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A Holistic Supply Chain Framework To Drive Strategic Alignment: The EASIER Model

Victor del Pozo Triscón
Department of Nautical Sciences and Engineering, Universitat Politècnica de Catalunya (UPC), Pla de Palau 18, E-08003 Barcelona, Spain
Email: victor.del.pozo@upc.edu

Jaime Rodrigo de Larrucea
Department of Nautical Sciences and Engineering, Universitat Politècnica de Catalunya (UPC), Pla de Palau 18, E-08003 Barcelona, Spain
Email: jaime.rodrigo@upc.edu

James A. Rappold
Crummer School of Business, Rollins College, Winter Park, FL 32789, USA
Email: jrappold@rollins.edu

ABSTRACT

Designing an effective supply chain strategy that supports the firm's competitive strategy is increasingly complex, as priorities vary significantly across firms, markets, and industries and continue to evolve over time. While recent literature has gradually addressed the dimensions of effective supply chain strategy, knowledge remains fragmented and an integrated framework is still lacking. This study introduces the EASIER model (acronym of efficiency, agility, sustainability, integration, digital enablement, and resilience), a holistic and adaptable tool that bridges academic theory and practical application. Designed for simplicity and ease of implementation, EASIER serves both as a diagnostic and strategic decision-making model. It enhances managerial alignment by clearly mapping trade-offs and linking supply chain priorities to the firm's strategic objectives. Accordingly, by helping firms to assess their current and desired performance across key supply chain competences, the framework guides investment, transformation, and management attention toward the capabilities most critical to enabling full implementation of the business plan. In doing so, it advances the discourse on supply chain strategy and offers a practical, future-oriented pathway for leveraging supply chain management as a source of competitive advantage.

Keywords: *Competitive Advantage, EASIER Framework, Strategic Competences, Supply Chain Strategy, Trade-Offs In Supply Chain Management.*

1. INTRODUCTION

In recent decades, supply chain management has evolved from a predominantly operational function into a strategic domain with direct implications for competitive advantage. As firms face increasingly volatile markets, accelerated technological change, rising sustainability expectations, and recurrent global disruptions, supply chain decisions have become more consequential at the strategic level. This shift has increased the need for frameworks that help managers translate business priorities into coherent supply chain choices.

Once focused primarily on efficiency, competitive supply chain management (SCM) now encompasses broader goals, incorporating agility (Christopher, 2000), sustainability (Elkington, 1997; Carter and Rogers, 2008), integration (Lambert and Cooper, 2000; Frohlich and Westbrook, 2001); digital enablement (Büyüközkan and Göçer, 2018), and resilience (Sheffi and Rice, 2005; Pettit *et al*., 2010). Designing an effective supply chain strategy is an increasingly complex and dynamic challenge. The strategic competences required vary significantly across firms, depending on their industry, business model, and level of organizational maturity. Much of the academic literature to date has emphasized specific trade-offs (i.e., efficiency vs. agility) or addressed single topics, such as sustainability or digital supply chain. However, only a few contributions propose a robust and practical approach that aligns supply chain priorities with overarching business strategy. As a result, organizations often lack structured yet adaptable tools to support strategic decision-making in rapidly changing environments.

The present study seeks to advance the field by addressing the following research questions:

RQ1: How are strategic supply chain competences conceptualized and integrated in the existing supply chain strategy literature? In response to this question, the study develops a synthesis of the supply chain strategy literature to

identify and structure the main strategic competence domains emphasized in previous research studies.
RQ2: How can these competences be synthesized into a coherent decision-support framework that supports strategic alignment and explicit trade-off management? To respond to this question, the study adopts a Design Science Research (DSR) methodology to design, demonstrate and conceptually evaluate the EASIER framework as a strategic decision-support artefact through a cross-case study of four companies.

2. LITERATURE REVIEW

Definitions of supply chain strategy (SCS) emphasize different but complementary dimensions, including the pursuit of long-term competitive advantage (Harrison and New, 2002; Chopra and Meindl, 2016); the optimization of end-to-end flows of materials, information, and finances (Lummus & Vokurka, 1999; Mentzer *et al*., 2001; Naslund and Williamson, 2010); the coordination of partners and customers to enhance agility and resilience (Frohlich and Westbrook, 2001; Gattorna, 2015); and the alignment of supply chain decisions with demand and value creation in customer-centered contexts (Fisher, 1997; Naylor *et al*., 1999; Lee, 2004; Holweg, 2005). SCS has increasingly been recognized as a conceptual system that must align business objectives with supply chain design (Pérez-Franco *et al*., 2016). Building on this perspective, there is a need for more holistic and actionable approaches that help managers translate strategic priorities into coherent supply chain choices.

To operationalize supply chain strategy at a strategic level of analysis, this study adopts the notion of supply chain competences, consistent with the core competence logic proposed by Prahalad and Hamel (1990). A supply chain competence is a dynamic and systemic configuration of capabilities, technologies, processes, and knowledge that, when integrated purposefully, enables the supply chain to support and reinforce a firm's strategic goals. In this sense, the design of an effective supply chain strategy requires the combination of higher-order competences that align supply chain configuration with business strategy to create a competitive advantage. The six competences included in the EASIER framework, --efficiency, agility, sustainability, integration, digital enablement, and resilience--, are selected on the basis of three conceptual criteria: recurrence in the supply chain strategy literature, independence as strategic design domains, and collective strategic coverage with parsimony. The framework intentionally focuses on a limited number of strategic competences in order to maintain conceptual clarity and managerial applicability. Its objective is not to catalogue every possible supply chain capability, but to provide a parsimonious and operational representation of the key competences that shape the strategic configuration of supply chains. The relevant criterion for inclusion is not whether a construct is important, but whether it constitutes an independent strategic dimension of supply chain design rather than a sub-capability, enabling mechanism, or managerial practice. Of note, related constructs such as customer centricity, talent management, or innovation, which are discussed in the literature, are treated here as cross-cutting enablers, strategic orientations, or embedded sub-capabilities within these broader competence domains of the EASIER framework rather than as independent supply chain competences.

2.1 Efficiency

Efficiency refers to cost, profitability, resource utilization, productivity, and quality. This dimension has traditionally been the cornerstone of supply chain strategy, tracing back to early mass production methods pioneered by Taylor (1911) and Ford (1913), and later evolving through modularity and postponement; mass customization (Feitzinger and Lee, 1997); bottleneck management (Goldratt & Cox, 1984); and total quality management, ultimately consolidated through lean practices (Womack et al., 1990) and Lean Six Sigma approaches emphasizing cost, quality, and short-term performance (Harry, 1998). Toyota (Ohno, 1988) and General Electric (Eckes, 2002) are manufacturers that built their supply chain strategies around efficiency as a core competitive driver, while Aldi and Lidl are examples of retailing companies using an efficient supply chain as a competitive advantage. Key efficiency metrics include cost ratios, resource utilization indicators, productivity and quality measures, and financial indicators.

2.2 Agility and Responsiveness

Agility captures speed, flexibility and responsiveness. It is the competence to respond quickly and reliably to market changes, combining responsiveness, service consistency, and the capacity to absorb variability. Agility is essential for customer-centered supply chains in volatile markets with high product variety, uncertain demand, and service pressure. Demand-driven strategies rely on real-time data, flexible operations, and make-to-order configurations to minimize overproduction and enable fast adaptation (Goldman *et al*., 1995; Christopher, 2000; Holweg, 2005; Hult *et al*., 2007). Hybrid strategies combine lean and agile elements by positioning the decoupling point based on demand predictability, separating forecast-driven from demand-driven supply chain configurations (Naylor *et al*., 1999), defining make-to-stock, assemble-to-order, make-to-order, and engineer-to-order production strategies (Olhager, 2003). Zara created a vertically integrated, fast-cycle supply chain that moves from design to store in 2 to 4 weeks (Ferdows *et al*., 2004; Ghemawat and Nueno, 2006). Agility metrics focus on service performance, speed, and flexibility, typically including on-time in-full (OTIF), order cycle time, order cycle time variability, and measures of operational flexibility.

2.3 Sustainability

Sustainability encompasses environmental performance, social responsibility, circularity, ethical sourcing and environmental, social, and governance (ESG) legitimacy. This dimension has become a strategic imperative, driven by regulatory pressure, stakeholder expectations, brand reputation, and overall value creation. Companies increasingly adopt Environmental, Social, and Governance (ESG) frameworks (Elkington, 1997), and align operations with global initiatives such as the UN Sustainable Development Goals. Sustainable supply chain management requires a life-cycle perspective, addressing impacts across sourcing, production, distribution, and post-consumption processes (Carter and Rogers, 2008; Srivastava, 2007; Seuring and Müller, 2008). Patagonia exemplifies

sustainability by embedding environmental and ethical priorities throughout its supply chain, influencing upstream and downstream partners (Shourkaei *et al*., 2024). Key sustainability metrics include carbon footprint, energy and water consumption, waste reduction, recycled content, supplier diversity, and labor practice compliance.

2.4 Integration

Supply chain integration (SCI), encompassing internal, supplier, partner and customer integration representing a strategic framework to achieve seamless collaboration, has progressively evolved from internal coordination (Stevens, 1989) to inter-organizational collaboration (Lambert and Cooper, 2000; Muckstadt *et al*., 2001; Frohlich and Westbrook, 2001), increasing agility (Lee, 2004), boosting performance through practices such as Collaborative Planning, Forecasting, and Replenishment (CPFR) (Barratt, 2004), enhancing efficiency (Lee *et al*., 1997) and resilience (Pettit *et al*., 2013; Simchi-Levi *et al.*, 2014), while supporting sustainability (Guide and Van Wassenhove, 2009). Digital platforms applied to supply chain synchronize operations, support collective real-time decision-making, enable knowledge sharing, product training, and servitization models, allowing hyper-personalization and customized after-market services, all of which are amplified by network effects in e-commerce and digital manufacturing ecosystems. Dell's customer integration (Magretta, 1988), Toyota's internal integration (Kim and Cavusgil, 2009), Zara's agile vertical integration (Ghemawat and Nueno, 2006), Walmart's supplier integration (Kim and Mahoney, 2010), and Mercadona's development with inter-suppliers (Meliá-Martí *et al.*, 2024) and, more recently, platform-based ecosystems such as Alibaba and Cainiao coordinating third-party sellers and logistics partners through shared digital infrastructures, all exemplify the diversity and effectiveness of integration strategies in practice. Key performance indicators for SCI include the degrees of supply chain visibility and internal and external integrations, information sharing, and partnership performance.

2.5 Digital Enablement

Digital enablement includes dimensions such as core systems, data visibility, analytics & AI, automation, robotics, and cybersecurity. Digital enablement represents a systemic configuration of digital technologies and capabilities that can fundamentally transform business models and entire supply chains. The emergence of digital supply chains and digital supply networks enhances control, efficiency, customer-centricity, integration, flexibility, and sustainability (Hofmann and Rüsch, 2017; Büyüközkan and Göçer, 2018; Di Vaio *et al.*, 2023). Technologies such as internet of things (IoT), radio frequency identification system (RFID), 5G, and real-time data capture enable visibility and automation especially when combined with artificial intelligence (AI), cloud computing, blockchain, and big data analytics (Wang *et al.*, 2016; Wamba *et al.*, 2017; Queiroz *et al.*, 2020). However, implementation challenges and integration barriers remain common in practice (Rappold, 2003). Digital twins, predictive analytics, and AI-driven automation improve planning and execution across supply chains (Chiu and Liu, 2021). E-commerce growth has accelerated automation, while digital ecosystems foster real-time collaboration and decision-making (Chiu and Liu, 2021). SHEIN's combination of real-time data, AI, data-driven automation, and a decentralized micro-batch production system, exemplify the use of digital enablement for competitive advantage (Luo and Chen, 2021). Key metrics for supply chain digitalization typically emphasize the number and quality of digital products introduced, the maturity of core systems, indicators of automation, the digital impact, and the robustness of cybersecurity.

2.6 Resilience

Resilience refers to the supply chain's ability to anticipate disruptions, including through risk management, and to preserve functionality through absorption, response, recovery, and adaptation (Sheffi and Rice, 2005; Ponomarov and Holcomb, 2009). It becomes a source of competitive advantage when firms can react faster and more effectively than competitors under disruption (Wieland and Durach, 2021). Resilience arises from balancing vulnerabilities and capabilities such as flexibility, redundancy, visibility, collaboration, and agility (Kamalahmadi and Parast, 2016). In this context, risk management constitutes a fundamental component of resilience, encompassing activities such as risk identification, assessment, monitoring, and mitigation that enable organizations to anticipate potential disruptions and reduce their impact. Therefore, strengthening resilience requires proactive risk assessment (Ribeiro and Barbosa-Povoa, 2018), collaboration, and strategies like near-shoring, diversification, and contingency planning (Jüttner *et al.*, 2003; Tang, 2006; Pettit *et al.*, 2010). Leadership and culture also play a crucial role, especially in decision speed and resource reallocation (Sheffi and Rice, 2005). UPS's use of analytics and planning to maintain service under disruption (Sheffi, 2007) illustrates resilience as a core competence. Key resilience metrics focus on anticipation (e.g., risk exposure level), response (e.g., time-to-survive [TTS] and service levels under degraded conditions), recovery (e.g., time-to-recovery [TTR]), and adaptation.

2.7 Frameworks for Supply Chain Strategy

A review of the literature shows remarkable progress and complexity in the supply chain concepts. Efficiency and responsiveness were emphasized in early studies (Womack *et al.*, 1990; Fisher, 1997). Agility emerged subsequently as a competence to better manage volatility (Christopher, 2000; Harrison and New, 2002) paving the way for hybrid approaches such as leagility (Naylor *et al.*, 1999). Agility, adaptability, and alignment were then considered key levers for supply chain integration and reconfiguration (Lee, 2004). Thereafter, matching operational models (lean, agile, continuous replenishment, fully flexible) with behavioral purchasing patterns to maximize customer value were developed (Gattorna, 2015). As attention shifted to systemic risks, resilience gained prominence as a core competence to respond to disruptions, which Cecere (2012) integrated into a five-stage, practice-based maturity framework describing a sequential transition from efficiency to reliability, resilience, adaptability, and finally alignment. Also, sustainability was explicitly recognized as a core competence (Carter and Rogers, 2008).

The LARG framework integrates lean, agile, resilient, and green (emissions reduction, sustainable sourcing, reverse logistics, and closed-loop systems) principles, offering a structured model to define performance metrics, prioritize supply chain objectives, and guide practice selection (Cabral *et al.*, 2012). This is echoed by recent calls

Table 1 Comparative Analysis of Supply Chain Strategy Frameworks and Competence Coverage.

Framework	Reference First author, year	Efficiency	Agility	Sustainability	Integration	Digitalization	Resilience
Lean supply chain	Womack, 1990	High	Low	Medium	Low	Low	Low
Fisher's matrix	Fisher, 1997	High	High	Low	Low	Low	Low
Leagility	Naylor, 1999	High	High	Low	Medium	Low	Low
Agile	Christopher, 2000	Medium	High	Low	Medium	Low	Medium
Triple-A	Lee, 2004	Low	High	Low	High	Low	Low
SCOR	APICS, 2012; 2021	High	Low	High	Medium	Low	High
LARG	Cabral, 2012	High	High	High	Medium	Low	Medium
SC Excellence	Cecere, 2012	High	High	Low	High	High	Medium
Dynamic alignment	Gattorna, 2015	Low	High	Low	High	Low	Medium
Viable supply chain	Ivanov, 2020; 2022	Medium	High	High	Low	High	High

Low, medium, and high indicate the relative emphasis each framework places on the corresponding supply chain competence as interpreted from their theoretical scope and strategic focus in the literature. Ratings are qualitative and reflect the extent to which each capability is explicitly addressed by the framework

for viable supply chains, combining agility, resilience, and sustainability within broader ecosystems and supported by digital technologies to handle global disruptions (Ivanov and Dolgui, 2020).

Digital supply chains represent a strategic shift from linear, pipeline-based models to platform-based ecosystems, enabling transitions to service-based business models (e.g., from ownership to pay-per-use) (Porter and Heppelmann, 2014; Van Alstyne *et al.*, 2016). Reflecting this shift, the practice-based SCOR framework was renamed the SCOR Digital Standard, reorganizing performance attributes into resilience, economic, and sustainability dimensions (ASCM, 2021). However, most supply chain frameworks still fail to treat digitalization as a core competence, which often results in digital initiatives remaining disconnected from broader strategic supply chain design.

In response to RQ1, Table 1 presents a comparative analysis of supply chain strategy frameworks based on their theoretical scope and strategic focus.

3. METHODOLOGY AND MODEL DEVELOPMENT

This study introduces the EASIER supply chain model, a decision-oriented framework designed to support the strategic alignment of supply chain competences with business objectives in dynamic and uncertain environments. The framework integrates six strategic competences, -- efficiency, agility, sustainability, integration, digital enablement, and resilience--, each firmly established in the academic literature. Their combined use can be tailored to reinforce a firm's competitive strategy. Crucially, EASIER also incorporates performance alignment through key performance indicators (KPIs), ensuring that the strategic relevance of each competence is matched by measurable outcomes. Figure 1 summarizes the components of the EASIER model, highlighting core capabilities, dimensions, illustrating performance metrics, and providing a practical foundation for diagnosis, prioritization, and performance tracking.

The EASIER model applies a two-step methodology to assess how supply chain competences align with business objectives. It supports strategic alignment by evaluating their current configuration and performance, as well as defining their future orientation through the prioritization of competences according to strategic relevance and the establishment of appropriate performance metrics. By positioning competences as strategic levers, EASIER emphasizes that supply chains must be tailored to business strategy, as generic practices no longer create sustainable advantage. Instead, competitive advantage arises when firms cultivate and measure their strategic competences more effectively than the industry standard.

In contrast to a traditional gap analysis, the EASIER framework incorporates several distinctive features. First, it enforces prioritization by capping the total allocation of strategic relevance points at 16, compelling executives to make explicit trade-offs among competences. This mechanism prevents the common managerial tendency to classify all capabilities as equally strategic and instead surfaces the inherent tensions of supply chain strategy.

Second, the framework integrates a communicative layer through radar charts and competence-specific KPIs, enabling firms to visualize trade-offs, set objectives, monitor progress, and communicate supply chain priorities effectively to executive teams and cross-functional stakeholders. Finally, the methodology is designed for empirical validation across industries, providing practical evidence of how firms in different sectors apply and benefit from this structured prioritization process.

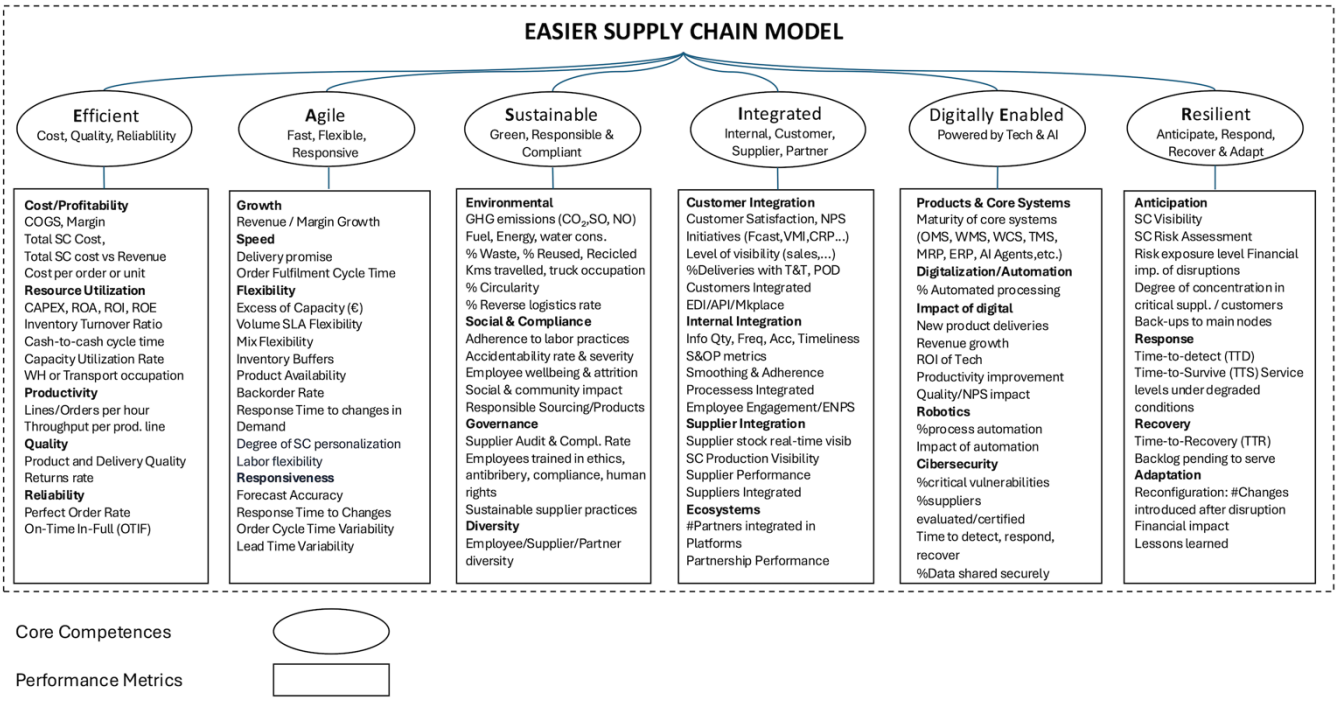

Figure 1 EASIER Supply Chain Model with Strategic Supply Chain Competences and Illustrative Performance Metrics.

3.1 Current State Assessment

The current state assessment captures the strategic focus and performance outcomes of each supply chain competence to establish a baseline and identify alignment gaps in two dimensions. First, "strategic relevance assessment" evaluates the extent to which each competence is prioritized in the firm's competitive agenda, drawing on objective criteria (e.g., presence in strategic plans, resource allocation, KPIs) as well as executive judgment (e.g., leadership discourse, cultural emphasis). Each competence is rated on a four-point scale, as shown in Table 2. To highlight inherent trade-offs in supply chain strategizing, the EASIER assessment applies a total allocation limit of 16 points, compelling firms to concentrate on the most critical competences while de-emphasizing those of minor importance. A sensitivity analysis was conducted by simulating alternative caps of 12, 16, and 18 points. The 16-point cap produced the greatest variance in competence prioritization across firms, indicating stronger discriminatory power while preserving managerial usability and enabling multiple strategic focus configurations. This allocation cap derives from a forced-distribution logic commonly applied in strategic portfolio prioritization. With six competences rated on a four-level Likert-type scale (1–4), the theoretical unconstrained maximum would be 24 points. Setting the cap at 16 forces trade-offs by limiting the average score to 2.67, thus preventing homogeneous "high" ratings across all competences. This mechanism reflects the fundamental reality of supply chain strategy, where organizations must balance competing priorities, such as cost efficiency, responsiveness, sustainability, and risk management. The four-level scale was intentionally selected to avoid central tendency bias commonly associated with five-point scales and to promote categorical strategic positioning rather than incremental scoring. This prioritization mechanism mirrors real strategic decision-making processes, where firms must allocate limited managerial attention and resources across competing supply chain capabilities.

3.2 Future Strategic Orientation

This phase focuses on aligning supply chain competences with the business objectives defined in the company's strategic plan, positioning them as enablers of competitive advantage. It requires reassessing the strategic relevance of each competence considering future priorities and defining success through targeted KPIs and expected outcomes. The scoring methodology from Table 2 is reapplied to reprioritize competences according to emerging strategic needs. Firms with higher strategic maturity may employ structured approaches such as the analytic hierarchy process or weighted scoring models, while others may rely on executive judgment or budget allocation as proxies for relevance. The EASIER framework accommodates both approaches, ensuring adaptability to organizational context. Once priorities are set, specific performance metrics must be defined, with emphasis on those competences identified as most strategic, and initiatives and choices should be defined and prioritized to reach the objectives. The process must be repeated as per every new business plan, or when competitive landscape is changed.

3.3 Continuous Alignment

The model is grounded in three complementary theoretical lenses. First, the Resource-Based View (Barney, 1991) informs the selection of valuable, rare, inimitable, and organized (VRIO) resources, operationalized through six supply chain competences that drive competitive advantage. Second, Dynamic Capabilities Theory (Teece *et al.*, 1997) explains the firm's ability to integrate, build, and reconfigure internal and external competences in response to changing environments. Third, Contingency Theory (Donaldson, 2001) emphasizes that organizational performance depends on achieving a fit between structure and contextual conditions, guiding the alignment of supply chain competences with the firm strategy and environment.

Table 2 Strategic Relevance Scoring Scale for EASIER Supply Chain Competence

Level	Definition
4 Strategic imperative	Strong management focus. Clear strategic objectives, metrics are existing, populated and follow-up recurrently. Strongly embedded in the culture of the company. It is normally in the objectives and key results (OKRs) of the executive committee. Directly tied to the achievement of core strategies objectives. Its underperformance threatens the success of the strategic plan
3 Functional priority	It is a priority for the company and has resources associated, but not mission-critical on its own. It has high impact and is normally presented in functional OKRs. Enables and accelerates the execution of ongoing strategic initiatives
2 Capability builder	Develops foundational capabilities necessary to unlock future strategic opportunities. It has latent value, preparing the ground for impact. Perceived as needed, but to be developed with limited capacity and investment
1 Market readiness	Required to meet legal, regulatory or industry standards, but without strategic value. Minimal resources to get market readiness. Not perceived as a competitive lever for the company

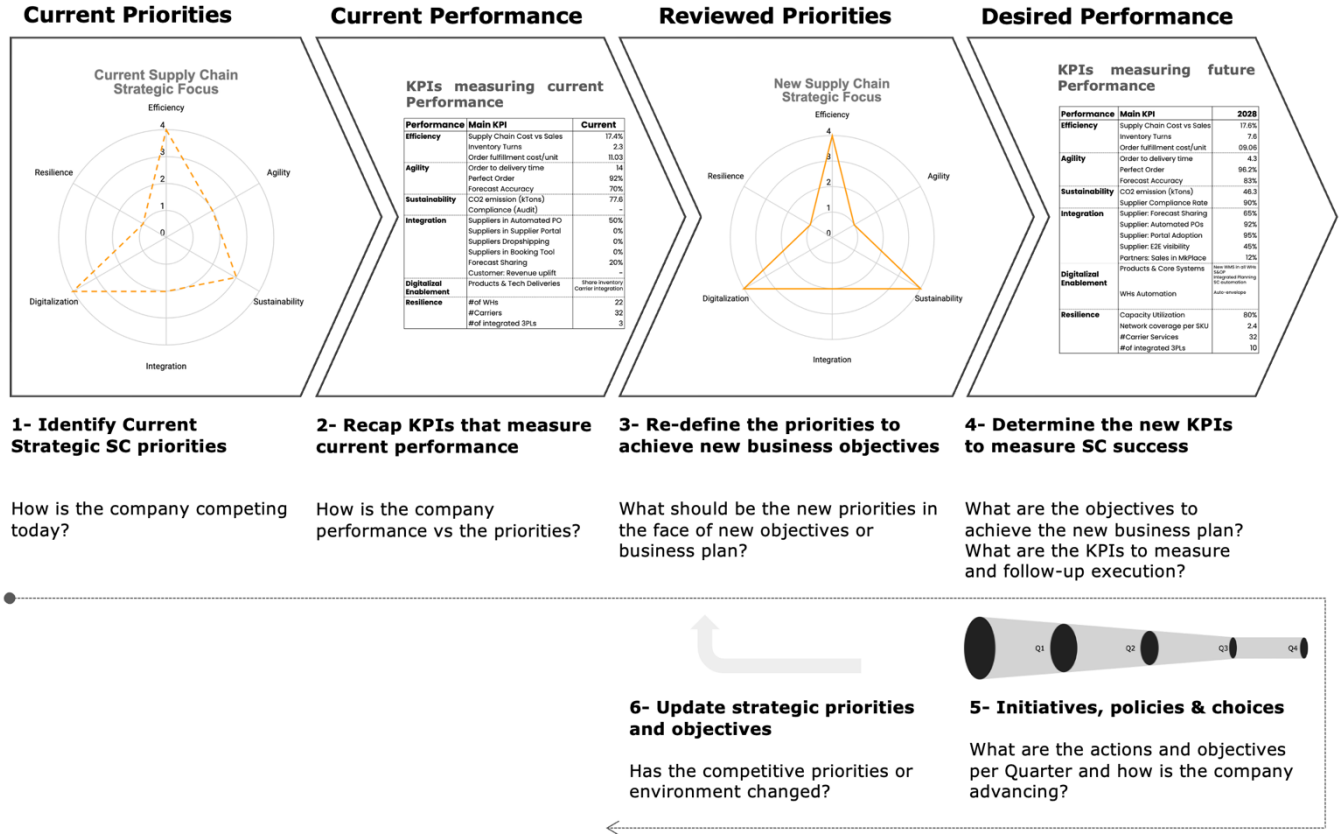

Figure 2 The EASIER Cycle for Supply Chain Strategy Alignment.

Building on these foundations, EASIER is conceived as a process of strategic realignment in response to internal developments, competitive dynamics, and evolving business plans. Figure 2 illustrates this logic, showing how the framework supports the realignment of supply chain competences with strategic priorities over time.

4. EMPIRICAL APPLICATION / RESULTS

This section presents the demonstration and exploratory cross-case evaluation of the EASIER framework through industry-based action research with senior C-level executives involving 4 companies from different industries, with different size, SC maturity and strategic agenda. Company selection is shown in the Table 3.

To provide an initial external validation of the framework, structured feedback was collected from senior supply chain executives in the four companies. Data were collected through a structured qualitative–quantitative questionnaire specifically designed to operationalize the EASIER Supply Chain Model in organizational settings. Data collection followed a two-stage process between January and November 2025. The questionnaire is included in the Annex.

1) **EASIER Model Application**. Semi-structured interviews (60–90 minutes) were conducted with key informants per company, including senior and C-level executives. These sessions developed the application of the EASIER Model to examine the alignment between supply chain and business strategy, assessing to what extent supply chain priorities, competitive advantages, and executive communication were consistent with the firm's strategic plan, and facilitated the selection of relevant KPIs to evaluate each competence.

Veepee Group: an efficiency-centric digital retailer shifting from agility to sustainability

TENDAM Group: an efficient, integrated fashion retailer doubling down on digitalization

ACROSS Logistics: an agile, resilient freight forwarder with digital at its core

LVT Moto: an efficiency-driven transport company evolving toward agility and customer integration

Figure 3 Changes in Supply Chain Strategy Focus under the Perspective of the EASIER Model.

Table 3 Companies Selected for the Multiple Case Study

	Business Type	Revenue	SC Maturity	Strategic Phase	Informant
Veepee Group	Online Flash sales	3.300 m€	High	New Business Plan, long-term ownership agenda	SC Director
TENDAM Group	Fashion retail	1.290 m€	Very High	New Business Plan after acquisition	COO & CTO
Across Logistics	Freight forwarding	100 m€	Medium	Continuation strategy	CTO
LVT Logistics	Contract logistics	9 m€	Low	New Business Plan after acquisition	Managing Director

Table 4 Changes of Main KPIs for the Six Domains of the EASIER Framework in a Case Study

EASIER	Main KPI	2019	2022	2025
Efficient	SC cost/sales	20.4%	18.9%	17.6%
	Inventory turns	2.3	4.2	7.6
	Order fulfillment cost/unit	11.03	10.01	9.06
Agile	Delivery time	5.9	3.8	4.3
	Perfect order	92%	95%	96.2%
	Forecast accuracy	60%	75%	83%
Sustainable	CO_2 emission kt	77.6	62.6	46.3
	Sup. compliance	-	50%	90%
Integrated	Fcast. sharing	20%	40%	65%
	Automated POs	50%	70%	92%
	% Web Portal	0%	30%	95%
	E2E visibility	0%	30%	45%
	% Sales in Marketplace	0%	5%	12%
Digitally Enabled	Products	OMS	Dropship API	New WMS
	Core system	TMS	Supplier portal	S&OP
		PIM	TMS	IBP
		Mktplace	AI forecasting	AI automation
	Warehouse Automation	Pouch sorter	Cross-belt sorter	Automated packing
Resilient	Capacity utilization	56%	70%	80%
	SKU coverage	1.3	2	2.4
	# Carriers	20	28	32
	# 3PLs	3	7	10

Sup.: Supplier; PO: Purchase Order; OMS: order management system; API: application programming interface; TMS: transport management system; PIM: product information management; Mktplace: Marketplace tool; AI: artificial intelligence; WMS: warehouse management system; S&OP: sales and operations planning; IBP: integrated business planning; SKU coverage: number of WHs able to ship the stock keeping unit.

2) **EASIER Model Validation**. After applying the methodology in their own company, executives evaluated the framework using a five-point Likert scale across several validation dimensions: conceptual completeness, practical usefulness, clarity, and ability to support strategic dialogue. The final section gathered open-ended feedback on potential improvements, additional competences, and the recommended frequency of model application.

A synthesis of the current and future strategic focus across cases is shown in Figure 3. The objectives and key performance indicators (KPIs) resulting from the application of the EASIER supply chain model to an online retailer are presented in Table 4. The table illustrates the evolution of selected KPIs across three successive business plans (2019, 2022, and 2025), reflecting shifts in strategic priorities. The illustration is based on anonymized performance indicators inspired by real retail practice. Data have been adjusted to preserve confidentiality. Therefore, the purpose of this table is not to represent a specific company, but to provide a structured and pedagogical example of how the EASIER framework can be applied to link strategic priorities with measurable performance outcomes.

The results highlight how improvements in efficiency, integration, digitalization, and resilience are associated with sustained investment over time, while agility-related metrics improve initially but partially deteriorate as strategic focus shifts—illustrating the trade-offs inherent in supply chain strategic alignment.

5. DISCUSSION

The EASIER framework introduced in this paper is an evolution of the current existing models, that consolidates six strategic supply chain competences of efficiency, agility, sustainability, integration, digitalization, and resilience into a coherent structure that aligns operational priorities with business strategy. While the first three components of the EASIER model, efficiency, agility and sustainability are well integrated in the company's metrics and objectives, the latter three, integration, digitalization, and resilience receive less management attention in the planning process and fewer KPIs and less developed mechanisms to define future success. By embedding integration and digitalization as central enablers, EASIER goes beyond earlier frameworks, providing managers with a modular and actionable tool to assess current capabilities, define future priorities, and balance trade-offs in line with evolving corporate objectives. In practice, EASIER supports both reflection and execution. It helps companies create a clear distinction between activity metrics and true drivers of competitive advantage and proved useful as a strategic dialogue and decision-support tool, helping executives make trade-offs explicit, identify misalignments between strategy and supply chain focus, and translating broad strategic intent into clearer competence priorities, KPIs, and capability-development choices. Its value therefore lies not only in diagnosis, but also in its translational role: creating a shared cross-functional language, improving strategic coherence, and making opportunity costs visible. The application of the model reflects that strategic misalignment does not arise in less mature settings, but also in relatively advanced contexts, depending more on ownership and competitive agenda shifts than on maturity level, reinforcing the dynamic nature of supply chain strategic alignment.

Future research should empirically test EASIER across industries, refine its implementation methodology, and explore how it can link corporate strategy, supply chain strategy, and engineering choices within a process improvement loop. The managerial implications of the framework emphasize that supply chain priorities must be tailored to each business plan rather than relying on generic practices. Sustained competitive advantage stems from the cultivation of distinctive competences—agility and digital enablement may be decisive in fast fashion, while resilience and regulatory compliance are paramount in pharmaceuticals. Measuring progress requires multidimensional KPIs that evolve with regulations, market conditions, and customer expectations. Since not all objectives can be maximized simultaneously, leaders must consciously manage trade-offs between cost, speed, flexibility, and sustainability. Positioning digitalization and integration at the core ensures that investments enhance efficiency, agility, resilience, and sustainability in a synergistic rather than fragmented manner.

The EASIER model is harder to apply when the following three minimum conditions are weak: strategic clarity, cross-functional maturity, and real willingness to prioritize. Its usefulness declines when business strategy is ambiguous, when leadership resists explicit trade-offs, or when firms lack the data, KPI discipline, and management routines needed to operationalize the framework. It may also be less effective in acute crisis situations, where short-term response dominates strategic reflection, and in highly regulated settings, where managerial discretion over competence prioritization is limited.

6. CONCLUSIONS

This study contributes to the supply chain strategy literature by introducing the EASIER model as a holistic and actionable framework for aligning supply chain competences with business strategy. Some of the advantages of the EASIER model are related to three key contributions: (a) it functions as both a diagnostic and decision tool to assess alignment and shape future priorities; (b) it is simple and accessible, avoiding the complexity of maturity models while enabling rapid deployment; and (c) it facilitates communication by providing a clear structure to articulate trade-offs and directly link supply chain choices to corporate strategy and objectives, fostering alignment and strategic coherence. Future research should further refine the implementation of the framework and explore its integration with broader strategic and operational decision processes. For managers, the implication is clear: supply chain competences are not operational outcomes but strategic levers of competitive advantage that must be embedded in business planning. The challenge is to determine how much emphasis to place on efficiency, agility, sustainability, integration, digitalization, and resilience --and in what combination--, so that the supply chain directly supports the firm's business plan. By forcing managers to prioritize among these competences, the EASIER framework helps avoid the tendency to pursue all goals at once and instead guides the development of a supply chain strategy that truly differentiates the firm. In this way, EASIER provides a practical, holistic tool that reflects the evolving role of supply chains as enablers of long-term competitive advantage in the 21st century.

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CONFLICTS OF INTEREST

One of the authors is employed by a company included in the study. The authors declare no conflict of interest.

DATA AVAILABILITY STATEMENTS

Data presented in the manuscript are available from the first author upon request.

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ANNEX

· Annex shows the structured qualitative–quantitative questionnaire specifically designed to operationalize the EASIER Supply Chain Model in organizational settings.

ANNEX

Validation questionnaire of the EASIER model

Section 1 – Contextual data (control of variables)

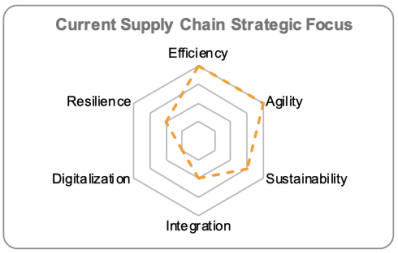
Industry/Sector of the firm (e.g. logistic operator, fashion retail, automotive, etc.):	
Approximate size (annual revenue, number of employees):	
Relevant changes in strategy or ownership agenda:	
Supply Chain maturity of your organization:	
Role of the interviewees (e.g., CEO, COO, CTO, Supply Chain Director):	
Years of experience in Supply Chain:	

Section 2 – Current strategies relevance of each competence

On a scale of 1 (not relevant at all) to 4 (very relevant), rate the importance of each competence in your current supply chain strategy:
You should distribute a maximum of 16 points

	(1-4)
Efficiency (costs, productivity, assets utilization).	4
Agility (flexibility, speed of response).	4
Sustainability (CO_2, circularity, ESG compliance).	3
Integration (end-to-end visibility, internal/external collaboration).	2
Digitalization (use of data, IA, automation, platforms).	1
Resilience (risk management, business continuity).	2
Total	16

Max. 16 points



Section 3 – KPIs for measuring current performance

For each EASIER competence, select KPIs or deliverables most relevant to define the actual performance:	List of key KPIs / deliverables
Efficiency (costs, productivity, assets utilization).	
Agility (flexibility, speed of response).	
Sustainability (CO_2, circularity, ESG compliance).	
Integration (end-to-end visibility, internal/external collaboration).	
Digitalization (use of data, IA, automation, platforms).	
Resilience (risk management, business continuity).	

(Keeping of a few very relevant KIPs helps to maintain strategic focus)

Section 4 – Measurement of current performance

For each KPI, measure the current performance:	KPI (key performance indicator)	Current Result
Efficiency (costs, productivity, assets utilization).		
Agility (flexibility, speed of response).		
Sustainability (CO_2, circularity, ESG compliance).		
Integration (end-to-end visibility, internal/external collaboration).		
Digitalization (use of data, IA, automation, platforms).		
Resilience (risk management, business continuity).		

Section 5 – Strategic relevance of supply chain competences in the future

On a scale of 1 (not relevant at all) to 4 (very relevant), rate the importance of each competence of your supply chain in the future:
Debe repartir un máximo de 16 puntos

	(1-4)
Efficiency (costs, productivity, assets utilization).	4
Agility (flexibility, speed of response).	4
Sustainability (CO_2, circularity, ESG compliance).	3
Integration (end-to-end visibility, internal/external collaboration).	2
Digitalization (use of data, IA, automation, platforms).	2
Resilience (risk management, business continuity).	1
Total	16

Max. 16 points

Section 6 – New KPIs for measuring performance

For each EASIER competence, choose the most relevant KPIs or deliverables for defining performance in future:

	KPIs/deliverables that remain	New KPIs/deliverables
Efficiency (costs, productivity, assets utilization).		
Agility (flexibility, speed of response).		
Sustainability (CO_2, circularity, ESG compliance).		
Integration (end-to-end visibility, internal/external collaboration).		
Digitalization (use of data, IA, automation, platforms).		
Resilience (risk management, business continuity).		

(Keeping of a few very relevant KIPs helps to maintain strategic focus)

Section 7 – Measurement of performance in future

For each KPI, measure the desired performance in future:	KPI (key performance indicator)	Objective
Efficiency (costs, productivity, assets utilization).		
Agility (flexibility, speed of response).		
Sustainability (CO_2, circularity, ESG compliance).		
Integration (end-to-end visibility, internal/external collaboration).		
Digitalization (use of data, IA, automation, platforms).		
Resilience (risk management, business continuity).		

Section 8 – Alignment with business strategy

To what extent is the focus of the supply chain strategy aligned with your company's strategic plan?	
To what extent is your supply chain enabling competitive advantages?	
Are there any shifts in priorities needed at supply chain level? Where they obvious before the exercise?	
Which gaps currently exist between business strategy and SC capabilities?	
Are supply chain priorities clearly communicated and discussed within the executive committee?	

Section 9 – Validation of the EASIER model

On a scale from 1 (totally disagree) to 5 (strongly agree):

	1 Totally disagree	2 Do not Agree	3 Neutral	4 Agree	5 Totally Agree
The model allows me to identify gaps in metrics in some competences	☐	☐	☐	☐	☐
The model offers a more complete and structured vision of SC strategy	☐	☐	☐	☐	☐
The model helps to understanding and showing strategic SC trade-offs	☐	☐	☐	☐	☐
The model facilitates prioritizing investments and resources in SC	☐	☐	☐	☐	☐
It helps to think about the necessary focus for each competence	☐	☐	☐	☐	☐
It contributes to establish clear and measurable objectives	☐	☐	☐	☐	☐
It includes all relevant strategic competences	☐	☐	☐	☐	☐
It has facilitated the communication of the SC strategy within the organization	☐	☐	☐	☐	☐
It is easy to implement in a company	☐	☐	☐	☐	☐
I have the intention of continuing using the model	☐	☐	☐	☐	☐

Section 10 – Open questions for improvement

What would you improve about the EASIER model to make it more useful in your organization?	
Would you add any competence or element to the model? Which?	
How often do you think this exercise should be performed in your company?	

Víctor del Pozo Triscón is Professor in Supply Chain Strategy at the Universitat Politècnica de Catalunya (UPC) in Barcelona (Spain) and a senior supply chain executive with over 25 years of experience, including leadership roles, such as Vice President at DHL and Chief Operating Officer at Privalia and Veepee. He holds a BS in Marine Engineering and has completed executive education programs at IESE and INSEAD. He combines extensive international management experience with an academic focus on supply chain strategy and its role in shaping business competitive advantage.

Jaime Rodrigo de Larrucea has a double PhD in law and engineering. He is Professor of Maritime Law at the Universitat Politècnica de Catalunya (UPC) in Barcelona (Spain) and past President of the Maritime Law Section of the Barcelona Bar Association. Director or the Cousteau Foundation and member of the Royal European Academy of Doctors and the Spanish Association of Naval Engineers. Professor Rodrigo de Larrucea promoted the protection of floating heritage and the legal status for the historical vessels.

James Rappold is an adjunct Professor of operations in the Crummer Business School at Rollins College in Winter Park, Florida (USA). Professor Rappold's research interests are in the design, operation, and management of complex manufacturing and distribution networks. Professor Rappold holds a BS in Industrial Management and Mathematics from Carnegie Mellon University and an MS and PhD in Operations Research and Industrial Engineering from Cornell University.