aggressiveness in firms, mainly by alleviating financing constraints. However, the study also finds that subsidies may negatively impact investment efficiency, suggesting the potential for overinvestment. Additionally, firms with stronger internal control systems exhibit a more effective and positive strategic response to subsidies. The effects are more pronounced in state-owned enterprises, firms with high ownership concentration, and firms in the growth stage of their life cycle. Government subsidies act as a catalyst for strategic aggressiveness, particularly for firms that are either state-owned, have concentrated ownership, or are in their growth stage. The study also highlights that while subsidies ease financial constraints, they can sometimes lead to inefficiency if not carefully managed, particularly in firms with weaker internal governance structures. The findings offer valuable insights for policymakers and corporate managers. Policymakers should consider firm-specific characteristics, such as internal control quality and firm life cycle stage, when designing subsidy programs. For corporate managers, aligning internal governance systems with external support mechanisms is crucial to leveraging subsidies effectively and ensuring sustainable strategic growth.

Keywords: Firm heterogeneity, Government subsidies, Internal control, Investment efficiency, Strategic aggressiveness.

1. Introduction

In recent years, as China continues to push forward economic transformation and pursue high-quality development, the role of the government in supporting enterprise growth has become increasingly prominent. Among various policy tools, government subsidies have emerged as a key mechanism to promote corporate innovation and competitiveness. These subsidies not only help allocate resources and guide markets but also play a significant role in shaping corporate strategic behavior, especially in encouraging strategic aggressiveness. Strategic aggressiveness refers to a firm's willingness to take bold actions in the market, such as increasing investment in R&D, entering new markets, or engaging in mergers and acquisitions. It reflects a company's proactive approach to pursuing growth and competitive advantage under uncertainty [1, 2].

From the perspective of resource dependence theory, government subsidies serve as an external resource that can ease firms' financial constraints, allowing them to overcome internal limitations and pursue more ambitious strategies. With additional capital and policy support, firms are better positioned to invest in technological upgrades, expand product lines, and explore new markets. This financial backing enhances their ability to take risks and move quickly in competitive environments [3, 4]. Moreover, governments often use subsidies to direct firms toward strategic industries such as clean energy, high-end manufacturing, and digital technology, aligning enterprise strategies with national development goals [5].

Government subsidies also influence the competitive landscape. On one hand, they can strengthen subsidized firms and shift market balance, sometimes leading to monopolistic behavior. This may push non-subsidized firms to respond with more aggressive strategies to survive and compete [6, 7]. On the other hand, there are potential downsides. Some firms may misuse subsidies, leading to overinvestment, inefficient resource allocation, or even moral hazard, where companies rely too heavily on government support and lose incentive to operate efficiently [8, 9].

The effect of subsidies is also shaped by internal corporate factors such as governance, managerial incentives, and internal control systems. Studies have shown that strong internal control can enhance the positive effects of government subsidies. Firms with better internal control mechanisms are more likely to use subsidies for productive purposes, such as R&D and innovation, rather than for short-term gains or non-strategic spending. This helps improve investment efficiency and ensures that subsidies translate into real competitive advantages [10-12]. In contrast, poor internal control may lead to misuse of funds, weakening the intended benefits of the subsidies.

Another important factor is the firm's financial situation, particularly its access to external funding [13]. Many small and medium-sized enterprises face financing difficulties, which limit their ability to take strategic risks. In this context, government subsidies not only provide direct financial support but also act as a positive signal to investors and financial institutions, helping firms improve their creditworthiness and expand financing channels. This, in turn, gives them more flexibility to pursue aggressive strategic actions [14, 15].

In summary, the relationship between government subsidies and corporate strategic aggressiveness is complex and influenced by multiple factors. While subsidies can serve as a powerful driver of innovation and proactive strategy, their impact depends on how effectively they are used and managed. It is important to consider not only the amount and type of subsidies but also the industry context, firm governance, financial constraints, and internal control quality when evaluating their effectiveness.

This study aims to explore the link between government subsidies and strategic aggressiveness, with a focus on the mediating roles of investment efficiency and financing constraints, as well as the moderating role of internal control quality. By building a theoretical model and conducting empirical analysis using recent data from Chinese listed companies, this research seeks to better understand how government support influences corporate strategic decisions. The findings are expected to provide insights for both academic research and policy-making, helping enterprises make better use of subsidies and assisting governments in designing more effective support measures to promote sustainable business growth.

2. Materials and Methods

2.1. Sample Selection and Data Source

This study examines A-share listed companies in China. Following common practices in the literature, we exclude financial industry firms, ST and *ST companies with financial anomalies, and firms with missing data. Additionally, we perform winsorization at the 1st and 99th percentiles for continuous variables to mitigate the influence of outliers. The empirical analysis covers the period from 2009 to 2024 (Table 1).

Table 1.
Sample Selection and Descriptive Statistics Summary (2009–2024).

Variable Type	Variable Symbol	Variable Name	Definition
Independent Variable	SUB	Government Subsidies	Ratio of government subsidies to firm revenue
Dependent Variable	STRA	Strategic Aggressiveness	Discrete variable measuring corporate strategy, scored from 0 to 24 [16, 17]
Mediating Variables	IE	Investment Efficiency	Measured using Richardson's method [18]
	SA	Financing Constraints	Measured using the SA index by Hadlock and Pierce [19]
Moderating Variable	ICQ	Internal Control Quality	Dibo Internal Control Index
Control Variables	SIZE	Firm Size	Natural logarithm of total firm assets
	LEV	Debt-to-Asset Ratio	Ratio of total liabilities to total assets
	TOP1	Ownership Concentration	Shareholding proportion of the largest shareholder
	TJIO	Dual Role	1 if the CEO and chairman are the same person, 0 otherwise
	EA	Average Managerial Age	Average age of managers
	CF	Cash Flow Scale	Ratio of firm cash flow to total assets

2.2. Empirical Models
2.2.1. Panel Regression Model

To examine the impact of government subsidies on corporate strategic aggressiveness (testing H1), we construct the following panel regression model:

$$STRA_{i,t} = \alpha_0 + \alpha_1 SUB_{i,t} + \sum \alpha_j CV_{i,t}^j + \lambda_i + \mu_t + \varepsilon_{i,t}$$

In the model, α_0 represents the intercept, $\varepsilon_{i,t}$ denotes the residual term, and $CV_{i,t}^j$ refers to the control variables. Additionally, the model includes firm fixed effects (λ_i) and year fixed effects (μ_t).

2.2.2. Mediation Model

To examine the mediating roles of investment efficiency and financing constraints (testing H2 and H3), that construct the following panel regression model:

$$M_{i,t}^v = \alpha_0 + \alpha_1 SUB_{i,t} + \sum \alpha_j CV_{i,t}^j + \lambda_i + \mu_t + \varepsilon_{i,t}$$

In the equation, the mediating variable $M_{i,t}^v$ includes investment efficiency $IE_{i,t}$ and financing constraints $SA_{i,t}$. This model can be employed to examine whether government subsidies have an impact on the mediating variables.

2.2.3. Moderation Model

To examine the moderating effect of internal control quality (testing H4), we construct the following panel regression model:

$$STRA_{i,t} = \alpha_0 + \alpha_1 SUB_{i,t} + \alpha_2 SUB_{i,t} \times ICQ_{i,t} + \sum \alpha_j CV_{i,t}^j + \lambda_i + \mu_t + \varepsilon_{i,t}$$

In the equation, $SUB_{i,t} \times ICQ_{i,t}$ represents the interaction term between government subsidies and corporate internal control quality. This model can be employed to examine the moderating role of internal control quality in the impact of government subsidies on corporate strategic aggressiveness.

3. Empirical Results Analysis
3.1. Descriptive Statistics

Table 2 presents the descriptive statistics for the key variables in the study. The dependent variable, corporate strategic aggressiveness (STRA), has a mean value of 11.7761 and a standard deviation of 3.8441, indicating considerable variation in strategic aggressiveness across firms. The government subsidies (SUB) variable has a mean of 0.0088 and a standard deviation of 0.0126, reflecting significant differences in the level of subsidies received by firms. Further analysis, as depicted in Figure 1, shows that the majority of firms (87%) receive government subsidies accounting for 0%~2% of their operating income, while only a small percentage of firms (1%) receive subsidies greater than 8%.

Table 2.
Summary Statistics of Main Variables Used in the Empirical Analysis.

Variables	N	Mean	SD	Min	Max
STRA	28017	11.7761	3.8441	0	24
SUB	28017	0.0088	0.0126	0	0.0891
IE	28017	-0.0384	0.0468	-0.2965	-0.0005
SA	28017	3.8344	0.2481	3.0446	4.4224
ICQ	28017	6.3642	0.8815	0	6.7875
SIZE	28017	22.4156	1.2763	18.9123	26.0998
LEV	28017	0.459	0.1983	0.0506	0.9934
TOP1	28017	0.3357	0.1470	0.09	0.7288
TJIO	28017	0.2275	0.4192	0	1
EA	28017	49.5338	3.0979	41	57
CF	28017	0.1435	0.1055	0.0005	0.9724

This study also includes a graphical descriptive analysis of government subsidy distribution, conducted using programming tools such as Python. As illustrated in Figure 1, the ratio of government subsidies to operating income is divided into four categories: "0–2%" , "2–5%", "5–8%" and ">8%". The results show that 87% of firms receive government subsidies amounting to 0–2% of their operating income, 10% fall within the 2–5% range, 2% receive subsidies between 5–8%, and only 1% of firms obtain subsidies exceeding 8% of their operating income.
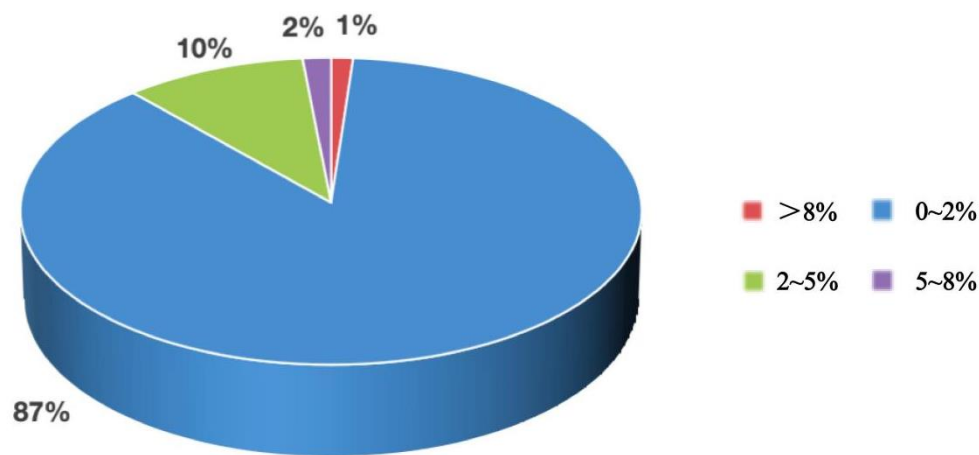
Figure 1.
Distribution of Government Subsidy Ratios.

3.2. Correlation Analysis of the Effects of Government Subsidies on Firms

The correlation analysis (Table 3) reveals several noteworthy relationships among the variables. Firstly, there is a positive correlation between government subsidies and corporate strategic aggressiveness (0.1841), indicating that higher levels of government subsidies are associated with more aggressive corporate strategies. Additionally, investment efficiency (IE) is negatively correlated with strategic aggressiveness (-0.1311), suggesting that firms with lower investment efficiency tend to adopt more aggressive strategies. Financing constraints (SA) show a weak positive correlation with strategic aggressiveness (0.0047), and internal control quality (ICQ) exhibits a weak negative correlation with strategic aggressiveness (-0.0149). These findings underscore the complex interplay between government subsidies, investment efficiency, financing constraints, and corporate strategy.

Table 3.
Results of Correlation Analysis.

	STRA	SUB	IE	SA	ICQ	SIZE	LEV
STRA	1.0000						
SUB	0.1841	1.0000					
IE	-0.1311	-0.0508	1.0000				
SA	0.0047	0.0314	0.0800	1.0000			
ICQ	-0.0149	-0.0387	0.0171	-0.0503	1.0000		
SIZE	-0.1878	-0.1389	0.1099	-0.0567	0.0598	1.0000	
LEV	-0.1417	-0.1359	0.0602	-0.0511	-0.0688	0.4217	1.0000
TOP1	-0.1223	-0.1026	0.0351	-0.1722	0.0563	0.2403	0.1026
TJIO	0.1005	0.0618	-0.0400	0.0099	-0.0065	-0.1119	-0.0942
EA	-0.1568	-0.0264	0.1342	0.0953	0.0346	0.3499	0.0453
CF	0.0488	0.0145	-0.0110	0.0087	0.0676	-0.1573	-0.3308
	TOP1	TJIO	EA	CF			
TOP1	1.0000						
TJIO	-0.1084	1.0000					
EA	0.1583	-0.1194	1.0000				
CF	0.0197	0.0096	0.0032	1.0000			

3.3. Panel Regression Analysis of the Effects of Government Subsidies on Firms

Table 4 presents the results of the panel regression analysis examining the impact of government subsidies on corporate strategic aggressiveness. Column (1) shows that the coefficient of the independent variable (government subsidies) is significantly positive at the 1% significance level, with a value of 20.1252. When control variables are included in column (2), the coefficient remains significantly positive at the 1% level, increasing slightly to 20.2554. This indicates that government subsidies have a positive impact on corporate strategic aggressiveness, supporting Hypothesis 1 (H1).

Table 4.
Panel Regression Analysis of the Impact of Government Subsidies on Corporate Strategic Aggressiveness.

	(1)	(2)
VARIABLES	STRA	STRA
SUB	20.1252***	20.2554***
	(1.6979)	(1.6945)
SIZE		0.1754***
		(0.0396)
LEV		0.3315**
		(0.1688)
TOP1		1.0882***
		(0.2675)
TJIO		0.1246**
		(0.0565)
EA		-0.0747***
		(0.0104)
CF		1.0361***
		(0.2254)
Constant	11.5944***	10.6659***
	(0.0213)	(0.9692)
I-FE	Y	Y
T-FE	Y	Y
Observations	28,017	28,017
R-squared	0.6140	0.6159

3.4. Robustness Tests of the Effects of Government Subsidies on Firms

To ensure the robustness of our findings, we conducted several alternative analyses. When using the natural logarithm of government subsidies as the independent variable, the regression coefficient was significantly positive at the 1% level (0.0183) in column (1), and remained significantly positive at the 5% level (0.0137) in column (2) after including control variables. This supports Hypothesis 1 (H1), indicating that government subsidies positively influence corporate strategic aggressiveness (Table 5).

Reclassifying corporate strategic aggressiveness, the regression coefficient for government subsidies was significantly positive at the 1% level (1.2674) in column (1), and remained significantly positive at the 1% level (1.2793) in column (2) after including control variables. This further supports H1.

Excluding samples from the years 2010 and 2022, the regression coefficient for government subsidies was significantly positive at the 1% level (19.9533) in column (1), and remained significantly positive at the 1% level (20.1632) in column (2) after including control variables. This again supports H1.

Using an ordered probit model for regression analysis, the regression coefficient for government subsidies was significantly positive at the 1% level (14.8319) in column (1), and remained significantly positive at the 1% level (12.5369) in column (2) after including control variables. This supports H1. Controlling for province-year fixed effects, the regression coefficient for government subsidies was significantly positive at the 1% level (20.3008) in column (1), and remained significantly positive at the 1% level (20.5941) in column (2) after including control variables. This supports H1.

These robustness tests consistently show that government subsidies have a positive impact on corporate strategic aggressiveness, validating the findings presented in the earlier sections.

Table 5.
Robustness Tests of the Effects of Government Subsidies on Firms.

VARIABLES	Log-Transformed Subsidies		Reclassified Strategic Aggressiveness		Excluding 2010 and 2022	
	(1)	(2)	(1)	(2)	(1)	(2)
	STRA	STRA	STRA	STRA	STRA	STRA
SUB	0.0183***	0.0137**	1.2674***	1.2793***	19.9533***	20.1632***
	(0.0064)	(0.0065)	(0.2165)	(0.2163)	(1.8445)	(1.8412)
Constant	11.4823***	11.0628***	1.9754***	1.7504***	11.5948***	9.5363***
	(0.1025)	(0.9723)	(0.0027)	(0.1237)	(0.0228)	(1.0548)
I-FE	Y	Y	Y	Y	Y	Y
T-FE	Y	Y	Y	Y	Y	Y
Observations	28,017	28,017	28,017	28,017	24,540	24,540
R-squared	0.6123	0.6140	0.4160	0.4173	0.6197	0.6213

	Panel Ordered Probit Robustness Test		Robustness Check: Province-Year FE	
	(1)	(2)	(1)	(2)
VARIABLES	STRA	STRA	STRA	STRA
SUB	14.8319***	12.5369***	20.3008***	20.5941***
	(0.4790)	(0.4862)	(1.7453)	(1.7417)
Constant	-	-	11.5953***	7.2042***
	-	-	(0.0220)	(1.0580)
I-FE	Y	Y	Y	Y
T-FE	Y	Y	Y	Y
Observations	28,017	28,017	26,328	26,328
R-squared	-	-	0.6424	0.6442

3.5. Endogeneity of the Effects of Government Subsidies on Firms

As shown in Table 6, the instrumental variables are significantly positive at the 1% significance level in columns (1) and (2), indicating that the instruments are relevant and meet the correlation assumption with the endogenous explanatory variable. In column (3), the regression coefficient for government subsidies is significantly positive at the 1% level, with an estimated value of 197.6530. When control variables are included in column (4), the coefficient for government subsidies remains significantly positive at the 1% level, with an estimated value of 231.5907. These results support Hypothesis 1 (H1), which posits that government subsidies have a positive impact on corporate strategic aggressiveness. As government subsidies increase, corporate strategic aggressiveness also rises. This finding confirms the robustness of our empirical results after addressing the endogeneity issue using two-stage least squares regression with instrumental variables.

Table 6.
Endogeneity Analysis Using Two-Stage Least Squares Regression with Instrumental Variables.

VARIABLES	(1)	(2)	(3)	(4)
	SUB	SUB	STRA	STRA
IV	0.0635***	0.0793***		
	(0.0109)	(0.0107)		
SUB			197.6530***	231.5907***
			(66.6872)	(53.7637)
Constant	0.0108***	0.0507***	-	-
	(0.0001)	(0.0019)	-	-
I-FE	Y	Y	Y	Y
T-FE	Y	Y	Y	Y
Observations	28,017	28,017	28,017	28,017
R-squared	0.5334	0.5343	-	-
F-statistics	-	-	23.626	40.813

3.6. Heterogeneity Analysis of the Effects of Government Subsidies on Firms

The heterogeneity analysis, as presented in Table 7, reveals significant variations in the impact of government subsidies based on firm characteristics. For state-owned enterprises (SOEs), the coefficient for government subsidies is 25.5497, significantly higher than the coefficient for non-SOEs (15.8255), indicating that SOEs respond more strongly to government subsidies. Similarly, firms with high ownership concentration exhibit a greater positive response to government subsidies (18.7423) compared to firms with low ownership concentration (17.9758). Additionally, government subsidies have the most significant impact on growth-stage firms (21.2109), followed by mature firms (14.2969), with declining firms exhibiting the smallest response (13.5199). These findings suggest that the effects of government subsidies on strategic aggressiveness are stronger for state-owned firms, firms with high ownership concentration, and firms in the growth stage of their lifecycle.

Table 7.
Results of Heterogeneity Analysis.

VARIABLES	Heterogeneity by Ownership Type		Heterogeneity by Ownership Concentration	
	(1) **State-Owned Enterprises**	**(2)** **Non-State-Owned Enterprises**	**(1)** **Firms with High Ownership Concentration**	**(2)** **Firms with Low Ownership Concentration**
	STRA	**STRA**	**STRA**	**STRA**
SUB	25.5497***	15.8255***	18.7423***	17.9758***
	(2.5068)	(2.3758)	(2.1973)	(2.6775)
Constant	13.0895***	7.8262***	14.4080***	8.5649***
	(1.5024)	(1.3093)	(1.4166)	(1.6059)
I-FE	Y	Y	Y	Y
T-FE	Y	Y	Y	Y
Observations	12,209	14,941	14,769	12,995
R-squared	0.5787	0.6347	0.6517	0.6383

	Heterogeneity Analysis Distinguishing between Growth-Oriented, Mature, and Declining Enterprises		
	Growth Oriented Enterprises	**Mature Enterprises**	**Declining Enterprises**
VARIABLES	STRA	STRA	STRA
SUB	21.2109***	14.2969***	13.5199***
	(2.8600)	(3.2950)	(3.8593)
Constant	6.6781***	9.7468***	19.3029***
	(1.7451)	(1.7675)	(2.6213)
I-FE	Y	Y	Y
T-FE	Y	Y	Y
Observations	11,299	9,871	5,009
R-squared	0.6629	0.6865	0.6795

3.7. Mechanism Analysis of the Effects of Government Subsidies on Firms

The mediating role of investment efficiency and financing constraints in the impact of government subsidies on corporate strategic aggressiveness is examined through regression analysis (Table 8). Specifically, the regression results in column (1) show that the coefficient of government subsidies is significantly negative at the 5% significance level, with an estimated value of -0.0621. After including control variables in column (2), the coefficient remains significantly negative at the 5% level, with an estimated value of -0.0655. These findings support Hypothesis 2 (H2), indicating that investment efficiency acts as a mediating factor in the relationship between government subsidies and corporate strategic aggressiveness. In other words, government subsidies negatively affect investment efficiency, which in turn influences corporate strategic aggressiveness.

To further validate whether government subsidies primarily enhance corporate strategic aggressiveness through stimulating excessive investment, the impact of government subsidies on excessive investment behavior is examined in columns (3) and (4). The regression results in column (3) show that the coefficient of government subsidies is significantly positive at the 1% significance level, with an estimated value of 0.1644. After including control variables in column (4), the coefficient remains significantly positive at the 1% level, with an estimated value of 0.1668. These results confirm that government subsidies have a positive effect on excessive investment behavior, thereby supporting the mediating role of investment efficiency in the relationship between government subsidies and corporate strategic aggressiveness.

Additionally, the mediating role of financing constraints is examined. The regression results in column (1) show that the coefficient of government subsidies is significantly negative at the 1% significance level, with an estimated value of -0.1291. After including control variables in column (2), the coefficient remains significantly negative at the 5% level, with an estimated value of -0.0843. These findings support Hypothesis 3 (H3), indicating that financing constraints act as a mediating factor in the relationship between government subsidies and corporate strategic aggressiveness. Specifically, government subsidies alleviate financing constraints, which in turn positively influence corporate strategic aggressiveness.

Table 8.
Analysis Results of Mediating Effects.

Variables	Investment Efficiency				Financing Constraints	
	(1)	**(2)**	**(3)**	**(4)**	**(1)**	**(2)**
	IE	**IE**	**OVERI**	**OVERI**	**SA**	**SA**
SUB	-0.0621**	-0.0655**	0.1644***	0.1668***	-0.1291***	-0.0843**
	(0.0266)	(0.0265)	(0.0564)	(0.0562)	(0.0337)	(0.0332)
Constant	-0.0397***	-0.0112	0.0466***	-0.1303***	3.7838***	3.5472***
	(0.0003)	(0.0148)	(0.0007)	(0.0314)	(0.0005)	(0.0190)
I-FE	Y	Y	Y	Y	Y	Y
T-FE	Y	Y	Y	Y	Y	Y
Observations	28,017	28,017	12,397	12,397	28,017	28,017
R-squared	0.2515	0.2529	0.3617	0.3665	0.9477	0.9493

The analysis of mediating effects reveals that both investment efficiency and financing constraints play significant roles in the impact of government subsidies on corporate strategic aggressiveness. The negative effect on investment efficiency and the alleviation of financing constraints mediate the positive impact of government subsidies on corporate strategic aggressiveness, providing a comprehensive understanding of the underlying mechanisms.

3.8. Moderation Analysis of the Effects of Government Subsidies on Firms

Finally, the moderating effect of internal control quality on the relationship between government subsidies and strategic aggressiveness is explored in Table 9. The results indicate that internal control quality strengthens the positive impact of government subsidies on corporate strategic aggressiveness. In Column (1), the interaction term between government subsidies and internal control quality (SUB×ICQ) is significantly positive (44.6437), and this effect remains robust in Column (2) with a coefficient of 36.9701. This suggests that firms with stronger internal controls are better positioned to utilize government subsidies effectively, leading to more aggressive strategic actions.

Table 9.
Analysis Results of the Moderating Effect of Internal Control Quality.

Variables	(1)	(2)
	STRA	**STRA**
SUB	18.9197***	19.1921***
	(1.8320)	(1.8271)
SUB×ICQ	44.6437**	36.9701**
	(17.9135)	(17.8851)
Constant	11.5703***	9.0053***
	(0.0226)	(1.0510)
I-FE	Y	Y
T-FE	Y	Y
Observations	28,017	28,017
R-squared	0.6168	0.6192

4. Discussion
4.1. The Influence of Government Subsidies on Strategic Aggressiveness

The empirical results presented in this study offer strong support for the conclusion that government subsidies have a significantly positive impact on corporate strategic aggressiveness. This relationship is consistently confirmed across various statistical models, including fixed effects regressions and instrumental variable approaches. The robustness of these findings suggests that subsidies play a substantive role in shaping firms' willingness to pursue bold, proactive strategies aimed at long-term growth.

Strategic aggressiveness refers to the extent to which a firm engages in forward-looking actions such as increasing research and development, expanding into new markets, investing in new technologies, or pursuing mergers and acquisitions [20]. In the Chinese institutional context, where government involvement in industrial policy is extensive, subsidies are more than just financial transfers. They often function as policy signals, indicating that certain industries or enterprises are favored or supported under national development goals. When firms receive such support, they may perceive it as both a safety net and an endorsement, which in turn encourages them to adopt more ambitious strategies.

The study further shows that this effect is not uniform across all firms. For example, the results in Table 7 highlight that state-owned enterprises are more responsive to subsidies than their non-state-owned counterparts. This difference may arise from their closer alignment with national priorities and stronger ties to government institutions. Growth-stage firms also respond more aggressively to subsidies, likely because these firms are in a period of rapid development and are more in need of external capital to support their expansion plans. For these firms, subsidies may represent a critical source of financing and a timely opportunity to accelerate competitive positioning.

While the relationship is generally positive, it is important to recognize that increased strategic aggressiveness does not always translate into improved performance. Firms may pursue expansion too rapidly, misallocate resources, or engage in high-risk investments without adequate assessment. In these cases, government subsidies might unintentionally encourage inefficiency or instability. Thus, it is essential that the strategic use of subsidies be accompanied by internal discipline, rigorous evaluation procedures, and clearly defined long-term objectives [21].

In conclusion, government subsidies appear to serve as a catalyst for strategic aggressiveness, particularly for firms that are institutionally or developmentally positioned to take advantage of such support. The results contribute to a deeper understanding of how public policy tools influence firm behavior, emphasizing that financial assistance can do more than relieve constraints, it can also reshape corporate strategy and risk appetite.

4.2. Mechanisms Driving Strategic Aggressiveness: Investment Efficiency and Financing Constraints

To further clarify the pathway by which government subsidies influence strategic aggressiveness, this study examines two mediating mechanisms. One mechanism is investment efficiency, which concerns how effectively a firm utilizes its capital to generate value. The other is financing constraints, which refer to limitations firms face when attempting to access external funding. Understanding these mechanisms provides insight into whether subsidies serve as a productive enabler of strategy or whether they create unintended consequences by weakening financial discipline.

The analysis reveals that government subsidies are associated with a decline in investment efficiency. As reported in Table 8, the negative coefficient between subsidies and investment efficiency suggests that firms receiving subsidies tend to allocate capital less efficiently. This may occur because the availability of external funds reduces the financial pressure that normally forces firms to carefully evaluate and prioritize investment decisions. In some cases, subsidies might encourage overinvestment in low-return projects or expansion into markets that are not aligned with the firm's core competencies. Such behavior reflects a form of moral hazard, where the safety of government backing lowers the perceived cost of strategic failure [22, 23].

This concern is further supported by findings related to excessive investment behavior. Firms that receive higher subsidies are more likely to engage in excessive capital expenditures, often without corresponding improvements in performance. These decisions may not be entirely irrational. Rather, they can stem from overconfidence, weak internal oversight, or misaligned incentives. When capital is easily accessible and not tied to strict performance metrics, firms may pursue scale or speed at the expense of efficiency.

In contrast, the alleviation of financing constraints emerges as a more constructive channel. The results show that government subsidies significantly reduce firms' dependence on external financing, thereby improving their liquidity and investment flexibility. This finding confirms the notion that subsidies act as a form of financial relief, especially for firms that face challenges in accessing debt or equity markets. With fewer capital restrictions, firms are more capable of executing aggressive strategies, such as entering competitive markets, launching new products, or investing in innovation [24].

These two mechanisms interact in a complex manner. On one side, subsidies unlock strategic potential by easing financial burdens. On the other, they can compromise capital discipline if firms lack the governance capacity to allocate resources wisely. The overall impact of subsidies thus depends heavily on internal factors such as management quality, investment planning processes, and accountability systems. It is not sufficient to provide funds alone; mechanisms must also be in place to ensure that those funds are used in ways that support long-term strategic goals.

In summary, government subsidies influence strategic aggressiveness both by expanding firms' financial capabilities and by altering their investment behavior. While one pathway opens new strategic opportunities, the other introduces potential risks. These findings highlight the importance of coupling subsidy policies with governance requirements to maximize their positive impact and reduce the likelihood of inefficient outcomes.

4.3. Moderating Effects of Internal Control Quality and Firm Characteristics

While government subsidies have a general tendency to promote strategic aggressiveness, the degree of this influence varies according to internal governance and firm-specific attributes. This section explores how internal control quality and organizational characteristics such as ownership structure and life cycle stage affect the extent to which subsidies translate into strategic action.

One of the most prominent findings in this area is the role of internal control quality. As shown in Table 9, firms with stronger internal control systems exhibit a greater ability to convert subsidies into purposeful and well-executed strategies. High-quality internal control ensures that financial resources are monitored, allocated, and used in line with strategic objectives. It also reduces the likelihood of opportunistic behavior or inefficient spending. This reinforces the idea that internal governance plays a central role in determining whether external resources lead to value creation. In contrast, firms with weak internal control may misuse subsidies, engaging in reckless expansion or projects with limited strategic relevance. In these cases, government support can become a liability rather than a benefit, particularly when it enables decision-makers to avoid necessary scrutiny or accountability [25].

In addition to governance systems, the firm's ownership structure also influences how subsidies affect strategic behavior. State-owned enterprises tend to be more responsive to subsidies, which is likely due to their closer alignment with government goals and stronger administrative ties. These firms may view subsidies not only as financial resources but also as directives or incentives to fulfill broader public mandates. Likewise, firms with highly concentrated ownership structures are often more decisive and consistent in strategic execution. Such firms are more capable of rapidly mobilizing resources and aligning stakeholder interests, making them well-positioned to act upon government support [26, 27].

The stage of a firm's life cycle also shapes the subsidy–strategy relationship. Growth-stage firms, which are typically more dynamic and capital-intensive, benefit most from subsidies. These firms are often more willing to take risks and are actively seeking resources to fund expansion. By contrast, mature firms may have already reached operational stability and might use subsidies conservatively, prioritizing operational improvements over bold ventures. Declining firms, meanwhile, may lack the organizational energy or strategic clarity needed to translate subsidies into meaningful change.

Together, these findings indicate that subsidies do not operate in isolation. Their effects depend on the internal structures, strategic orientation, and operational context of the receiving firms. For policymakers, this implies that a more differentiated approach to subsidy design is needed. Rather than applying uniform criteria, governments should consider governance strength, ownership structure, and developmental readiness when distributing subsidies. For corporate leaders, the results underscore the importance of investing in internal control systems and strategic planning frameworks. Firms that can absorb subsidies within a well-managed environment are more likely to transform external support into sustainable competitive advantage.

In conclusion, internal control quality and firm-level characteristics serve as key moderators that determine the effectiveness of government subsidies. Understanding these variables allows for more precise targeting of public policy and more effective deployment of strategic resources within firms.

4.4. Limitations and Directions for Future Research

Despite providing robust empirical evidence on the relationship between government subsidies and corporate strategic aggressiveness, this study still has several notable limitations that open up valuable directions for further investigation.

First, the sample is limited to A-share listed firms in China. These firms generally possess greater transparency, better governance, and more stable access to resources compared to non-listed or smaller enterprises. Consequently, the findings may not be fully applicable to the broader population of Chinese firms or to firms operating under different institutional and economic conditions. For example, small and medium-sized enterprises (SMEs) often encounter more severe financing challenges and weaker internal controls, which may result in different behavioral responses to government subsidies. Future research could expand the sample scope to include privately held or non-listed firms in order to assess the broader validity of the results.

Second, while the study adopts widely accepted quantitative indicators, such as the ratio of subsidies to revenue and the strategic aggressiveness index, these measures may not fully capture the complexity of corporate strategic behavior. Strategic aggressiveness encompasses more than observable metrics like investment levels or market entry; it also involves deeper organizational processes such as internal restructuring, innovation culture, and long-term positioning, which are not easily reflected in financial data. A more comprehensive understanding could be achieved by incorporating qualitative approaches, including case studies or interviews, to supplement quantitative findings.

Third, although the study addresses endogeneity using instrumental variable regression techniques, such as those reported in Table 6, there remains the possibility of omitted variable bias or reverse causality. In the Chinese institutional context, the distribution of subsidies is often influenced by informal relationships or local government discretion. These same factors may also shape a firm's strategic orientation, which complicates the interpretation of causality. Future studies could adopt more advanced identification strategies, including natural experiments or regression discontinuity designs, to enhance the credibility of causal inferences.

Finally, while this study considers heterogeneity across firm ownership types, ownership concentration, and life cycle stages, these classifications may overlook within-group diversity. Firms in different industries or regions may face unique challenges, policy pressures, and technological paths that influence how they respond to subsidies. Incorporating industry-level or regional variables into the analysis would provide a more detailed picture of subsidy effectiveness. Methodologies such as multi-level modeling or cross-level interaction analysis could prove particularly valuable in this regard.

In summary, although the present study contributes to our understanding of how government subsidies influence firm strategy, addressing these limitations in future work would improve the robustness and generalizability of the findings. This would not only enhance academic insights but also inform the development of more precise and impactful subsidy policies.

4.5. Implications for Policy and Managerial Practice

The findings of this study have important implications for both public policy design and corporate strategic management, especially as China advances its goal of achieving high-quality, innovation-driven economic growth. In this policy environment, understanding how firms respond behaviorally to government subsidies is critical for maximizing the impact of fiscal interventions.

From a policy perspective, the study demonstrates that simply increasing the volume of subsidies is insufficient. The effectiveness of government support depends on how subsidies are allocated, monitored, and integrated with broader industrial policies. While financial subsidies can ease liquidity constraints and act as positive signals to investors, these benefits do not guarantee long-term strategic advancement. In cases where firms lack strong internal governance or clear strategic direction, subsidies may lead to inefficient resource allocation, short-sighted expansion, or rent-seeking. It is therefore advisable for subsidy programs to incorporate explicit performance requirements or evaluation mechanisms. Linking subsidy distribution to measurable outcomes in innovation, sustainability, or productivity could improve accountability and resource efficiency.

Moreover, the study suggests that a differentiated approach to subsidy policy is more effective. Firms at different stages of development or with distinct organizational structures respond differently to financial incentives. For instance, firms in the growth phase, those with concentrated ownership, or state-owned enterprises tend to show greater

responsiveness to subsidies. This indicates that policy interventions should be tailored to firm-specific characteristics. In some cases, direct financial assistance may be appropriate; in others, non-financial support such as training, consulting, or facilitating access to innovation networks might offer greater long-term value.

For business leaders, the study underscores the importance of aligning internal management systems with external support mechanisms. Government subsidies should be viewed as an opportunity to strengthen long-term competitiveness, not merely as a source of temporary funding. Firms with effective internal control systems are better positioned to absorb and utilize subsidies strategically, turning external support into lasting innovation and market gains. Enhancing governance quality, improving investment evaluation processes, and fostering a culture of strategic discipline can help firms avoid the pitfalls of overexpansion or inefficient spending.

Ultimately, the interaction between government and enterprise should be conceptualized as a strategic partnership rather than a transactional exchange. When designed with clear objectives and implemented under robust institutional oversight, subsidies can become a powerful tool for driving sustainable business transformation. At the same time, firms that proactively integrate government support into their strategic planning processes will be better equipped to adapt, compete, and thrive in a rapidly evolving economic landscape.

5. Conclusion

This study offers comprehensive insights into the strategic implications of government subsidies in the context of Chinese listed firms. By systematically examining the relationship between subsidies and corporate strategic aggressiveness, it reveals that public financial support not only plays a functional role in relieving financial constraints but also significantly influences firms' strategic posture. The findings demonstrate that firms receiving government subsidies are more likely to engage in aggressive strategies, including market expansion, technological innovation, and capital-intensive investments.

A key contribution of this research lies in uncovering the dual mediating mechanisms through which subsidies operate. On the one hand, subsidies ease financing constraints, enabling firms, particularly those with limited access to capital markets to pursue ambitious strategic objectives. This channel suggests that subsidies are effective in empowering firms to break through resource bottlenecks and seize growth opportunities that might otherwise remain out of reach. On the other hand, the study finds that subsidies can also negatively affect investment efficiency. With less pressure from financial constraints, firms may engage in excessive or poorly evaluated investment activities, leading to resource misallocation. This inefficiency is particularly pronounced in firms with weaker internal governance, underscoring the need for careful oversight and performance monitoring.

Beyond these mechanisms, the study highlights the importance of firm-specific characteristics in shaping the effectiveness of subsidies. Internal control quality emerges as a critical moderating factor. Firms with robust governance structures are better positioned to manage subsidy resources effectively, aligning them with long-term strategic goals rather than short-term opportunistic behavior. Additionally, the heterogeneous analysis reveals that state-owned enterprises, firms with higher ownership concentration, and those in the growth stage respond more strongly to subsidies. These firms are either institutionally embedded in the policy environment or inherently inclined toward expansion, which amplifies the strategic impact of subsidies.

These findings offer valuable implications for both policymakers and corporate managers. For policymakers, the results suggest that subsidy programs should be designed with attention to firm heterogeneity. A one-size-fits-all approach may result in inefficient allocation and suboptimal outcomes. Instead, differentiated subsidy strategies based on firm governance, ownership structure, and development stage may lead to better policy effectiveness. Moreover, integrating performance-based metrics and post-subsidy evaluations can help ensure accountability and reduce the risk of overinvestment or rent-seeking.

For business leaders, the study serves as a reminder that external support is most beneficial when matched with strong internal discipline. Firms should not view subsidies as mere financial windfalls but as strategic tools that must be aligned with clear, long-term objectives. Strengthening internal control, enhancing strategic planning, and maintaining investment discipline are all essential to converting subsidies into sustainable competitive advantage.

In sum, this study bridges a critical gap in the literature by linking government support to corporate strategic behavior through both enabling and distorting mechanisms. It contributes to a more nuanced understanding of how public policy shapes firm-level outcomes and provides a basis for more effective collaboration between government and enterprise in achieving economic transformation.

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