

The Effect of Supply Chain Integration on Achieving Competitive Advantage in Service Industry

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Abstract

With the progress of social technology and the economy and the development of globalization, supply chain management has become the most important means to help enterprises obtain competitive advantages. This paper takes the impact of supply chain integration on enterprise competitive advantage as the research object. Therefore, the author combs the research literature of supply chain integration and enterprise competitive advantage and refers to other scholars' composition mechanisms of enterprise competitive advantage. At the same time, the author conducted research on the service industry and constructs the supply chain integration enterprise competitive advantage model, based on the literature review and interview analysis results. The author puts forward a series of research hypotheses to test the correlation between the variables in the competitive advantage model. According to the research hypothesis and the characteristics of the service industry, the paper designs a questionnaire and carries on the research, uses statistical software to analyze the data of 133 valid samples, and verifies the feasibility of applying the model to the establishment of the service industry. The test results show that the competitive advantage model is valid for service industry. This study verifies the feasibility of applying the enterprise competitive advantage model to the service industry, which has certain reference value for enhancing the competitive advantage of the service industry.

Keywords

Supply Chain Integration, Enterprise Competitive Advantage, Service Industry

1. Introduction

Supply chain management was put forward in the late 1980s. However, the re-

search on supply chain problems began in the 1960s, especially in enterprise material planning (MRP) and logistics transportation. With the rapid development of electronic data interchange (EDI) and enterprise intranet, wan and internet, supply chain management has already gone beyond the original scope of enterprises and become a cross-enterprise. It includes raw material procurement, Channel management of production, sales, transportation, and other links.

According to the Supply Chain Council, the definition of Supply Chain Management (SCM) is generally regarded as manufacturing and transporting final products. Four procedures to complete all activities from suppliers to customers: plan, source, make, and deliver. Supply chain management integrates a series of products, services, and information processes that provide added value for customers from raw material suppliers to the customer. It refers to the complete information of materials and services composed of suppliers, internal functional persons, and retailers to consumers. This information applies to the whole system. [Gligor et al. \(2019\)](#) pointed out that supply chain management tries to link the production capacity and resources of internal and external alliance enterprises, to make the supply chain become a supply system with high competitiveness and rich customers so that it can concentrate on the development of innovative methods, synchronize market products, services and information, and create unique and individual customer value

2. Literature Review

2.1. Foreign Literature Review

[Lawrence and Lorsch \(1967\)](#), the nature of internal and external integration to gain competitive advantage in the manufacturing environment has been studied by world-class manufacturers for more than ten years. Some researchers ([Bozarth et al., 2009](#)) believe that manufacturers face some problems, such as parts replacement, delivery and quality issues, and cost growth, which are rooted in the lack of effective internal and external supply chain integration. Supply chain integration is the integration of enterprise processes to create value for customers.

The Process of integration across the company's boundaries is turning suppliers and customers into value creation processes. [Choon Tan et al. \(2002\)](#) also pointed out that the core purpose of supply chain integration is to obtain the best combination between value activities and personality characteristics. It must also be vertically integrated to optimize the transformation to produce better enterprise performance.

[Lambert and Cooper \(2000\)](#) believe that supply chain integration includes the main links in the supply chain network and internal and external entities and alliances which are formed for common goals. The integrated supply chain can reduce costs and create value for customers, shareholders, and all supply chain members.

[Vargas, Cardenas and Matarranz \(2000\)](#) analyzed the integration activities of

Spanish assembly and manufacturing enterprises. They found that although logistics integration was at a relatively low potential level, it could bring competitive and economic advantages. Additionally, they found that Spanish manufacturing enterprises mainly relied on internal integration as means to achieve strategic goals.

Frohlich and Westbrook (2001), investigated the supplier and customer integration in through collecting data from 322 manufacturers. They believe that the degree of arc of integration which includes suppliers and customers has a strong relationship with performance improvement.

Ram Narasimhan and Soo Wook Kim (2002) illustrated the relationship between supply chain integration, and product diversification performance by comparing the main and interactive influences of supply chain integration and diversification on performance. They found that the coordinated use of supply chain integration strategy and diversification strategy significantly impacts enterprise performance.

Gimenez and Ventura (2005) found that the internal and external integration of supply chains were related to the study of supply chain integration in the Spanish retail industry. At the stage when internal integration is generally incomplete, enterprises with a higher level of internal integration will gain competitive advantages and thus improve their performance. However, when internal integration is relatively common, it can only be regarded as a necessary condition for competition, so it cannot improve the competitiveness of enterprises.

2.2. Domestic Literature Review

Zhu Yihua (2004) built a hypothetical model of integration performance of agricultural products supply chain focusing on enterprise logistics capability. He also discussed the relationship between supply chain management, agriculture products logistics capability, and enterprise competitiveness. He believed that internal integration improved enterprise logistics capability as well as enterprise performance and supplier performance.

Through a questionnaire survey, Pan Wenan and Zhang Hong (2006) discussed the influence of supply chain partnership and supply chain integration ability on cooperation performance. They constructed the relationship model between partnership and enterprise competitive advantage based on integration ability. They pointed out that the indirect effect of internal and external integration of supply chain on cooperation performance is higher than its direct impact, and the external integration ability is the key for enterprises to use the partnership to improve cooperation performance and form competitive advantage.

On a study conducted by Barratt and Barratt (2011) about the Exploring internal and external supply chain linkages. They found out that individual internal linkages can be useful for extending externally derived visibility as well as addressing the “structural holes” to some extent in the supply chain (Figure 1).

Huo Jiazhen (2021) believes that an integrated supply chain refers to a virtual organization formed by all member units of the supply chain based on a common

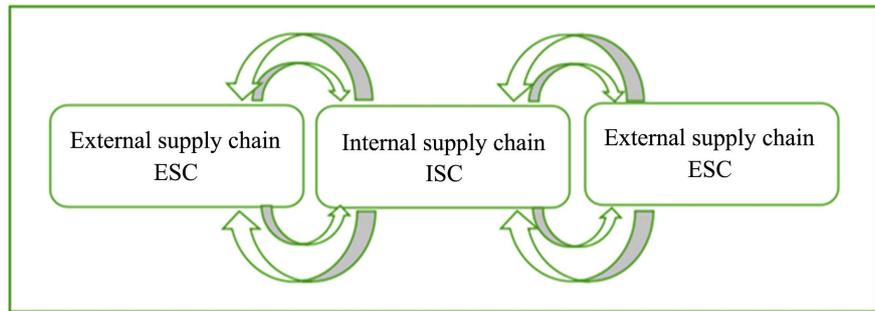


Figure 1. Integration of internal supply chain and external supply chain.

goal. Members in the organization optimize the organizational goal (overall performance) through information sharing, coordination, and cooperation in terms of capital and material.

3. Methodology

This part will mainly test the Reliability and validity of the variables in the model with the data obtained from the market survey. We will conduct the internal structure analysis, and then carry out the correlation analysis to verify the research hypothesis.

3.1. Data Processing Method

3.1.1. Research Hypothesis

We can assume that:

H1: There is a positive correlation between external integration of supply chain and competitive advantage.

H2: There is a positive correlation between internal integration of supply chain and competitive advantage.

3.1.2. Main Statistical Analysis Methods

1) Principal component analysis

Principal component analysis (PCA) is an important method to synthesize the correlated variables into one (or a few) comprehensive indicators (or principal components), which should be able to reflect the information provided by the observed variables to the greatest extent. It is a method to simplify the data structure.

2) Factor analysis

Factor analysis is developed based on principal component analysis. Its primary task is to find out the common factors that cannot be directly observed but play a dominant role in the changes of observable variables and point out the main characteristics of the common factors. Compared with the principal component analysis method, the factors obtained by factor analysis method are more easily linked with objective social and economic phenomena. The factor analysis is preferable to integrate quantitative and qualitative research and make more scientific and reasonable comprehensive evaluation of the hypothesis.

3) Correlation analysis

Correlation analysis tests the relationship between variables that are common in economic phenomena and cannot be expressed by definite relation. This analysis method is mainly to study the closeness between variables, mainly through the correlation coefficient. The correlation coefficient is a statistic to describe the degree and direction of correlation. Its value is between 0 and 1. The larger the coefficient is, the stronger the correlation between variables will be.

3.1.3. Reliability and Validity Analysis

In this study, SPSS13.0 is used to analyze the reliability and validity. The steps are as follows:

1) Firstly, KMO (Kaiser Meyer Olkin) sampling suitability test and Bartlett sphere test were carried out to determine whether the data is suitable for factor analysis. Kaiser (1974) pointed out that the acceptable range is within 0.5 - 1. If the kmo value is less than 0.5, it indicates that it was unsuitable for factor analysis. The significant level of the Bartlett chi square test is less than 0.01, which suggests that factor analysis could be carried out.

2) Factor analysis was performed on the data. Principal component analysis and varimax orthogonal rotation method were used to extract common factors. SPSS13.0 outputs a factor load matrix. The column of the matrix is the original variable name, the row is the extracted common factor, and the middle is the factor load coefficient. The factor load coefficient indicates the explanation degree of the variable to the common factor. The larger the value is, the stronger the explanation degree is.

3) The internal consistency of the common factor is tested by Cronbach's α internal consistency coefficient. If all the above three steps are passed, the questionnaire will be reliable and valid to get accurate results.

3.2. Reliability and Validity of the Scale

Reliability and validity are mainly used to evaluate the research quality. They indicate how well a method. Reliability is about the consistency of a measure, and validity is about the accuracy of a measure. The reliability and validity of the scale directly affect the results of data analysis, so the reliability and validity of the scale should be tested first. Some of the scales used in this study draw lessons from scales developed in foreign countries and have high content validity. However, due to the modification of the scale before the formal questionnaire survey, it is important to test the scale's reliability and validity in this research. **Table 1** shows the Cronbach's internal consistency coefficient (α coefficient) of 21 items in the questionnaire and 133 cases.

3.2.1. Competitive Advantage of Enterprises

1) Sampling suitability test

After 133 groups of data were input into SPSS, the software gave the kmo value and Bartlett chi square test value. See **Table 2** below for details.

Table 1. Internal consistency coefficient.

Project	Reliability Coefficients		
	N of Case	N of Items	Cronbach's Alpha
Reliability coefficient of competitive advantage	133	6	0.828
Reliability coefficient of internal integration	133	6	0.743
Reliability coefficient of external integration	133	9	0.787
Reliability coefficient of each item	133	21	0.904

Table 2. KMO and Bartlett's test.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.823
	Approx. Chi-Square	293.017
Bartlett's Test of Sphericity	Df	15
	Sig.	0.000

According to **Table 2** KMO value is 0.8231, greater than 0.5. The spherical Bartlett chi-square test value of sample distribution is 293.017. The significance is 0.000, indicating that the data has a high correlation and is suitable for factor analysis.

2) Factor analysis

The varimax orthogonal rotation method is used for maximum variance rotation. The results of factor analysis are shown in the following two **Table 3** and **Table 4**.

SPSS extracted four common factors, and the total interpretation rate of these four factors was 71.057%. The factor load matrix is:

We choose the measurement items with the strong ability to explain the common factors classified into one category, shown in the above table. A1 and A2 describe customer value; A3, A4, A5 and A6 reflect "time efficiency". The common factor extracted is consistent with the theoretical analysis and the respondents in the actual interview.

3) Internal consistency test

After the common factor is extracted, we test the internal consistency of the measurement items, which is reflected by the Cronbach α coefficient. The overall Cronbach α coefficient of competitive advantage of service industry is 0.828. The consistency coefficient of internal factors is shown in **Table 5** below.

In the above table, the Cronbach α consistency coefficients of the two common factors of customer value and time efficiency are more than 0.6, which shows good consistency. The internal consistency has passed the test, and the reliability meets the requirements.

From the above analysis, we can roughly conclude that the competitive advantage of service industry includes two sub-dimensions: customer value and time efficiency is consistent with the evaluation of service industry staff.

Table 3. Total variance explained.

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings*		
	Total	% of Variance	cumulative%	Total	% of Variance	Cumulative %
2	3.260	54.338	54.338	3.260	54.338	54.338
3	1.003	16.719	71.057	1.003	16.719	71.057
3	0.577	9.623	80.680			
4	0.463	7.715	88.395			
5	0.401	6.691	95.086			
6	0.295	4.914	100.000			

Table 4. Rotated component matrix.

	Component	
	1	2
a1 Customers are very satisfied with the timeliness and accuracy of the service		0.738
a2 service is welcomed by consumers of different levels		0.890
a3 minimizes the cost of services	0.823	
a4 Service products have little loss	0.835	
a5 Service industry has high added value	0.720	
a6 has a certain reputation in the service industry	0.844	

Table 5. Internal consistency test of common factors.

Common factor	Project	Cronbach alpha coefficient
value of customer	a1 Customers are very satisfied with the timeliness and accuracy of the service	0.606
	a2 service is welcomed by consumers of different levels	
Time efficiency	a3 minimizes the cost of services	0.852
	a4 Service products have little loss	
	a5 Service industry has high added value	
	a6 has a certain reputation in the service industry	

3.2.2. Internal Integration

1) Sampling suitability test

After 133 groups of data were input into SPSS, the software gave the kmo value and Bartlett chi square test value. See **Table 6** below for details.

In the table, Kaiser Meyer Olkin measure of sampling appropriateness. Bartlett's Test of Sphericity is the result of spherical verification, approx. Chi-square is the approximate chi-square value. DF is the degree of freedom, and sig is the significance.

The results of SPSS13.0 data analysis show that kmo value is 0.743 which is greater than 0.5, the spherical Bartlett chi-square test value of sample distribution

Table 6. KMO and Bartlett's test.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.743
	Approx. Chi-Square	352.750
Bartlett's Test of Sphericity	Df	15
	Sig.	0.000

is 352.750, and the significance is 0.000, which indicates that this group of data has a high correlation and is suitable for factor analysis.

2) Factor analysis

The varimax orthogonal rotation method is used for maximum variance rotation. The results of factor analysis are shown in the following two tables (**Table 7** and **Table 8**).

SPSS extracted four common factors, and the total interpretation rate of these four factors was 70.658%. The factor load matrix is:

We choose the measurement items with strong ability to explain the common factor to be classified into one category in the above table. C1 and C2 describe organization and coordination; C3, C4 and C5 reflect internal information communication. The common factor extracted is consistent with the theoretical analysis and the respondents in the actual interview.

3) Internal consistency test

After the common factor is extracted, we test the internal consistency of the measurement items, which is reflected by the Cronbach α coefficient. The overall Cronbach α coefficient of internal integration is 0.743. The consistency coefficient of internal factors is shown in **Table 9** below.

In the above table, the Cronbach α consistency coefficients of the two common factors of organizational coordination and internal information communication are all over 0.6, showing good consistency. Therefore, the internal consistency has passed the test, and the Reliability meets the requirements.

From the above analysis, we can conclude that the internal integration of supply chain includes two sub-dimensions: organization coordination and internal information communication. They are consistent with the evaluation of internal integration by relevant staff in the service industry.

3.2.3. External Integration

1) Sampling suitability test

After 133 sets of data were input into SPSS, the kmo value and Bartlett chi square test value of sphere were given by the software:

In **Table 10**, Kaiser Meyer Olkin measure of sampling appropriateness. Bartlett's test of sphericity is the result of spherical verification, approx. Chi-square is the approximate chi-square value. DF is the degree of freedom, and sig is the significance.

SPSS13.0 data analysis results show that kmo value is 0.787, greater than 0.5, the spherical Bartlett chi-square test value of sample distribution is 556.961. The

Table 7. Total variance explained.

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings*		
	Total	% of Variance	cumulative%	Total	% of Variance	Cumulative %
2	3.253	54.218	54.218	3.253	54.218	54.218
3	1.086	18.103	72.321	1.086	18.103	72.321
3	0.707	11.782	80.104			
4	0.477	7.949	82.395			
5	0.258	4.747	96.800			
6	0.192	3.200	100.000			

Table 8. Rotated component matrix.

	Component	
	1	2
c1 There is informal collaboration between departments		0.762
c2 All departments cooperate to reduce the total cost of logistics instead of the internal cost of the department		0.714
c3 Sharing operation and decision-making information among various departments	0.894	
c4 Service industry management generally uses a computer information management system	0.844	
c5 service industry has established an internal computer network	0.766	
c6 The information systems of various departments can easily carry out data sharing and exchange	0.869	

Table 9. Internal consistency test of common factors.

Common factor	Project	Cronbach alpha coefficient
Organization and coordination	c1 There is informal collaboration between departments	0.662
	c2 All departments cooperate to reduce the total cost of logistics instead of the internal cost of the department	
Internal communication	c3 Sharing operation and decision-making information among various departments	0.835
	c4 Service industry management generally uses computer information management system	
	c5 service industry has established an internal computer network	
	c6 The information systems of various departments can easily carry out data sharing and exchange	

Table 10. KMO and Bartlett's test.

Kaiser-Meyer-Olkin Measure of Sampling		
	Adequacy.	0.787
Bartlett's Test of	Approx. Chi-Square	556.961
Sphericity	Df	36
	Sig.	0.000

significance is 0.000, which indicates that this group of data has high correlation and is suitable for factor analysis.

2) Factor analysis

The varimax orthogonal rotation method is used for maximum variance rotation. The results of factor analysis are shown in the following two tables (**Table 11** and **Table 12**).

SPSS extracted four common factors, and the total interpretation rate of these four factors was 61.859%. The factor load matrix is as follows:

We choose the measurement items with strong ability to explain the common factor to be classified into one category in the above table. D1, D2, D3, D4, d5 and D6 describe customer-oriented integration; D7, D8 and D9 reflect information integration. The common factor extracted is consistent with the theoretical analysis and the respondents in the actual interview.

Table 11. Total variance explained.

Components	Initial Eigenvalues			Extraction Sums of Squared Loadings*		
	Total	% of Variance	cumulative %	Total	% of Variance	Cumulative %
1	4.191	46.566	46.566	4.191	46.566	46.566
2	1.376	15.293	61.859	1.376	15.293	61.859
3	0.961	10.682	72.541			
4	0.737	8.190	80.731			
5	0.610	6.783	87.514			
6	0.407	4.526	92.040			
7	0.309	3.432	95.471			
8	0.219	2.434	97.905			
9	0.189	2.095	100.000			

Table 12. Rotated component matrix.

	Component	
	1	2
d1 Establish long-term cooperative relations with partners and jointly formulate consistent strategic goals	0.837	
d2 Informal cooperation with partners	0.848	
d3 collaborates with partners on product and market development	0.638	
d4 collaborate with partners to reduce costs and share the benefits	0.853	
d5 Share market risk with partners	0.792	
d6 Work with partners to discover and solve logistics problems	0.674	
d7 partners share information such as inventory and sales forecasts		0.856
d8 Effectively communicate information with partners		0.796
d9 can evaluate the performance of the entire supply chain and share the results with partners		0.719

3) Internal consistency test

After the common factor is extracted, we test the internal consistency of the measurement items, which is reflected by the Cronbach α coefficient. The overall Cronbach α coefficient of external integration is 0.787. The consistency coefficient of internal factors is shown in **Table 13** below.

In the above table, the Cronbach α consistency coefficients of the two common factors of customer-oriented integration and information integration are more than 0.6, and the consistency is good. Therefore, the internal consistency has passed the test, and the Reliability meets the requirements.

From the above analysis, we can roughly draw the conclusion that external integration of supply chain includes two sub-dimensions: customer-oriented integration and information integration are consistent with the evaluation of external integration of supply chain in service industry interviews.

3.3. Correlation Analysis of Model

Correlation analysis mainly studies the degree of the close correlation between variables. In this study, Pearson coefficient is used to show the correlation between the variables. The larger the coefficient is, the stronger the correlation will be. The following is the correlation analysis of the enterprise competitive advantage and supply chain integration.

3.3.1. Correlation Analysis of Internal Integration and Competitive Advantage of Enterprises

The correlation between internal integration and its factors and enterprise competitive advantage is shown in **Table 14** below.

Table 13. Internal consistency test of common factors.

Common factor	Project	Cronbach alpha coefficient
Customer-oriented integration	d1 Establish long-term cooperative relations with partners and jointly formulate consistent strategic goals	0.752
	d2 Informal cooperation with partners	
	d3 collaborates with partners on product and market development	
	d4 collaborate with partners to reduce costs and share the benefits	
	d5 Share market risk with partners	
	d6 Work with partners to discover and solve logistics problems	
Information Integration	d7 partners share information such as inventory and sales forecasts	0.733
	d8 Effectively communicate information with partners	
	d9 can evaluate the performance of the entire supply chain and share the results with partners	

Table 14. Correlation between internal integration and enterprise competitive advantage.

		Competitive advantage of enterprises
c1 There is informal collaboration between departments	Pearson Correlation Sig. (2-tailed)	0.237 (*) 0.017
c2 All departments cooperate to reduce the total cost of logistics instead of the internal cost of the department	Pearson Correlation Sig. (2-tailed)	0.495 (**) 0.000
c3 Sharing operation and decision-making information among various departments	Pearson Correlation Sig. (2-tailed)	0.387 (**) 0.000
c4 Service industry management generally uses computer information management system	Pearson Correlation Sig. (2-tailed)	0.218 (*) 0.029
c5 service industry has established an internal computer network	Pearson Correlation Sig. (2-tailed)	0.123 (*) 0.024
c6 The information systems of various departments can easily carry out data sharing and exchange	Pearson Correlation Sig. (2-tailed)	0.274 (**) 0.006

It can be seen from the above table that at the significant level of 0.01, some factors of internal integration, such as department cooperate to reduce costs and information sharing between departments, are positively related to the competitive advantage of enterprises. At the significant level of 0.05, the construction of an internal information network is positively related to the competitive advantage of enterprises.

The proportion of information construction in the competitiveness of the service industry is weaker than the cost reduction and other factors, which is related to the current level of enterprise development. Through the above analysis, the service industry through internal integration can improve the ability of enterprises, and further improve the competitive advantage of enterprises.

3.3.2. Correlation Analysis of External Integration and Enterprise Competitive Advantage

The correlation between external integration and its 9 factors and enterprise competitive advantage is shown in **Table 15** below.

It can be seen from the above table that, at the significant level of 0.01, external integration and its factors are positively correlated with enterprise competitive advantage.

Through the above analysis, the service industry through external integration can improve the ability of enterprises, and further improve the competitive advantage of enterprises.

4. Discussions

4.1. Improve the Benefit Mechanism and Promote the Integration of Supply Chains

The establishment of the interest mechanism of member enterprises is the institutional guarantee to ensure the chain enterprises to operate around the overall

Table 15. Correlation **Table 15** between external integration and enterprise competitive advantage.

		Competitive advantage of enterprises
d1 Establish long-term cooperative relations with partners and jointly formulate consistent strategic goals	Pearson Correlation Sig. (2-tailed)	0.262 (**) 0.008
d2 Informal cooperation with partners	Pearson Correlation Sig. (2-tailed)	0.363 (**) 0.000
d3 collaborates with partners on product and market development	Pearson Correlation Sig. (2-tailed)	0.334 (**) 0.001
d4 collaborate with partners to reduce costs and share the benefits	Pearson Correlation Sig. (2-tailed)	0.337 (**) 0.001
d5 Share market risk with partners	Pearson Correlation Sig. (2-tailed)	0.314 (**) 0.001
d6 Work with partners to discover and solve logistics problems	Pearson Correlation Sig. (2-tailed)	0.432 (**) 0.000
d7 partners share information such as inventory and sales forecasts	Pearson Correlation Sig. (2-tailed)	0.376 (**) 0.000
d8 Effectively communicate information with partners	Pearson Correlation Sig. (2-tailed)	0.252 (**) 0.004
d9 can evaluate the performance of the entire supply chain and share the results with partners	Pearson Correlation Sig. (2-tailed)	0.324 (**) 0.001

interest of the supply key. The goal of an enterprise is to maximize its own profit, which may be contrary to the goal of system optimization pursued by the supply chain community. Therefore, it is necessary to establish a benefit coordination mechanism, which compensates the enterprises that have lost their individual goals due to the realization of the system goals. This compensation comes from the enterprises that have benefited more from the optimization of the supply chain system. For example, the leading enterprise of the supply chain requires suppliers to deliver products on time in order to promote the speed of products going on the market, which will inevitably increase the supply cost of suppliers. Therefore, the leading enterprise should give appropriate profits from the excess profits gained from accelerating the speed of products going on the market and give certain compensation to its suppliers. This supply chain management method has been widely used in American and Japanese automobile manufacturers such as Ford, General Motors, Toyota, Honda, and others. Only through the establishment of an accurate and quantifiable member enterprise benefit mechanism can all enterprises coordinate and make efforts to improve the overall advantages of the supply chain.

Scientific and technological innovation and brand effect—the fundamental solution to benefit distribution mechanism is to enlarge the cake. The stability of supply chain integration can be guaranteed only when supply chain cooperation increases the interests of all parties. The distribution of benefits is not a process

of reciprocation and reciprocation. To achieve the effect of “ $L + 1 > 2$ ”, it is necessary to share the pie as much as possible in the past to share the pie as much as possible when the pie is bigger.

The premise of compliance with the agreement (rule) is that the agreement and the rule can bring greater benefits to the compliance than the non-compliance. In an organization with a framework of agreements or rules, the actors actually want to transfer part of their rights, that is to say, the secondary actors need to exchange part of their own rights, agreements or rules to maximize their interests. Of course, such an agreement or rule must be carried out by consensus and common belief of all the sub-actors in the organization. At the same time, it also objectively requires that the organization under the framework of agreement or rules will have greater efficiency or value added. From a static point of view, the supply chain has the function of transaction (or value) creation. In other words, due to the mutual compliance of the agreement or rules between the members of the supply chain alliance, the transaction scale between them is expanded, and the reduction of transaction costs brings about the resulting increase in welfare.

The supply chain and its alliance members make use of the supply chain coordination mechanism whose transaction cost is relatively lower than the market mechanism, which leads to the reduction of transaction obstacles and the expansion of transaction scale. Due to the expansion of the transaction scale, the supply chain alliance members will have more benefits from the supply chain and its alliance. As consumers (consumers of intermediate products), members of the supply chain alliance can enjoy the increase of consumer surplus brought by low-price products.

4.2. Promote Supply Chain Organizational Innovation and Explore Supply Chain Integration Mode

Supply chain integration makes the original enterprise production organization and resource allocation mode have a qualitative change. Supply chain integration emphasizes that enterprises should shape their own core competitiveness and establish strategic cooperative relationship with other enterprises. Each enterprise focuses on consolidating and developing its own core competitiveness and core business, making use of its own resource advantages, redesigning its technical procedures and rapidly restructuring its business processes, so as to achieve long-term control that can create special value. In order to achieve the goal of “win-win” or “multi win” of supply chain cooperation mode. In this process, the market competition is no longer the competition between single enterprises but will form an integrated enterprise network (extended enterprise model) characterized by external use of resources, and turn to the competition between supply chain alliances. Therefore, the original idea and practice of single enterprise competition cannot meet the needs of the development of the new environment. The operation mechanism of the supply chain urges the enterprises participating in the supply chain to transform and innovate in the organization and management behavior.

5. Limitations of the Study

Although the evaluation system of the variables of supply chain integration and competitive advantage is established according to the relevant literature, and the objectivity of the evaluation is sought, the subjective color of the evaluation is relatively strong. Objective evaluation is an objective existence independent of subjective consciousness, while subjective evaluation is the decision maker's estimation of objective situation. In the same situation, different decision makers may have different estimation. However, for supply chain management, it is very difficult to establish an objective evaluation system to fairly evaluate the performance of integration ability and competitive advantage, because these variables are usually independent, so many researchers can only evaluate them by subjective evaluation, because the subjective evaluation has individual differences, which will affect the research results to a certain extent. The objectivity of the theory.

6. Conclusion

This study finds that supply chain integration, especially internal integration, has a significant positive impact on the competitive advantage of enterprises, which indicates that enterprises can effectively improve their competitiveness through internal coordination and integration; on the other hand, the degree of internal integration of the investigated service industries is not high, and there is a large space. From the conclusion of empirical research, the level of external integration of the supply chain in China's service industry is still relatively low. Most enterprises still stay in the stage of internal integration, and the impact of internal integration on enterprise competitive advantage is greater than that of external integration. This conclusion is consistent with Gimenez and Ventura (2005) research results. They found that internal integration cannot produce competitiveness after reaching a universal level, and internal integration has become a necessary condition for the survival of enterprises. With the continuous development of integration from internal to external, the impact of internal integration on competitive advantage is gradually weakened, while the impact of external integration on competitive advantage is gradual.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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