

# The role of logistics service providers in enhancing supply chain performance: Literature review and proposal of a research model

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**Abstract:** This article explores the crucial role of logistics providers in the global context of industrial companies, highlighting their extended impact beyond borders and their significant contribution to optimizing supply chain management. In line with its objectives, the article first seeks to thoroughly define key concepts such as logistics, logistics delivery and supply chain performance. It then undertakes a comprehensive review of existing research, highlighting the crucial relationship between logistics providers and supply chain performance in the global industrial context. Finally, the article proposes an innovative conceptual research model, aiming to provide an analytical structure to further explore this complex dynamic.

**Keywords:** Logistics, Logistics service providers, Supply chain, Supply chain performance

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## 1. Introduction

In the global context of industrial companies, logistics service providers play an essential role in optimizing supply chain management. Their impact extends beyond borders, fostering interconnected global supply chains. These specialized players make a significant contribution to performance by improving operational efficiency, inventory management and reducing delivery times. Their strategic involvement is crucial in enabling industrial companies to remain competitive on a global scale, thanks to agile and efficient supply chain management.

Each company within the supply chain operates separately. However, the transmission of sensitive data between supply chain partners, and the monitoring of activities that go beyond the interests of the company's shareholders and stakeholders, can present obstacles along the way.

Our research aims to answer the following central question: How do logistics providers contribute to improving supply chain performance? We will address this issue by taking a close look at the various aspects of this complex relationship. This will involve exploring the specific practices of logistics service providers, and understanding how these particular elements can help optimize overall supply chain efficiency.

In order to address our problem, we will set out in:

The first section of the article aims to clarify the concepts of logistics, supply chain and outsourcing to facilitate a better understanding of these notions, while deepening the understanding of supply chain performance.

The second section of the article highlights the relationship between logistics service providers and supply chain efficiency. It also examines the nature of the influence of these suppliers' practices on supply chain performance, based on evidence from the literature. In conclusion, we present a research model incorporating the variables explored in the literature.

## 2. Conceptual framework

### 2.1 The concept of logistics

Having explored various definitions of logistics, we can now take a comprehensive look at the concept. According to the Council of Supply Chain Management Professionals (CSCMP), logistics is defined as the process encompassing the effective planning, implementation and control of the flow and storage of goods, services and information, from point of origin to point of consumption, in order to meet customer requirements (CSCMP, 2013). This definition encompasses inbound, outbound, internal and external movements, as well as information management. In today's e-commerce context, reverse logistics, which concerns material returns for operational and environmental reasons, adds to this understanding. Fundamentally, logistics is an essential part of the supply chain, encompassing physical transport, storage, handling, value-added services, manufacturing and customer operations. In short, logistics boils down to ensuring delivery of the right product, in the right quantity, to the right place, to the right customer, at the right price, at the right time, and under the right conditions, reflecting the seven "rights" of customer service.

According to the Collins Dictionary, logistics is defined as the management of the flow of goods between point of origin and point of destination to meet customer and business requirements. The Chartered Institute of Logistics and Transport, UK, states that logistics involves the strategic positioning of resources over time, summed up in the "five rights". These rights include ensuring that goods or services are present in the right place, at the right time, in the right quantity, with the right quality and at the right price.

A modern analysis, proposed by researchers Gwynne Richards and Jo Godsmark (2020), applies to most industries. It defines logistics as the efficient transfer of goods from the source of supply to the point of consumption, via the point of manufacture, in a cost-effective manner and meeting customer needs appropriately. For most companies, logistics encompasses key areas such as shipping, warehousing, inventory, packaging and information.

## 2.2 Supply chain performance

Before defining the concept of supply chain performance, let's start with the concept of the supply chain. The literature offers various definitions of the "Supply Chain" concept, among which stand out those of Chopra (2019), Tahir and Darton (2010), and Génin (2003).

Chopra (2019) depicts the supply chain as a system encompassing all parties involved, directly or indirectly, in satisfying a customer demand.

According to Tahir and Darton (2010), the supply chain can be understood as a system comprising subcontractors, producers, distributors, retailers and customers. Within this system, material flows from suppliers to customers, as well as information flows in both directions.

As for Génin (2003), his definition emphasizes cooperation. He describes the supply chain as a network of organizations or functions geographically dispersed over several sites. These entities cooperate to reduce costs and increase the speed of processes and activities between suppliers and customers.

Mentzer et al (2001) have defined three distinct classifications of supply chains, highlighting the diversity of possible approaches. The first classification takes the form of a direct supply chain, involving an analysis of research firms, their suppliers, and their customers engaged in enabling operations. This analysis encompasses product flows, information flows, service flows and financial flows. The second classification identified is the extended supply chain, which extends the analysis to include the supplier's suppliers and the customer's customers. Finally, the last category is the final supply chain, where all companies in the system, as well as product, service, information and financial flows, are taken into account.

The terms "long supply chain" (Jain and Benyoucef, 2008) and "end-to-end supply chain" (Chilmon and Tipi, 2014) are used to emphasize the importance of a comprehensive analysis of the entire supply chain, if possible, or of a pre-established end-to-end supply chain system.

The structure of a supply chain is subject to constant change, not least to take account of external factors. For example, the COVID-19 pandemic led to changes in the structure of supply chains, forcing many globally-operating chains to adopt more local approaches to suppliers, manufacturing and distribution. The idea of creating supply chains capable of adapting to current environmental changes is not new, and several studies have conceptualized the idea of complex adaptive supply chains (Choi et al, 2001; Choi and Krause, 2006; Hearnshaw and Wilson, 2013).

Supply chain performance, as conceptualized by Christopher in 1992, is measured by the intrinsic ability to deliver goods and services to customers with an appropriate level of service and minimal costs. Furthermore, according to Lambert and Cooper (2000), it is assessed through various criteria such as service quality, costs, flexibility and supply chain speed. This holistic approach is reinforced by Mentzer et al (2001), who see supply chain performance as the ability to satisfy customer needs while meeting the financial objectives of its members.

According to Hugos (2006), supply chain performance becomes a composite measure, encompassing the speed, flexibility, reliability and costs associated with each stage of the supply chain. This perspective

underlines the importance of responsiveness and efficiency in the logistics context. Coyle, Langley and Novack (2013) complement this view by emphasizing customer satisfaction as a fundamental component of supply chain performance. Thus, the latter can be defined as the measure of a supply chain's ability to meet customer needs while optimizing the financial objectives of each participating company, thus bringing together customer satisfaction and economic profitability within an integrated dynamic.

### **2.3 Logistics service provider**

Logistics service providers are specialized entities offering logistics solutions to optimize supply chain management performance. Companies outsource these services for a variety of reasons, including access to best practices, improving service quality, controlling logistics costs, increasing speed, managing resources efficiently, spreading risk, and focusing on aspects crucial to their existence and future growth.

A key definition of a logistics service provider is provided by Gadde and Hulthen (2009), who define it as an external company charged with performing logistics functions traditionally managed in-house. The Council of Logistics Management also offers a perspective, describing logistics as the process of planning, implementing and controlling the efficient flow of goods, services and information from point of origin to point of consumption, to meet customer requirements.

Hertz and Alfredsson (2012) describe the third-party logistics service provider as an external supplier who manages, controls and executes logistics activities on behalf of a shipper. These providers are evolving from a transactional to a strategic role, according to Green, Turner, Roberts, Nagendra and Wining (2008) and Forrest et al. (2008).

Knemeyer and Murphy (2004) highlight the diversity of interpretations of the term "logistics service provider", underlining the lack of consensus on a universal definition. This dichotomy lies in the choice between a transactional perspective and a vision of a mutually beneficial long-term relationship.

On the other hand, Stank and Maltz (1996) propose a simple definition, considering any supplier of goods or services not belonging to the buyer as a logistics service provider. Lieb and Randall (1996), for their part, orient their definition towards outsourcing, encompassing either the entire logistics process, or specific activities within it.

Furthermore, Africk and Calkins (1994) define the logistics service provider as a relationship characterized by more personalized offerings, the inclusion of a wider range of service functions, and an orientation towards a longer-term, mutually beneficial relationship, thus broadening the perspective. This relies on the creation of customized services, enabling them to differentiate themselves from the traditional transport market and access higher margins, as Large, Kramer and Hartmann (2011) point out. The rapid proliferation of these providers, observed in both developed and developing economies, underlines their growing role in the global logistics landscape.

## **3. Literature review: The link between logistics service providers and supply chain performance**

In this section, we explore the fundamental relationship between logistics providers and supply chain performance. The study of this strategic association is of great importance in the dynamic context of today's business operations. By exploring existing research, we will attempt to expose the intricacies of this complex relationship, revealing the practices, trends and implications that affect how logistics providers affect overall supply chain efficiency.

Firstly, supply chain performance evaluation, as highlighted by Ravi (2001), offers a crucial opportunity for in-depth understanding of the supply chain, thus contributing to a significant

improvement in its overall performance. This responds to an emerging need to focus on supply chain performance.

Furthermore, according to the findings of Sharma (1995), several factors exert a significant influence on supply chain performance, including outsourcing of logistics delivery, external environmental conditions, adoption of appropriate technology, and management support, among others.

Sang (2010) adds an important perspective by asserting that the decision to outsource logistics services through a third-party provider, rather than managing them in-house, results in reduced costs and improved logistics operations. He also points out that, to maintain competitiveness and improve service delivery despite limited resources, outsourcing non-core functions such as logistics and transport is imperative.

Furthermore, Bendor-Samwel (1998) argue that outsourcing the logistics function gives a supply chain a significant competitive advantage by exploiting economies of scale derived from mass production by the third-party provider, leveraging process expertise due to the third-party provider's increased experience, and gaining access to advanced, up-to-date technologies, among other key benefits.

A favorable external environment, according to Sang (2010), provides an enabling environment for the implementation of any outsourcing policy. He points out that the external environment, such as trade union lobbies, governments, pressure groups, surrounding communities that prefer to have employees on the company payroll, leads to piecemeal implementation of an outsourcing policy, logistics or otherwise. This will prevent the organization from reducing costs, improving efficiency and enhancing supply chain performance.

According to Sople (2011), the efficiency and effectiveness of a supply chain are the direct result of cost reduction and a favorable external environment for implementing the outsourcing policy. Supply chain technology, as a tool, not only improves the effectiveness and efficiency of the supply chain, but also acts as a competitive weapon for corporate strategy, such as the outsourcing of logistics services (Ravendran, 2002). It coordinates and integrates electronic information flows throughout the supply chain network.

Supply chain technology offers partners and customers, in both directions, the opportunity to conduct effective and efficient business transactions, access information quickly, improve customer service, reduce paperwork, communicate better, increase productivity and save time.

Supply chain technologies that can improve supply chain performance include enterprise resource planning (ERP), supply chain planning systems (SCP), manufacturing execution systems (MES), warehouse management systems (WMS), transportation management systems (TMS), extranets, radio frequency identification systems (RFID), geo-coded tracking systems (GCTS), supply chain event management (SCEM) and demand forecast management systems (DFMS) (Helo and Szekely, 2005).

One of the visible effects associated with supply chain technology on supply chain performance is the integration of services such as transportation and warehousing with information-based services such as booking, freight rate calculation, routing and scheduling.

According to Premkumar et al (2007), management support ensures effective implementation of organizational policies. It ensures the involvement, cooperation and commitment of all members in the successful implementation of the logistics outsourcing policy. These members may have complex economic and business relationships with each other and with the organization, resulting in a number of social, political and economic factors influencing supply chain performance.

A holistic approach to logistics outsourcing leads to the elimination of managers' narrow focus and unfavorable relationships between logistics service providers, suppliers and customers, to the exclusion of other supply chain actors, resulting in improved supply chain performance (Williams, 2009).

Although there is little research and evidence on the impact of logistics outsourcing in universities, there is sufficient literature from other sectors to show that there is more to be gained than lost from logistics outsourcing.

Logistics outsourcing can contribute to business profitability by ensuring that a company is able to achieve the five rights of purchase - right time, right place, right quality, right price and right quantity - resulting in a strong and more efficient supply chain that enables users to gain a competitive advantage, adding measurable value to products, improving customer service, helping to open up new markets and providing dedicated resources (Agure, 2006).

Consequently, outsourcing logistics services can improve business operations by reducing lead times and enhancing value creation for companies, enabling them to become more competitive and profitable through fast, high-quality customer service, and thus improve supply chain performance

Value creation involves understanding the dynamic interaction within the customer's supply chain. One of the most important reasons for employing third-party logistics providers is their ability to provide customers with expertise and experience that would otherwise be difficult or expensive to acquire in-house (Byrne, 2003).

The expertise gained from working with other customers enables users to benchmark themselves against other companies, and can lead to opportunities to reduce costs and improve customer service, providing an opportunity for innovation. It is thought that a contract logistics company with national and regional expertise can even give a customer a local image, even if that company has no local presence in terms of assets and employees (Bradley, 2006), so the impact of outsourcing logistics provision on a supply chain cannot be overlooked as it has a direct bearing on its performance.

According to Luck (2004), the use of contract logistics frees up management time, enabling companies to devote more time to strategic issues and focus on their core business, rather than logistics as a secondary activity.

Luck (2004) also claims that logistics reduces the overheads associated with maintaining inventory and warehousing in-house. Other impacts of logistics outsourcing and supply chain performance include increased supply chain visibility and reduced risk.

Kroes and Ghosh (2010) investigated the degree of congruence (fit or alignment) between outsourcing drivers and competitive priorities, i.e. whether outsourcing decisions should be made in alignment with a company's competitive priorities. The study also assessed the impact of congruence on supply chain and corporate performance. The main findings were that outsourcing congruence in the five competitive priorities was positively and significantly related to supply chain performance.

The current economic outlook has forced companies to outsource key logistics processes, namely warehousing, transportation, clearing and shipping (Kaneshige, 2001).

According to Wilson (2001), the need to reduce costs and the increasing complexity of logistics technology are forcing companies to outsource transport and logistics functions. Despite this, companies are still reluctant to outsource critical logistics functions, even though third-party logistics is more likely to integrate logistics functions and thus improve supply chain performance. As a result, companies outsource in order to focus on activities that represent their core business, creating competitive advantage while reducing costs.



Similarly, according to Lynch (2000), companies that outsource have reduced their investment in expensive technology, warehousing and equipment. They have significantly increased their returns through improved asset performance and reduced costs. Another consideration with regard to outsourcing is the perceived addition of value to a company's operation, i.e. just-in-time, consolidation of shipments through cross-docking. This reduces transport and handling costs, thus improving the distribution process. Information and technology management was the most important value added by third-party logistics companies.

Supply chain visibility and access to real-time information on inventory status and shipping orders are important for improving logistics efficiency. It has reduced inventory levels and improved customer service. Consequently, the logistics service provider will be obliged to take the initiative in implementing them if the integrity and safety of goods is to be maintained during transportation, handling and storage. Measuring supply chain performance can facilitate a better understanding of the supply chain and improve its overall performance (Ravi 2001).

Information technology as a tool not only improves the effectiveness and efficiency of the supply chain, but also acts as a competitive weapon for corporate strategy, namely the outsourcing of logistics services (Ravendran 2002).

Information technology helps to coordinate and integrate the electronic flow of information throughout the supply chain network. This technology enables partners and customers to conduct effective and efficient business transactions, access information quickly, improve customer service, reduce paperwork, communicate better, increase productivity and save time.

Supply chain technologies that can boost supply chain performance include enterprise resource planning systems, supply chain planning systems, warehouse management systems, transportation management systems, extranets, radio frequency identification systems and demand forecast management systems (Helo and Szekely, 2005).

One of the visible effects associated with supply chain technology on supply chain performance is the integration of services such as transportation and warehousing with information-based services such as booking, freight rate calculation, routing and scheduling. The impact of logistics outsourcing on supply chain performance is undeniable.

According to Kariko (2012), outsourcing logistics services can contribute to business profitability by ensuring that goods and services are purchased at the right time, in the right place, at the right quality, at the right price and in the right quantity. A robust and efficient supply chain enables an organization to gain competitive advantage through superior customer service. A company needs to improve its operations in order to increase supply chain performance by creating value at every stage of the supply chain.

Sinha et al (2011) highlighted a number of reasons for offshore outsourcing, namely increasing efficiency and reducing labor costs while maintaining consistent quality. Outsourcing also brought flexibility in resource allocation and enabled relationships to be built through networks and alliances. Amacon, on its website (<http://amanet.org>), has defined a number of reasons why companies outsource, namely organization (improve efficiency), improvement (performance and innovation), finance (free up resources), revenue (access the market), costs (reduce costs) and employees (commitment and energy in non-core areas). In short, logistics outsourcing is closely linked to the performance of an organization's supply chain.

The main idea behind supply chain management is that the arrangement of business processes within a company and between companies can develop competitive supply chains. Companies are increasingly outsourcing logistics services to third-party suppliers (Berglund et al., 1999; Hertz and Alfredsson, 2003).

At the same time, logistics service providers have developed their core competencies in two main areas: the range of services offered, and tailor-made solutions for customers or specific customer segments (Fabbe-Costes et al, 2009).

Logistics activities cover the entire supply chain and are therefore becoming important for improving overall supply chain performance. The objective of the logistics process is to merge and organize all activities involved in the acquisition, conversion and distribution of goods, from raw materials to finished products, in order to achieve customer service objectives in an efficient and cost-effective manner (Byrne and Markham, 1991).

According to Berglund et al (1999) and Hertz and Alfredsson (2003), the logistics and transport sector is becoming increasingly important for companies, as supply chain management becomes more efficient. Logistics service providers can improve their performance partly because they have the ability to cooperate both upstream and downstream with supply chain partners, as well as in parallel with other logistics service providers (Hakansson and Persson, 2004; Mason et al., 2007; Persona et al, 2007).

Various authors believe that logistics service providers can improve quality, speed, service level, cost, performance and contribute to savings and profits in supply chains (Fabbe-Costes et al, 2009).

The product offered by the company is a complete logistics solution for the customer. The process of designing, implementing and managing a supply chain, from manufacturer to trader, as well as the continuous monitoring and improvement of supply chain performance, are carried out by the company solely for the customer's purse (Hakansson and Persson, 2004).

We can say that logistics service providers are supporting members of the supply chain. In other words, logistics service providers can support supply chain strategies (Bask, 2001).

A further explanation of supporting members has also been described by Lambert et al. (1998) as "primary members of the supply chain are facilitated by firms to distribute knowledge, grant resources or assets". Through logistics service providers, not only can the company improve its performance, but the supply chain can also gain benefits in the sense of focusing on core skills and capabilities, managing logistics to increase customer satisfaction levels, and seeking more cost-effective methods of service delivery (Bask, 2001).

A survey conducted by Aberdeen Group (2008) shows the changing role of local service providers in the supply chain. Companies evaluated their local service providers on the basis of traditional cost versus service factors and the roles they play, such as on-time delivery/shipping and inventory accuracy. The survey also shows the reasons for choosing logistics service providers on the basis of their roles in the supply chain, e.g. data quality, on-time delivery, accurate inventory management, electronic information exchange, etc. Customers trust third-party logistics providers because they have indirect relationships with suppliers. Customers rely on third-party logistics providers because they have an indirect relationship with suppliers. Third-party logistics providers therefore manage all the activities that complete the entire logistics flow, and monitor and process the performance of the various suppliers. The performance of these multiple suppliers has a direct effect on the efficiency of the entire supply chain (Xiao et al, 2009).

Brewera and Speh in 2000 used the term traditional logistics performance for supply chain performance management. This logistics performance management focuses on measurements of order fill rate, number of errors, costs allocated to inventory or delivery times, etc.



In general, the outsourcing of any business activity that was previously carried out in-house is considered outsourcing. Increased competition in the marketplace has forced companies to cut costs, and outsourcing has become a viable option (Peter Embleton Phillip and Wright 1998). Since then, to compete in the marketplace, companies have been using outsourcing as one of their business strategies. The key business activity that is outsourced to improve company performance is transport outsourcing (De Kluyver and Pearce 2006). Various terminologies are used to describe the outsourcing of logistics services, e.g. distribution contract logistics, contract logistics operational alliance and third-party logistics (Lieb and Randall 1996; Laarhoven and Graham 1994). Empirically, companies in the manufacturing sector are outsourcing their transport at a very rapid pace. The underlying objective is to achieve cost savings while improving service quality.

It has also led companies to develop long-term, sustainable relationships with their outsourced partners (Cooper 1993; Dapiran Lieb Millen and Sohal 1996; Cooper Lambert and Pagh 1997).

Companies that have outsourced their transport have not only succeeded in reducing their overall costs, but also in making their supply chain more agile. There are two main reasons for this. Firstly, outsourcing leads to lower capital investment, which further reduces depreciation and operational costs. Secondly, because the outsourced partner is specialized in the activity entrusted to it, service efficiency is increased (Lambert Cooper and Pagh 1998).

Lambert Cooper and Pagh's (1998) argument was analyzed empirically by Sohal Millen and Moss (2002). They conducted a study of Australian manufacturing companies to determine the influence of outsourcing on the cost and agility of their supply chain. The study revealed that transport outsourcing has a significant positive relationship with overall company cost and supply chain agility.

Similar results were also illustrated by Gammelgaard and Larson (2001); Vokurka and Lummus (2000). In explaining the importance of logistics in the supply chain, Stank Davis and Fugate (2005) mention that the success of a company depends on its supply chain, while the success of the supply chain depends on the performance of logistics, in particular transportation. He argues that the viable option for improving a company's transport performance is to outsource it to a service provider specializing in this specific area. This will not only increase transport agility, but also reduce a company's transport costs. In summary, the study concludes that transport outsourcing is the cornerstone of any manufacturing business. Similarly, Lin (2006) also explained that outsourcing contributes positively to a company's performance.

Similarly, Rodrigues Bowersox and Calantone (2005) assert that to achieve sustainable competitive advantage, companies must rely on their supply chain, which is furthermore dependent on the degree of outsourcing of activities. Strategic outsourcing of ancillary activities directly influences the performance of any company's supply chain.

In this context, the activity that companies can outsource from the outset is transport. Although outsourcing increases supply chain performance, it can also be disastrous for any company. If the company is unable to maintain relationships with external stakeholders, outsourcing can lead to a decline in business performance (Lai and Cheng 2003).

Srivastava (2006) studied Indian manufacturing companies to analyze the effects of outsourcing, in particular on these companies' supply chain performance. In the first analysis, the study showed mixed results where outsourcing only had a negative effect on the cost of doing business, and this relationship was not very strong. In the second analysis, the study divided companies into two groups, namely Group A: companies with the ability to maintain their relationship with outsourced partners, and Group B: companies with weak relationship management with their outsourced partners. The study revealed that in the first case, outsourcing had a significant negative impact on cost, and a significant positive impact

on companies' service quality. In the second case, outsourcing only affected cost. The results highlighted a very important element for outsourcing, namely an appropriate relationship with outsourced partners.

A similar study was carried out in China. It concluded that outsourcing not only reduces company costs, but also increases customer satisfaction.

The steady increase in the number of third-party logistics service providers is also seen as evidence of the growing trend towards outsourcing. This is further linked to the positive impacts of outsourcing on a company's performance.

Wilding and Juriado (2004) explain the reason for the increase in outsourcing in the UK FMCG industry by outsourcing their logistics services. The study mentions that outsourcing logistics services has considerably reduced logistics costs and improved supply chain performance.

Similarly, Murphy et al (1996) have also illustrated such findings in the past. The study states that most multinational companies outsource their transport. In explaining this argument, they mentioned that the reason for this trend towards transport outsourcing was due to its substantial impact on supply chain performance.

Numerous studies have shown a significant impact of outsourcing on supply chain performance (Bhatnagar Sohal and Millen 1999; Knemeyer Corsi and Murphy 2003; Langley Allen and Colombo 2003; Sohail Austin and Rushdi 2004).

Supply chain performance was assessed from two facets, namely cost and quality. While cost has been operationalized using companies' transportation costs. However, several researchers and strategists have taken quality into account.

Some researchers, such as Dapiran Lieb Millen and Sohal (1996); Cooper Lambert and Pagh (1997), consider a reduction in lead times and back orders as a sign of quality, while an increase in customer satisfaction is a sign of quality improvement.

Interestingly, outsourcing has influenced both cost and quality. Empirical studies reveal that outsourcing not only reduced the company's lead times and back orders, but also improved customer satisfaction.

For example, Sohail Austin and Rushdi (2004) studied companies in Ghana's manufacturing sector and concluded that outsourcing logistics provision not only has a significant relationship with customer satisfaction, but is also a major source of lead-time reduction.

Explaining the case of Latin American countries, Lieb and Randall (1996) describe that the majority of manufacturing companies in Latin America outsource their transport, but that not all companies manage to improve their performance.

Explaining the reasons with case studies of some of the selected companies, Lieb and Randall (1996) revealed that companies with the ability to maintain relationships with external stakeholders and with a high level of commitment were more likely to benefit from outsourcing.

Sahay and Mohan (2003) presented similar results in a study of Indian companies. They found that companies with a high level of commitment, better relationship management capability and extensive outsourcing experience had a significant impact of outsourcing on their supply chain performance.

#### 4. Research model and hypotheses

Through our literature review, our proposed conceptual model, which relates all the variables discussed above, is schematized as follows:

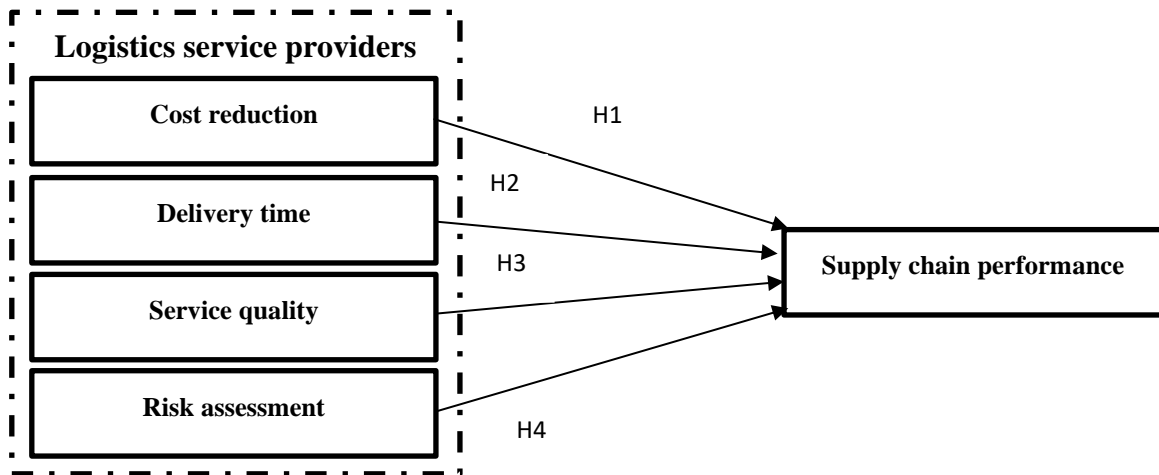


Figure 1: Conceptual search model

Source: Authors

Tableau 1 : Research hypotheses

Hypotheses	Authors
H1: Cost reduction influences supply chain performance	Sople (2011) ; Lynch (2000) ; Sinha et al. (2011) ; Sang (2010) ; Wilson (2001) ; Fabbe-Costes et al. (2009) ; Bask (2001) ; Brewera and Speh (2000) ; Cooper et Pagh (1998) ; Wilding and Juriado (2004).
H2: Delivery time impacts supply chain performance	Brewera et Speh (2000) ; Dapiran Lieb Millen et Sohal (1996) ; Cooper Lambert and Pagh (1997) ; Sohail Austin et Rushdi (2004).
H3: Service quality influences supply chain performance	Srivastava (2006) ; Kariko (2012) ; Sinha et al. (2011) ; Fabbe-Costes et al. (2009) ; Dapiran Lieb Millen et Sohal (1996) ; Cooper Lambert and Pagh (1997)
H4 : Risk assessment impacts supply chain performance	Tummala, R. and Schoenherr, T. (2011) ; Luck (2004) ; Wagner, S. M and Bode, C. (2008) ; Choi, T. Y. and Hartley, J. L. (1996).

Source: Authors

#### 5. Conclusion

In this article, we have progressively refined our field of research and developed a theoretical model integrating the key concepts of our thesis. The first part of the article was devoted to contextualizing the four fundamental pillars of our study: logistics, the supply chain, logistics services and supply chain performance, by positioning them within existing work exploring the various facets of this theme. The second part of the article undertakes an in-depth analysis of research into the impact of logistics outsourcing on supply chain performance.

In terms of research perspectives, our intention is to test the proposed research model in the Moroccan context. This will involve carrying out a quantitative study, including the preparation of a questionnaire aimed at logistics directors and managers of industrial companies in Morocco. The aim is to test the impact of logistics providers' practices on supply chain performance. The distribution of this questionnaire will enable us to collect empirical data and validate the relevance of our model in the specific Moroccan context.

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