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Strategies for Effective Logistics Outsourcing: A Case Study in the Serbian Market

Milan Andrejić*, Vukašin Pajić

Faculty of Transport and Traffic Engineering, University of Belgrade, 11000 Belgrade, Serbia

* Correspondence: Milan Andrejić (m.andrejic@sf.bg.ac.rs)

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Abstract: The viability of numerous businesses in today's competitive landscape is significantly influenced by their ability to successfully implement outsourcing strategies, particularly in the realm of logistics. Despite the extensive body of literature exploring the multifaceted dimensions of outsourcing, there remains a notable gap in research specifically addressing logistics outsourcing in distinct markets through in-depth case studies. This analysis seeks to bridge this gap by providing a comprehensive examination of the logistics outsourcing process, as evidenced by a case study within the Serbian market. The research delineates the essential steps required for the establishment of a productive logistics partnership, encompassing the identification of needs, selection of a trusted Logistics Provider (LP), integration of logistics solutions with existing IT systems, delegation of goods handling, assignment of intralogistics responsibilities to maintain compliance with prevailing standards, specification of shipping and delivery requisites, and the continuous monitoring of activities and key performance indicators (KPIs). Through a detailed exploration of transportation, customs clearance, warehousing, customs declaration filing, document exchange, software implementation, and cargo insurance, the study illuminates the intricate processes involved. It is highlighted that the key advantages of such collaborations include enhanced efficiency and streamlined operations, while potential risks involve dependency and loss of control over logistics functions. The distinctiveness of this study lies in its comprehensive approach to outsourcing, encompassing seven critical activities, as opposed to the existing literature which predominantly focuses on the outsourcing of singular services. By offering both theoretical insights and practical implications, this research not only contributes to the existing body of knowledge but also paves the way for future investigations into logistics outsourcing, with a particular emphasis on the Serbian market.

Keywords: Outsourcing; Logistics Provider (LP); Transportation; Warehousing; Customs clearance; Risks; Partnership

1. Introduction

Logistics outsourcing is highly attractive for companies aiming to allocate more time and resources to their core activities (Pajić et al., 2023). Outsourcing has become a megatrend for achieving cost efficiency and competitive advantage. However, despite numerous advantages, the implementation of logistics outsourcing also entails various risks (El Mokrini et al., 2016). Unfortunately, research indicates that risk assessment is not given significant attention, even though it is a crucial factor in decision-making regarding outsourcing and provider selection. Only through thorough risk analysis and effective negotiation can the benefits of outsourcing be realized, ensuring competitiveness in the market.

For this reason, the focus of this paper is the analysis of logistics outsourcing between an oil company and LPs operating in the Serbian market. Due to data privacy concerns, the oil company analyzed in this study will be referred to as Company A, while the companies to which it outsources activities will be denoted as LP1 and LP2. Company A stands as one of the top ten global oil companies. The primary reasons for choosing Serbia as a central point include its favorable geographical location and relatively acceptable labor and operational costs. Company A is distinguished by its partnerships with major automotive companies, an extensive range of cutting-edge products meeting the demands of various manufacturers, and customer support through direct company

representatives. The company's headquarters in Serbia serve as the primary hub for the entire southern Balkans, overseeing all other branches, with subsidiaries located both within and outside the country. On a global scale, Company A collaborates with over 10 partners and distributors.

The paper is structured as follows: Following the introduction, the second section provides a literature review related to logistics outsourcing. The third section outlines the implementation procedures during logistics outsourcing. The fourth section describes how the logistics activities of Company A are outsourced. The fifth section presents an analysis of the outsourced activities. Section 6 presents a discussion on logistics outsourcing, associated risks, and KPI. Finally, in the last section, concluding remarks, along with future research directions, are outlined.

2. Literature Review

In today's market conditions, companies find it increasingly difficult to survive, evolve, and become competitive if they undertake all operations within the logistics chain independently. It has long been recognized that outsourcing certain activities to specialized companies in the field is a strategic approach to reducing costs, a primary objective for any large system. In recent years, outsourcing has emerged as a highly popular operational strategy, enabling companies to concentrate on their core competencies, reduce capital costs, and enhance responsiveness to dynamic global markets and customer demands (Kakabadse & Kakabadse, 2005). This approach has been linked to improved performance (Bustinza et al., 2010). Outsourcing, as defined by Kotabe & Zhao (2002), involves contracting specific processes or functions within an organization to an external firm. According to Ellram & Billington (2001), outsourcing entails the transfer of activities and processes, once conducted internally, to an external party. Despite numerous definitions, one of the most widely embraced interpretations characterizes outsourcing as the engagement of an external company specializing in providing logistics services to enhance the efficiency and competitiveness of a company's logistics functions. When discussing logistics outsourcing, two distinct types can be identified. The first involves outsourcing only a segment of logistics activities to a LP, while the second entails entrusting the entire logistics sector to them. In most instances, companies opt for partial outsourcing, as they typically possess certain resources for executing specific logistic activities and also for better control and communication with clients. Complete outsourcing may represent a superior solution, considering the potential for achieving financial benefits and enabling the company to focus on its core business without the need to invest in logistics resources. However, the challenge with both forms of outsourcing lies in transferring the operational risk to another entity (the LP), thereby diminishing the company's control capabilities. To mitigate this risk, companies monitor them and implement tracking through KPIs, which will be elaborated on later in the paper. The case study discussed in this research pertains to the second scenario (complete outsourcing).

A literature review has identified a gap in studies addressing logistics outsourcing, which is the focus of this paper. Most existing literature primarily deals with provider selection issues, performance measurement of providers (during the outsourcing of specific activities), the impact of outsourcing on the supply chain, efficiency in outsourcing processes, and similar topics. For example, Gunasekaran et al. (2015), in their review paper, delved into questions regarding the selection of performance measures and metrics in outsourcing. Similarly, Akbari (2018) presented a structured literature review regarding logistics outsourcing. Kilibarda et al. (2020) presented a literature review regarding logistics service quality (LSQ). Alkhatib (2017) proposed a novel approach for the strategic logistics outsourcing process by determining the logistics-independent success factors (ISFs). In order to do so, the author implemented a fuzzy quality function deployment (QFD) to link the logistics requirements, strategic objectives, and ISFs and to select the LP. On the other hand, Benatiya Andaloussi (2024) examined how warehousing outsourcing can enhance a company's performance and agility in crisis situations. Domingues et al. (2015) proposed a framework for measuring the performance of a third-party logistics (3PL) provider. Noskov (2021) addressed outsourcing efficiency, where the aim was to evaluate the effectiveness of outsourcing and determine the factors influencing its effectiveness. Solakivi et al. (2013) addressed logistics outsourcing in Finnish companies, examining the relationship between outsourcing, its motivations, and logistics costs. Results indicated widespread outsourcing of transport activities, while many companies still manage other logistics operations internally. The study suggests an anticipated increase in outsourcing for product customization, inventory management, and warehousing. Major motives for outsourcing include cost savings, flexibility, and enhanced customer service. Similarly, Ali et al. (2023) investigated the drivers of logistics outsourcing in the UK's pharmaceutical manufacturing industry. Bajec & Tuljak-Suban (2017) addressed the ranking of criteria used in selecting LP. The identified criteria were grouped into four categories, and the AHP (Analytic Hierarchy Process) method was employed to determine their respective weights. Kilibarda et al. (2016) implemented the SERVQUAL model for measuring the quality of logistics services in freight forwarding companies in Serbia. Pajić et al. (2023) proposed a novel approach for the evaluation of a resilient 4PL (fourth-party logistics) provider for product delivery in e-commerce. The approach is based on fuzzy Full Consistency Method (FUCOM), Evidence Theory (ET), Rule-Based Transformation (RBT), and Weighted Aggregated Sum Product Assessment (WASPAS)

methods. On the other hand, Pajić et al. (2022) proposed a model based on Stepwise Weight Assessment Ratio Analysis (SWARA) and Measurement Alternatives and Ranking according to Compromise Solution (MARCOS) methods for sustainable transportation mode selection from the freight forwarder's perspective in trading with western EU countries. Afum et al. (2021) investigated the mediating roles of time-based competitiveness, cost-based competitiveness, and customer performance in the relationship between logistics outsourcing and financial performance. The findings reveal that logistics outsourcing has a substantial positive influence on time-based competitiveness, cost-based competitiveness, customer performance, and financial performance. Both time-based competitiveness and cost-based competitiveness were identified as having a significant positive impact on financial performance. However, customer performance did not show a significant impact on financial performance. The mediation analysis suggests that time-based competitiveness and cost-based competitiveness act as mediators between logistics outsourcing and financial performance, whereas customer performance does not mediate the relationship between logistics outsourcing and financial performance. The study (Zhu et al., 2017) aimed to clarify the role of the outsourcing management process (OMP), an operational mechanism, in two types of logistics service outsourcing: basic and advanced. The study found that OMP affects basic outsourcing's cost and delivery directly, while advanced outsourcing influences performance through interaction with OMP. Mageto (2022) explored the current and future trends of information technology and sustainability when outsourcing logistics activities. Dong et al. (2023) in their paper investigated whether the companies should outsource logistics activities to the e-commerce platform or a 3PL company. Based on the results, it was concluded that outsourcing to an e-commerce platform is better. Pani et al. (2022) developed models to quantify the relationship between logistics outsourcing and insourcing decisions. On the other hand, performance management during logistics outsourcing was studied by Simon et al. (2021).

3. Implementation Procedure

During the implementation phase, the initial step is for companies to proactively identify the need for logistics outsourcing and determine the appropriate level of implementation. The primary objectives of the implementation must align with the company's overarching goals. A crucial decision arises regarding whether to outsource specific operations or the entire spectrum.

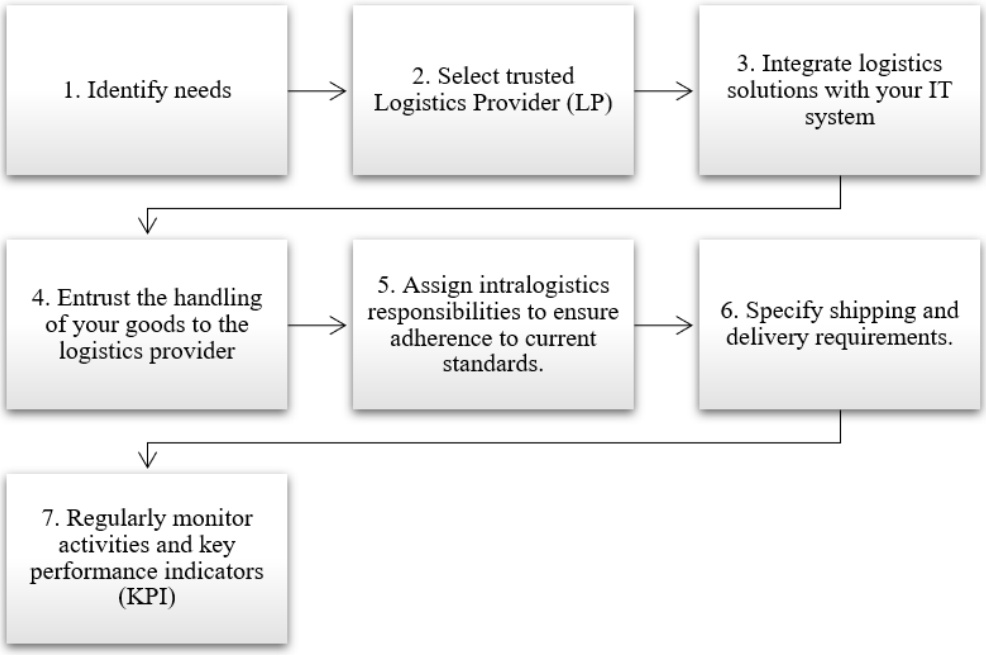

Figure 1. Outsourcing implementation procedure (adapted based on Verhulsel, 2024)

The subsequent step involves the selection of a suitable partner with whom the company can collectively achieve shared objectives, with the primary goal being the attainment of profits through the execution of core activities. Establishing a long-term partnership founded on mutual trust is paramount. Partner selection introduces a certain level of risk, and the company's future hinges on the choice of partners. Criteria for partner selection should primarily be based on the provider's reputation, compatibility of technology with user requirements, service execution speed, service quality, cost, and location. Collaboration between partners is primarily formal, involving verbal agreement on basic elements that express the needs of both contracting parties. The ensuing step entails

formalizing the agreement in written form, encompassing details related to the rights and obligations of the contractual parties. The collaboration agreement is a legally binding document between both parties. Crucial elements of the agreement include responsibilities, roles, goals, costs, expectations, duration, risk-sharing, and profit-sharing. The collaboration agreement between Company A and its partners is not publicly available and constitutes confidential information about the company.

Contracting marks the written initiation of the partnership. In practice, the partnership is at an initial stage, requiring a certain period to build trust and establish robust partner relationships. Company A has the shortest collaboration with LP1, lasting for 2 years. The company exclusively contracts external companies for one year, reviewing the collaboration after one year and deciding whether it is advantageous to continue with existing partners. The longstanding collaboration of the company with its partners has integrated certain operations into routine and daily practices, contributing to the acceleration of formal operations (e.g., when LP1 receives a loading order, it already knows which transport vehicle is needed, its dimensions, and characteristics to send to the loading site; after loading, unloading locations are automatically known, as well as the necessary accompanying documentation prepared before the vehicle arrives). Such a relationship with all partners contributes to the acceleration of operations, reducing unnecessary correspondence and formalities.

The final step in implementing logistics outsourcing is performance measurement. Performance measurement occurs after a specific time period, where the company evaluates the effects of the partnership based on indicators crucial for its business objectives. The continuation of collaboration with partners depends on these indicators, i.e., how the effects of logistics outsourcing are measured. Some of the indicators include costs, delivery accuracy, inventory management, flexibility, etc. Based on performance, the company A terminated collaboration with foreign transporters, after which LP1 handles all transport in international flows. When discussing the implementation procedure, it consists of the following steps (Figure 1).

4. Outsourcing Company A's Logistics Activities

Company A, as an international enterprise, has delegated a significant portion of its operations to companies specializing in such activities. Depending on the type, volume, requirements, timing, and quality of service execution, various domestic and foreign companies are enlisted. This holds true for all branches, whether large or small, in all countries where they maintain a presence. To comprehend the workings of logistics outsourcing, it is crucial to define the processes and goods flows. Company A is an international entity with its own facilities—factories dedicated to the production and processing of oil and oil derivatives. The majority of their production revolves around lubricants, with oils being their primary product. Serving as the primary representative for the Balkans, Serbia must import goods from the countries housing the production facilities and subsequently distribute them to larger clients.

The entire process commences with client orders. The order is logged and forwarded (based on the product type) to the respective factory. The factory provides feedback to the company's service in the form of an availability list, outlining all available quantities up to the specified date. The defined file is then sent to the client, who confirms or rejects the stated quantities, with this confirmation solidifying the loading request.

The transportation of goods abroad is delegated to LP1, which has its representation in Serbia. Meanwhile, domestic transportation (including some neighboring countries) is entrusted to LP2. Depending on the country in question, Company A's representation in Belgrade initiates a loading request (specifying quantities, type of goods, and loading dates), wherein, following the terms of the defined contract, they must promptly locate and secure a transport vehicle. Confirmation that the transport vehicle with the appropriate characteristics has been secured is provided by vehicle plates, which are sent to the factory where the goods are loaded, serving as a reference for the loading process. In this scenario, Company A creates a transport order encompassing all waybill numbers for each item. The transport order is dispatched at least two working days prior to the loading date. Larger factories in major cities adhere to precise loading times; failure to comply results in the exclusion of a delayed vehicle, with the loading process proceeding according to the predefined schedule. Penalties are incurred by the transporter for each day of waiting (lay days), which Company A is obligated to settle with the clients, covering this unexpected cost by a certain percentage. For some factories, the exact loading time (specific hour) is not defined, but the exact day or date of loading is stipulated and must be honored. The process of preparing the shipment (at the factory) from the moment of order varies based on the available stock. However, the expected waiting time is around 10 days, a duration specified in the contract with the client. LPs also possess the same information and are required to estimate approximately when the vehicle should be dispatched to the loading site to arrive for loading at the specified time. During this period, a notification of goods for the warehouse (the total truck receipt for the warehouse) must be submitted. Although Company A doesn't own a warehouse for receiving goods, it rents warehouses from its LPs. Depending on the LP, prescribed forms are utilized for notifying goods for the warehouse. Once the transport vehicle arrives at the loading site at the scheduled time, the process of loading the goods commences.

Serbia's non-membership in the European Union poses significant challenges during the import of goods, particularly in dealing with customs procedures and documentation. While goods transiting through European

Union countries usually require minimal additional documentation beyond what accompanies the goods, complications arise when entering non-member countries. In addition to essential commercial-trading documents, such as invoices and packing lists, specific international transport and customs documents like customs declarations, CMRs, and EUR 1 certificates become crucial. Moreover, due to varying legal regulations concerning environmental protection, certain goods, especially those with environmental implications like oils, require approval through specific declarations. These declarations outline the products' intended use, handling procedures, protective measures, and more. The preparation and submission of these declarations incur additional charges for clients. Importantly, the absence of a dedicated in-house customs department at the company, and this results in the oversight of the customs clearance process by logistics sector employees, with the actual customs clearance delegated to an external service provider. The division of responsibilities entails that export customs are managed through the domestic LP, while import customs are handled by the manufacturing facility. Prior to goods arriving at import or export customs, the company must proactively notify customs authorities, ensuring the preparation of all necessary accompanying documentation. This proactive approach not only serves as a precaution but also contributes to time efficiency and streamlined processing. Considering the unique characteristics of certain goods, especially those subject to sampling, it is common practice for customs to conduct sampling processes in accordance with prevailing customs regulations. An issue arises because, unlike other procedures, sampled goods are typically not compensated by customs. Although the economic impact may not be substantial, the challenge lies in the fact that clients may not receive the initially specified quantity due to the sampling process. Consequently, adjustments must be made to invoices to reflect these deviations (stock modification request). The CMR document serves as evidence that the goods underwent the sampling process. Facilitating the transportation of goods from the EU to its member countries, where these challenges are less pronounced, underscores the importance of streamlined procedures within the European Union. Clients located in Serbia receive all necessary accompanying documentation via express mail, while international clients benefit from the electronic delivery of documents, including invoices and CMRs, as proof of the completed service. In this digital context, email communications are considered as legally valid as traditional, signed contracts.

The subsequent procedures following the arrival of goods are stipulated by contracts. Depending on the client, the distribution of goods either takes place from temporary storage to their warehouses or, in the case of a small number of clients, they independently retrieve the goods using their own vehicles.

The final operation in this sequence is invoicing and payment collection. Invoices for specific factories are delivered alongside the transporter (driver) and serve as evidence that the specified goods have been loaded onto the truck, facilitating the crossing of borders. For factories in Central Europe, invoices are sent to customs, as the factory forwards the corresponding invoices to its branches. Depending on the client's contract, status, and location, payment terms are either 30 or 60 days, while clients from certain countries make advance payments (50% upfront). Additionally, clients procuring goods in smaller quantities make immediate payments upon the delivery of the goods, relying on the CMR as proof of delivered goods.

5. Analysis of Outsourced Activities

Chronologically observed, from the initiation of the goods flow to its realization, the outsourced activities are as follows (Figure 2): transportation and customs clearance, warehousing, customs declaration filling, document exchange, software implementation, and cargo insurance.

5.1 Transportation and Customs Clearance

From a physical standpoint, transportation involves the relocation of specific goods, delivering them to a designated location within an agreed-upon time-frame, and utilizing a mode of transport tailored to the characteristics of the goods. Company A lacks its own fleet of vehicles; instead, all transportation assets are leased from both foreign and domestic transport companies. As previously mentioned, international transport is managed by LP1, while LP2 oversees transportation within Serbia's borders and occasionally handles reexports.

In terms of collaboration with Company A, LP1 maintains an open-ended contract, allowing termination at any time without incurring costs or contractual obligations between the parties, fostering a certain level of trust in the company. The prices negotiated between these two companies are fixed for consistent routes; they are pre-defined and expressed in a foreign currency (€), with the only potential variation being influenced by changes in the euro-to-dinar exchange rate. Importantly, these two companies share a longstanding partnership spanning two years.

As a 3PL provider, LP2 has cultivated collaboration with Company A in the domains of domestic transportation and temporary storage. The partnership has been ongoing since the establishment of Company A in the region and is governed by a contract without a time limit. Either party can terminate the partnership at any given time. LP2 boasts a robust distribution network and significant available capacities in terms of storage space and transportation vehicles of various dimensions, sizes, and characteristics. They are considered one of the leading transportation and customs companies in Serbia. The transportation-related clauses in the contract are stringent, clearly defining

the rights and obligations of both parties. These contracts are established at the commencement of the collaboration and remain unchanged until both parties agree on necessary amendments. During the organization of transportation, the contract terms remain constant, with only elements such as price, date, and location subject to change. With each new transport, transporters receive a new transport order, while the contract serves as the baseline. Key elements defined in the contract include the price as the primary parameter, all necessary dates, terms, insurance details, and locations. The following will present the contract between Company A and transport companies, excluding elements related to the quantity and value of the shipment.

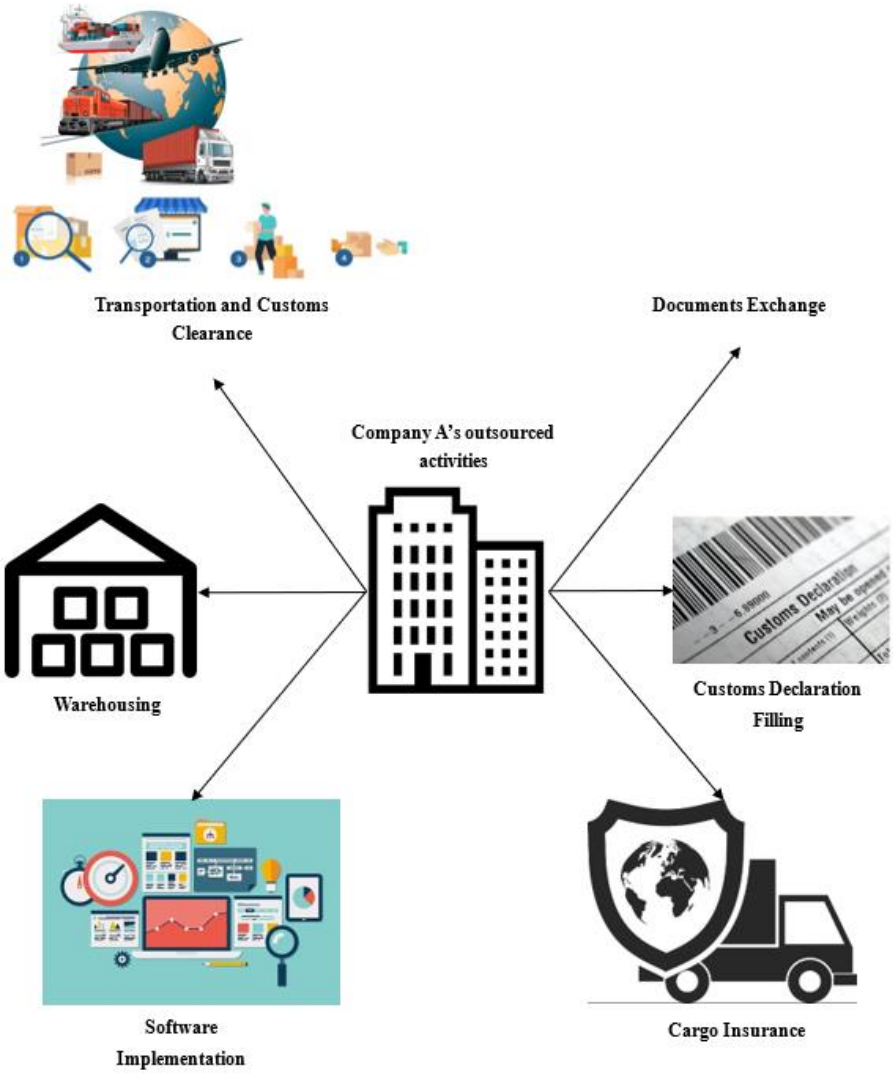

Figure 2. Outsourced activities

The transporter, upon acceptance of the transport contract, agrees to adhere to the following terms:

- Ensuring the confidentiality of business partners' identities is imperative, and direct communication with the client without Company A's knowledge is strictly prohibited.
- Transshipment and reloading of goods without Company A's awareness are not permissible. Unloading of goods is only allowed at the pre-agreed unloading location.
- The engaged vehicle for transporting goods under order must be covered by appropriate CMR insurance, encompassing the value of the transported goods as indicated in the transport documentation.
- The transporter is required to furnish Company A with the CMR insurance policy and authorize the verification of its validity with the insurance provider.
- Payment for transportation is contingent upon the provision of the original, sealed, and signed CMR, and is subject to resolution in the event of objections raised by the recipient.
- The compensation for the transporter includes a time allowance of 24 hours for loading and 48 hours for unloading, incorporating Saturdays after 4 p.m. and Sundays.
- The transporter must ensure that the entrusted goods are handled with the utmost care and shielded from any

form of damage, contamination (including packaging), adverse weather conditions, and unauthorized access. The transporter bears responsibility for implementing necessary precautionary measures and vigilance in accordance with the aforementioned requirements. During loading, vehicles must be equipped with suitable accompanying gear and arrive at the loading point in proper and clean condition, with a functional tarpaulin.

- The carrier is under obligation to ensure the safety of the vehicle during both loading and unloading operations, taking particular measures to prevent the possibility of the vehicle rolling, tilting, or overturning. The vehicles provided by the carrier should facilitate the entry of transport vehicles (especially forklifts) for the loading and unloading of goods. It is mandatory for the carrier to inform Company A prior to accepting the order if the vehicles have any restrictions in this regard. The carrier is also required to familiarize its employees with the importance of adhering to the specified safety provisions.
- The carrier is mandated to guarantee the presence of a driver during the loading process, and if attendance at the loading is denied by the shipper, it is obligatory to make a notation on the CMR or the bill of lading. Throughout the loading process, the carrier must exercise control over the loading of goods and, upon detecting any irregularities, raise objections with the loading personnel. In the event that the loading personnel do not address the carrier's objections or rectify the irregularities, the carrier must document a note in the bill of lading/CMR; otherwise, it will be deemed that the loading was conducted correctly, and the carrier will be held accountable for any damage resulting from improper loading of goods onto the vehicle.
- Before the vehicle commences its journey with the cargo, the carrier is obliged to notify both Company A and the shipper if any part of the packaging, loading methods, or cargo securing practices is deemed inappropriate. In addition to ensuring the secure loading of goods onto the vehicle, the carrier is also responsible for the proper utilization of its cargo-securing equipment. To meet these obligations, the carrier must supply sufficient quantities of suitable cargo-securing equipment.
- Upon taking possession of the goods and packaging, the carrier must, on-site, ascertain whether there are any disparities between the actual condition of the loaded goods and packaging and the information specified in the bill of lading/CMR. By signing the bill of lading/CMR, it is acknowledged that the carrier has accepted the goods and packaging in accordance with the details outlined in the bill of lading/CMR. In instances of any discrepancies, Company A is authorized to invoice the carrier for any discrepancies between the quantities stated in the bill of lading/CMR and the quantities determined at the delivery location. In cases of damage or deficiencies, the carrier must record the objection in the bill of lading or the CMR, request an endorsed report, and capture photographic evidence of the damage or deficiency.
- The carrier is under obligation to unload the goods at the recipient's specified delivery point and, in collaboration with the recipient, scrutinize the delivery process based on shipping documents. In the event of irregularities (such as damage, shortage, surplus, etc.), it is incumbent upon the carrier to promptly notify Company A. Subsequently, following the received instructions, the carrier must compile a report on the identified irregularities, jointly signing it with the recipient.
- The carrier will ensure that employees engaged in service provision adhere to regulations, procedures, instructions, and other acts pertaining to occupational safety and protection. Any non-compliance by employees engaged in service provision will be the responsibility of the carrier. The carrier commits to engaging only employees without a criminal record for property offenses. Engaged workers must be appropriately attired and comply with protocols and standards of business appearance and dress. Any negative consequences resulting from non-compliance with these obligations will be compensated by the carrier, covering damages incurred by Company A.
- The carrier is responsible for the axle load of the vehicle and must ensure the proper distribution of cargo within the vehicle.
- International payment transaction costs are borne by the payee, unless otherwise agreed.
- In the event that the carrier fails to adhere to loading/unloading deadlines and instructions specified in the order, the contracting parties agree that the carrier will bear any fines or damages invoiced to Company A by the client. In such cases, the carrier is also responsible for covering all costs incurred due to the mentioned failure to comply with loading/unloading deadlines and Company A's instructions.
- If there is partial or complete destruction, damage, or loss of goods during transportation, the carrier is obliged to compensate Company A for the damage, equivalent to the entire value of the transported goods at retail prices. If the client demands it from Company A, this compensation will be without the possibility of limited liability under the CMR Convention or any other regulation.
- Any deficiency or sampling of goods by customs officials, freight forwarders, or inspection authorities must be recorded in the CMR; otherwise, the carrier will be accountable for any shortages. The carrier must endorse any T5/TC11/EX1/T1 document at the last European Union border and provide the original to Company A.
- Outside closed operational areas, leaving vehicles and vehicle units is only allowed within supervised premises.
- The carrier must possess and ensure that its employed individuals have the necessary permits and approvals for transporting goods in domestic and international traffic (licenses, third-country licenses, CEMT licenses, valid

passports and visas, and all required technical documentation for international road transport according to the CMR Convention). The carrier is also obliged to submit a copy of the relevant Ministry's decision on its registration for international transport to the shipper before accepting the goods for transport.

- The carrier commits to respecting applicable minimum wage laws, ensuring timely and lawful payment of applicable minimum wages, and complying with legal obligations regarding documentation and reporting with stipulated deadlines and obligations.
- Without explicit written consent from Company A, the carrier is not allowed to engage any subcontractors. In the event of Company A's approval for subcontractor engagement, the carrier must provide all subcontractor documentation that it is required to submit, including evidence of insurance. The carrier must also ensure that its subcontractor complies with the obligations outlined in the order.
- Company A is obligated to promptly notify, in writing, of the following circumstances:

- Delays in the loading and unloading processes;
- Changes to the initially designated or planned vehicle or driver;
- Discrepancies between the shipping document and the transport order;
- Accidents, breakdowns of the transport vehicle, or other absences (e.g., technical issues, driver illness, etc.);
- Discovery of damage to the goods;
- Official inspections;
- Malfunctioning of cooling devices or other control devices;
- Deviations from the regular transport route;
- Anticipation that specified deadlines cannot be met;
- Reclamations from the recipient or refusal to accept the goods;
- Missing transport documentation, dangerous goods sheets, customs documentation;
- Any deviations from standard procedures.

- The carrier is explicitly prohibited from accepting additional shipments from the client without an appropriate order for taking over goods from Company A.
- Damages and costs resulting from the untimely positioning of the vehicle are the responsibility of the carrier. The carrier waives the right to a lien or retention of goods.

These represent just a subset of the key elements pertaining to the rights and obligations of the carrier. Transportation and customs operations, where the two are intricately linked, each causing the other, and neither capable of occurring independently, pose the most significant challenges in the transportation chain. The transportation process, involving the movement of specific goods from point A to point B, is particularly time-consuming. This is further exacerbated by Serbia's non-membership in the eurozone, resulting in a prolonged customs process and wait times during customs clearance (queues of transport vehicles at border crossings and the actual customs clearance process). Consequently, Company A, as a leading company, concentrates on other facets of the logistics chain, cultivating robust relationships with partners with an aim not only to acquire new ones but also to sustain strong business ties with existing ones. Hence, transportation and customs operations are entrusted to companies specializing in this line of work, with an appropriate fee for these services.

5.2 Warehousing

The interdependence of various logistics operations is highly pronounced within the logistics chain. Operations at the end of the chain cannot be executed without preceding operations. Warehousing is considered one of the non-compulsory operations, but its significance becomes crucial and necessary when specific circumstances dictate. The decision to store goods or not depends on numerous factors. One challenge that warehousing can introduce is delays in the transportation process, i.e., the delivery of goods. A delay in delivering goods to a designated location may result in the inability to receive the goods at the destination location during the scheduled unloading dates. The unloading schedule defines the dates/terms for unloading the goods. A delay in one transport vehicle can lead to the rescheduling of all planned unloading activities. To prevent other carriers from bearing the consequences caused by one transport company, a new unloading schedule is arranged. The question then arises about where to store the goods until the newly scheduled unloading. For these reasons, most transport companies have their own warehouses within the company premises. These are typically temporary storage facilities for short durations (from 5 to 10 days). Additionally, in many transport companies, this space serves as a location for customs clearance, known as "clearance on wheels." As a rule, if goods need to be stored due to the delay of a transport vehicle at the unloading site, the carrier bears the costs of storing the goods, as well as any additional expenses arising from the requirement to keep the goods in unchanged condition until delivery to the recipient. In all other situations leading to the storage of goods, due to the lack of timely and accurate information, subsequent changes in locations, delays at the unloading site, customs procedures, etc., the costs of warehousing are borne by the purchaser of the goods.

Taking the example of Company A, warehousing is entrusted to major carriers. Company A has its own warehouse located in Dobanovci. The role of this warehouse, which, in terms of its dimensions, falls into the

category of small warehouses, is to store repro materials, samples, materials for promotional activities, etc. This warehouse does not have the primary function of storing goods imported from abroad. LP2 has provided its warehouse capacities to Company A, with an appropriate fee, during the re-export of goods to Montenegro. Due to the organization of the re-transport, goods must be temporarily stored. The agreement between these two companies also defines the warehousing clause, the amount of compensation, the size of the leased space, as well as the manner of use and necessary handling equipment. Additionally, provisions regarding damage to goods during handling, compensation for shortages, and other sensitive details are specified.

5.3 Customs Declaration Filling

European regulations and regulations in the Republic of Serbia differ in certain elements, especially concerning environmental protection. The European Union has precisely outlined methods and measures for dealing with materials that are highly resistant to degradation and can penetrate the soil, impacting plant and animal life, as well as the overall environment and human health. The strictness of regulations and measures by the EU is also influenced by the type of product itself, its significance, market price, and global situations caused by this material. For these and various other reasons, significant attention is devoted to this matter. The laws are very stringent, particularly when transporting to countries that are not members of the eurozone. The Republic of Serbia has concluded an agreement that defines the conditions under which the import of these goods is allowed into the country. One provision of the agreement is the preparation of customs declarations. A customs declaration is a description of the product based on which its chemical composition, characteristics, handling methods, and precautionary measures can be seen. The preparation of declarations cannot be done arbitrarily; a special permit from the Ministry of Environmental Protection is required for this purpose. Company A, in collaboration with an external agency entrusted with implementing this operation, has primarily entered into a partnership agreement that defines the interests, rights, and obligations of the contracting parties. Special attention in the contract is devoted to protecting the information handled by the agency. Additionally, a period of ten days for the submission of declarations has been defined.

5.4 Documents Exchange

The international character and a multitude of branches in neighboring countries, along with a significant number of foreign factories, complicate the process of document exchange, where relying solely on electronic documentation is insufficient. The exchange of documents between the main representations situated abroad and other branches across the globe is practically non-existent; all information, forms, and templates are transmitted electronically. An exception is made for the documentation accompanying goods dispatched from specific factories. In this context, the services of an external company are unnecessary because all required documents travel alongside the driver. Company A has a longstanding collaboration agreement with an external courier service company, ensuring the company's privacy, specifying payment methods, and covering all necessary aspects. The courier service is frequently engaged for the dispatch and receipt of original documentation (CMR, customs declaration, EUR 1, etc.) accompanying the goods, which must be delivered to the client. Copies of these documents are archived internally as evidence of the received goods.

5.5 Software Implementation

The hallmark of LPs and other service providers lies in their ability to swiftly and efficiently resolve specific situations. To achieve this, having an adequate technological infrastructure, particularly in data exchange, is imperative. The utmost value for a company is derived from having accurate information at the right place and time. The characteristics of this information also determine other directly related activities. Various software solutions, serving to streamline external operations, constitute substantial investments for companies. These solutions, however, ensure a certain level of efficiency and security, especially in the exchange of internal data. A network of physically interconnected facilities must also be electronically well integrated. Presently, major industry players offer diverse software solutions for various logistics subsystems, including warehousing, transportation, finance, and marketing. The price and efficiency of operations are dictated by brand and quality, emphasizing the importance of investing in innovations. The process of implementing a software solution is a significant decision for any company. Initial analyses are crucial to determining the economic justification for implementing these solutions in any area. Despite the financial commitment required for these analyses, it is considered a better solution to implement the right software solution that aligns with the company's processes. Many companies have customized programs tailored to their business scope, operations, and client base. These tailored versions of certain software solutions are known as custom versions, offering a considerably lower cost.

From the perspective of Company A, acting as the primary hub on the map of the Balkan Peninsula and directing all other flows toward surrounding countries, possessing an appropriate technological solution is paramount. SAP

is one such software program that consolidates all internal company operations. Company A has been a long-time user of SAP solutions, and it serves as the cornerstone for executing all operations.

5.6 Cargo Insurance

The necessity for cargo insurance is determined by the intrinsic value of the transported goods. More valuable items carry a higher risk of being subject to misuse and various illicit activities. Consequently, the demand for cargo insurance has emerged, shifting responsibility and consequences to the other party. Crude oil and its derivatives have consistently ranked high in global markets due to their prices and have been constant targets of misuse. However, it's not only misuse; damages during transportation and handling due to various transportation methods and the necessity of combining multiple modes of transport, including cargo transshipment, are common issues. Goods are often insured while in storage. The diverse characteristics of packaging also pose challenges in transportation, serving as an additional reason to insure cargo.

Company A has established a collaboration with an insurance company, primarily focusing on insuring goods transported to Montenegro and Bosnia. Goods transported to Serbia (from factories in European countries) fall under the coverage of one of the European insurance companies with which Company A collaborates abroad.

6. Discussion

By examining the broader perspective, one can identify numerous factors that serve as primary catalysts for the advent of logistics outsourcing. These factors emanate from diverse life domains, including technological, legal-political, economic, geographical, and ecological aspects. The evolution of technology across various life domains has given rise to the need for more frequent, timely, precise, and secure delivery of goods, representing the primary objectives of logistics outsourcing. The process of delivering goods from one location to another involves a series of activities that entail additional time and costs. Over time, it has been noticed that certain individuals and companies excel in specific areas. They have capitalized on this advantage as a foundation for establishing logistics outsourcing. The paramount objective of every company is to ensure market survival, achieve profitability through its activities, compete with other companies, and differentiate itself from competitors. Through the implementation of outsourcing, companies not only reduce costs but also enhance production efficiency by eliminating unprofitable operations, leading to increased productivity. Another significant advantage is the delegation of certain operations outside the company's scope (such as transport and storage) to companies equipped with suitable resources and systems for executing these operations. Unnecessary investments in technologies unrelated to the company's core activities result in substantial costs, which are automatically considered tied-up capital. However, a drawback is that companies engaging providers for specific activities partially relinquish the degree of autonomy and control over the chain, contingent on the level of trust established with LPs. Challenges also arise concerning staff structure, the acceptance of innovation by employees, and other related factors.

From the perspective of Company A, representing an international company, the application of logistics outsourcing proves to be a highly effective solution for the numerous aforementioned operations. As a company with its main headquarters in a European country and an extensively branched distribution network worldwide, the company lacks the means to provide the necessary fleet to service the entire network. For this reason, engaging an external company is not only advantageous but also the only viable solution. Customs clearance and customs representation services are also entrusted to external companies. Owning warehouse space in economically less developed countries poses a considerable investment with uncertain prospects of recouping the invested funds. The rational solution is to enlist companies offering warehouse services. Many smaller operations accompanying various processes can also be outsourced. Company A cites the significant drawback of extensive documentation due to the involvement of numerous intermediaries, as well as a high number of managers, directors, and leadership personnel that must be constantly in contact. Additionally, the quality of service execution depends on all participants, and the demand for best practices is constant. The general conclusion is that, with appropriate implementation and execution, logistics outsourcing has more advantages than disadvantages. Company A, guided by experience, continues to use already-implemented services and explores the possibility of new options.

The collaboration with LP1 was reviewed after the first year of cooperation, taking into account information related to the accuracy of vehicle arrivals at loading locations, the percentage of damaged shipments over a one-year period damaged due to LP's fault, delays in arrivals caused by LP, as well as the quality and method of delivering goods (the condition in which the goods were delivered, unloading methods, etc.). The parameters showed that Company A has economic justification to continue its collaboration with LP1. On the other hand, Company A also faced issues with domestic courier services, resulting in changes to numerous courier services. The main reasons contributing to the termination of collaboration were inadequate delivery, loss of shipments, delivery delays, etc.

When contracting logistics outsourcing, it is inevitable that certain risks exist, considering that the entire process is further complicated by involving a greater number of companies (participants). For this reason, it is essential to

manage the inherent risks. Risk management encompasses specific steps divided into two groups: risk assessment and risk control. Risk assessment involves three processes: risk identification, risk analysis, and risk assessment, while risk control includes two processes: mitigation (risk reduction) and risk monitoring. All risks can be categorized into groups, distinguishing between operational, financial, technological, informational, relational, and internal risks (El Mokrini et al., 2016). Within each group, several main risks that require attention during outsourcing can be identified, as outlined below. Regarding operational risks, these primarily pertain to storage and distribution processes, including poor infrastructure and handling, subpar service performance, inflexibility, irregularity of operations within the company, delivery delays, inadequate quality, etc. Concerning financial risks, increased costs, the inability to achieve savings, loss of customers due to poor performance, the emergence of hidden costs, etc., can be outlined. Poor integration of IT solutions leading to issues in product visibility and traceability, as well as reduced innovation, stands out as a technological risk. On the other hand, information risks include strategic and operational information leakage and latent information asymmetry between the client and the service provider. Relational risks are associated with poor relationships with suppliers, reduced customer/supplier contact, and cultural conflicts. Finally, internal risks encompass inefficient management, a poorly drafted (ambiguous) or poorly planned outsourcing function, poor choice of partners (unsuccessful providers), unrealistic or high expectations regarding service performance, lack of skills for provider assessment, management, and monitoring, loss of control, dependence on the LP, problems with provider evaluation and performance monitoring, etc. All risks must be identified and assessed for priority, and appropriate measures should be defined. To achieve this, it is necessary to determine the probability of risk occurrence, the severity of the consequences, the likelihood of detection, the degree of risk exposure, etc. This task should be carried out by individuals trained in logistics auditing. Accordingly, it is essential to define suitable preventive and corrective measures to reduce or, if possible, eliminate the risk.

On the other hand, during outsourcing, it is crucial to define and monitor appropriate KPIs to assess providers. In this regard, some of the following KPIs can be defined (Outsourcing KPIs: Key Metrics for Success, 2024; Stokes, 2021; Maplesder, 2023; Jenkins, 2023):

- on-time shipping percentage,
- shipping accuracy,
- order accuracy,
- inbound receiving time,
- order time-to-fill,
- inventory accuracy,
- time to process the return,
- return rate due to shipping damage or error,
- cost per unit shipped,
- dock-to-stock time,
- shipping time,
- perfect order,
- number of shipments,
- lead time,
- capacity utilization,
- inventory turnover,
- truck utilization rate,
- truck turning,
- transportation costs,
- cost savings,
- quality of service,
- timeliness,
- customer satisfaction,
- efficiency,
- contract compliance,
- risk management,
- etc.

7. Conclusions

The paper presents a comprehensive overview of an international company that has opted for logistics outsourcing, entrusting specialized firms with the execution of its operations. This collaboration has endured for several years, with mutual trust being reaffirmed annually between Company A and its service providers. Company A consistently seeks to enhance this collaboration by articulating new demands and proposals to its partners daily,

addressing various situations. Overall, Company A has witnessed positive outcomes from logistics outsourcing and aspires to extend the delegation of operations to external entities on a larger scale wherever feasible. Finance and marketing emerge as areas with potential for future collaboration. The decision for Company A revolves around its willingness and capability to manage these activities with a team of experts. Furthermore, the delicate nature of these domains (finance and marketing) requires careful partner selection, involving significant responsibility and a thorough assessment of both advantages and disadvantages. The paper also outlines the implementation procedure for logistics outsourcing, the specific activities subject to outsourcing, and the associated risks. The paper delivers evident theoretical and practical contributions. The detailed methodological approach to establishing and implementing logistics outsourcing offers valuable insights for practitioners. Given the absence of similar papers in the literature analyzing logistics outsourcing in this manner, the paper addresses a gap and provides certain theoretical contributions. However, it is essential to note that specific quantitative data could not be presented in the paper to safeguard company privacy, which also represents the limitation of the paper.

The paper lays the groundwork for numerous future research projects. Identifying potential risks in outsourcing necessitates applying specific methods to assess the significance and priority of individual risks in future research. Another direction involves developing a broader set of KPIs for monitoring the realization of outsourced services and comparing different examples across various markets to identify key factors. Future research should also incorporate new criteria based on risks in the selection of providers. Additionally, a significant area for future research is the simulation of various scenarios when engaging providers and analyzing the KPIs monitored during logistics outsourcing.

Data Availability

Not applicable.

Conflicts of Interest

The authors declare no conflicts of interest.

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