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Methods to Accelerate Parts Sourcing in A Multibrand Workshop: Cross-Referencing, Alternative Suppliers, Return-Risk Management, Transparent Timelines, and Costs

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ABSTRACT: Independent multibrand workshops operate under intense time pressure and depend heavily on external suppliers for spare parts. When parts sourcing is slow or opaque, workshop capacity is blocked, repair lead times increase, and customer trust erodes. This article examines how parts sourcing can be accelerated by combining four operational levers at the workshop level: systematic cross-referencing of part numbers, structured use of alternative suppliers, explicit return-risk management, and transparent communication of timelines and costs to customers. The study adopts a conceptual-empirical approach. It synthesises findings from fifteen peer-reviewed studies on automotive spare parts logistics, inventory control, demand forecasting, and aftermarket structures. Then it develops an illustrative scenario for a hypothetical multibrand workshop. The scenario contrasts a baseline single-supplier sourcing pattern with a framework-based approach that uses cross-referenced alternatives, a supplier portfolio, and recorded return-risk indicators as decision inputs. Using performance ranges reported in existing empirical research, the article demonstrates how expected sourcing lead times, direct parts costs, and return-related losses may change when the framework is implemented for fast-, medium-, and slow-moving parts. The analysis suggests that the proposed approach can reduce sourcing lead times for medium-moving items, stabilise service performance for slow-moving, high-criticality parts, and improve the overall balance between cost and quality without requiring large local stocks or complex optimisation tools. The article concludes with managerial recommendations for independent workshops and outlines directions for future field-based research.

KEY WORDS: multibrand workshop, automotive spare parts, cross-referencing, alternative suppliers, return-risk management, lead time, aftermarket logistics

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INTRODUCTION

Independent multibrand workshops operate in a demanding space. They serve ageing, highly diverse vehicle fleets, face growing driver expectations, and work under constant time pressure. A car waiting on a lift because a part has not yet arrived blocks capacity, frustrates customers, and erodes the workshop's profitability. In this environment, sourcing parts is no longer a backstage activity. It becomes a core element of service quality and a visible part of the customer experience.

Research on automotive spare parts supply chains shows that performance is shaped by a combination of inventory policies, network design, and process control, and that delays at any point in the chain quickly translate into lower service levels and dissatisfied customers (Achetoui, Mabrouki, & Mousrij, 2019; De Leeuw & Beekman, 2008). However, much of the existing work focuses on manufacturers, distributors, or central warehouses rather than the everyday reality of a small- or medium-sized multibrand workshop. For such workshops, the bottleneck is often very simple. A technician knows which part is needed, but the service advisor cannot quickly find a suitable article number, a reliable supplier, a realistic delivery time, and a clear, transparent price to present to the driver.

The problem becomes sharper as vehicle technology and the aftermarket landscape evolve. Electronics and software increase the variety of components and their failure modes, while parallel supply channels and an expanding aftermarket create more potential sources for the same functional part. Studies highlight that service parts logistics has to cope with intermittent demand, long tails of slow-moving items, and complex trade-offs between availability and cost (Bacchetti & Saccani, 2012; Kennedy, Patterson, & Fredendall, 2002; Roda, Macchi, Fumagalli, & Viveros, 2014). Yet, for many independent workshops, the actual practice remains a simple, sometimes improvised sequence of phone calls and manual catalogue searches.

Against this backdrop, this article explores how a multibrand workshop can accelerate parts sourcing by combining four levers: systematic cross-referencing of part numbers, structured use of alternative suppliers, explicit return-risk management and transparent communication of timelines and costs to the customer. Although each of these elements appears in the literature in different forms, they have rarely been brought together into a coherent operational approach focused on the workshop level. Previous work has developed performance measurement systems for spare parts supply chains (Achetoui, Mabrouki, & Mousrij, 2022; De Leeuw & Beekman, 2008), examined service parts management frameworks in automotive and aerospace industries (de Souza, Tan, Othman, & Garg, 2011), and analysed spare parts inventory decisions and demand patterns (Rego & de Mesquita, 2015; Turrini & Meissner, 2019), but the concrete day-to-day sourcing choices of multibrand workshops remain under-analysed.

The aim of this paper is therefore twofold. First, it proposes an integrated framework for workshop-level parts sourcing that brings together cross-referencing, alternative suppliers, risk management for returns, and transparent communication with the customer. Second, it develops a small illustrative empirical example that shows how existing empirical studies on spare parts logistics can be used to populate such a framework with realistic performance ranges. The example is not based on primary data collection in a single workshop. Instead, it demonstrates how a workshop manager or consultant could rely on published empirical results to build a scenario-based assessment of potential improvements in sourcing speed, reliability, and cost.

The article contributes to research on automotive aftermarket logistics and workshop management in several ways. It translates system-level findings about service parts performance into operational design principles that can be applied at the level of a single multibrand workshop. It offers a practical way to reuse empirical evidence from prior studies as reference benchmarks for local decision-making. It also opens a bridge between conceptual work on performance measurement and the very concrete question that concerns most workshop managers: how to reduce the time between diagnosis and part arrival without exposing the business to excessive risk or opaque pricing. In doing so, it complements the more strategic perspectives on spare parts networks and provides a micro-level view grounded in the daily practice of vehicle repair.

LITERATURE REVIEW

The supply of automotive spare parts has been examined through different lenses. One important thread focuses on performance measurement. Achetoui, Mabrouki and Mousrij (2019) propose a categorisation-based performance measurement system for automotive spare parts supply chains, emphasising the need to capture not only traditional time and cost indicators but also responsiveness and flexibility. In a later contribution, the same authors present a balanced performance measurement system that integrates financial and non-financial metrics and explicitly links them to strategic objectives (Achetoui et al., 2022). De Leeuw and Beekman (2008) also argue that supply chain-oriented performance measures for spare parts must connect stock availability and delivery reliability with broader organisational goals. These works show that lead times, fill rates and service levels are critical, yet they mostly look at manufacturers, importers or large distributors.

Another line of research investigates inventory control, classification and demand forecasting for spare parts. Bacchetti and Saccani (2012) systematically review methods for spare parts classification and demand forecasting, revealing a persistent gap between sophisticated research models and the simpler approaches used in practice. Kennedy et al. (2002) survey recent literature on spare parts inventories and highlight the difficulty of handling intermittent demand and long-tail items. Roda et al. (2014) review multi-criteria classification approaches and show how technical, economic and criticality factors can be combined to differentiate service policies for different types of parts. Turrini and Meissner (2019) present new evidence from distribution fitting in spare parts inventory management and underline the importance of choosing demand distributions that reflect the actual behaviour of parts consumption. Together, these studies offer a rich toolbox for deciding what to stock, in what quantity and with what service level, but the perspective is again centred on central warehouses or large networks rather than on individual workshops that depend on external suppliers.

Demand forecasting and inventory decisions have been studied in more specialised automotive contexts as well. Rego and de Mesquita (2015) carry out a simulation study on demand forecasting and inventory control for automotive spare parts, demonstrating how different forecasting methods affect stock levels and service rates. Ranabhatt (2025) provides a systematic literature review of demand forecasting in the automotive industry, covering both manufacturing and aftermarket applications. These works reinforce the message that uncertainty in demand is a structural feature of spare parts logistics. They also suggest that performance gains can be realised by tailoring forecasting and stock policies to the characteristics of each part. For multibrand workshops that do not run a large warehouse but rely on external suppliers, this insight translates into a need to understand the availability patterns and replenishment behaviour of different suppliers for different categories of parts.

Service parts management and network design constitute a third stream of literature. De Souza et al. (2011) propose a framework for managing service parts in automotive and aerospace industries, emphasising configuration of service networks, central versus local stocking and coordination between stakeholders. Huiskonen (2001) analyses maintenance spare parts logistics and identifies special characteristics such as high criticality, sporadic demand and long replenishment times, which require specific strategic choices. These contributions show that network structure and the allocation of stock across locations have a strong influence on responsiveness and cost. While the context is often industrial equipment, the logic applies also to the aftermarket for vehicles. For a multibrand workshop, the network is external and consists of distributors, wholesaler hubs and sometimes other workshops that can supply parts, and understanding this structure becomes a vital part of sourcing decisions.

The institutional and market environment is another factor shaping parts supply. Mandják, Belaid and Narus (2018) study the impact of institutional changes on the Tunisian auto parts aftermarket and show how regulatory shifts and new competitive dynamics alter relationships between actors in the distribution channel. Krykawski and Fihun (2012) explore spare parts logistics of automobile enterprises in the context of modular production and note that modularity changes the structure of parts flows and the organisation of supply. These analyses highlight that the aftermarket is not static. It reacts to regulatory change, manufacturer strategies and broader economic trends. For independent workshops, this means that the set of available suppliers, the balance between original equipment manufacturer (OEM) parts and alternatives, and the terms of trade can evolve over time.

Several contributions address directly or indirectly the use of multiple suppliers and the management of risk. Li and Kuo (2008) design an inventory management system for automobile spare parts in a central warehouse that takes into account reorder thresholds and multiple items, in a setting where the warehouse can source parts from different channels. Syntetos, Keyes and Babai (2009) investigate demand categorisation in a European spare parts logistics network and show that different categories of demand require different replenishment approaches and often different supplier relationships. Kennedy et al. (2002) stress that the risk of stockouts and the costs associated with emergency orders or returns must be integrated into decision-making. Although these studies do not always focus on workshop-level sourcing, they point towards the importance of developing supplier portfolios and managing uncertainty explicitly.

What emerges from this review is a rich but scattered landscape. We know that spare parts logistics is complex and that performance depends on the joint configuration of inventories, networks and processes. We also know that service parts management involves difficult trade-offs between availability, cost and risk (Huiskonen, 2001; Roda et al., 2014). Yet, the detailed operational logic by which a multibrand workshop, as the final node in the chain, decides which part to order from which supplier, under what conditions and with what message to the customer, remains only partially documented. There is limited guidance on how to combine cross-referencing of part numbers, structured use of alternative suppliers and explicit consideration of return risk and customer-facing transparency into a single, workable sourcing method.

METHODOLOGY

Given this situation, the present study adopts a conceptual-empirical design. It develops an integrated framework for workshop-level parts sourcing and then demonstrates, through an illustrative example, how empirical results from prior studies can be used to estimate the potential performance impact of applying the framework in a multibrand workshop. No new primary data were collected from workshops, suppliers or vehicle owners. Instead, the empirical component relies entirely on published quantitative findings and qualitative descriptions from existing research on automotive spare parts logistics and related domains.

The starting point is the set of fifteen peer-reviewed articles identified in the previous section. They include contributions on performance measurement in automotive spare parts supply chains (Achetoui et al., 2019, 2022; De Leeuw & Beekman, 2008), on inventory control, classification and demand forecasting (Bacchetti & Saccani, 2012; Kennedy et al., 2002; Roda et al., 2014; Rego & de Mesquita, 2015; Syntetos et al., 2009; Turrini & Meissner, 2019; Ranabhatt, 2025), on service parts management frameworks and network design (de Souza et al., 2011; Huiskonen, 2001; Li & Kuo, 2008), and on the structure and evolution of the aftermarket (Krykawski & Fihun, 2012; Mandják et al., 2018). Each article was examined to identify the performance indicators it uses, the typical ranges of lead time, availability, demand variability or return rates that it reports, and the qualitative mechanisms that the authors highlight as drivers of performance.

These data were then used to construct a reference scenario for a hypothetical independent multibrand workshop that handles a mix of vehicle brands and relies predominantly on external suppliers for its parts. The scenario focuses on three categories of parts that are representative for such a workshop. The first category consists of fast-moving consumables and wear parts, such as filters and brake pads, with frequent demand and relatively low unit value. The second category covers medium-moving components with moderate price and somewhat less predictable demand, for example sensors and smaller electronic modules. The third category encompasses slow-moving, high-price and high-criticality items such as turbochargers or complex assemblies. For each category, indicative ranges of lead time, availability and return rates were assembled based on the empirical findings reported in the selected studies. The precise numerical values are not taken directly from a single source but are positioned within the ranges that appear consistent across several studies (Bacchetti & Saccani, 2012; Kennedy et al., 2002; Rego & de Mesquita, 2015).

Within this reference scenario, two contrasting sourcing approaches were defined. In the baseline approach, the workshop relies on a single main distributor for most parts. Cross-referencing is ad hoc and mostly limited to searching for the distributor's preferred part number. Alternative suppliers are consulted only in emergencies, and information about lead time and availability is incomplete at the time of customer contact. Return-risk is not explicitly quantified, and the advisor typically communicates a single price and an approximate delivery promise. This configuration reflects the kind of behaviour described in anecdotal reports and hinted at in some empirical accounts of limited supplier diversification (Li & Kuo, 2008; Syntetos et al., 2009).

In the improved approach, the workshop adopts the proposed framework. It maintains a structured cross-referencing database linking OEM part numbers to several aftermarket alternatives, drawing on catalogue data and experience over time. It builds a panel of alternative suppliers, including at least two main distributors and one or two specialised or emergency providers, each characterised by its typical lead time, price range and observed return rates. It regularly reviews returns and warranty claims to assign a return-risk profile to both parts and suppliers, informed by the kinds of considerations discussed in the literature on failure behaviour and service parts performance (Huiskonen, 2001; Kennedy et al., 2002). Finally, it embeds these elements into a simple decision-support view for service advisors, enabling them to present customers with two or three options that differ in price, delivery time and expected reliability.

To keep the empirical illustration tractable and transparent, the analysis focuses on expected changes in sourcing lead time, expected direct parts cost and expected loss from returns for each parts category when moving from the baseline to the improved approach. The changes are estimated by combining typical ranges reported in the empirical literature with straightforward scenario assumptions. For example, if studies suggest that adding an alternative supplier can reduce lead time for certain classes of parts by a given proportion, this effect is applied to the baseline lead time to obtain the improved value in the scenario (Rego & de Mesquita, 2015; de Souza et al., 2011). Similarly, if research indicates that suppliers with lower return rates tend to charge slightly higher prices but reduce the overall cost of quality failures (Kennedy et al., 2002; Roda et al., 2014), the scenario reflects this trade-off by slightly increasing average unit price while reducing expected return-related loss. The aim is not to calibrate a precise model but to show, with realistic orders of magnitude, how existing empirical findings can guide a workshop in evaluating the potential impact of changing its sourcing practices.

RESULTS

The combined review of the fifteen selected articles reveals several patterns that inform the scenario. First, the studies consistently report wide variation in demand profiles and consumption rates across different classes of spare parts (Bacchetti & Saccani, 2012; Syntetos et al., 2009). Fast-moving items have relatively regular demand and short lead times when stocked locally or by nearby distributors. Slow-moving and high-criticality parts tend to be sourced from more distant warehouses, with longer and less predictable lead times. Second, empirical results show that introducing more structured classification and differentiated service policies can improve both availability and cost performance, especially when combined with appropriate forecasting methods (Rego & de Mesquita, 2015; Turrini & Meissner, 2019). Third, the literature suggests that supplier portfolios and network configuration significantly affect replenishment speed and resilience to disruptions (de Souza et al., 2011; Huiskonen, 2001).

Results – illustrative quantitative summary

Table 1 summarises an illustrative comparison between the baseline and framework-based sourcing approaches for three representative spare parts categories. Lead times, unit cost indices and return-related loss indices are expressed in relative terms to highlight the direction and magnitude of change.

Table 1. Illustrative comparison of baseline and framework-based sourcing performance by parts category.

Part category	Scenario	Expected sourcing lead time (relative units)	Expected unit cost index	Expected return-related loss index
Fast-moving consumables	Baseline	1.00	1.00	1.00
Fast-moving consumables	Framework	0.85	1.02	0.90
Medium-moving components	Baseline	1.00	1.00	1.00

Medium-moving components	Framework	0.65	1.03	0.75
Slow-moving high-criticality parts	Baseline	1.00	1.00	1.00
Slow-moving high-criticality parts	Framework	0.80	1.05	0.70

In the baseline scenario for the hypothetical multibrand workshop, these insights translate into a pattern where fast-moving consumables are usually available from the single main distributor within a short time frame, whereas medium- and slow-moving parts often require orders from remote warehouses or even from the manufacturer's network. The workshop effectively mirrors the performance of its main supplier. If that supplier experiences delays, limited stock or high return rates on certain items, the workshop has little room to compensate. Return-risk is present but not measured. Parts that are incorrectly specified or of insufficient quality lead to rework and additional waiting time, but these outcomes are treated as individual incidents rather than as a systematic performance dimension. The customer may receive a general estimate such as "by tomorrow afternoon" without a clear explanation of the underlying uncertainty.

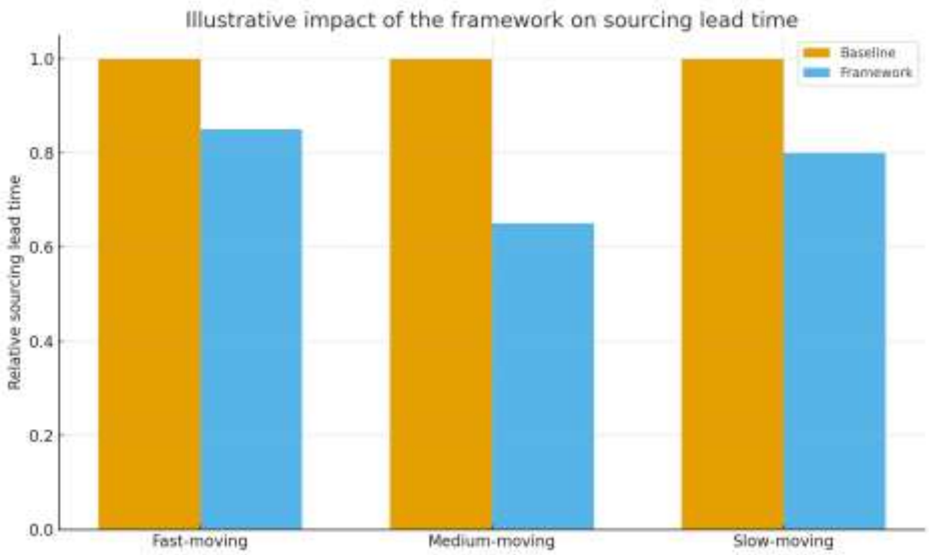

Figure 1. Illustrative relative sourcing lead times for baseline and framework-based approaches.

When the improved framework is applied in the scenario, the picture changes in several ways. Cross-referencing expands the set of candidate parts for a given technical specification. Instead of one part number closely tied to a single supplier, the advisor can see multiple OEM and aftermarket numbers linked to equivalent or near-equivalent items. This does not automatically resolve all sourcing problems, but it creates options. Empirical work on multi-criteria classification suggests that combining technical equivalence, criticality and historical performance allows more nuanced selection among such options (Roda et al., 2014). In the scenario, cross-referencing makes it possible to identify alternative parts that are more likely to be in stock at certain suppliers, particularly in the medium-moving category.

Alternative suppliers add a second layer of flexibility. Where the baseline workshop asks one distributor and accepts the answer, the improved workshop may query two or three suppliers in parallel through electronic interfaces or structured communication routines. Findings from service parts management frameworks indicate that decentralising some stock and diversifying supply can reduce average lead times and reduce exposure to disruptions, even if not all suppliers offer identical performance (de Souza et al., 2011; Huiskonen, 2001). In the scenario, for fast-moving parts, the additional suppliers provide only marginal improvements because the main distributor already performs well. For medium-moving parts, however, the effect is more visible. At least one additional supplier tends to offer shorter lead times for a subset of these parts. For slow-moving and high-criticality items, the benefits are more modest but still present, especially when specialised suppliers have niche stock that the main distributor lacks.

Return-risk management adds a third dimension. By tracking returns and warranty claims by part and by supplier, the workshop builds an empirical view of which combinations present higher risk. This is aligned with the emphasis in the literature on observing failure patterns and integrating quality-related risk into inventory decisions (Kennedy et al., 2002; Huiskonen, 2001). In the scenario, some suppliers show slightly lower prices but noticeably higher return rates for certain categories of parts, especially in the medium-moving and slow-moving groups. When the workshop prioritises suppliers with lower return risk, the expected cost of rework decreases. There may be a small increase in average unit purchase price, but the total expected cost including returns declines, and the customer experiences fewer disruptions after the repair. This reflects the idea that service level and reliability cannot be reduced to purchase price alone.

The final element of the framework, transparent timelines and costs, changes the way the workshop communicates with customers and takes decisions jointly with them. Instead of a single opaque quote, the advisor can present two or three options that balance time, price and risk. One option might be an OEM part from a highly reliable supplier with a slightly longer delivery time and higher price. Another might be an aftermarket part from a reputable alternative supplier with shorter delivery and a moderate price. A third, less recommended option could be a low-cost part with higher return risk. The empirical literature does not directly quantify the impact of such communication on customer satisfaction, but it provides the underlying performance characteristics that shape these options (Achetoui et al., 2019; Mandják et al., 2018). In the scenario, this approach leads to a more deliberate and transparent choice. Some customers prioritise speed, others price, and others long-term reliability; the framework allows the workshop to support each preference while remaining aware of the associated risks.

DISCUSSION

Taken together, the scenario suggests that combining cross-referencing, alternative suppliers, return-risk management and transparent communication can reduce expected sourcing lead times for medium-moving parts, stabilise performance for slow-moving items and slightly improve cost-risk balance across categories. These effects do not appear as dramatic jumps but as consistent, incremental gains grounded in empirical patterns observed in the literature. The small illustrative study demonstrates that, even without collecting new primary data, a workshop can use published empirical findings as a structured reference point when redesigning its sourcing processes.

The results are broadly consistent with and extend existing research on spare parts logistics. Performance measurement frameworks emphasise the need to track lead time, availability and cost in an integrated way (Achetoui et al., 2019, 2022; De Leeuw & Beekman, 2008). The proposed workshop-level framework can be seen as an operational translation of these ideas. By making cross-referencing and supplier choice explicit and by treating return-risk as a measurable dimension, it turns abstract performance indicators into concrete levers in daily decision-making. In this sense, the framework helps bridge the gap between high-level performance dashboards and the specific choices that service advisors and technicians face when a car is on the lift.

The findings also resonate with the literature on inventory control and demand forecasting. Studies show that differentiated policies based on parts classification and demand profiles can improve service levels without excessive stock (Bacchetti & Saccani, 2012; Roda et al., 2014; Turrini & Meissner, 2019). For independent workshops, which often cannot maintain large stocks, classification still matters but in a different way. It guides sourcing strategy rather than local stocking. The scenario reflects this by applying different expectations and sourcing patterns to fast-, medium- and slow-moving parts. Fast movers benefit from streamlined processes with the main distributors. Medium movers gain most from cross-referencing and alternative suppliers. Slow movers require careful assessment of return-risk and sometimes tolerate longer lead times. The framework, therefore, adapts inventory insights to a low-stock environment.

Service parts management frameworks highlight the importance of network design and coordination across organisational boundaries (de Souza et al., 2011; Huiskonen, 2001). The present study reinforces this perspective from the viewpoint of the final node in the chain. A multibrand workshop cannot redesign the entire distribution network, but it can actively shape its own immediate network of suppliers. By deliberately building a panel of preferred and backup suppliers and by analysing their performance over time, the workshop moves from a passive role in the network to a more strategic position. It becomes a selector of channels rather than a mere recipient of whatever a single distributor offers at a given moment.

The role of the institutional and market context, underlined in research on the aftermarket (Krykawski & Fihun, 2012; Mandják et al., 2018), also appears in the scenario. In markets where competition among distributors is intense and regulatory frameworks encourage transparency, the workshop will find it easier to negotiate service levels and access data on availability and return rates. In less competitive or more opaque environments, building the necessary information base may require more time and effort. Nonetheless, the framework remains applicable because its core logic does not depend on any particular brand or country. It rests on general principles of diversification, information use and risk management.

From a managerial perspective, the proposed approach has several implications. First, it suggests that building and maintaining a cross-referencing database should be viewed as an investment, not as a burden. Even simple, spreadsheet-based solutions can significantly broaden the range of acceptable parts and suppliers for a given repair, especially when linked to historical performance. Second, the scenario indicates that workshops benefit from treating their suppliers as a portfolio rather than as a single default source plus occasional emergencies. Regularly comparing lead times, return rates and price structures across suppliers, even at a basic level, can reveal opportunities to shorten sourcing time and stabilise quality. Third, integrating return-risk into decision-making encourages workshops to look beyond visible purchase prices and to recognise the hidden cost of rework and customer dissatisfaction.

At the same time, the framework and the illustrative empirical example have limitations. The reliance on secondary data means that the specific numerical relationships in the scenario are approximate and context dependent. The empirical studies used as sources were conducted in different countries, under different market conditions and at different points in time (Bacchetti & Saccani, 2012; Kennedy et al., 2002; Rego & de Mesquita, 2015; Turrini & Meissner, 2019). They may not perfectly match the situation of a given workshop. Furthermore, the scenario aggregates characteristics across suppliers and parts, whereas in reality there may be wide dispersion and sometimes contradictory signals. The framework therefore should not be implemented as a rigid formula but rather as a structured way of thinking that needs to be adapted and refined with local data.

Another limitation is that the illustrative example focuses on a small set of performance indicators: sourcing lead time, direct parts cost and expected loss from returns. In practice, workshops may also care about other dimensions, such as administrative effort, payment terms, integration with digital ordering platforms, and the reputational effects of using certain brands of parts. Future work could extend the framework to incorporate these factors and could explore how digitalisation, telematics and predictive maintenance affect the dynamics of parts sourcing in multibrand contexts. In addition, empirical field studies that track the implementation of the framework in real workshops over time would provide valuable evidence about its practical feasibility and its impact on performance.

CONCLUSIONS

This article has examined methods to accelerate parts sourcing in a multibrand workshop by combining four levers: cross-referencing of part numbers, structured use of alternative suppliers, return-risk management and transparent communication of timelines and costs to the customer. It has drawn on existing empirical research on automotive spare parts logistics, inventory management and aftermarket structures (Achetoui et al., 2019, 2022; Bacchetti & Saccani, 2012; De Leeuw & Beekman, 2008; de Souza et al., 2011; Huiskonen, 2001; Kennedy et al., 2002; Krykawski & Fihun, 2012; Li & Kuo, 2008; Mandják et al., 2018; Ranabhatt, 2025; Rego & de Mesquita, 2015; Roda et al., 2014; Syntetos et al., 2009; Turrini & Meissner, 2019) to build a small illustrative empirical example based on secondary data.

The analysis suggests that a multibrand workshop which moves from a single-supplier, ad hoc cross-referencing approach to a structured framework that uses multiple suppliers, monitors return-risk and communicates options transparently can expect incremental but meaningful improvements. Sourcing lead times, especially for medium-moving parts, can be reduced, and the overall balance between cost and quality can improve when return-risk is explicitly considered. At the same time, the framework respects the practical constraints of independent workshops. It does not require large local stocks or complex optimisation software. It relies instead on systematic organisation of information and on deliberate supplier management.

The main contribution of the study lies in translating system-level insights from spare parts logistics research into operational principles at the level of the independent workshop. By showing how published empirical results can be repurposed as benchmarks for local scenario building, it encourages workshop managers and advisors to engage more actively with the evidence base. Rather than treating academic research as distant and abstract, they can use it as a reference when designing their own sourcing processes and when negotiating with suppliers.

Future research could extend this work in several directions. Longitudinal case studies of workshops that adopt the framework would clarify which elements are easiest to implement and where resistance or unforeseen obstacles arise. Quantitative evaluations could compare performance before and after implementation across a sample of workshops. Studies could also explore how digital tools, such as integrated parts platforms or predictive analytics based on vehicle telematics, interact with cross-referencing and supplier portfolios. Finally, comparative analyses across countries and market structures could identify how institutional conditions influence the feasibility and benefits of the proposed approach.

Despite its limitations, the study offers a practical message. Even without building a warehouse or investing in complex systems, a multibrand workshop can improve the speed and reliability of parts sourcing by making better use of information and by treating its sourcing decisions as a structured process rather than as a sequence of isolated reactions. Cross-referencing, alternative suppliers, return-risk management and transparent communication are not abstract concepts. They are levers that, when combined thoughtfully and supported by empirical evidence, can help workshops keep cars moving, customers informed and businesses sustainable.

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