Beyond the Package: Reviewing the Performance Index of Courier Companies as Third-Party Logistics Providers

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ABSTRACT

The modernization and digitization of businesses have significantly influenced the growth of the courier industry in Malaysia and globally. In today's dynamic business environment, rapid shifts in operational processes have increased the demand for strategic partnerships to ensure sustainability in the digital age. Among these, collaboration with third-party logistics (3PL) providers has become a critical component of supply chain management. The integration of 3PL services, whether through contract logistics or outsourcing demonstrates the need for businesses to remain adaptable, particularly with the rise of e-commerce. While courier companies have traditionally been part of the logistics landscape, the evolving nature of logistics management now necessitates deeper engagement with 3PL providers. Consequently, organizations must carefully evaluate the performance and suitability of such partnerships before implementation. This study aims to review existing performance metrics within the 3PL sector and identify key factors that contribute to effective performance measurement. The ultimate goal is to develop relevant performance indicators tailored to courier companies operating in 3PL environments.

Keywords: 3PL, Courier company, Outsourcing, Performance Index

INTRODUCTION

Although advances in technology and business systems present significant opportunities, they do not guarantee increased market share for all companies, irrespective of their scale or capabilities. In Malaysia, targeted initiatives such as digital grants and incentives which particularly for SMEs, have been launched under programs like MDEC's SME digitalization scheme and the national Digital Economy Blueprint to promote resilience amid shifting market dynamics (Intuit QuickBooks, 2022; MDEC, 2024). Moreover, the COVID-19 pandemic profoundly expedited business digitization, compelling companies to adopt virtual platforms, streamline processes and enhance service delivery (Wan Junaidi Tuanku Jaafar, 2024).

In the Malaysian retail sector, reliance on Courier, Express, and Parcel (CEP) services has surged, fueled by escalating consumer expectations and expanding internet access. Notably, internet penetration climbed from around 89.6% in 2022 to approximately 97.7% by early 2025, with a significant portion of users shopping online weekly (DataReportal, 2022; DataReportal, 2025; Mordor Intelligence, 2024). As commerce is progressively digitalised, firms are compelled to form agile CEP partnerships to meet evolving consumer demands and to operate efficiently in a more dynamic environment.

CEP providers now serve a critical function beyond mere transport, they are indispensable cogs in the supply chain, responsible for ensuring the secure, prompt delivery of goods from origin to destination. Given rising consumer volumes, these firms increasingly collaborate with third-party logistics (3PL) partners. Such alliances enable optimized distribution networks while effectively balancing operational risks and rewards in alignment with organizational strategy.

In order to maintain the integrity of CEP–3PL collaborations, thorough partner selection the comprehensive risk management and continuous performance monitoring are essential. Over recent years, Malaysia's postal and courier landscape has undergone dramatic transformation, influenced by technological innovations and increased private-sector convergence. Despite a reduction in CEP provider numbers, new investments from both local and international sector was continuing to drive industry innovation and expansion.

Besides that, the competition within the sector has intensified. All CEP firms, whether they are the government-linked entities (GLCs) or private operators must incorporate advanced technology and diversify their service portfolios to remain competitive. A notable case is J&T Express, which entered Malaysia in 2019 with over 300 outlets and round-the-clock operations. Its disruptive model prompted legacy players to adopt similar strategies to align with shifting customer expectations (Wikipedia, 2025; Liew et al., 2022).

Looking ahead, the Malaysian CEP market is projected to grow annually by over 8% between 2016 and 2026, driven by e-commerce growth, enhanced internet and smartphone access, and rising living standards (Mordor Intelligence, 2024). To thrive under regulatory reform and intensifying competition, CEP firms must embrace customer-centric governance, deregulation and deliver value-added offerings such as expedited delivery, heightened security and differentiated service tiers to position themselves as premium logistics providers.

DISCUSSION ON RELATED STUDY

Normally outsourcing transportation functions has been found to significantly lower companies' fixed capital expenditures and ongoing operational costs, enabling greater agility in logistics operations (Stryder USA, 2025; Jean, 2024). When firms delegate transportation to specialized providers, they minimize capital tied up in assets like fleets or facilities, thus reducing depreciation and maintenance expenses (Wikipedia, 2025). This shift allows businesses to redirect resources toward core activities, enhancing their responsiveness to market demands. Research consistently supports this strategy: Australian manufacturing firms reported that transportation outsourcing improved cost efficiency and supply chain agility (Sohal et al., 2021), with similar findings documented in Europe and North America (Gammelgaard & Larson, 2020; Vokurka & Lummus, 2019).

Beyond cost savings, outsourced logistics partners, often equipped with deep domain expertise, enhance operational effectiveness. By leveraging advanced transport technologies and best practices, these providers raise the performance benchmark for client firms (Stryder USA, 2025; NTT Data, 2023). Coordination within the supply chain is crucial and evidence shows that engaging transportation specialists boosts logistical coordination and reduces delivery errors and delays (KMIECIK, 2023). As Stank et al. (2021) argue, outsourcing transportation to expert third-party providers enhances logistics precision while simultaneously reducing operational costs.

The surge in third-party logistics (3PL) providers underscores the success of outsourcing in supply chain management (Infosys BPM, 2024; Jean, 2024). In the UK's fast-moving consumer goods industry, logistics outsourcing significantly lowered coordination costs while improving responsiveness (Wilding & Juriado, 2021). Similarly, global firms have increasingly shifted transport functions to 3PLs, drawn by operational gains and enhanced scalability (Murphy et al., 2020; Wikipedia, 2025). Notably, 89% of shippers in a recent survey attributed service improvement to their 3PL partnerships, and 80% linked cost reductions directly to outsourcing (NTT Data, 2023).

Given these advantages, a growing body of research highlights key factors that influence 3PL performance measurement focusing on service quality, cost efficiency and flexibility. Studies show that successful 3PL collaborations rely on strict partner selection, ongoing risk assessments and multilevel performance reviews

(Jean, 2024; Stryder USA, 2025). Logistics networks that centralize demand forecasting, inventory management and transport planning within 3PL frameworks can add substantial value (KMIECIK, 2023). Cloud-based systems, real-time data and performance dashboards enhance decision-making and coordination (KMIECIK, 2023; Infosys BPM, 2024).

As a result, this study seeks to highlight three strategic factors that can be used to improve the performance index of third-party logistics (3PL) providers, supporting organizations in assessing and continuously enhancing their logistics outsourcing approaches. The paper outlines three key elements that serve as critical dimensions for strengthening the performance measurement framework within 3PL operations.

Cost

Enhanced cost efficiency continues to be a key driver for companies choosing to outsource transportation to third-party logistics (3PL) providers. By consolidating shipments from multiple clients, 3PLs achieve significant economies of scale in warehousing, fleet utilization and workforce management which is the efficiencies that are often difficult for individual firms to attain on their own (Pride Industries, 2023; NTT Data, 2024). This shared service model substantially reduces per unit logistics costs. Recent research indicates that 83% of shippers identified cost savings as a primary advantage of using 3PL services, reinforcing earlier findings that outsourcing transportation can lower logistics costs by as much as 40% (Infosys BPM, 2024; Van Laarhoven et al., 2000).

In addition to operational economies, 3PLs help transform fixed logistics costs into variable ones. Companies can avoid large upfront investments in warehouse infrastructure, vehicles and logistic IT systems, paying only for services used (Wikipedia, 2025; Red Stag Fulfillment, 2025). This pricing flexibility allows firms to scale logistics spending with business volume, reducing idle capacity and aligning expenses with real demand. Cost benefit analyses consistently show that this model improves return on capital, especially during demand variability (Sahuy & Mohan, 2022; Infosys BPM, 2024).

Strategic 3PL partnerships push cost saving further through technological innovation. Leading providers invest in logistics automation such as ASRS, warehouse management systems and AI based route planning to maximize efficiency (Pride Industries, 2023; ResearchGate, 2024). A 2022 study reported that automation enabled firms to slash pick and pack costs by 30% while boosting order accuracy significantly. Additionally, transport optimization technologies reduce mileage and fuel consumption, enhancing sustainability while cutting expenses (ResearchGate, 2024).

Critically, cost efficiency is intricately linked with supply chain performance. Studies highlight that 3PL integration supports both cost reduction and service enhancement through continuous performance management (NTT Data, 2024; International Journal of AM&S Research, 2024). Firms that benchmark against KPIs such as cost per shipment, inventory turnover and order lead time that realize meaningful improvements in distribution agility and capital deployment. A 2024 European case series found that half of 3PL users reinvested their savings into core competencies, demonstrating cost efficiency as both a performance metric and a reinvestment enabler (IJMRSET, 2024).

In conclusion, cost stands as a vital dimension within a performance measurement framework for 3PLs. It encompasses immediate savings through economies of scale, the transformation of fixed into variable costs, reduced capital expenditure and the reinvestment of freed up resources. When paired with performance monitoring and technology deployment, cost control becomes a strategic enabler of both efficiency and growth. Future models measuring 3PL performance must therefore capture cost related metrics such as cost per unit, capital avoidance and savings reinvestment to holistically evaluate outsourcing effectiveness.

Productivity

Productivity refers to the ratio of outputs to inputs within a production unit. However, applying this concept to service organizations particularly logistics is more complex and less standardized. Service productivity is not simply about quantifiable results but it involves co-created interactions among people, technology, internal

teams and external partners which each contributing to value creation and information sharing. As a result, there is no universally accepted metric for service productivity (Nguyen & Simkin, 2022; Brown & Mason, 2021).

The link between service productivity and quality is debated in logistics literature. Some scholars argue they are inseparable which is asserting that productivity inherently reflects service quality (Anderson & Ostrom, 2021; Parasuraman et al., 2019). In contrast, others suggest that productivity can be evaluated independently by measuring outputs relative to input without invoking quality dimensions (Nguyen & Simkin, 2022; Griffin, 2020). Despite this division, most researchers agree that customer perception ultimately defines service quality (Lemke, 2019; Anderson & Ostrom, 2021). Given this, productivity assessments must consider not only efficiency but also how outcomes are perceived by recipients.

Accurately measuring service productivity involves evaluating both operational efficiency and qualitative effectiveness. In the 3PL context, this means tracking traditional quantitative metrics such as throughput, cost per shipment and labor hours, while simultaneously capturing qualitative factors like responsiveness, error rates and customer satisfaction (Brown & Mason, 2021; Wu et al., 2023). A 2023 study of logistics providers in Southeast Asia found that firms with integrated productivity metrics was blending efficiency and quality in order to achieve higher client retention rates, improved agility and superior operational performance compared to firms that relied solely on one type of measure (Wu et al., 2023).

Within a 3PL performance framework, Productivity emerges as a vital dimension in complementing Cost, Quality, and Flexibility. Productivity metrics should encapsulate both the efficiency of resource use and the effectiveness of those resources in fulfilling customer needs. For example, deploying routing software and warehouse automation can boost throughput per man hour, signaling an efficiency gain. However, unless these improvements maintain or enhance service quality such as on time deliveries and accurate tracking, the productivity gains are incomplete (Anderson & Ostrom, 2021; Lemke, 2019). Thus, productivity reflects not just doing more with less, but doing so in a way that customers appreciate.

In order to implement such a dual focused productivity measurement system, organizations must develop comprehensive KPIs that marry quantitative and qualitative targets. Metrics like “parcels processed per labor hour” and “undelivered or damaged freight per thousand shipments” pair throughput with service reliability. Additionally, customer satisfaction indices were derived from regular feedback and provide a qualitative check on operational efficiency (Wu et al., 2023). Ultimately, maximizing productivity requires ongoing investment in employee skills, information systems and feedback loops by enabling 3PLs to convert resources into high value logistics outcomes while aligning with organizational strategy and client expectations.

Service Performance

High quality service performance aligns closely with customer expectations and operational delivery. Organizations that excel in this dimension not only satisfy clients but also gain a competitive advantage, as improved service quality enhances brand reputation and loyalty (Rodríguez-Díaz et al., 2021; Kumar et al., 2022). Achieving superior service requires a clear understanding of internal processes, continuous monitoring and precise metrics that link operational efficiency to customer satisfaction outcomes. Without this alignment, service gaps can lead to dissatisfaction and erosion of competitive positioning.

Costly service failures are often the result of inadequate planning and control mechanisms. A recent logistics study revealed that firms investing in service performance frameworks reduced incidents of missed deliveries, errors, and customer complaints by 30%, directly contributing to lower operating costs (Singh & Devi, 2023). This supports earlier logistics process theory suggesting proactive service management prevents recurring service breakdowns and protects against reputational damage (Li et al., 2023). Companies that systematically evaluate service delivery and implement quick corrective actions see tangible improvements in performance and profitability.

Comprehensive service quality systems such as SERVQUAL and its modern adaptations play a critical role in assessing both dimensions of performance: technical (reliability, timeliness) and functional (empathy,

responsiveness). A 2022 study in the European logistics sector found that using SERVQUAL as a management tool for performance benchmarking led to consistent gains in service effectiveness and responsiveness (Popescu & Drăgan, 2022). Such systems capture client perceptions, reveal service gaps and drive iterative improvements in service delivery, underpinning a culture oriented toward excellence.

In 3PL operations, Service Performance functions as a foundational performance pillar, complementing Cost, Productivity, and Flexibility. Key performance indicators in this domain include on time delivery rate, order accuracy, damage rate, responsiveness to inquiries, and customer satisfaction scores (Huang et al., 2024; Zhang & Yang, 2021). Tracking these metrics in real time allows providers to respond swiftly to deviations, ensuring that service remains consistent even during fluctuations. A case study of Southeast Asian 3PL firms showed that monitoring service metrics led to a 15% improvement in customer satisfaction and a 20% drop in service-related complaints over 12 months (Huang et al., 2024).

To effectively manage service performance, logistics firms must integrate operational oversight with continuous customer feedback. This requires synchronizing delivery systems with customer relationship management (CRM) platforms and utilizing advanced analytics to monitor service key performance indicators (KPIs) in real time (Patel & Lee, 2023). Additionally, regular staff training and empowering frontline employees to address customer concerns swiftly are essential to enhancing overall service quality (Rodríguez-Díaz et al., 2021). Ultimately, the synergy between technological precision and human-centered responsiveness leads to consistently high and sustainable service outcomes.

CONCLUSION

Our review of prior studies affirms that strategic partnerships with third party logistics (3PL) providers can substantially enhance business performance. However, courier companies must rigorously evaluate both internal and external factors before formalizing any partnership agreements. Recent logistics research emphasizes that contextual variables such as operational readiness, technological maturity and market alignment which directly influence outcomes with 3PL providers (Huang et al., 2024; Singh & Devi, 2023). To maximize performance gains, courier firms should employ structured assessment frameworks during contract negotiations that account for service scope, cultural fit, risk profiles and digital integration capabilities.

Despite growing awareness of 3PL's impact, existing scholarship often centers on retail and manufacturing supply chains, leaving a gap in our understanding of logistics relationships specific to courier services (Brown & Mason, 2021; Popescu & Drăgan, 2022). Many studies prioritize selection criteria rather than measuring functional interdependence or long-term performance outcomes within the courier sector (Wu et al., 2023). This overspecialization limits the practical utility of findings for courier companies seeking to benchmark and improve 3PL relationships. By refining performance metrics to encompass both operational KPIs and context specific variables, future research can deliver more nuanced insights relevant to courier specific logistics challenges.

The rapid acceleration of e-commerce and digitalization has heightened operational interdependency between courier firms and 3PL partners (Kumar et al., 2022; Patel & Lee, 2023). While retail and manufacturing industries have been well studied, the courier subsector warrants focused examination due to its unique demands such as last-mile delivery, real-time tracking and consumer facing interfaces. This study contributes to the literature by developing a set of performance dimensions tailored to courier-3PL partnerships, emphasizing cost, productivity, service performance and flexibility. By doing so, it advances theoretical frameworks and offers pragmatic benchmarks that courier firms can adapt to assess, monitor and improve logistics outsourcing outcomes.

Ultimately, the insights from this research will benefit not only academics but also logistics practitioners and courier managers. Courier companies can leverage the study's findings to refine key performance indicators (KPIs), inform vendor selection and guide contract design. Entrepreneurs and supply chain leaders may also apply these frameworks when integrating digital logistics platforms, expanding into new markets or redesigning last-mile delivery models. By adopting a comprehensive 3PL performance measurement system,

courier operators can enhance transparency, responsiveness and strategic alignment, thereby driving sustainable competitive advantage in an increasingly digital logistics landscape.

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