



Cost Stickiness and Severance Costs: the Moderating Effect of Employee Compensation

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Abstract. This study examines the mechanism through which severance costs affect cost stickiness of enterprise and the moderating role of employee compensation in Chinese private enterprises, grounded in the three foundational theories of cost stickiness and the contract theory. Using the sample of the A-share listed private enterprises from 2008 to 2020, this study implements fixed-effects regression models to analyze the relationship of severance costs cost, cost stickiness and employee compensation. Empirical results demonstrate that severance costs exhibit significant cost stickiness, characterized by asymmetric adjustments where cost reductions during demand declines are smaller than expansions during growth periods, and employee compensation attenuate the positive relationship between severance costs and cost stickiness. These findings contribute to the theoretical understanding of cost management optimization and the evidence-based recalibration of national labor policy frameworks. This study makes dual contributions by both expanding the theoretical boundaries of cost behavior literature and providing actionable organizational-level insights for optimizing employment relationship governance.

Keywords: Cost stickiness, Severance costs, Private enterprises, Contract theory

1 Introduction

China's economic reforms and social transformation have intensified structural tensions in labor relations, exemplified by frequent disputes and imbalances between workforce flexibility and rights protection. Establishing harmonious labor relations is critical for safeguarding worker rights and sustaining high-quality economic development. Within corporate cost management research, labor costs demonstrate sticky behavior, where cost adjustments lag asymmetrically behind revenue fluctuations (Anderson et al., 2003)^[1]. Severance costs as a unique labor cost component embodies dual attributes: it is both a legally mandated rigid expenditure and a strategic instrument for corporate social responsibility (CSR), which may generate dynamic cost stickiness patterns distinct from conventional labor costs. While prior studies focus on wage structures (Banker et al., 2014)^[2], systematic analyses of severance costs remain absent.

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This study addresses this gap by analyzing A-share listed private enterprises in China, examining how severance costs influence cost stickiness and how employee compensation moderate this relationship. The contributions are threefold: Firstly, it expands the cost stickiness literature by incorporating severance costs, a CSR-driven labor cost, into theoretical frameworks. Secondly, it identifies employee compensation as a critical moderating variable, offering actionable strategies for labor cost optimization and dispute mitigation.

2 Literature Review and Research Hypothesis

2.1 Literature Review

Traditional cost behavior models assume a linear and symmetric relationship between costs and operational volume. However, Anderson et al. (2003)^[1] empirically demonstrated that the marginal increase in selling, general, and administrative (SG&A) costs during revenue growth significantly exceeds the marginal decrease during equivalent revenue declines, thereby pioneering the concept of cost stickiness. Subsequent studies have validated the universality of cost stickiness across heterogeneous institutional contexts. For instance, state-owned enterprises (SOEs) in China exhibit 30% stronger cost stickiness than private enterprises, demonstrating its transcendence beyond ownership structures (Wang et al., 2022)^[3]. Zhou et al. (2023)^[4] demonstrate the dynamic reversal patterns in cost stickiness with machine learning. Industry characteristics and ownership structures critically shape cost stickiness intensity. State-owned enterprises, burdened by policy mandates and agency costs, demonstrate 41% lower labor cost adjustment flexibility than private enterprises (Gulen et al., 2023)^[5].

2.2 Research Hypotheses

Grounded in the theoretical frameworks of adjustment costs and contractual governance, private enterprises in China face intensified market-imposed constraints in human capital adjustments. Severance costs, functioning as an implicit relational contract (Holmström, 2017)^[6], creates dual financial and reputational liabilities during demand contractions. The theory of adjustment (Banker et al., 2022)^[7] posits that firms reliant on specialized human capital exhibit pronounced cost asymmetry: managers delay workforce reductions to avoid substantial severance costs, while optimistic expectations of demand recovery reinforce resource retention (Dalla Via & Perego, 2021)^[8]. This behavioral inertia manifests as cost stickiness, where expenses remain rigid downward but expand proportionally during revenue growth. Thus, this study hypothesizes:

H1: Severance costs exhibit cost stickiness in private enterprises.

The substitution elasticity framework (Kama & Weiss, 2013)^[9] posits that firms manage demand volatility through substitutable cost-adjustment mechanisms. Higher salary levels enable firms to mitigate reliance on severance costs by adopting flexible wage structures rather than workforce reductions. This substitutive effect diminishes the marginal impact of severance expenditures on cost stickiness. Besides, the resource flexibility hypothesis (Banker et al., 2022)^[11] suggests that firms offering competitive

salaries often cultivate a multi-skilled workforce capable of internal redeployment, thereby reducing involuntary layoffs during demand fluctuations (Dalla Via & Perego, 2021)^[12]. Thus, this study hypothesizes:

H2: Employee compensation negatively moderates the positive relationship between severance costs and cost stickiness.

3 Sample and Research Design

3.1 Sample and Data

This study uses data of private enterprises listed on China’s A-share market using panel data from 2008 to 2020, which includes 36,131 raw firm-year observations. This study applies the following filters: (1) exclude ST and *ST enterprises; (2) remove financial enterprises; and (3) drop observations with missing key variables. This yields 12,428 valid observations.

Data are sourced from two databases: RESSET Financial Database and CSMAR Database. Using Stata 18.0, this study preprocess the data by: (1) winsorizing continuous variables at the 1st and 99th percentiles to address outliers; (2) constructing firm-year panel structures; and (3) standardizing key variables for measurement consistency.

3.2 Variable Description

Cost Stickiness. Following prior literature (Dan Weiss, 2010)^[10], this study measures cost stickiness using the Weiss model. The details are as follows.

$$Sticky_{i,t} = \lg\left(\frac{\Delta Sale}{\Delta Cost}\right)_{i,p} - \lg\left(\frac{\Delta Sale}{\Delta Cost}\right)_{i,q} \quad p, q \in \{t, \dots, t-3\} \tag{1}$$

Severance costs. This study employs enterprises' annual adoption of severance subsidy policies (hereafter termed “Benefit”) as the primary explanatory variable.

Control Variables. According to the prior research (Zhao et al., 2024^[13]; Yang et al., 2022^[14]), this study uses the following variables as Table 1.

Table 1. Variables table

Variable Name	Variable Definition
STICKY	Formula (1)
Benefit	Measured as the natural logarithm of total severance benefits
Age	The age of the enterprise
Size	The natural logarithm of operating revenue
Lev	Total debt/total asset
ROA	Net profit / Total assets
Indep	Number of independent directors / Total number of directors
TOP1	The proportion of shares held by the largest shareholder
ROE	Return on Equity = Net Profit / Owners' Equity
Alnt	Total Assets / Operating Revenue

Elnt	Number of employees / Operating Revenue
Loss	If the profit is negative, the value is 1; otherwise, it is 0.
Dual	If the chairman of the board and the general manager are the same person, the value is 1; otherwise, it is 0.
AdmExp	The proportion of administrative expenses in operating revenue
CAF	If the operating cash flow is negative, the value is 1; otherwise, it is 0.
Salary	Natural logarithm of total employee compensation

3.3 Regression Design

This study examines the impact of severance costs of enterprises on its cost stickiness in the same year. The dependent variable is cost stickiness (Sticky), and the independent variable is whether the firm offers severance subsidies (Benefit).

The regression models specified in this paper is as follows:

$$Sticky_{i,t} = \beta_0 + \beta_1 Benefit_{i,t} + \beta_2 Controls + Year + Industry + \epsilon_{i,t} \tag{2}$$

$$Sticky_{i,t} = \beta_0 + \beta_1 Benefit_{i,t} + \beta_2 Benefit_Salary_{i,t} + \beta_3 Controls + Year + Industry + \epsilon_{i,t} \tag{3}$$

4 Empirical Test and Result Analysis

4.1 Descriptive Statistics

Table 2. Results of descriptive statistics

	N	Mean	SD	Min	p25	Median	p75	Max
STICKY	9312	-.019	0.165	-.729	-.059	-.01	.023	.693
Benefit	3938	14.165	2.652	4.605	12.395	14.416	16.1	18.861
Age	9312	21.075	7.088	6	14	22	27	32
Size	9312	22.329	1.298	19.886	21.404	22.137	23.092	26.191
Lev	9312	.458	0.206	.059	.298	.454	.617	.934
ROA	9312	.037	0.058	-.225	.013	.035	.065	.197
Indep	9312	.371	0.053	.3	.333	.333	.4	.571
TOP1	9312	.357	0.151	.093	.235	.339	.464	.743
ROE	9312	.064	0.129	-.687	.03	.072	.118	.369
Alnt	9312	2.252	1.848	.352	1.164	1.717	2.633	11.797
Elnt	9312	1.464	1.074	0.133	0.733	1.198	1.861	6.13
Loss	9312	.099	0.299	0	0	0	0	1
Dual	9312	.216	0.412	0	0	0	0	1
AdmExp	9312	19.091	1.145	16.846	18.279	18.956	19.744	22.655
CAF	9312	.194	0.396	0	0	0	0	1
Salary	9312	17.346	1.634	12.664	16.356	17.358	18.342	21.601
Benefit Salary	3938	5.516	.25	4.288	5.37	5.537	5.693	6.01

**Observations with original values of zero for Benefit and Benefit_Salary (57.7% of the full sample) were excluded due to mathematical constraints in logarithmic transformation, resulting in a reduced sample size of 3,938*

Table 2 presents the descriptive statistical results of the key variables utilized in this research. The primary variable of severance costs (Benefit), measured as the natural logarithm of raw severance costs, exhibits a mean value of 14.165 (N =9312), indicating that the average scale of logarithm-transformed severance costs across enterprises is 14.165. The lower quartile of 12.395 suggests that 25% of enterprises have a natural logarithm of total severance costs \leq 12.395, reflecting a relatively concentrated distribution of severance costs values. The dependent variable, cost stickiness (Sticky), yields a mean value of -0.019, providing empirical evidence of cost anti-stickiness among the selected listed enterprises. This indicates that cost reductions during business volume declines exceed cost increases during expansions, highlighting stronger cost-control capabilities in responding to cyclical fluctuations.

4.2 Regression Analysis

Table 3. Regression analysis of Benefit on Sticky controlling for year and industry of Model (1)

STICKY	Coefficient	Std.err	t.	P>t	[95% conf. interval]
Benefit	0.003	0.001	2.540	0.011	0.001 0.005
Control variables			Yes		
_cons	0.073	0.053	1.370	0.172	-0.032 0.178
Year		Control	Industry		Control
R-squared		0.133	Number of obs		3,938
F(14, 3896)		37.52	Adj R-squared		0.123
Prob > F		0.000	Root MSE		0.156
Within R-sq		0.119			

Table 3 presents the two-way fixed effects regression analysis results. In the result, the relationship between severance costs (Benefit) and cost stickiness (Sticky) is significant at the 5% level ($p=0.011$), indicating that it is meaningful to study the relationship between them. The regression coefficient ($\beta_1 = 0.003$) indicates that private enterprises providing severance subsidies exhibit 0.3% increase in cost stickiness, thereby validating the rationality of Hypothesis 1 regarding the severance costs exhibit cost stickiness in private enterprises.

This finding aligns with the adjustment cost theory, managerial behavioral theory, and contract theory. For adjustment cost theory, severance costs increase labor adjustment costs, making it difficult for private firms to reduce costs proportionally during revenue declines, which exhibit cost stickiness. For managerial behavioral theory, executives exhibit asymmetric risk preferences avoiding layoff-induced reputational damage and future rehiring costs outweighs short-term cost optimization incentives. This behavioral bias systematically delays labor adjustments during revenue declines, exhibiting cost stickiness. For contract theory, severance costs function as implicit

contracts enhancing employee loyalty, which paradoxically increases transaction costs in workforce restructuring, which lead to cost stickiness in private enterprises.

5 Future Analysis

Table 4. Regression analysis of Benefit on Sticky adding moderating variable of Model (2)

STICKY	Coefficient	Std.err	t.	P>t	[95%conf.interval]	
Benefit	0.013	0.004	2.920	0.003	0.004	0.021
Benefit_Salary	-0.119	0.051	-2.360	0.018	-0.218	-0.020
Control variables			Yes			
_cons	0.475	0.179	2.660	0.008	0.125	0.826
Year		Control	Industry		Control	
R-squared		0.134	Number of obs		3938	
F(15, 3895)		35.43	Adj R-squared		0.124	
Prob > F		0.000	Root MSE		0.156	
Within R-sq		0.120				

Table 4 presents the moderating effect of employee compensation on the relationship between severance costs and cost stickiness. The negative coefficient of Benefit_Salary ($\beta = -0.119$, $p = 0.018$) reveals that higher salary levels attenuate the positive association between severance costs and cost stickiness, thereby validating the rationality of Hypothesis 2 regarding the employee compensation negatively moderate the positive relationship between severance costs and cost stickiness. The results align with adjustment cost theory. For the low-salary group where firms lack alternative cost adjustment instruments, the dependence on severance provisions amplifies their marginal impact on cost rigidity. The dominance of these low-salary observations in the sample (constituting 62.8% of the dataset per supplementary analysis) mechanically elevates the main effect coefficient ($\beta = 0.013$, $p = 0.003$).

6 Conclusion

Based on empirical analyses of panel data from A share listed private enterprises, this study demonstrate that severance costs exhibit cost stickiness and severance costs attenuate the positive relationship between them. These findings support Hypothesis 1 and Hypothesis 2, highlighting the dual institutional-strategic nature of severance costs in balancing statutory obligations and organizational flexibility. This study contributes to cost behavior literature by identifying severance costs as a distinct cost category with measurable stickiness effects and the moderating effects of employee compensation. It provides empirical benchmarks for policymakers to refine labor governance frameworks that harmonize economic efficiency with worker protections practically.

This study exclusively examines the moderating effects of employee compensation. Future research should adopt more moderate variables to further expand the research boundaries of cost stickiness.

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