

Supply chain management practices, competitive advantages and business performance of small and medium enterprises in China: Basis to develop an improved supply chain management framework

Gong, Can ✉

Graduate School, Lyceum of the Philippines University - Batangas, Philippines (gcseraph@gmail.com)

Received: 18 June 2023

Available Online: 15 August 2023

Revised: 20 July 2023

DOI: 10.5861/ijrsm.2023.1076

Accepted: 24 July 2023



ISSN: 2243-7770

Online ISSN: 2243-7789

OPEN ACCESS

Abstract

The paper described the effect of supply chain management practices on competitive advantages and determined whether competitive advantages have impact on business performance of the firm. Specifically, this study determined the supply chain management practices in terms of customer relationship, strategic supplier partnership and internal supply chain management; assessed the competitive advantages in terms of economics, social resources, company culture and environmental protection; described the business performance of the firm in terms of profitability, customer satisfaction and social performance; tested the significant relationship between supply chain management practices and competitive advantages and analyzed the significant relationship between competitive advantage and business performance of the firm. This paper analyzed the results of in-depth interviews with the managers of the supply chain management departments of CSMEs and the data gathered through the questionnaires. It utilized the quantitative analysis methods to conduct multivariate statistical analysis based on SPSS software on the data content of the questionnaire feedback, including descriptive analysis, correlation analysis and regression analysis, and organically combined the quantitative analysis results to form an CSMEs supply chain management comprehensive framework. Results of the study revealed that there is an important relationship between supply chain management practices and competitive advantages and showed that the better the supply chain management practices, the greater the competitive advantages of firm. There is also a significant relationship between competitive advantages and business performance, indicating that the greater the competitive advantages, the greater the corporate business performance. Then, it also indicated that supply chain management practices and business performance are significantly positively correlated, indicating that the better the supply chain management practices, the greater the business performance.

Keywords: supply chain management practices, competitive advantages, business performance, Chinese small and medium-sized enterprises

Supply chain management practices, competitive advantages and business performance of small and medium enterprises in China: Basis to develop an improved supply chain management framework

1. Introduction

At present, the process of global economic integration continues to accelerate, economic market uncertainties continue to increase, consumer demand is becoming increasingly subjective, personalized, and diversified, and the business environment and competition model of enterprises have undergone essential changes. The relationship between enterprises and upstream and downstream enterprises is not a conflict-of-interest relationship, but a partnership relationship; The competition between enterprises has changed from single business unit competition to group competition and multi-point competition between supply chain and supply chain. Enterprise competition has entered the era of supply chain competition. In this context, enterprises must integrate supply chain resources, optimize their business structure, and effectively implement supply chain management (SCM) (Richey., 2022) practices in order to provide customers with high-quality services and products, so as to gain and maintain competitive advantages and improve business performance. Large enterprises around the world, such as Wal-Mart, Toyota, Samsung and so on, have taken supply chain management as an important business improvement strategy of the company, and have greatly improved their business performance through the implementation of SCM.

Although Oliver and Webber used SCM for the first time in 1982, there is no unified definition until now and there is no consensus on the content and dimensions of Supply Chain Management Practices SCMP Sharma, et al. (2022). Most of the theoretical or empirical studies on SCMP only study the upstream or downstream of the supply chain, or some aspects of supply chain management, such as the impact of supplier selection and supplier participation on manufacturing performance the impact of information sharing on supply chain performance Alam, M. (2022). and the impact of manufacturing technology (Ferreira, 2023) on competition and performance. The study of SCMP has not formed a theoretical system, so most cases of SCMP implementation in enterprises have not achieved the expected success. Both Boddy and Spekman's studies found that more than half of SCMPs failed. So, The important content of this study is to study the measurement of SCMP and explore the relationship between its constituent elements, competitive advantage and business performance one by one.

The cultural advantages of enterprises (Ogutu, 2023) are the subject of less attention by previous scholars. With the continuous deterioration of the global ecological environment and the gradual enhancement of the awareness of environmental protection, countries around the world have invested a huge amount of money to improve the ecological environment, and the relevant legal system of environmental protection has been established and improved, so that enterprises can develop continuously and healthily only if they compete in environmental protection. Therefore, this study is the first time to incorporate excellent corporate culture and environmental protection into the constituent elements of corporate competitive advantage, take them as the measurement of corporate competitive advantage, and explore the relationship model between them and supply chain management practice and experience performance, so as to provide theoretical guidance for enterprises to obtain long-term and healthy competitive advantage.

The multifaceted nature of business performance has attracted the attention of researchers. Tseng (2013), Gupta & Wales (2017), Agwu (2018) and other researchers have put forward their own interpretations of business performance. There are also different research results on the measurement indicators of enterprise business performance. The way to evaluate enterprise business performance by a single indicator is considered to be unscientific. The actual application process needs to combine multiple indicators to maximize the effectiveness of performance evaluation. This study uses three dimensions of financial performance, customer

satisfaction performance and social performance to build a measurement system of enterprise business performance and explores its impact mechanism with supply chain management practices and enterprise competitive advantage.

China's small and medium-sized enterprises (CSMEs) have the characteristics of wide range, small scale, large number and significant proportion, which have an important impact on China's economy and even the world economy. In the new competitive situation, how to integrate the resources in the supply chain and improve the practical level of supply chain management has become one of the keys for CSMEs to improve their overall competitiveness and business performance. However, the research on the relationship between supply chain management practice, competitive advantage and business performance of SMEs in mainland China has not been paid enough attention for a long time. China's small and medium-sized enterprises have naturally become the research object of this study. From the perspective of individuals, supply chain management for small and medium-sized enterprises has a very broad prospect because the prosperity of China's network economy is conducive to the development of small and medium-sized enterprises. Also becoming a good professional manager is the ideal of the researcher. Therefore, studying and researching the relationship between supply chain management practices, competitive advantage and business performance of Chinese SMEs can help increase the researcher's expertise, improve professional competence, and achieve career aspirations.

Objectives of the Study - The purpose of this study is to evaluate the impact of supply chain management time on a company's competitive advantage and determine how the company's competitive advantage affects its business performance. Specifically, the thesis aims to: determine the supply chain management practices in terms of strategic supplier partnership, customer relationship and internal supply chain management; assess the competitive advantage in terms of economics, social resources, company culture and environment protection; describe the business performance of the firm in terms of profitability, customer satisfaction and social performance; test the significant relationship between supply chain management practices, competitive advantage of the firm and business performance; based on the results, develop an improved supply chain management framework.

2. Methods

Research Design - This study used the research methods of normative analysis and empirical analysis, utilized literature analysis to lay the theoretical foundation and research model, and then employed questionnaires to collect data. The collection of questionnaire data is carried out through the online questionnaire platform "Questionnaire Star". In terms of research content, the first is the theoretical foundation and the definition of variables, the second is data collection, that is, the design and implementation of questionnaires, and the last is descriptive analysis, correlation analysis and regression analysis. This study utilized a combination of normative and empirical methods, which are summarized as follows: Literature research method, adopting the method of literature research, to find out the shortcomings in the existing research by reading the literature, and determine the research ideas of the thesis. After searching for literature related to supply chain management practices in databases such as JSTOR, ScienceDirect, CNKI and EBSCOhost. the research ideas of the thesis are determined after combing the existing research.

The questionnaire survey method was used and through the analysis of the results of in-depth interviews with the managers of the supply chain management departments of Chinese small and medium enterprises, the direction and scope of the questionnaire interviews were formulated, and the final questionnaire questions were formed. The results of the questionnaire survey were summarized through the form of online distribution. By using the quantitative analysis method, researcher used the SPSS software-based multivariate statistical analysis of the data content of the questionnaire feedback, including descriptive analysis, correlation analysis and regression analysis, organically combines the quantitative analysis results to develop a new supply chain management model.

Participants of the Study - The researcher Since the questionnaire was distributed via the Internet, it could cross company and geographic restrictions. There were 500 questionnaires were finally sent, and 329 valid questionnaires were recovered. Since the author's area is Hunan Province, China. Guangdong is the province with the largest number of SMEs and one of the most active business activities in China. the company's supply chain partners and colleagues are mainly in these two Provinces. So, the research in this article is typical and representative.

Data Gathering Instrument - This research study is a self-compiled questionnaire was used to collect data, and the Likert 4 scale was used for measurement. The main content of the questionnaire is composed of three parts: the first part is a survey of the respondents' personal information to filter the questionnaire data; the second part is the measurement of the three variables in the topic of the thesis; the third part is on the open question and answer. The questionnaire undergoes the reliability test and the Cronbach alpha result is show in Table 1.

Table 1

Reliability Test of Instrument

Indicator	Cronbach Alpha	Remarks
Customer Relation	0.942	Excellent
Strategic Supplier Partnership	0.930	Excellent
Internal Supply Chain Management	0.859	Good
Economics Advantages	0.831	Good
Social Resources Advantages	0.893	Good
Company Culture Advantages	0.913	Excellent
Environmental Protection Advantages	0.912	Excellent
Profitability	0.863	Good
Customer Satisfaction	0.902	Excellent
Social Performance	0.862	Good

George and Mallery (2003) provide the following rule of thumb: Legend: “>0.90 – Excellent, >0.80 – Good, >0.7 – Acceptable, >0.60 – Questionable, >0.50 – Poor, and <0.50 – Unacceptable

Data Gathering Procedure - The questionnaire was done through literature analysis and integrated expert opinions, and then distributed the questionnaire online through the questionnaire star research platform for pre-survey. After the questionnaire was revised and improved under the guidance of the adviser, The questionnaire survey adopts the combination of online questionnaire star and offline field survey. After the preliminary design of the questionnaire was completed, seven experts were invited to conduct a pre-test of the questionnaire, which further improved the questionnaire structure and language expression. The pre-test of the questionnaire shows that the Cronbach's α and CR values of each variable are both higher than 0.831, indicating that the scale has good reliability. After the questionnaire was confirmed, researcher prepared a letter of intent as a request by the researcher to collect data from the respondents.

After the preliminary design of the questionnaire was completed, seven experts were invited to conduct a pre-test of the questionnaire, which further improved the questionnaire structure and language expression. The pre-test of the questionnaire shows that the Cronbach's α and CR values of each variable are both higher than 0.831, indicating that the scale has good reliability. After the questionnaire was confirmed, researcher prepared a letter of intent as a request by the researcher to collect data from the respondents.

Ethical Considerations - The surveyed Ethical considerations will be applied in the performance of the research effort to ensure that any information acquired is used solely for research purposes in order to maintain the quality and integrity of the research. The researcher gets the permission of each respondent before the formal filling. It also protected the respondents' confidentiality and anonymity by not asking for their names as they completed the questionnaires. The researcher also ensures that the respondents answer the surveys voluntarily and according to their will. Finally, it ensures that none of the study's participants will be hurt or harmed, and that their safety and security is a primary priority.

Data Analysis - To perform Research data was analysed by IBM SPSS 22.0 and different statistical tools

were used to count, code and interpret the data. Firstly, the research made use of frequency distribution and weighted mean for descriptive statistical analysis, so as to quantitatively obtain the overview of the relevant variables. The second is analysis of variance to test the significance of the difference between the means of two or more samples. Pearson correlation test for all variables was used to verify the correlation between the variables, which provides a preliminary basis for the subsequent regression analysis. Finally, the thesis used multiple regression to empirically test the impact of relational trading and earnings management.

3. Results and Discussion

Table 1

Supply Chain Management Practice

Indicators	Weighted Mean	Verbal Interpretation	Rank
1. Customer Relationship	3.60	Strongly Agree	1
2. Strategic Supplier Partnership	3.52	Strongly Agree	3
3. Internal Supply Chain Management	3.53	Strongly Agree	2
OVERALL MEAN	3.55	Strongly Agree	

Legend: 3.50 – 4.00 = Strongly Agree; 2.50 – 3.49 = Agree; 1.50 – 2.49 = Disagree; 1.00 – 1.49 = Strongly Disagree

The summary assessment of supply chain management practices has a comprehensive average is 3.55, indicating that the various indicators are strongly consistent. The evaluations of all projects are consistent, among which the indicator 1 (customer relationship) ranks first, with a weighted average score of 3.60. The survey shows the importance of customer relationship in supply chain management practices. Customer relationships involve handling customer complaints, establishing long-term relationships with customers, and improving customer satisfaction, with the ultimate goal of maximizing the long-term performance of the enterprise. Nowadays, customer relationships have become an intangible asset, a key and even determining factor of shareholder assets (Ami, Levly, 1996).

Good customer relationships can increase customer repeat purchase rates, (Choi, 2019) explore new business opportunities (Çipi, 2023), reduce customer loss rates, (Liang, 2023), use customer feedback (Maslova, 2023) to design innovative products, and obtain useful market information from customers. Customer relationship management is considered an important component of SCM. The value of customer relationships to enterprises is not only directly reflected in the increase in the total amount of products purchased by customers, but also specifically manifested in: (1) scale effect. If a company establishes a good customer relationship with its customers, it will have a large number of loyal customers. The increase in loyal customers will enable the company to occupy a relatively large market share, which will bring corresponding barriers to the company, form a scale advantage, and also reduce the cost of the company. (2) Brand effect. A larger market itself represents a brand image, and customer public opinion plays a significant role in the brand image of a company. However, customer public opinion has two value orientations: one is that customers are very satisfied with the company's products and services, and the other is that they are not satisfied with the company's products and services. Only by establishing a good customer relationship with customers can a company gain positive publicity from customers, thereby strengthening the brand and gaining brand advantages. (3) Information value. Customer information is the most important value for enterprises, as it directly affects their business behavior and their grasp of customer consumption behavior. A good customer relationship will encourage customers to provide more personal information to the enterprise, thereby increasing the probability of the enterprise providing more personalized services. On the other hand, a good customer relationship will encourage customers to pay high attention to the enterprise, which can provide more suggestions and opinions on improving products and services for the enterprise.

The indicator 3, referring to internal supply chain management, ranks 2nd and the weighted average score is 3.53. The internal supply chain is a supply and demand network composed of departments such as procurement,

production, storage and transportation, and sales within an enterprise to coordinate the production and circulation of products. The purpose of enterprise internal supply chain management is to optimize the internal business activity process of the enterprise by promoting the exchange of enterprise logistics, capital flow and information flow, strengthen the cooperation between corresponding departments in the entire supply chain chain of the enterprise, integrate many links in the supply chain such as procurement, production, storage and transportation, and sales, improve the operating efficiency of the enterprise, meet customer needs, reduce the cost of supply chain expenditure, and enhance the overall economic efficiency of the enterprise. A complete internal supply chain of an enterprise has the following characteristics: (1) dynamism, the ability to quickly establish and dissolve collaborative relationships between departments, the close integration of demand and supply relationships, and the rapid and convenient flow of value. Multiple enterprises or departments can collaborate with each other, and the relationship is no longer fixed. Establish dynamic cooperative relationships between enterprises and business partners to improve market responsiveness. (2) Openness, departments without business relationships can participate in cross organizational collaborative production processes with multiple departments, and there are no obstacles to their participation and exit during this process. (3) Flexibility, where the relationships between organizations manifest in a more flexible form of dynamic alliances, and cooperation and dissolution between organizations change based on the actual needs of customers.

However, the indicator 2(strategic supplier partnership) gets the lowest weighted average score of 3.52. Strategic supplier relationships refer to establishing long-term strategic partnerships with core suppliers to obtain stable and lasting benefits. The strategic relationship with suppliers enables the enterprise to collaborate more closely with a few important suppliers, and both parties share the responsibility for product success.

Table 2

Competitive Advantages

Indicators	Weighted Mean	Verbal Interpretation	Rank
1. Communication	2.71	High	6
2. Interpersonal	2.79	High	4.5
3. Intellectual	2.81	High	2.5
4. Self-Management	2.81	High	2.5
5. Learning	2.83	High	1
6. Management and career development	2.79	High	4.5
Composite Mean	2.79	High	

Legend: 3.50 – 4.00 = Strongly Agree; 2.50 – 3.49 = Agree; 1.50 – 2.49 = Disagree; 1.00 – 1.49 = Strongly Disagree

The summary result of the company's competitive advantages in terms of environmental protection, company culture, social resources and economics. The comprehensive average is 3.44. The investigators agreed with each item. The indicator 4 (Environmental Protection) ranks 1st, with the highest weighted average of 3.49. With the rapid growth of the global economy, resource and environmental issues have become important bottlenecks for sustainable economic development (Umurzakov, 2023). Company Culture with the weighted average of 3.46. Corporate culture (Isensee, 2023), as a very important intangible resource of an organization, can bring competitive advantages to the organization.

The Economics with the weighted average of 3.43. Economic I (Tajeddin, 2023) indicators directly reflect the competitive advantage of enterprises. Compared to competitors, enterprises with economic characteristics (Neri, 2023) such as high efficiency, low cost, high profit, high quality, and high market share have obvious competitive advantages. However, there is still no unified conclusion on the structure of enterprise economic advantages (Wu, 2023) defining competitive advantages as factors such as cost, quality, product innovation, delivery reliability, and market response speed in the form of a questionnaire. Fredrik Nordin (2008) divided competitive advantage into three aspects: low-cost competitive advantage, differentiated competitive advantage, and customer bond. With the development of the times, economic advantage is no longer the only goal pursued by enterprises. People are beginning to pay attention to the "dual carbon" strategy and sustainable development, focusing on how to enhance social value and effectively carry out charitable undertakings to improve social welfare. More care, motivation, and empowerment should be given to employees, creating an excellent work

environment and job opportunities to create a sense of meaning and happiness, generate the courage to overcome difficulties, and stimulate their potential and creativity. The results of this survey reflect this trend.

The indicator 2, referring to social resources, ranks 4th, with the weighted average of 3.39. Corporate social resources refer to the human, knowledge, technology and other resources owned by enterprises, as well as social networks, social relations and social norms (trust, reciprocity, etc.). Social resources are one of the factors that constitute the core competitive advantage of enterprises.

The comprehensive average value is 3.34, indicating that the various indicators are positively consistent. All indicators are rated as agreed. Among them, the indicator 2 (customer satisfaction) ranks 1st, with an average score of 3.40. The survey shows that the customer satisfaction plays a very important role in business performance (Eklof Jan, et al., 2020). The evaluation of enterprise business performance should consider the evaluation based on financial performance. However, financial information only reflects the past business performance of the enterprise, and the business performance of the enterprise should also include information on future development, that is, non-financial evaluation is also needed to explain what changes will occur in the future financial effects of the enterprise. The concept of enterprise management has been constantly changing with the development of the times, and has gone through the stages of "output centered theory", "sales centered theory", "profit centered theory", "market centered theory", and "customer centered theory". Currently, it has entered the stage of "customer satisfaction centered theory". The survey results of this study confirm the fact that the "customer satisfaction center theory" of enterprises has been established.

Table 3

Business Performance

Indicators	Weighted Mean	Verbal Interpretation	Rank
1.Profitability	3.29	Agree	3
2.Customer Satisfaction	3.40	Agree	1
3.Social Performance	3.34	Agree	2
OVERALL MEAN	3.34	Agree	

Legend: 3.50 – 4.00 = Strongly Agree; 2.50 – 3.49 = Agree; 1.50 – 2.49 = Disagree; 1.00 – 1.49 = Strongly Disagree

However, the indicator with the lower score is the indicator 3 (social performance), with an average score of 3.34. There is currently no unified concept for the social performance of enterprises. It generally refers to the integration of corporate social responsibility, social response process, and social policy issues into the development strategy of enterprises from the perspective of pursuing the overall interests of stakeholders, and promoting business management through daily management, thereby generating a certain social impact (Ye, B., 2018). Under the premise of legal operation and tax payment, enterprises can not only obtain economic benefits but also create wealth for society. The indicator with the lowest score is the indicator 1 (profitability), its average score is 3.29. In addition to pursuing maximum economic benefits to ensure the maximization of shareholder interests, enterprises should also create social benefits such as protecting the environment, operating legally, and safeguarding the legitimate rights and interests of employees and consumers. The survey results of this study indicate that the above-mentioned business philosophy has been recognized by people.

Relationship Between Supply Chain Management Practice and Competitive Advantages

The relationship between supply chain management practices and competitive advantages. The results show that the calculated rho value has a strong direct correlation, and the p-values obtained are all less than the 0.01 alpha level. This means that there is an important relationship, and only shows that the better the supply chain management practices, the stronger the competitive advantage of the supply chain.

The competitive advantage of an enterprise is a key determinant of its performance and survival. It is the comprehensive quality of an enterprise to obtain the ability to surpass its competitors through reasonable allocation of resources and conducting business activities in a competitive market, and effectively output it to the market, thereby winning more development opportunities. The dimensions of a company's competitive

advantage include: (1) financial dimensions, indicators that reflect the economic benefits of the company's production and operation activities, such as returns, profit margins, and relevant ratios in the balance sheet. (2) The non-financial dimension refers to the advantages of a company compared to its competitors in terms of social resources, corporate culture, environmental protection, etc. In today's uncertain environment, it is difficult for enterprises to maintain a single economic competitive advantage for a long time, and they urgently need to obtain a more comprehensive and sustainable competitive advantage. Economic benefits, social resources, company culture, and environmental protection complement each other and are the key to the survival of enterprises.

The first is the correlation between the customer relationship and the competitive advantage of the enterprise. In the new economic environment centered on customer satisfaction, the effective implementation of customer relationship management will continuously expand the customer base, improve customer satisfaction and loyalty, directly reduce enterprise operating costs, increase enterprise economic income, and enhance the enterprise's competitive advantage in the new economy. Enterprises gain social resource advantages through customer relationship management to improve high-quality products and services for customers, provide better welfare for employees, and achieve good social reputation. Customer relationship management and corporate culture actually have a two-way impact and interactive relationship. Corporate culture is the key to effectively establishing good relationships with customers and a prerequisite for the effectiveness of customer relationship management. Customer relationship management provides conditions for the construction of corporate culture by improving the quality of employees.

The second is the correlation between strategic supplier partnership and the competitive advantage of the enterprise. Supply chain strategic partnership refers to a cooperative partnership between supply chain enterprises that shares information, risks, and profits at various levels such as product manufacturing, design, and new product development. It is a commitment or agreement established on the basis of cooperation and trust, reached over a long period of time, with the goal of ensuring the competitive advantage of the enterprise and achieving a win-win situation. The strategic partnership of enterprises (Widjajanti, 2023) has the following characteristics: it is a high-level cooperative relationship, a broader range of cooperative relationships, a more coordinated cooperative relationship, a long-term cooperative game relationship. The establishment of strategic partnerships in supply chain enterprises will greatly promote the sustained and stable competitive advantages of enterprises in the increasingly competitive market in terms of economic effects, social resources, corporate culture, and environmental protection. This advantage will promote the stability and further development of supply chain strategic partnerships, form a virtuous cycle, and ultimately achieve the sustainable development of supply chain enterprises.

The third is the correlation between internal supply chain management and the competitive advantage of the enterprise (Jahanbakhsh, 2023). The internal supply chain is the internal supply chain of an enterprise. It is the specific embodiment of the internal business operation process of an enterprise and reflects the process of information flow, capital flow and cooperation between various departments within the enterprise. From procurement, production, warehousing to sales, products flow between departments, forming an internal supply chain. Each department in the supply chain cooperates with each other to connect business processes to form a supply chain connected by logistics, information flow and capital flow. The internal supply chain can be seen as a microcosm of the entire external supply chain, with the main difference being the size of the supply chain coverage. Internal supply chain management is a set of synchronous decisions and activities used to efficiently integrate internal supply chains, with the main purpose of obtaining sustainable competitive advantages. The data analysis results show that internal supply chain management is closely related to the economic, social, cultural, and environmental advantages of enterprises. The possible reason is that internal supply chain management can enable effective division of labor and collaboration among different departments within the enterprise, improve the work efficiency of each department and the overall cooperation awareness among enterprises, and enhance the overall competitiveness of the enterprise. Secondly, on the basis of division of labor and cooperation between departments, the efficiency of the department can be continuously improved through

Relationship between Supply Chain Management Practice and Business Performance

The results show that the calculated rho value has a strong direct correlation, and the p-values of the results are all less than the 0.01 alpha level. This means there is an important relationship, and it just shows better supply chain management practices, better business performance.

The analysis results show that all indicators of SCMP have a significant relationship with business performance indicators such as financial performance, customer satisfaction performance, and social performance. This is consistent with the successful practice cases of large enterprises (Moursellas, 2023 such as Amazon, Dell, and Toyota (Amazon, Dell, and other companies have confirmed that SCM practice has a significant positive impact on business performance). Firstly, customer relationship management practices utilize information technology to identify valuable customers, track customer transactions, analyze customer demand characteristics, recommend personalized products and services to customers, improve customer satisfaction and loyalty, and bring long-term stable profits to the enterprise.

Customer relationship management (Cao, 2023) can also tap into the potential value of customers, continuously expanding new customers through customer recommendations, referrals, and other means, and gaining greater market share with lower advertising costs. Customer relationship management practices can also reduce legal disputes, promote corporate brand image, promote corporate culture, and improve corporate social performance by establishing good interactive relationships with customers. Secondly, the essence of supply chain strategic partnership is still a commercial relationship.

The establishment of strategic partnership can give full play to their respective advantages in technology, information and talent, learn from each other, achieve faster customer demand response, better customer service, and improve customer satisfaction and loyalty. The establishment of a supply chain strategic partnership is based on a good trust relationship and cooperation foundation between supply chain enterprises. Even if difficulties and disputes arise during the cooperation process, efforts will be made to negotiate and resolve them, reducing the negative impact of conflicts such as arbitration and legal litigation on the company's brand image. The sharing and exchange of market status, product technology, corporate culture, and other information among supply chain strategic partners is also beneficial for improving the social performance of enterprises. Third, (Cao, Junlei, 2016) the internal supply chain management of enterprises can also reasonably allocate human resources in the organizational structure, effectively control the logistics, information flow and capital flow involved in the circulation of raw materials, spare parts and finished products through business processes, so as to achieve the goal of low cost, high profit and customer satisfaction, and ultimately achieve the improvement of financial performance, customer satisfaction performance and social performance.

Relationship between Competitive Advantages and Business Performance

The relationship between competitive advantages and business performance, and analyzes the economics, the social resources, the company culture and the environmental protection in relation to profitability, customer satisfaction, and social performance. The results show that the calculated rho value has a strong direct correlation, and the p-values of the results are all less than the 0.01 alpha level. This means there is an important relationship, and it just shows the greater the competitive advantages, the better the business performance.

The relationship between corporate competitive advantage and business performance has always been a focus of concern for strategic managers. After all, excellent business performance is the ultimate goal that strategic managers aspire to. There are roughly three patterns of the relationship between the competitive advantage of the target enterprise and business performance. 1. Competitive advantage leads to excellent business performance, which can make a positive contribution to a company's business performance. 2. Having a competitive advantage without excellent business performance, such as a company failing to unleash its potential or having multiple competitive advantages without a suitable combination. 3. Having excellent business

performance without competitive advantage, such as a company's excellent product quality, The trend has almost disappeared, but due to the inertia of customer purchases, enterprises can still achieve excellent business performance in the short term. From this, it can be seen that the competitive advantage of enterprises cannot be simply equated with excellent business performance. The relationship between the competitive advantage of enterprises and business performance (Farida, 2022) should be grasped and understood from a systematic and complete perspective.

The first is the correlation between the economics competitive advantages and the business performance. The enterprise has the economic advantages of high efficiency and short delivery time. Under the condition of sufficient demand, it can produce and sell more products to put into the market, promote the sales of the enterprise and shorten the capital turnover time; The profit rate of enterprises with competitive advantages of low cost and high profitability is higher. The enterprise has the advantages of high-quality products and services, which can better adapt to and meet the needs of customers, and obtain the ability of sustainable development. These can make the enterprise more profitable than its competitors, with a higher return on investment and a larger market share. It can also reduce the debt of enterprises and improve the solvency of enterprises. Enterprises will also have more funds to invest in product development and innovation, so as to obtain better economic performance.

The second is the correlation between the social resources competitive advantages and the business performance. The development of an enterprise cannot be separated from the social environment. When establishing an enterprise, it must consider the distribution of social resources, and be adept at utilizing social resources in the operation process, forming social resource advantages, and continuously improving the operational performance of the enterprise.

The third is the correlation between the company culture competitive advantages (Arsawan, 2022) and the business performance. Corporate culture plays a huge role in the production, operation, and management of enterprises, thus having a significant impact on their business performance. Enterprise employees have a stronger sense of belonging and happiness when working in such a cultural environment, and have a lower tendency to resign. Corporate culture can also engage in two-way communication with the external public through public relations, and the service and product sales of enterprises will also transmit their value system to society, which will have a positive radiation effect on social performance.

The fourth is the correlation between the environmental protection competitive advantages (Skordoulis, 2022) and the business performance. With the continuous deterioration of the global ecological environment, global environmental organizations and governments around the world have formulated strict laws and regulations to govern and protect the environment, regulate the relevant behavior of enterprises, punish or even shut down enterprises that damage the environment, and environmental protection has been raised to an unprecedented level. Enterprises with strong environmental awareness can avoid or reduce environmental pollution, resource waste, and economic penalties caused by environmental pollution, reduce costs, and thus improve financial performance of enterprises; A significant decrease in energy consumption, a significant increase in material utilization rate, and a significant increase in waste recovery and utilization rate will directly improve the financial performance of enterprises; Environmental awareness and behavior will also directly enhance the image and brand value of the enterprise, and have a positive impact on customer satisfaction performance and social performance.

Predictors of Business Performance

The multiple regression methods to predict business performance from supply chain management practices and competitive advantages. It is observed that these two variables have significant predictive significance for business performance, $F(2,326)=188.012$; $p<0.05$; $r^2=0.732$. Two variables are statistically significant for prediction. From the regression results of supply chain management practices and business performance (Richey, 2022), p value <0.05 and B value 0.260, indicating that the better the supply chain management practices, the

better the business performance. Supply chain management practice refers to the effectiveness of supply chain management implementation, including the construction and maintenance of customer relationships and strategic supplier partnerships, as well as the integration of internal supply chains within enterprises.

From the regression results of competitive advantages and business performance, p value <0.05 and B value 0.732 , indicating that competitive advantages and business performance are significantly positively correlated, indicating that the greater the competitive advantages, the better the business performance. Competitive advantage refers to the advantage that a company has over its competitors in terms of economy, social resources, corporate culture, and environmental protection. These advantages mean that the company has more high-quality employees and management teams, lower costs, lower pollution and energy consumption, higher production efficiency, larger market share, more funding and policy support, better cultural values, and better products and services for customers. These advantages will have a positive impact on the economic performance, customer satisfaction performance, and social performance of the enterprise.

The Chinese small and medium-sized companies, the supply chain management integrated framework is composed of supply chain management practices, competitive advantage and business performance. First of all, a new and more efficient supply chain management model was proposed and verified. In this model, the relevant constituent elements interact to form a complex supply chain network structure. In this model, the relevant constituent elements interact to form a complex supply chain network structure. Secondly, customer relationship management, strategic supplier partnership construction and maintenance, and internal supply chain management constitute the three core elements of supply chain management practice (Chopra & Meindl, 2007).

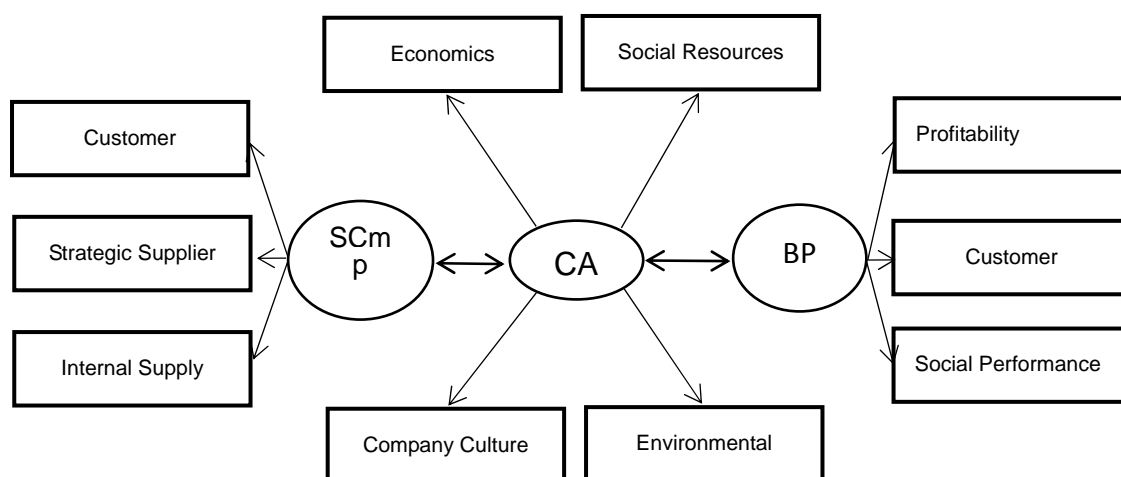


Figure 1 supply chain management Model

This model can effectively explain the business management process of enterprises. Through the smooth implementation of supply chain management practices such as customer relationship management, supply chain strategic partnership construction, and internal supply chain management, enterprises can achieve competitive advantages in terms of economy, social resources, corporate culture, environmental protection, and other aspects, thereby achieving business performance such as economics, customer satisfaction, and social performance. Enterprise managers can also adjust various aspects of enterprise operation based on the model to comply with the operating rules of the model, achieving efficient, coordinated, and sustainable development of the enterprise. Subsequent researchers can continue to refine and improve the model.

4. Conclusions and Recommendations

The respondents strongly agreed the importance of customer relationship, strategic supplier relationships

and internal supply chain management in supply chain management practices. The competitive advantages in terms of economics, social resources, company culture and environmental protection were rated agree by the respondents. The respondents agreed on the business performance of the firm in terms of profitability, customer satisfaction and social performance. The study revealed that there is a highly positive correlation between supply chain management practices and business performance, and there is also highly significant relationship between competitive advantages and business performance of the firm.

An improved supply chain management framework has been developed to enhance supply chain management practices of Chinese SMEs. This study recommends that the Chinese SMEs may enhance their customer relationship management by proactively engaging with customers on a regular basis. The small-sized enterprises may focus on building long-term relationships with customers by strengthening their knowledge and information systems, which will enable them to share information with customers and quickly resolve any issues that arise. While the medium-sized enterprises may opt for strategic partnerships with high-quality supply chain companies to achieve faster response times, lower costs, and better-quality products and services. Furthermore, the study developed framework may serve as a valuable tool for enhancing the supply chain management practices of Chinese SMEs. And for future researchers may consider exploring the impact of information sharing and supply chain integration on the efficiency of SCM practices.

5. References

- Agwu, E. (2018). "Analysis of the impact of strategic management on the business performance of SMEs in Nigeria." *Academy of Strategic Management* 1(17): 1-20.
- Alam, M. (2022). Supply Chain Management Practices and Organizational Performance in Manufacturing Industry: SCM and Organizational Performance. *South Asian Journal of Social Review*, 1(1), 42-52.
- Arsawan, I. W. E., Koval, V., Rajiani, I., Rustiarini, N. W., Supartha, W. G., & Suryantini, N. P. S. (2022). Leveraging knowledge sharing and innovation culture into SMEs sustainable competitive advantage. *International journal of productivity and performance management*, 71(2), 405-428.
- Cao, G., & Weerawardena, J. (2023). Strategic use of social media in marketing and financial performance: The B2B SME context. *Industrial Marketing Management*, 111, 41-54.
- Choi, D., Chung, C. Y., & Young, J. (2019). Sustainable online shopping logistics for customer satisfaction and repeat purchasing behavior: Evidence from China. *Sustainability*, 11(20), 5626.
- Çipi, A., Fernandes, A. C. R., Ferreira, F. A., Ferreira, N. C., & Meidutė-Kavaliauskienė, I. (2023). Detecting and developing new business opportunities in society 5.0 contexts: A sociotechnical approach. *Technology in Society*, 73, 102243.
- Chopra, S. and M. Meindl(2007). Meindl M. Supply Chain Management: Strategy, Planning, & Operation, Pearson.
- Eklof Jan, Podkorytova Olga & Malova Aleksandra.(2020). "Linking customer satisfaction with financial performance:" an empirical study of Scandinavian banks. *Total Quality Management & Business Excellence*(15-16). doi:10.1080/14783363.2018.1504621.
- Farida, I., & Setiawan, D. (2022). Business strategies and competitive advantage: the role of performance and innovation. *Journal of Open Innovation: Technology, Market, and Complexity*, 8(3), 163.
- Ferreira, I. A., Oliveira, J. P., Antonissen, J., & Carvalho, H. (2023). Assessing the impact of fusion-based additive manufacturing technologies on green supply chain management performance. *Journal of Manufacturing Technology Management*, 34(1), 187-211.
- Gupta, V. K. and W. J. Wales(2017). "Assessing organizational performance within entrepreneurial orientation research: Where have we been and where can we go from here?" *The Journal of Entrepreneurship* 1(26): 51-76.
- Isensee, C., Teuteberg, F., & Griese, K. M. (2023). How can corporate culture contribute to emission reduction in the construction sector? An SME case study on beliefs, actions, and outcomes. *Corporate Social Responsibility and Environmental Management*, 30(2), 1005-1022.

- Jahanbakhsh Javid, N., & Amini, M. (2023). Evaluating the effect of supply chain management practice on implementation of halal agroindustry and competitive advantage for small and medium enterprises. *International Journal of Computer Science and Information Technology*, 15(2023), 8997-9008.
- Liang, X., Wang, N., Zhang, M., & Jiang, B. (2023). Bi-objective multi-period vehicle routing for perishable goods delivery considering customer satisfaction. *Expert Systems with Applications*, 220, 119712.
- Maslova, S., & Burgess, G. (2023). Delivering human-centred housing: understanding the role of post-occupancy' evaluation and customer feedback in traditional and innovative social housebuilding in England. *Construction Management and Economics*, 41(4), 277-292.
- Moursellas, A., De, D., Wurzer, T., Skouloudis, A., Reiner, G., Chaudhuri, A., ... & Dey, P. K. (2023). Sustainability practices and performance in European small-and-medium enterprises: Insights from multiple case studies. *Circular Economy and Sustainability*, 3(2), 835-860.
- Neri, A., Negri, M., Cagno, E., Franzò, S., Kumar, V., Lampertico, T., & Bassani, C. A. (2023). The role of digital technologies in supporting the implementation of circular economy practices by industrial small and medium enterprises. *Business Strategy and the Environment*.
- Ogut, H., Adol, G. F. C., Bujdosó, Z., Andrea, B., Fekete-Farkas, M., & Dávid, L. D. (2023). Theoretical nexus of knowledge management and tourism business enterprise competitiveness: An integrated overview. *Sustainability*, 15(3), 1948.
- Richey, R. G., Roath, A. S., Adams, F. G., & Wieland, A. (2022). A responsiveness view of logistics and supply chain management. *Journal of Business Logistics*, 43(1), 62-91.
- Sharma, V., Raut, R. D., Hajiaghahi-Keshteli, M., Narkhede, B. E., Gokhale, R., & Priyadarshinee, P. (2022). Mediating effect of industry 4.0 technologies on the supply chain management practices and supply chain performance. *Journal of Environmental Management*, 322, 115945.
- Skordoulis, M., Kyriakopoulos, G., Ntanos, S., Galatsidas, S., Arabatzis, G., Chalikias, M., & Kalantonis, P. (2022). The mediating role of firm strategy in the relationship between green entrepreneurship, green innovation, and competitive advantage: the case of medium and large-sized firms in Greece. *Sustainability*, 14(6), 3286.
- Tajeddin, M., Farashahi, M., Moghaddam, K., Simba, A., & Edwards, G. (2023). Internationalization of emerging economy SMEs: a tripod approach. *Journal of International Management*, 29(1), 100991.
- Tseng, K. A. and Y. W. Lan, et al. (2013). "Mediation of strategy on intellectual capital and performance." *Management Decision* 7(51): 1488-1509.
- Umurzakov, U., Tosheva, S., & Salahodjaev, R. (2023). Tourism and sustainable economic development: Evidence from belt and road countries. *Journal of the Knowledge Economy*, 14(1), 503-516.
- Widjajanti, K., Kaewhanam, P., & Putri, V. W. (2023). Strategic Alliances and Marketing Orientation: to Improve SME's Performance. *International Business and Accounting Research Journal*, 7(2), 142-158.
- Wu, Q., Yan, D., & Umair, M. (2023). Assessing the role of competitive intelligence and practices of dynamic capabilities in business accommodation of SMEs. *Economic Analysis and Policy*, 77, 1103-1114.
- Ye, B. (2018). "Research on the Construction of a Comprehensive Evaluation Index System for Corporate Social Responsibility Performance in China." *Times Finance*, 703(21):139+141

