

Supply Chain Management's Effects on Business Performance and Competitive Advantage in the Healthcare Sector

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Abstract. This study aims to evaluate supply chain management methods in relation to competitive advantage, supply chain management practices in relation to the performance of the healthcare industry, and competitive advantage and performance. This research method is a quantitative method. This study was carried out in a retailer. As many as 550 employees from the healthcare industry made up the study's population. Simple random sampling was the sampling technique employed. Techniques for gathering data involved online surveys and social media. In this study, a Likert scale with a 1–5 rating scale was used as the assessment tool. Data analysis utilized the data processing technology SmartPLS and structural equation modeling (SEM). Validity, dependability, determination tests, and hypothesis testing are barriers to data processing. Supply chain management and competitive advantage are the study's independent variables, and the performance of the healthcare sector is its dependent variable. The competitive advantage of products in the healthcare industry is directly and favorably impacted by supply chain management practices. Practices in supply chain management have a direct, favorable impact on how well the healthcare sector performs. The competitive advantage of Healthcare Industry products has a direct and positive impact on performance.

Keywords: Management; supply chain; competitive advantage; performance; healthcare industry

1. Introduction

In the current era, many companies have their respective advantages in order to maintain their position, moreover the development of technology and an increasingly modern era encourages companies to develop and look for all kinds of potentials needed for the sustainability of the company's life. Competitiveness is one of the keys that need to be considered for every company. One factor that can have an impact on a company's ability to compete is supply chain management. According to [1], [2], supply chain management is a system owned by the company from the process of having a good relationship with suppliers, to service and delivery to consumers. The impact of supply chain management is as an influencing factor on production effectiveness and competitiveness. Production efficiency is one of the goals that is always expected and applied to every company, be it a manufacturing company or others. In previous research, [1], [2] discussed the influence of supply chain management on competitive advantage and performance in construction companies. The goal of this study was to ascertain whether supply chain management

implementation within an organization can significantly affect performance and competitive advantage. The roles of the supply chain performance are more specifically as follows: 1) producing better performance than competitors; 2) more responsive in meeting needs and consumer demand in general or in particular; 3) can reach a certain number of shipments on a certain date the goods are delivered; and 4) can work well with its suppliers. In the supply chain management process, there are five primary players: suppliers, distributors, manufacturers, retailers, and customers. Suppliers are sources that provide the first materials, either raw materials, auxiliary materials or raw materials [1], [2]. Manufacturers are those who do the work of making, fabricating, assembling or do the finishing. Distributors are big dealers. Retailers are smaller dealers that are closer to consumers

According to [3], businesses are encouraged to keep innovating in the healthcare sector because of the increasingly fierce corporate competition on a national and international level. Having a competitive advantage, which is a sign that the business is unique or superior to competitors, is one strategy businesses can use to gain market share. Optimal supply chain management must also be implemented by businesses. As a result of supply chain management's ability to provide competitive advantages, corporate competition can be lessened through its application. The existence of supply chain management is expected to be able to respond quickly, effectively, and efficiently to all changes in the market, increasing the company's performance and competitiveness. Although there has been a lot of research in the topic of supply chain management, particularly in the manufacturing industry, there hasn't been much done on a smaller scale. Research conducted by [3], [4] on the effect of supply chain management on the performance of companies only focus on manufacturing and service companies. According to [5], small and medium-sized enterprises, one of which is in the Healthcare Industry sector, are also subject to business competition in addition to huge corporations. Research by [6], [7] on supply chain management has been carried out a study.

The effective production and delivery of goods in order to satisfy consumer demand is accomplished through the integrated planning, implementation, coordination, and control of all business processes and operations. Supply chain management aims to boost the trust and cooperation of a number of supply chain participants as well as the quantity of inventory and the rate at which it grows. Inventory needs to be handled as the foundation of supply chain management in order to improve system performance from the viewpoints of many stakeholders. Management of interactions between stakeholders in the supply chain, such as suppliers and consumers, is known as supply chain strategy. This strategy aims to increase customer value while lowering overall supply chain costs. Companies with a competitive advantage are always able to comprehend shifting market structures and make smart marketing decisions. Generally speaking, competitive advantage can be defined as the ability of an entity or business to outperform its rivals by making use of its resources and/or competencies. The perspective of the client and the distinctiveness of the product are the two key components of this competitive advantage.

To compare the performance of the company over the past and upcoming periods, its performance must be quantified. Strategies for reaching particular goals are also mapped out using measurements of business performance. [5], [8] explain that company performance is measured using two dimensions, namely operational performance and financial performance. Operational performance refers to how well the business performs internally in terms of reducing costs and waste, enhancing product quality, creating new goods, enhancing delivery performance, and boosting productivity. investment in the growth of the business and its ability to create a profile that

is more competitive. The purpose of this study is to ascertain whether supply chain management has an impact on the performance and competitive advantage of the healthcare sector. In other words, it aims to ascertain whether competitive advantage has an impact on how well the healthcare industry performs.

2. Literature Review

2.1 Supply Chain Management

The process of obtaining raw materials, turning those materials into finished goods, and delivering those commodities to customers is referred to as the supply chain [3], [4], [6], [7]. This explanation leads one to the conclusion that supply chain management is a system that affects a company's interactions with customers, production and inventory operations, and suppliers. [6], [7] explain that supply chain management comprises raw materials, product planning and assembly, storage, ordering, and distribution to customers. Supply chain management is defined as the coordination and management of the complicated and activities involved in delivering the product to the final consumer. [3], [6], [7] stated that supply chain management applied to manufacturing companies has several main elements, namely, new product planning, finding raw materials, planning production and inventory quantities, implementing production, shipping and returning goods.

2.2 Competitiveness

[8] shows that implementing a strategy within a business to produce a value that is challenging for competitors to duplicate is what makes a company competitive. Factors that affect competitiveness can be internal and external. [5] presents the viewpoint that a company's competitiveness is a means that it has a value or advantage over its rivals. Factors that affect competitiveness, such as working capital, product packaging, network, business development, human resources. [8], [9] revealed that a company's success or failure is largely based on its ability to compete. This means that success is not feasible and that the company's guts to compete determines whether it will succeed or fail. Competition evaluates whether a company's initiatives, such as innovation, a strong culture, or best practices, are appropriate to support its performance. The pursuit of a favorable competitive position within an industry—the primary setting for competition—is referred to as competitive strategy. Establishing a lucrative and defendable position against the factors that influence industry rivalry is the goal of competitive strategy. Meanwhile, [8]–[10] mention competitive advantage refers to a company's capacity to generate earnings that are higher than those that rivals in the same market can generate. Companies with a competitive edge are always able to comprehend changes in the market's structure and make wise marketing decisions. When facing competition, competitive strategy is to preserve a stable level of profit and position. A company can obtain a competitive advantage over rivals by providing better consumer value, either at cheaper prices or by generating bigger profits and services that are worth paying more for.

2.3 Performance

According to [5], [8], firm performance is a snapshot of a company's overall state during a given time period; it is a result or accomplishment that is influenced by the operational activities the company engages in to make use of its resources. According to [9], performance is a broad phrase that refers to any or all of an organization's actions or operations over the course of a given period, as measured by efficiency, management accountability, and other factors, such as past or projected expenses. Performance is the capacity to work as demonstrated by work outcomes. According to [10], a company's performance is what it produces over a given period of time in comparison to the standards established. Corporation performance need to be a quantifiable outcome that describes the actual state of a company of a range of agreed-upon sizes. Business performance is the degree to which a corporation is focused on the market and its financial objectives. According to [3], [6], [7], performance is the degree to which results are attained when certain activities are carried out, in fulfilling an organization's goals, objectives, mission, and vision, as well as the degree to which outcomes are attained in order to meet the company's goals. According to the aforementioned definition, performance is the accomplishment of a specific task in order to reach company objectives as assessed by standards. Firm performance appraisals strive to ascertain the operational effectiveness of the company.

2.4 Hypothesis Development

A study model that demonstrates the connection between supply chain management practices, competitive advantage, and supply chain performance was created based on the body of current literature. Competitive advantage is influenced by supply chain management techniques in terms of price, quality, delivery, product innovation, and time to market. Prior research suggested that certain parts of supply chain management strategies, such as strategic supplier partnerships, had an impact on a number of competitive advantage factors, such as price levels [11], [12]. The following can be used to describe this: Strategic supplier alliances can enhance supplier performance, shorten time to market, and boost customer responsiveness. According to [13]–[15], high levels of supply chain integration are impacted by information sharing since it enables businesses to deliver services to customers more quickly and introduce new products more quickly. According to [16]–[18], customer happiness and the caliber of supply chain partnerships are positively impacted by the quantity and quality of information exchange. The postponement method balances global efficiency and consumer response while also enhancing supply chain flexibility.

H1. Supply chain management significantly affects competitive advantage.

H2. The performance of the supply chain is significantly impacted.

According to [16], [17], [19], a corporation with a competitive edge is one that, in comparison to its rivals, can compete in one or more of the following areas: lower pricing, higher quality, and quicker delivery time. According to [11], [15], the company's performance will increase as a result of these capabilities. Gaining a competitive advantage will improve a company's overall performance and supply chain efficiency. An organization's performance, customer happiness, customer loyalty, and the efficiency of interactions between enterprises in the supply chain—

particularly those involving dependability, responsiveness, flexibility, cost, and assets—all will improve as a result of having a competitive edge [11], [12], [19]. Sales will improve for businesses that can offer products at reduced costs and higher quality, increasing profit margins and return on investment. Companies with innovative products and quick turnaround times can boost market share and revenues, demonstrating a high level of responsiveness, adaptability, and dependability that makes it easier to grow the company's assets [14], [15], [18]. Companies with innovative products and quick turnaround times can boost market share and revenues, demonstrating a high level of responsiveness, adaptability, and dependability that makes it easier to grow the company's assets.

H3. Performance of the supply chain is significantly influenced by competitive advantage.

3. Research Method

This approach to research is quantitative. This study was carried out in a retailer. 550 employees from the healthcare industry made up the study's population. Simple random sampling is the sampling technique employed. Techniques for gathering data that involve online surveys and social media. In this study, a Likert scale with a 1–5 rating scale was used as the assessment tool. Data analysis utilizing the data processing technology SmartPLS and structural equation modeling (SEM). Validity, dependability, determination tests, and hypothesis testing are barriers to data processing. Supply chain management and competitive advantage are the study's independent variables, and the performance of the healthcare sector is its dependent variable.

Assessment of the variables to achieve supply chain management efficacy, a number of internal organizational operations are referred to as supply chain management. Among the supply chain management techniques examined in this study are supplier strategic partnership management, customer interactions, the degree to which information is shared, the quality of the information, and delay. The company's level of operating strategy attention is measured using a 5-point Likert scale (1 being strongly disagree, and 5 being strongly agree). Advantage in the marketplace. The ability of the business to establish a superior position gives it a competitive edge. The dimensions of competitive advantage included price, quality, delivery, product innovation, and time to market. These factors were assessed using a 5-point Likert scale, with strongly disagreeing (1) being the lowest score and strongly agreeing (5) being the highest (5) Supply chain effectiveness Using the SCOR technique, which considers five significant factors, including dependability, responsiveness, flexibility, cost, and assets, chain performance supply is assessed [20].

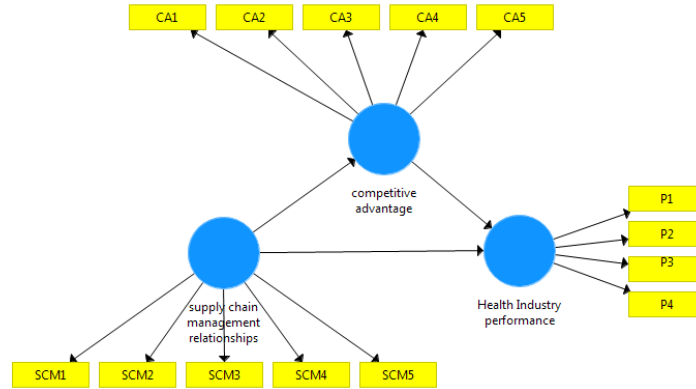


Fig 1. Research Model

4. Result and Discussion

4.1 Convergent Validity

It is known that each of the study variable indicators has a value of outer loading > 0.7 based on the information shown in Fig. 1. It seems that certain indicators still have an outside loading value of less than 0.7, though. According to [21], it is thought that the outer loading value of between 0.5 and 0.6 is enough to satisfy the convergent validity requirements. No indicator variable has an outer loading value below 0.5, as shown by the data above, hence all indicators are deemed practicable or legitimate for research usage and can be used for further investigation.

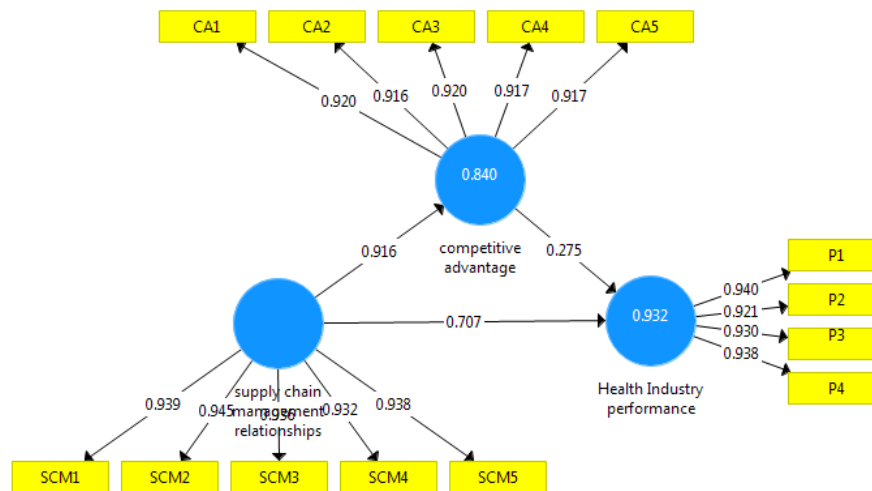


Fig 2. Loading Factors

4.2 Discriminant Validity

Table 1's statistics indicate that all of the variables' AVE values are more than 0.5. With the composite reliability value of all research variables being > 0.7 , it can therefore be said that each variable has excellent discriminant validity. With the Cronbach's alpha value of each study variable being greater than 0.7, these results show that each variable has achieved composite reliability, allowing it to be said that all variables have a high level of reliability. Thus, based on these findings, it can be said that all research variables have a high degree of reliability since they all matched the criteria for Cronbach's alpha values.

Table 1. Reliability Testing

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Supply chain management	0.812	0.871	0.789	0.612
Competitive advantage	0.875	0.823	0.875	0.631
Performance	0.879	0.856	0.812	0.654

4.3 Coefficient of Determination

Table 2. R Square

	R Square	R Square Adjusted
Performance	0.931	0.923
Competitive advantage	0.840	0.823

It is clear from the information in table 2 that the performance variable's R Square value is 0.931. According to the calculated figure, 93.1 percent of performance may be attributed to supply chain management and competitive advantage, while the remaining 6.9 percent can be attributed to other aspects not covered in this study. The competitive advantage variable's R Square value is 0.840. The calculated figure indicates that 84% of competitive advantage may be attributed to supply chain management, and the remaining 16% can be attributed to other aspects not included in this study.

4.4 Hypothesis Testing

The T-Statistics value and the P-Values value were used to test the hypotheses in this study. If the P-Values are 0.05, the study hypothesis is considered to be accepted.

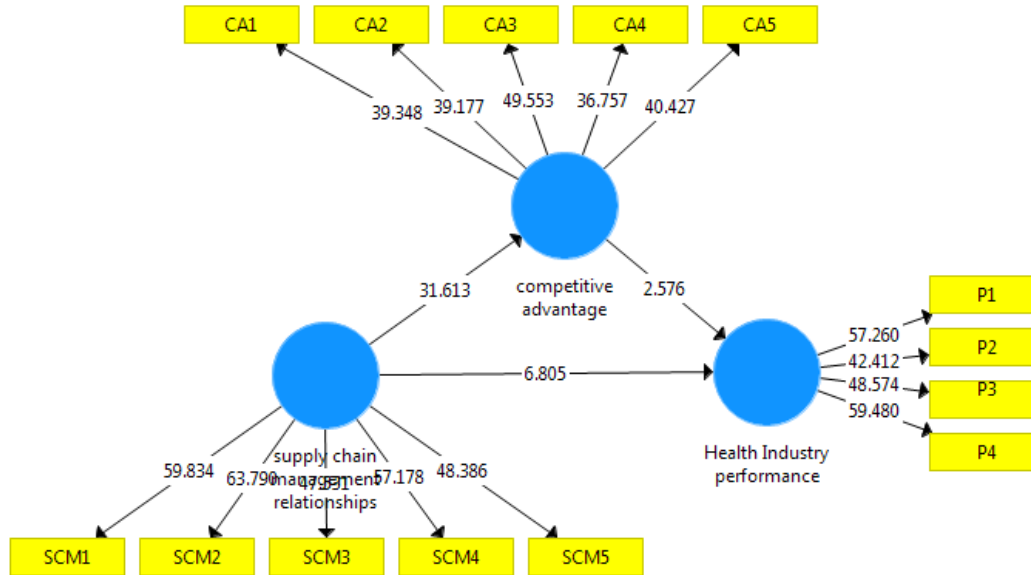


Fig 3. Hypothesis testing

Table 4. Hypothesis testing

Hypothesis	Original Sample (O)	T Statistics	P Values	Result
Supply chain management -> competitive advantage	0.916	2.492	0.000	Supported
Supply chain management practices-> performance	0.707	2.934	0.000	Supported
Competitive advantage -> performance	0.275	4,831	0.000	Supported

4.5 Supply chain management and performance

Based on the findings of the statistical study, it was determined that there was a significant link because the T value was $2.934 > 1.96$. Supply chain management has a big impact on how well the healthcare industry performs. These findings show that the performance of the company—in this case, the performance of healthcare—improves with the application of better supply chain management techniques. Supply chain management is a series of supply chain processes that begin with the delivery of raw materials and end with happy consumers. The organization performs better financially and operationally as a result of this happy customer. Client happiness is also given top priority by the healthcare industry, which constantly pays attention to customer needs and develops new products to boost customer satisfaction. The findings of this investigation corroborate the findings of [3], [4], [6], [7] that performance is significantly impacted by supply chain management.

4.6 Supply chain management and competitive advantage

Based on the findings of the statistical study, it was determined that there was a significant link because the T value was $2.492 > 1.96$. The ability to manage the supply chain effectively has the potential to boost competitive advantage. Integrating the management of supplier and customer relationships, delays, and quality throughout the entire supply chain can help a business stay competitive in the market. According to [6], [7], competitive advantage is significantly impacted by supply chain management. This can be taken to mean that the healthcare industry will have a greater competitive advantage the better supply chain management is established. In order to obtain more inexpensive rates and reliable supply, the healthcare industry consistently maintains solid relationships with raw material suppliers. This has an impact on the cost of traditional drugs and the healthcare sector, both of which are more reasonably priced. Because it has a constant supply of raw materials, the healthcare industry is also always able to meet client needs quickly. Another competitive advantage is the capacity to continuously develop on products, such as by offering different herbal remedies in accordance with customer needs. According to [1], [2], low costs, superior quality, quick delivery, and ongoing product innovation have all been shown to boost sales and gain market share.

4.7 Competitive advantage and performance

Based on the findings of the statistical study, it was determined that there was a significant link because the T value was $4.831 > 1.96$. Value that businesses may produce for clients or customers is where competitive advantage comes from. The ability of the company to establish a competitive edge is the key to its success in the face of commercial rivalry. According to [9], [10], the performance of an organization is significantly impacted by competitive advantage. This can be expressed by stating that a corporation will perform better the better its competitive edge is. The better the competitive advantage the healthcare industry has, in other words, the better. In order to satisfy client needs, the healthcare industry already has a competitive edge. Demand in the healthcare sector is rising, and this sector is equipped to satisfy these customer requests.

Products in the healthcare sector are becoming more varied as well to fulfill consumer wants. Due to the stronger business competition, the healthcare industry should strengthen its competitive advantage in the future. This must be done in order to boost the healthcare sector's financial and operational performance. In order to meet sales and profit goals, the healthcare industry must enhance customer quality and trust in the future. This will also improve the performance of the industry [2]. The findings of this study are consistent with earlier studies conducted by [5], [8]–[10]. Numerous earlier research has looked at how supply chain management strategies affect competitive advantage. Regarding the impact of supply chain management procedures on organizational performance, there have been a lot of prior research. Additionally, there are a ton of earlier studies that look at the relationship between competitive advantage and organizational performance. This suggests a connection between supply chain management strategies that provide organizations a competitive edge and organizational performance, and that boosting competition can help organizations perform better.

5. Conclusion

The competitive advantage of products in the healthcare industry is directly and favorably impacted by supply chain management practices. Practices in supply chain management have a direct, favorable impact on how well the healthcare sector performs. Performance is directly and favorably impacted by the products' competitive edge in the healthcare sector. Despite meeting the required number of samples for processing with SmartPLS, this study still has some sample size restrictions. This is also a result of the study's brief duration. Additional study can be conducted by including additional factors like company culture and creativity. On various sectors of the healthcare industry, additional study can be done. Based on the study and debate shown above, it is clear that supply chain management is a crucial factor that can boost a firm's ability to compete. Having better supply chain management will also help a company raise its production efficiency.

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