

# The Influence of Business Strategy Elements on Supply Chain Management Implementation in Small and Medium-Sized Enterprises

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## ■ Abstract:

Growing market pressure and the increasing globalization of the economy represent a major challenge for SMEs when it comes to effectively presenting their products and services to customers in terms of timing, price and location. This challenge highlights the importance of managing cross-border relationships with business partners and not just focusing on product improvement and production. Supply Chain Management (SCM) has now become a crucial part of the overall strategy for many companies, regardless of their size or industry. However, SMEs in emerging and developing countries face obstacles in implementing SCM due to limited resources and insufficient research in this area. Against this background, this paper examines the factors that influence SMEs' business strategies when adopting SCM. To achieve the objectives of this research, a questionnaire approach was used to identify and confirm the key elements of business strategy.

● **Keywords:** Supply Chain Management; Small and Medium Enterprises; Business Strategy; Manufacturing Sector.

## ■ المستخلص:

إن تزايد ضغوط السوق وعولمة الاقتصادات يمثل تحديًا كبيرًا للشركات الصغيرة والمتوسطة في تقديم منتجاتها وخدماتها للعملاء في الوقت المناسب وبالسعر المناسب وفي المكان المناسب. تكمن المشكلة في الحاجة إلى التحكم في العلاقات عبر الحدود بين شركاء الأعمال وتجاوز موقف تحسين المنتج والتصنيع. من أجل الحصول على ميزة تنافسية، أصبحت إدارة سلسلة التوريد جزءًا لا يتجزأ

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من استراتيجية العديد من الشركات، بغض النظر عن حجمها وصناعتها. ومع ذلك، تواجه الشركات الصغيرة والمتوسطة في البلدان الناشئة والنامية صعوبات في تنفيذ إدارة سلسلة التوريد بسبب نقص الموارد والدراسات العملية في هذا القطاع. وفي ضوء هذه الخلفية، تحدد هذه المخطوطة العناصر التي تؤثر على استراتيجية أعمال الشركات الصغيرة والمتوسطة والتي تربطها مع الشركات الصناعية الكبرى لممارسة إدارة سلسلة الامداد. ولتحقيق أهداف هذه الدراسة تم استخدام طريقة الاستبيان لتحديد والتحقق من العوامل المؤثرة في إستراتيجية العمل.

● **الكلمات المفتاحية:** إدارة سلسلة التوريد؛ الشركات الصغيرة والمتوسطة؛ استراتيجية العمل؛ قطاع التصنيع.

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## 1- Introduction

In most emerging economies, SMEs have become the backbone of a country's economic development by driving the development of the manufacturing sector (Thakkar et al 2009). They play a significant role in national economies, providing employment opportunities and acting as providers of products and services to large companies (Thakkar et al 2009), and contribute a high percentage of GDP for most countries. For small and medium-sized companies, supply chain management is one of the most important challenges of modern management. Increasingly, SMEs are under pressure from large manufacturing companies to change their traditional management processes (operationally and organizationally) and upgrade with integrated systems that help improve the speed and smoothness of physical and information flow. Many manufacturing companies place great emphasis on meeting customer due dates and schedules as it is extremely beneficial to the company (Cohen 2012). This helps meet demand, sync with offers and support, and organize transactions more accurately. With the global business network, SMEs now participate in many Interlink offerings, making SCM one of their crucial topics in overcoming challenges. On the other hand, due to the globalization of marketplaces, SMEs face an unequal scenario compared to the protective climate of previous years, resulting in SMEs suffering from high slump rates (Paik 2011), where often less than 50 percent of all new SMEs are sustain operational after five years. This may

be due to SME managers/owners who typically start a business with little or no basic knowledge, as well as SMEs, which are characterized by a lack of direction, especially strategic direction (Pansiri and Temtime 2008).

Although large companies successfully implement SCM, SMEs still face difficulties in benefiting from SCM because of different resources and technological limitations (Baier et al 2008). To remain competitive, SMEs could perform well in terms of on-time delivery, product quality, agility and sustainability without increasing operating costs. This is only possible through the effective use of SCM. For maintaining relationships between companies, SCM is a win-win strategy and has proven potential to increase overall performance (Cohen 2012).

## **2- Literature review**

The coordination and relationships between companies depend on the basic business strategy that helps complete tasks within the given time, quantity and cost, and this varies depending on the type and phase of the work. According to Kumar et al. (2014), SMEs should prioritize quality enhancement, on-time delivery, and cost reduction as critical strategic considerations. Monden (2012) discovered that their strategic and production capabilities significantly influenced the performance and competitiveness of Chinese manufacturing enterprises. However, business strategy (BS) is an integrated and coordinated set of commitments and actions that a company uses to gain a competitive advantage by leveraging basic strengths in specific product markets (Phongpetra and Johri 2011). In the automotive industry, BS has evolved from “build-to-stock” to “build-to-order.” Original equipment manufacturers’ suppliers were therefore forced to rethink their business strategies and replan development. One advantage of build-to-order is the ability to customize things to meet the needs and preferences of a specific buyer or market. Thus, they are less responsible for losses resulting from unsold goods. Accordingly, the synergy between BS and SC practices has been recognized (Cousins 2005), and there are significant facts that company success depends on the alignment of SCM implementation and work strategy (Baier et al 2008), and more effective communication and interaction between the two sections could improve organizations’ ability to meet their objectives.

Walmart, for example, has achieved better operational performance by establishing sophisticated inventory management, shipping and purchasing platforms. These capabilities have helped Walmart deliver on its brand promise of “everyday low prices” while achieving industry-leading margins and profitability. In another situation, Dell rose to the top of the computer industry in the 1990s by delivering low-cost, customized items through a “build-to-order” manufacturing model protected by comprehensive purchasing and inventory management efficiencies. The Just-In-Time (JIT) idea is the cornerstone of the Toyota production system. The basic ideas of JIT and automation, which involve producing the required units in the required quantities at a crucial time, are used to create a continuous flow of production throughout the company or to adapt to order changes in volume and variety. When JIT is implemented throughout the company, all unneeded inventory is eliminated from production, eliminating the need for stores and warehouses (Monden 2012). Because they are constantly faced with a variety of products and operations, SMEs must adopt techniques to increase their capabilities and effectiveness and be adaptable in improving their plans. According to Phongpetra and Johri (2011), SMEs must develop themselves strategically rather than just plan a new product to continue to grow and succeed. As noted in previous studies, business strategy revolves around time, orders fulfillment, cost, services, and the mechanism of handling between companies. Accordingly, this study will explore a few elements associated with the subject.

### **2.1 On-time delivery:**

This element is considered one of the measures of customer service level (Gunasekaran and Ngai 2004). Especially in industrial companies, punctual delivery is a crucial task for SC success. Reducing the planned delivery time leads to strained relationships and poor delivery information as reliability and responsiveness are severely compromised. Paik (2011) also explained that a company’s reliability depends on the need to ensure complete and timely delivery. Rao et al. (2011) listed some elements that can affect delivery time such as: Such as the supplier’s on-time delivery and full delivery, the fulfillment of the production schedule, the warehouse’s on-time delivery and

full delivery, and the timely distribution to the transportation service provider. This shows that just-in-time delivery advantages can be achieved when the entire SC processes are coordinated and integrated. In addition, there are other functions that can affect delivery speed including operations, warehouse location, transportation speed, distribution scheduling plan, and demand control (Gunasekaran and Ngai 2004, Thakkar et al 2012). Therefore, timely delivery of goods to the buyer and maintaining customer satisfaction with the quality is the key to creating value for the customer (Gunasekaran and Ngai 2004). In this regard, SMEs need to be able to work with partners to meet customer needs in a timely manner. Successful on-time delivery depends not only on the delivery process but also on a good cooperation system. It also increases customer loyalty, which in turn improves the profitability of both partners (Heydari 2009).

## **2.2 Order fulfillment to satisfy customers:**

Order fulfillment is about the effective generation, fulfillment, distribution and service of customer requirements (Croxtan 2003). This requires the integration of internal departments and coordination with external partners (customers and suppliers). Based on Forslund's (2006) presentation, the order fulfillment process in a manufacturing company includes activities such as receiving orders from buyers, production planning, workplace control, warehousing, and transportation. Within order fulfillment, the team takes order fulfillment measures for each customer segment and ensures that these functions and their costs are in line with the buyer's profitability. Therefore, responsibility for order fulfillment is not limited to the manufacturing process or inventory but encompasses multiple activities in the supply chain. In this case, coordination through a close partnership with SC members can help fulfill orders and reduce lead times and costs (Kumar et al 2015). For SMEs, this can happen through an early, precise exchange of information and experiences. Furthermore, the advancement of technology in the SC environment has had an important impact on order fulfillment procedures (Croxtan 2003), which can provide operators with details that can be implemented throughout the SC to improve the demand fulfillment process. Through a perfect logistics system, customer requirements and the company's services can be effectively linked (Kumar et al 2015).

### **2.3 Empowering decision making:**

According to Kuo and Lee (2011) it is assumed that strengthening decision-making techniques is of particular importance in the context of information management. It allows companies to be more responsive and flexible, which can lead to improvements for each individual and the organization's performance (Baird and Wang 2010). It is more related to the current competitive environment in which knowledge workers are more represented. However, the concept of empowerment requires that employees be offered a higher level of versatility and more freedom to make decisions about their work. Some studies support the need to empower frontline workers in the hospitality industry, with immediate action often seen as necessary to provide superior service to customers (Namasivayam et al 2014, Kim et al 2010), resulting in a higher job satisfaction and better reported management engagement. Employee contribution is like a management tool that, if implemented correctly, can effectively increase productivity, performance and job satisfaction. On the other hand, maintaining the empowerment of staff will not achieve the desired results if they do not have the skills and abilities necessary to handle the tasks and decisions at hand (Baird and Wang 2010). Therefore, the training program has become one of the company's strategies to help employees adapt to new initiatives from the management.

The reason for empowering staff is so that lower-level workers receive timely information about business operations, have an adequate overview of their work area, and can bear the results of the actions taken. This can give management additional time to think about broader strategies and the company's long-term goals (Baird and Wang 2010). McAdam and McCormack (2001) claimed that companies can be competitive in the current environment by strengthening the SC workforce, adopting electronic communications systems, and generally implementing simplified operations. Wilkinson (1998) described some types of empowerments: information sharing, work autonomy, attitude shaping, upward problem solving, and self-management. In addition, psychological empowerment fosters creativity and adaptability Linked to improved performance and innovation in SMEs (Rababah, 2023). Pettersson (2008) suggested that there are seven measures of workforce

empowerment, including power, decision making, skills and knowledge, autonomy, information, initiative and creativity, and responsibility. Therefore, people who consider themselves empowered have less conflict and opacity in their role since they can manage their individual environment (to a certain extent), which results in them having a higher sense of work enjoyment, motivation and organizational to have loyalty (Greasley et al 2005).

#### **2.4 Service level cost:**

In today's economy, service level has become an important competitive benchmark alongside quality and price (Kutanoglu and Mahajan 2009). Many experts have highlighted that goods provide few competitive advantages; however, customer service represents a crucial difference (Paik 2011). In addition, the importance of customer service is justified by the fierce competitive pressure, which is reflected in particular in increased buyer needs regarding a company's ability to manage operations and data flows, from raw material purchasing to customer service and maintenance (Kutanoglu and Mahajan 2009). The strategic construction and redesign of SC has become a major problem for companies as they simultaneously seek to improve customer service and minimize execution costs (Shen 2005).

In most organizations' customer service occurs in three different ways such as an activity; a performance measurement; and an attitude and strategic factor of the company, which may vary from company to company (Kumar et al. 2014). Service level is an activity that plays a role at the customer, the sales office, and the intermediaries. This action creates an advantage for the service introduced or traded (Paik 2011). This benefit can take the form of a simple deal in the short term or a partnership agreement in the future. Accordingly, customer service is the process through which important advantages in a value chain are effectively achieved (Kumar et al. 2014). This can be seen in the automotive industry, where original equipment manufacturers work with first-party manufacturers through service-level agreements. Therefore, companies need to plan well and collaborate between business strategies, operational capabilities, and market changes while reducing the overall cost of overall operations. Most SC improvement features focus on managing supply and demand flows across an SC network to reduce inventory, shortages, and transportation costs.



## **2.5 Inventory level:**

As mentioned in most of the previous factors, inventory is one of the most important dimensions in SCM to improve profitability, productivity and responsiveness and to smooth out pricing uncertainties. In addition to quality, cost and time, which are the key strengths of companies, failure to minimize inventory is a major challenge for SMEs (Thakkar et al 2012). Due to the variety and regular changes in demand, longer procurement lead times, production lead times and price fluctuations are the main problems in inventory control. In the supply chain, inventory is one of the seven wastes and is therefore considered something that should be minimized whenever possible (Baker 2007). Inventory management plays an important role and has attracted the interest of several researchers in recent years. Some accepted inventory management policies are studied and improved in terms of many elements such as minimum cost, availability, customer service level and increased flexibility (Thakkar et al 2012).

Not only is it important for cost conditions, but it is also critical for customer service as item availability becomes an important service metric and inventory is critical to the failure or success of many SCs (Baker 2007). Therefore, inventory levels play an important role in managing production and order fulfillment as well as controlling costs. Information in inventory includes order quantity determination, order timing, reorder point, and inventory replenishment, all of which are important to manage inventory efficiently (Baier et al 2008) and SC integration can help companies obtain more accurate data, which require reducing inventory levels to improve efficiency and competitive advantage over time (Monden 2012). Accurate information and exchange between SC members contribute to better control of operational processes and safety stocks. High inventory means better availability, but on the other hand it also comes with costs see (Gunasekaran and Ngai 2004). Additionally, excessive inventory takes up physical space, creates a financial burden, and increases the risk of spoilage damage and loss. From this point of view, the trade-off between ordering costs and holding costs characterizes the trading method of inventory control, which is represented by the inventory models ABC, EOQ and (S, s; upper and lower value for inventory) (Thakkar



et al 2012) and newer models have become more new Concepts developed for inventory control, including VMI, MRP (material requirements planning), JIT and ERP. In contrast, poor inventory levels often hinder production processes and increase the likelihood of poor customer service. Most of the time, good customers get displeased and move their business elsewhere if the desired product is not available within a specific period of time (Koumanakos 2008).

### **2.6 Inventory handling and facility:**

As previously mentioned, inventory is considered waste; however, for a company struggling due to poor cash flow or gaps in strict control over computerized data exchange with departments and suppliers, turnaround times, and the quality of resources received, inventory plays a crucial role. Therefore, the selection of handling equipment is an important function in the design of material handling systems and therefore a crucial step for facility planning (Kumar et al 2015). Inventory management provides tactics to move things along much faster and more accurately. Inventory handling systems are available to connect the entire production operations and ensure that the size of inventories and routes do not increase (Baird and Wang 2010), which are crucial in the handling process to effectively control inventory and respond to orders quickly. Current manufacturing requirements increased quality and productivity, improved inventory management, and led to an advanced level of integration of production sections ( Namasiv- ayam et al 2014). In addition, automated systems for material handling must be implemented to reduce inventory, cycle time, and costs and also improve quality and performance.

On the other hand, many problems can arise due to a lack of warehouse management and facilities. And back to Kim et al. (2010), inventory management problems often result in discrepancies in record keeping and physical counting and are due to issues such as lack of site responsibility; non-standard classification and outdated translation tables; non-standard procedures and policies; unlimited access to decentralized inventory spaces; and insufficient training and performance assessment methods. Singh (2011) confirmed that a lack of inventory management, such as inventory accuracy, defects in product handling, or even movement quality, can significantly impact overall operational performance. Chakravorty (2009) discovered

that carrying out the inventory management process involves both human and technical aspects. Human factors include the training required for employees, task teams, operators' assignment to specific work teams, and the role of supervisory personnel and warehouse management. Technical aspects include identifying objectives, creating scope, analyzing inventory flow requirements, determining inventory, storing and controlling items, determining and evaluating alternatives, selecting the ideal item handling system, and deployment of systems. These actions affect the main functions of inventory such as inventory, demand picking or handling, receiving or delivery.

### **2.7 Packaging for material handling efficiency:**

Packaging design and packaging have become an important part of marketing various consumer products and play a major function in communicating the product benefits to the buyer (Rundh 2013). To ensure that packaging can contribute to achieving a company's strategic goals, it must be designed and created to systematically cover the needs and tasks it must fulfill from a strategic perspective (Garcia et al 2014). Packaging development is subject to a complicated set of business environment influences. Among the main effects, new technologies, material development, logistics requirements, environmental concerns, customer priorities, and marketing characteristics play a significant role in management decisions on marketing strategy (Rundh 2013). For packaged items, packaging has an impact on every logistics process and therefore on the overall environmental and economic efficiency of the SC (Molin and Pålsson 2014). In addition, parts handling without packaging could be a disorganized, inefficient, and costly affair. Further details: Evidence of the lack of importance of packaging is provided by several examples of poorly designed packaging, resulting in destroyed goods, leaky containers and unpleasant or non-functional packaging that frustrate consumers (Robertson 1990).

The automotive sector is also considered a pioneer of packaging progress. At this point, the transportation package takes center stage as it improves

the transportation, handling, and storage of materials purchased and brought to the vehicle assembly stage. Innovative packaging can even change the product concept and create a new market position. This was confirmed by Ampuero and Vila (2006), packaging design was seen as a useful tool for achieving positioning objectives, i.e., item design, size of the packaging, and its cost compared to the competitor. Garcia et al. (2014) emphasized that after determining the packaging functions, it is necessary to rely on the hierarchical form of packaging primary, secondary and tertiary packaging, which is based on item quantity packaging. Decisions must then be made in some relevant areas: selection of materials, selection of dimensions, selection of the number of packs for each grouping, and graphic design. Garcia et al (2014) found that packaging is one of the aspects that can promote improvements in the sustainable and efficient management of supply chains. According to Robertson (1990), in order to objectively evaluate packaging, its many functions such as containment, protection, partitioning, uniformity, convenience, and communication must be taken into account. In addition, packaging provides a competitive advantage as elements that lead to competitive characteristics are greater customer convenience, better usability, and better layout (Rundh 2013). In summary, the increasing use of IT and automation in warehousing and material handling has increased the importance of packaging. High-quality packaging is likely to have a positive impact on the design and layout of the storage space, as well as the overall productivity of the store. Packaging dimensions and stack ability are crucial aspects of efficiency.

Finally, this narrative of the previous elements is ideas and opinions from studies that have worked in various areas of supply chain management and SMEs. Accordingly, the authors collected these elements and examined them in the context of business strategy to find out how strong the correlation and relationship are between them.

### **3- Research methodology**

*In this study, the survey method was used to collect the necessary data to achieve the objectives of the study. According to Beck (2024),*

*surveys facilitate rapid distribution and collection of responses more comprehensively, allowing for timely analysis. Malaysian automobile companies were selected as the target group. The criteria set for company selection are manufacturing, automotive, and companies with between 5 and 150 full-time employees, which is standard for SMEs in Malaysia (Pettersson 2008). The aim is to obtain a holistic overview of SCM implementation in the automotive industry as a supplier to big companies, where SMEs have become an interesting spot for many large companies, especially in the automotive sector, to conduct their business effectively and efficiently. This article is an exploratory study to identify effective elements (EEs) and determine the extent to which they have a positive and significant impact on business strategy related to SCM in automotive or manufacturing SMEs. Furthermore, these effective elements have been identified through a comprehensive literature review and expert opinions in the field.*

#### **4- Data analysis and discussions**

A total of 238 companies are auto parts suppliers to national automobile manufacturers in Malaysia. Responses were received from 87 companies, representing a response rate of 37 percent; of these, 57 were complete and provided usable answers. This is well above the recommended minimum of 20 percent for empirical studies in production and operations and even exceeds the value of 24 percent that is considered acceptable (Malhotra and Grover 1998). However, the analysis was carried out using the Statistical Package for the Social Sciences (SPSS). This covers the details of the respondents and companies in terms of experience, knowledge, size, system and SCM practices. The results illustrate the size proportion of the participating companies, with 77 percent being classified as small companies and 23 percent as medium-sized companies. As far as professional experience in the operational process is concerned (Figure 1), the majority of respondents (i.e., 49 percent) have professional experience between 11 and 20 years in the industry and 39 percent have professional experience between 6 and 10 years. This shows that most respondents have sufficient experience to give a typical answer (Zhu and Geng 2013).

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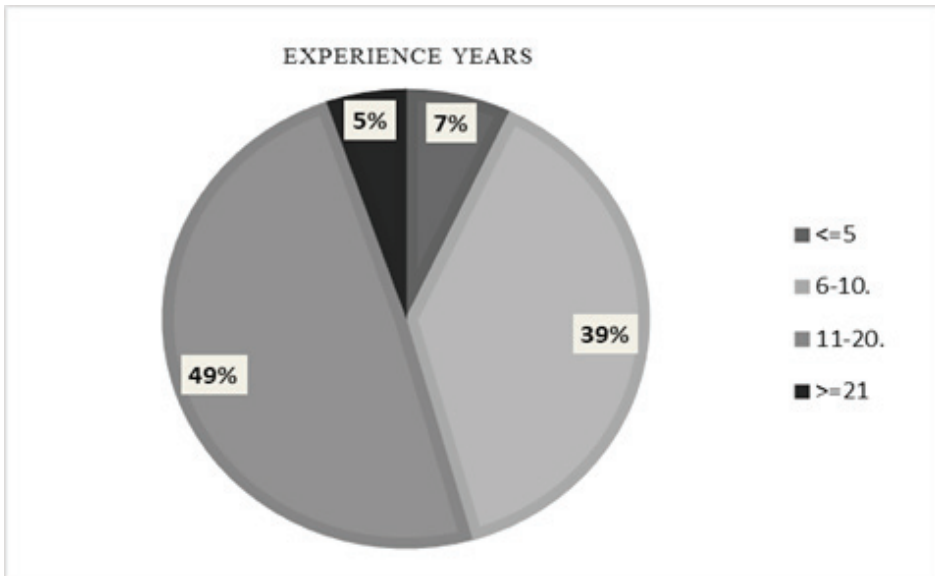


Figure: (1). Respondent's experience years

The other percentage of respondents have more than 21 years of experience and the rest have less than 5 years of experience, 5 percent and 7 percent, respectively. Furthermore, to assess the extent to which companies are aware of SCM practices and strategies, the results showed that 42 percent of respondents have an idea of SCM practices and strategies, but have not fully implemented them in their company. Meanwhile, the majority (38 percent) do not have a complete understanding of the SCM concept. A corresponding study in this area has shown that a larger proportion of Malaysian SMEs have only limited SCM knowledge (Thakkar et al 2009). Additionally, because 77 percent are small businesses controlled and run by family groups, they often place a high value on operational efficiency rather than effectiveness, meaning that financial measurement is the basis for running the business. However, there was attention from some companies (21.1 percent) that have begun to practice SCM principles in their company.

### Reliability Test:

Measurement Reliability refers to the degree of reliability of a particular measurement, as evidenced by its consistency over time and across different

items in the instrument (Sekaran 2003). Inter-item analysis was used to determine scales for internal consistency or reliability by using Cronbach’s coefficient test for each scale, as recommended for empirical studies in operations management (Kumar et al 2015). The values of the Cronbach’s alpha reliability coefficient are between 0 and 1. The higher the Cronbach’s alpha coefficient is 1.0, the higher the internal consistency of the items within the scale. The Cronbach’s alpha coefficient for the total items is (0.805), as shown in Table 1. This value is above the lowest requirement of 0.5 for exploratory research (Nunnally 1967), shows high overall internal consistency between elements, and is considered reliable.

**Table: (1).** Reliability analysis of effective elements

Factor name	Items	F loads	Eigen-value	% of Variance	Cumulative %	No. Of items	$\alpha$
Business strategy	Order fulfillment to satisfy customer	.662	2.098	9.123	42.144	7	.805
	Inventory level	.656					
	Inventory handling and facility	.654					
	On-Time Delivery	.572					
	Empowering decision making	.562					
	Packaging for material handling efficiency	.526					
	Service level cost	.519					

Principal components analysis was performed to determine whether the loading of the selected items is on one or more than one factor and to extract factors with an eigenvalue greater than 1 (Lee et al 2007). However, the cut-off point of factor loadings for retention is 0.5 (Hair 2005). As stated by

Aladwani and Palvia (2002), variable loadings above 0.3 can be considered significant, those above 0.4 are more significant and those above 0.5 are very significant. Regarding importance, factors with eigenvalues of 1.0 and higher were returned. The results presented a robust factor structure with significant loadings of items more than 0.5 and eigenvalue above 1.

However, these analytical steps were carried out to confirm the reliability and validity of established effective elements that can support the business strategies of SMEs when implementing SCM. This result is consistent with other studies that consider business strategy as one of the crucial factors for the success of SCM implementation (Cousins 2005). In doing so, these studies emphasize the role of business strategy in shaping activities at the company and supplier levels as well as in shaping commitment, attitudes, type and extent of collaboration with suppliers (Cousins 2005). This implies that business strategy represents an essential aspect in forming a corporate investment in SC partners, which is then associated with improved performance. If there are inconsistencies between certain business strategies and SCM practices, companies will consistently deliver unstable performance (Baier et al 2008).

## **5- Conclusion**

Finally, SMEs often have limited bargaining power compared to larger companies. Therefore, it is crucial to build trust and collaboration with key stakeholders. This can be achieved through regular communication, collaborative planning, and commitment to meeting customer needs. In addition, SMEs typically have limited storage space and financial resources, thus, it is important to maintain optimal inventory levels to avoid stockouts or overstocks. Implementing efficient forecasting techniques, adopting just-in-time inventory practices, and leveraging technology solutions can help SMEs achieve this goal. Additionally, SMEs should consider using and implementing an integrated software system that can streamline processes, improve transparency, and enable real-time tracking of inventory, orders, and deliveries. This in turn helps SMEs reduce costs, improve efficiency, and respond quickly to changes in customer demand.



In summary, SMEs need to develop effective SCM business strategies to overcome resource limitations and gain a competitive advantage. By focusing on building relationships, optimizing inventory management, leveraging technology, fostering collaborations and implementing continuous improvements, SMEs can improve the efficiency of their supply chain and the overall performance of their business.

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