Research on the Impact of Performance Feedback Persistence on Logistics Supply Chain Management

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Abstract. Based on the theory of corporate behavior and related research on profit continuity, this paper uses the application of computer technology as a moderator to explore the impact of the continuous difference between industry performance feedback and historical performance feedback on logistics supply chain management. This study further enriches the research on s logistics supply chain management by introducing the concept of persistence into the performance feedback framework, while taking into account the degree of application of computer technology in the enterprise.

Keywords: performance feedback; sustainability; computer technology application; logistics supply chain management

1   Introduction

In the fierce market competition, enterprise logistics supply chain management is the key to the success of the enterprise, and it is an "important weapon" to ensure the sustainable and healthy development of the enterprise [1]. Therefore, in order to maintain market advantages and gain market influence, enterprises must improve logistics supply chain management in time to adapt to the changing environment [2]. Therefore, this paper introduces the concept of performance feedback persistence, which provides decision makers with a very important continuous observation perspective from the perspective of time persistence, which can form a regular view in the mind of decision makers, thereby emphasizing the past or future. Certain elements of the enterprise in turn affect the analysis and prediction of the future prospects of the enterprise [3]. In addition, logistics supply chain management requires unified management and strict control of each link, giving full play to the corporate advantages of each link, and realizing resource combination. Therefore, this paper introduces the application of computer technology as a moderator variable, comprehensively analyzes the continuous difference between industry performance feedback and historical performance feedback, and studies the relationship between performance feedback and logistics supply chain management from the perspective of time continuity.

2   Theory and Hypothesis

2.1   Sustainability of Industry Performance Feedback Surplus and Logistics Supply Chain Management

Industry performance feedback uses the performance of other companies in the industry. Due to the flow barriers between companies in the industry, this makes it impossible for companies to fully imitate or replace the resources and capabilities of their industry competitors, thus limiting the transfer of industry status [4], Therefore, the duration of industry performance feedback is longer. From the perspective of organizational behavior inertia, the company has been in a state of excellent performance for a long time, which indicates that the current business strategy and resource allocation are correct, so managers will rely on the thinking mode that has made the company successful to a greater extent, and are reluctant to carry out logistics supply chain management [5]. Secondly, the state of the industry performance feedback surplus is not only widely recognized by stakeholders, but also allows the organization to establish a high social reputation and prestige. Finally, from the perspective of managers, the industry performance feedback surplus lasts for a long time, indicating that the company has been in a leading position in the industry for a long time. The arrogance and overconfidence of managers will lead them to be satisfied with the status quo and indulge in the past glory. Achievement. Therefore, hypotheses:

Hypothesis H1: When the company is in a state of blue-chip performance, with the expansion of the industry performance feedback surplus, the motivation of the company to implement logistics supply chain management decreases.

2.2   The Moderating Effect of Computer Technology Application

The contemporary society is a rapidly developing society, and the competition among enterprises is becoming increasingly fierce. For companies that have been in the industry performance feedback surplus for a long time, although the initial investment in computer technology application is relatively large, it can bring excellent talents, advanced technology, good structure and so on. In summary, the following assumptions are made:

Hypothesis H2: With the expansion of the industry performance feedback surplus, the higher the application of computer technology, the greater the motivation of enterprises to improve logistics supply chain management.

3   Materials and Methods

3.1   Sample Selection and Data Sources

Referring to the research methods of previous related literature, this paper selects the data of companies in the computer information technology industry (Class I) listed on the Shanghai and Shenzhen stock exchanges from 2008 to 2020 as the initial sample

for the study. After screening and sorting, a total of 4145 unbalanced panel samples from 572 companies were finally obtained, and the statistical software used was STATA15.0.

3.2   Definition and Measurement of Variables

Dependent Variable.

Supply chain logistics costs ($SCLC_{i,t}$). The defini supply chain logistics costs is as follows: supply chain logistics costs = transportation cost + labor cost.

Independent Variable.

Industry performance feedback surplus ($Psa_{i,t}$). Usually, the difference between the company's actual performance $P_{i,t}$ and the industry's expected target $SA_{i,t}$ is greater than 0 to measure. $P_{i,t}$ is the actual performance of the enterprise, referring to the literature [7], measured by return on total assets (ROA). $SA_{i,t}$ is the company's industry performance expectation target, which refers to the average performance of other companies in the same industry except the target company.

Moderator.

Computer technology application ($R\&D_{i,t}$). This paper measures the ratio of R&D expenses to operating income. This paper uses the ratio of the number of shares held by senior executives to the total number of shares to measure the control variable of executive shareholding ratio.

Control variable.

According to previous related research, this paper mainly includes the following five control variables: the age of the enterprise ($Age_{i,t}$), which is the natural logarithm of the establishment time of the enterprise; Shareholding ratio of executives ($Mgshp_{i,t}$), which is the ratio of the number of shares held by senior executives to the total number of shares; The analyst assessment gap ($Afgap_{i,t}$) is measured by the ratio of the difference between the average earnings per share predicted by securities analysts and the actual earnings per share of the company to the earnings per share predicted by securities analysts. Debt-to-capital ratio ($Debt_{i,t}$), the ratio of corporate debt to owner's equity balance; corporate growth ($Growth_{i,t}$), the growth rate of current operating income.

3.3   Empirical Model

Based on the assumptions, construct the following models to be tested:

$$SCLC_{i,t+1} = \beta_0 + \beta_1 Psa_{i,t} + \beta_2 Psa_{i,t} R\&D_{i,t} + \beta_3 C_{i,t} + \beta_4 Yr_{i,t} + \beta_5 Ind_{i,t} + \varepsilon_{i,t} \tag{1}$$

4   Results & Discussion

4.1   Descriptive Analysis and Canalysis

From the correlation analysis, the industry performance feedback surplus has a significant negative correlation with corporate logistics supply chain management (coef.=-0.196, p<0.01), from this result, under different expected reference points, the performance feedback status has different effects on corporate strategy restructuring. There is a significant positive correlation between the application of computer technology and corporate logistics supply chain management (coef.=0.139, p<0.01), which means that the higher the degree of computer technology application, the stronger the motivation of corporate logistics supply chain management.

4.2   Regression Test Results

The regression results are shown in Table 1

Table 1. Regression test results of performance feedback and logistics supply chain management (self-painted)

Variable	Model	Mode2
$Psa_{i,t}$	-0.728**	-1.607**
	(-2.31)	(-2.79)
$R\&D_{i,t}$	0.369**	0.352*
	(1.36)	(1.68)
$Psa_{i,t} \times R\&D_{i,t}$		1.247*
		(2.37)
$Age_{i,t}$	-0.029	-0.030
	(-1.26)	(-1.20)
$Mgshp_{i,t}$	0.079*	-0.020
	(1.87)	(-0.63)
$Debt_{i,t}$	-0.050**	-0.051**
	(-2.68)	(-2.94)
$Growth_{i,t}$	0.008	0.010
	(1.08)	(1.26)
$Afgap_{i,t}$	0.009	0.010
	(0.88)	(0.94)
_cons	0.672**	0.721**
	(2.76)	(2.81)
Adj.R^2	0.839	0.841
F	7711	11756
N	1,578	1,578

Note: *p<0.1, **p<0.05, ***p<0.01; N=4145; Source: This article is calculated and sorted by STATA15.0

5   Conclusions

This study has the following implications for corporate practice: First, persistence is the antecedent to explain the differential effect of industry performance feedback and historical performance feedback on corporate logistics supply chain management. Therefore, when conducting logistics supply chain management, companies should To establish a comprehensive and objective performance evaluation system, not only the status, intensity or scope of performance feedback should be considered, but also the trend characteristics of time and speed in the results of performance feedback; Second, when enterprises carry out logistics supply chain management, they should formulate scientific and reasonable computer technology application plans according to their own specific conditions. Enterprises must pay attention to the application of advanced computer technology to promote the long-term development of enterprises. At the same time, they should also pay attention to the implementation process. Improve the corporate governance structure and strengthen the internal control and supervision of the enterprise.

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