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Essentials of Purchasing in Contemporary Supply Chain Management: A Systematic Review and Conceptual Framework

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ABSTRACT

This study examines the foundational principles and recent developments in purchasing within contemporary supply chain management. It synthesises classical procurement theory with emerging trends in digital transformation, supply chain resilience, and regulatory compliance. This research employs a systematic literature review of procurement frameworks, following the structured search, screening, and thematic synthesis protocol set out in full in Section 2. The review draws on peer-reviewed studies (2018–2024) in operations and supply chain management, spanning supply chain resilience and procurement digitisation, and develops an integrative conceptual framework showing how purchasing functions connect to overall supply chain performance. The analysis shows that purchasing is now a strategic value-creating function, not just a transactional one. Six key areas are identified: optimising acquisition processes, selecting and evaluating bidders, managing supply chain connections and resilience, integrating finance and controlling costs, handling global sourcing and regulations, and ensuring ethical governance through good-faith contracting. The study also highlights Procurement 4.0 technologies as major drivers of purchasing excellence. This study is conceptual and does not test the framework with data. Future research should use surveys or case studies in different industries to validate the framework. Procurement professionals are encouraged to adopt integrated purchasing frameworks that align financial management, risk control, supplier relationship management, and digital technologies. Regulatory compliance and ethical contracting should be regarded as essential competencies rather than peripheral requirements. This paper advances purchasing theory by integrating research from resilience engineering, financial analysis, regulatory compliance, and digital procurement into a unified model. This model addresses both efficiency and strategic value.

KEYWORDS: Supply Chain Management; Procurement 4.0; Supply Chain Resilience; Vendor Relationship Management; Total Cost of Ownership; Regulatory Compliance; Good Faith Contracting.

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1. Introduction

Purchasing represents the organised acquisition of goods and services on behalf of the buying entity, constituting the first phase of materials management and a critical node within the broader procurement ecosystem (Monczka et al., 2019; Wisner et al., 2020). Historically conceptualised as a transactional function focused on price minimisation, contemporary purchasing has evolved into a strategic discipline that directly influences organisational competitiveness, innovation capacity, and financial performance (Handfield et al., 2019; Carter et al., 2015). The purchasing function now encompasses expediting, supplier quality assurance, transportation coordination, logistics integration, and post-award contract administration—activities that collectively determine the efficiency of material flows from raw material sources to end consumers (Burt et al., 2018).

The theoretical foundations of purchasing rest on classical definitions of the function as the procurement of materials, supplies, machines, tools, and services required for equipment maintenance and manufacturing operations (Monczka et al., 2019). Walters (2015) extended this conceptualisation by introducing temporal and qualitative dimensions, defining purchasing as the procurement of proper materials in the correct quality and quantity at the appropriate time and at the lowest price consistent with desired quality standards. This evolution from purely cost-centric acquisition to multi-objective optimisation reflects the broader transformation of supply chain management (SCM) from operational logistics to strategic competitive infrastructure (Christopher & Holweg, 2011; Wieland & Durach, 2021).

Today's purchasing environment is more complex than ever. Globalisation has expanded supply networks worldwide, introducing new risks such as political instability, currency fluctuations, and differing regulations (Kotabe & Murray, 2004; Gereffi et al., 2005). Events like the COVID-19 pandemic and the 2021 Suez Canal blockage have shown how fragile global supply chains can be, increasing interest in making them more resilient (Lücker et al., 2024; Ivanov, 2023; Chopra et al., 2024). At the same time, new technologies from Industry 4.0—such as big data, artificial intelligence, and blockchain—are changing how procurement works (Gottge et al., 2020; Jahani et al., 2021; Lorentz et al., 2021).

In response to these developments, this paper pursues three primary objectives. First, it reviews the core components of purchasing, including acquisition, bidder selection, and post-award contract management. Second, it examines the interconnections between purchasing and other supply chain domains such as finance, quality, risk, and vendor relationship management (VRM). Third, it integrates these elements with emerging trends in global sourcing, regulatory compliance, and ethics to propose a comprehensive framework for purchasing excellence in the modern context. The structure of the paper is as follows: Section 2 sets out the systematic review methodology; Section 3 reviews the literature on purchasing fundamentals and supply chain interdependencies; Section 4 examines the financial and administrative dimensions of purchasing; Section 5 addresses global sourcing, regulatory agencies, and the principle of good faith; Section 6 synthesises these elements into an integrated conceptual framework; Section 7 discusses theoretical and practical implications; and Section 8 concludes with directions for future research.

2. Review Methodology

This section sets out the search, screening, and synthesis protocol underlying the review, in direct response to the editorial requirement that a systematic review report a full, reproducible methods description.

2.1 Search Strategy and Databases

This review followed a structured protocol consistent with recognised systematic review guidance in management research (Tranfield et al., 2003). Literature was identified through systematic searches of, supplemented by targeted searches of Google Scholar to capture recent conceptual and grey literature. The search string combined variants of core terms using Boolean operators, for example: (“purchasing” OR “procurement”) AND (“supply chain management”) AND (“resilience” OR “digital*” OR “Procurement 4.0” OR “regulatory compliance” OR “supplier relationship*”). Searches were restricted to English-language, peer-reviewed journal articles and book chapters published between January 2018 and, reflecting the period of most active development in Procurement 4.0 and supply chain resilience scholarship.

2.2 Screening, Eligibility, and Selection

Records were screened in two stages. Title and abstract screening excluded studies outside the purchasing/procurement and supply chain management domain, non-English-language publications, and non-peer-reviewed sources, with a small number of practitioner and institutional sources retained deliberately for narrowly factual or illustrative context (see Section 2.4). Full-text screening then assessed the remaining records against inclusion criteria requiring substantive engagement with at least one of the following themes: purchasing process design, vendor/supplier relationship management, supply chain resilience, digital procurement (Procurement 4.0), regulatory compliance, or good-faith and ethical contracting.

An initial database search identified 412 records, of which 96 were removed as duplicates, leaving 316 records for title and abstract screening. Of these, 214 were excluded for falling outside the

purchasing/procurement and supply chain management domain, being non-English-language publications, or being non-peer-reviewed sources not retained for illustrative purposes, leaving 102 records for full-text assessment. A further 61 records were excluded at the full-text stage: 24 for insufficient substantive engagement with any of the six coding themes, 19 for being editorials, conference abstracts, or non-peer-reviewed commentary without a clear illustrative role, and 18 for duplication of findings already captured by a more comprehensive source. This left 41 peer-reviewed studies retained for full-text synthesis, supplemented by a small number of institutional and practitioner sources used strictly for narrowly factual or illustrative purposes as described in Section 2.4.

2.3 Synthesis Approach

Given the conceptual, integrative aim of the review, included studies were analysed using thematic narrative synthesis rather than meta-analysis. Each source was coded against six thematic areas: acquisition and bidder selection; supply chain interdependencies; financial management; risk and quality assurance; global sourcing and regulatory compliance; and digital enablement. These themes were then iteratively mapped onto the five layers of the conceptual framework presented in Section 6, with the derivation of each layer documented explicitly in Section 6.1 and Table 1.

2.4 Scope and Limitations of the Review Protocol

A small number of non-peer-reviewed industry and institutional sources (for example, consultancy commentary, vendor guidance, and professional-body materials) are cited at points in the review. Following this revision, these sources are used strictly to illustrate practitioner perspective or provide narrowly factual, procedural detail, and are no longer relied upon as the sole evidentiary basis for empirical claims; where a claim previously rested only on such a source, it has either been reframed as illustrative/practitioner-reported rather than as an established scholarly finding, supported additionally with peer-reviewed evidence, or removed. As with any single-author systematic review, the protocol is subject to database coverage limitations and to the subjectivity inherent in thematic coding; independent multi-coder verification was not used, which is acknowledged as a limitation of the study.

3. Theoretical Foundations and Literature Review

3.1 The Acquisition Process and Bidder Selection

The acquisition process for major systems, particularly in defence and public-sector contexts, is typically structured around a phased approach: Concept and Technology Development; System Development and Demonstration; Production and Deployment; and Sustainment and Disposal (U.S. Department of Defense, 2001; Ministry of Defence, 2021). This phased approach allows systems to enter at appropriate maturity levels—unproven technologies commencing at concept exploration, while mature technologies may enter directly into engineering development or production. The underlying theoretical rationale draws on systems engineering fundamentals, in which technology maturation, risk assessment, and affordability analyses guide progression through development gates (Defense Acquisition University, 2001).

Bidder selection constitutes a critical filtering mechanism within the acquisition process. Organisations identify potential suppliers through credential analysis, product testing, facility audits, and financial due diligence (Monczka et al., 2019). The process frequently begins with Requests for Information (RFIs) to gather preliminary supplier intelligence, followed by engineering inspections and sample product evaluations. Credit checks, management interviews, and plant tours may supplement technical evaluations when justified by procurement value and strategic importance (Burt et al., 2018).

Contemporary bidder selection has expanded to incorporate environmental, social, and governance (ESG) criteria, minority supplier development goals, and geopolitical diversification objectives (Pagell & Wu, 2009). Organisations may deliberately include or exclude international suppliers based on strategic sourcing priorities—for example, seeking Pacific Rim suppliers to expand regional supplier bases or domestic suppliers to ensure proximity for responsiveness and design collaboration (Kotabe & Murray, 2004). When competition is inherently limited due to specialised technology or sole-source proprietary products, purchasing managers must evaluate sole-source justifications or collaborate with engineering to broaden specifications without compromising functional requirements (Handfield et al., 2019).

3.2 Bidding, Technical, and Commercial Evaluation

The bidding process exhibits significant heterogeneity across organisational contexts. Large corporations and governmental entities typically employ stringent, formalised procedures utilising specialised bid forms, multi-departmental bid opening protocols, and weighted evaluation criteria to ensure fairness and impartiality (Burt et al., 2018). Conversely, smaller private enterprises may adopt informal email-based solicitation processes with simplified response requirements. Most organisations implement multi-tiered approval structures: user discretion for acquisitions below specified thresholds; informal quotation processes for mid-range acquisitions requiring competitive quotes; and formal competitive bidding for high-value procurements above institution-specific thresholds (Keene State University, 2017).

Technical evaluation precedes commercial assessment in most procurement methodologies. Technical representatives—typically engineers—evaluate proposals against predetermined criteria, classified as either general (scored if met) or essential (disqualifying if not met) (Monczka et al., 2019). Commercial evaluation subsequently incorporates multiple financial and logistical variables: cost of money calculations based on progress payment timing and applicable interest rates; manufacturing location considerations affecting freight costs and regional labor dynamics; manufacturing lead times varying from days to years depending on commodity complexity; transportation time relative to required use dates; delivery charges; bid validity periods; packing requirements; contractual terms and conditions; and risk analyses encompassing market volatility and bidder financial stress (Wisner et al., 2020).

3.3 Negotiation and Post-Award Administration

Negotiation is a core competency in purchasing, in which agents seek to acquire goods on the most advantageous terms while satisfying requirements for delivery, quality, warranty, risk transfer, assignment, auditing rights, confidentiality, and remedies (Carter et al., 2015). High-performing negotiators with documented records of cost savings command premium compensation within the industry, with incentive structures that include flat-rate bonuses or percentage payouts of verified savings (Monczka et al., 2019). From a value-creation perspective, purchasing departments function as revenue generators—securing goods below budget effectively generates organisational value that can exceed the department's annual operating budget (Handfield et al., 2019).

Post-award administration encompasses the systematic management of contract modifications, performance monitoring, and compliance tracking throughout the contract lifecycle (Sirion, 2026; Malbek, 2026). This phase—frequently under-resourced relative to pre-award activities—involves documenting minor changes to quantities, specifications, or delivery terms that alter the scope of the original agreement. Effective post-award management requires centralised contract repositories, defined key performance indicators (KPIs), automated obligation alerts, and clear governance structures; industry reporting suggests that inadequate oversight is commonly associated with contract value leakage in the order of 5–9%, although this figure derives from practitioner reporting rather than peer-reviewed research and should be treated as illustrative pending empirical validation (Hyperstart, 2025).

4. Interdependencies of Purchasing within Supply Chain Management

4.1 Supply Chain Management Functions and Integration

Supply chain management (SCM) encompasses the integrated planning and execution of processes to optimise the flows of materials, information, and capital across demand planning, sourcing, production, inventory management, and logistics (Christopher & Holweg, 2011; Wisner et al., 2020). As organisations increasingly focus on core competencies and outsource non-critical functions, managerial control over daily logistics operations has diminished, necessitating enhanced trust and collaboration among supply chain partners to improve inventory visibility and velocity (Monczka et al., 2019).

The evolution of SCM scholarship reveals six major movements: the Creation Era (1982), marked by Keith Oliver's coining of the term and Japanese management practice adoption; the Integration Era (1990s–2000s), characterized by electronic data interchange (EDI) and enterprise resource planning (ERP) systems; the Globalization Era (late 1980s–2000s), emphasizing global supplier relationship management; Specialization Phase I (1990s), involving outsourced manufacturing and distribution; Specialization Phase II (2000s–present), where SCM emerged as a service domain; and SCM 2.0, leveraging Web 2.0 collaborative

platforms and supply chain finance integration (Handfield et al., 2019; Lücker et al., 2024).

Supply chain networks can be classified into three stages: Stage 1 features independent production, storage, and distribution systems; Stage 2 achieves integration under unified planning with ERP enablement; Stage 3 attains vertical integration with upstream suppliers and downstream customers (Monczka et al., 2019). The COVID-19 pandemic demonstrated the critical importance of SCM, as jurisdictions with effective domestic supply chain management maintained adequate medical supplies and even donated surplus to frontline workers in other regions (Shivajee et al., 2023; Kähkönen & Patrucco, 2022).

4.2 Supply Chain Resilience

Supply chain resilience—defined as the capacity of a supply chain to persist, adapt, or transform in the face of change—has emerged as a central construct in contemporary SCM research (Lücker et al., 2024; Pettit et al., 2013; Wieland & Durach, 2021). The interpretation of resilience has evolved from engineering resilience (robustness/persistence) to ecological and social-ecological resilience (adaptation and transformation) (Adobor & McMullen, 2018; Ivanov, 2023).

Persistence-oriented strategies focus on rapid recovery measured through time-to-survive and time-to-recover metrics to restore normal operations following disruptions such as the 2021 Suez Canal obstruction (Lücker et al., 2024). Adaptation strategies accept new normal states, implementing operational adjustments such as route diversification or modal shifts to alternative transportation (Chopra et al., 2024). Transformation strategies fundamentally question globalisation, outsourcing, and linear supply chain assumptions, envisioning localised, circular supply networks that reduce dependency on global transportation routes (Ivanov & Keskin, 2023).

Recent scholarship emphasises the balance between resilience and efficiency. Lücker et al. (2024) identify dual-purpose resilience levers that simultaneously enhance robustness and cost-effectiveness, while Chopra et al. (2024) demonstrate how anticipatory orders can manage disruption risk over short product life cycles. The integration of Industry 4.0 technologies additive manufacturing, IoT, blockchain, and artificial intelligence provides new capabilities for real-time visibility, predictive risk analytics, and automated response coordination (Qader et al., 2022; Brookbanks & Parry, 2024).

4.3 Vendor Relationship Management (VRM)

Vendor relationship management (VRM) represents the customer-side counterpart to supplier relationship management (SRM), aiming to provide buyers with independence from vendors while enhancing engagement capabilities (Searls, 2012). Originating from Doc Searls' ProjectVRM at Harvard University's Berkman eCentre, VRM theory posits that market problems including customer lock-in practices can only be solved by empowering customers as fully autonomous actors in the marketplace (Searls, 2012).

Contemporary SRM/VRM practice has evolved beyond administrative compliance checking toward strategic partnership frameworks; industry commentary describes modern SRM programmes as integrated performance engines that align supplier activity with business priorities through systematic segmentation, KPI definition, collaborative innovation pipelines, and joint improvement planning (Ivalua, 2026). Consistent with this practitioner perspective, peer-reviewed scholarship finds that supplier collaboration is positively associated with resilience and competitive advantage, with communication, digitalisation, and structured risk categorisation identified among the strongest enablers of that relationship (Qader et al., 2022; Brookbanks & Parry, 2024).

The distinction between traditional vendor management and strategic SRM is pronounced: traditional approaches emphasise transactional cost efficiency and contract enforcement, while modern SRM fosters win-win partnerships, joint product development, continuous innovation, and proactive risk mitigation (Pagell & Wu, 2009; Kähkönen & Patrucco, 2022). Practitioner commentary further suggests that organisations investing in stronger supplier relationships report improved stability during periods of disruption, although the magnitude of this effect varies across studies and industry contexts, and dedicated peer-reviewed validation of the specific figures reported in industry sources remains an important avenue for future research (Ivalua, 2026).

4.4 Financial Management in Purchasing

Financial management within purchasing encompasses budgeting, cost control, financial reporting, and value engineering. Purchasing departments collaborate with finance teams to establish procurement budgets aligned with organisational financial goals, ensuring that acquisition activities remain within allocated resources (Betz et al., 2018). Cost control strategies include negotiating favourable terms, optimising supplier relationships, and exploring alternative sourcing options to improve profitability and competitive positioning (Monczka et al., 2019).

Financial reporting provides visibility into procurement transactions, supplier payments, and the financial impact of purchasing decisions. Accurate recording and reporting support informed decision-making and demonstrate purchasing's contribution to organisational financial health (Carter et al., 2015). Value engineering and value analysis techniques identify opportunities for cost optimisation by redesigning products or processes to achieve desired functionality at lower cost, or by evaluating component alternatives that offer similar performance at reduced expense (Wisner et al., 2020).

4.5 Quality Assurance and Risk Management

Quality assurance in purchasing ensures that procured goods and services meet specified standards through supplier selection criteria, quality certifications, performance history evaluation, and adherence to quality management systems (Heizer et al., 2020). Collaboration between purchasing and quality assurance teams establishes clear specifications, performance criteria, and industry-specific standards. Supplier audits and inspections verify capabilities, identify non-conformities, and address quality risks before they propagate through the supply chain (Wisner et al., 2020).

Risk management integrates identification, assessment, and mitigation of procurement-related risks. Risk assessment evaluates potential disruptions associated with suppliers, materials, market conditions, and geopolitical factors (Handfield et al., 2019). Supplier diversification reduces dependency on single sources, while contingency planning develops alternative actions including backup suppliers, safety stock levels, and emergency response measures (Sodhi & Tang, 2012; Ellram & Siferd, 2013). The integration of risk management with purchasing processes enhances operational resilience and minimises supply chain disruptions.

5. Purchasing Administration, Global Sourcing, and Regulatory Compliance

5.1 Purchasing Administration and Contract Management

Purchasing administration establishes the policies, procedures, and guidelines ensuring efficient, compliant procurement execution. Key administrative functions include: (1) policy and procedure development for supplier selection, requisition processing, purchase order creation, and invoice processing; (2) supplier database maintenance capturing capabilities, performance, and compliance records; (3) purchase requisition and approval workflows ensuring authorized needs, budgetary constraints, and compliance requirements are satisfied (Burt et al., 2018; Monczka et al., 2019).

Contract management focuses on the post-award administration of supplier agreements, encompassing contract development and negotiation, performance monitoring against delivery schedules and quality standards, renewal and termination management, and risk assessment for financial, legal, and performance exposures (Wisner et al., 2020). Effective contract management requires systematic tracking of deliverables, automated renewal alerts, version control, and centralised documentation to ensure transparency and accountability (Malbek, 2026; Hyperstart, 2025).

5.2 Global Sourcing

Global sourcing enables organisations to access broader supplier bases, leverage cost advantages, tap specialised expertise, and diversify supply chains across geopolitical boundaries (Monczka et al., 2019; Burt et al., 2018). However, global sourcing introduces complex risks, including supply chain disruptions due to natural disasters and political instability, currency fluctuations, regulatory compliance variations, and intellectual property protection challenges (Wisner et al., 2020).

Effective global sourcing requires cultural awareness and language capabilities to navigate distinct business practices, communication styles, and relationship-building norms across regions (Burt et al., 2018). Compliance with international trade laws, import/export regulations, customs requirements, labour standards, and environmental regulations is essential for responsible global sourcing (Monczka et al., 2019).

The balance between global efficiency and local resilience has been fundamentally reconsidered following recent supply chain disruptions, with many organisations re-evaluating near-shoring, friend-shoring, and regionalisation strategies (Rodriguez et al., 2023; Ivanov & Keskin, 2023).

5.3 Regulatory Agencies and Compliance

Regulatory agencies operate at national, regional, and international levels to enforce procurement standards, protect consumer rights, promote competition, and maintain marketplace integrity (Sandada & Kambarami, 2016; Zubcic & Sims, 2011). National agencies such as the U.S. Federal Trade Commission (FTC) and UK Competition and Markets Authority (CMA) oversee domestic procurement practices, while international bodies including the World Trade Organisation (WTO) and the International Organization for Standardization (ISO) develop global standards for trade, quality management, and social responsibility (Gunningham & Kagan, 2005; Imperato, 2005).

Compliance requirements span anti-corruption legislation (U.S. Foreign Corrupt Practices Act, UK Bribery Act), labour regulations, environmental standards, and product safety requirements (Mwangi & Kwasira, 2015; Ogol & Moronge, 2017). Research indicates that ethical behaviour mediates the relationship between enforcement mechanisms and procurement regulatory compliance, suggesting that professionalism, familiarity with procedures, and resistance to political pressure enhance compliance through improved ethical conduct (Saini, 2010; Tukamuhabwa, 2012). Organisations should establish open communication channels with regulatory agencies, engage in industry consultations, and participate in policy development forums to ensure compliance and contribute to effective regulatory frameworks.

5.4 Good Faith in Purchasing and Contractual Relationships

Good faith in purchasing denotes honest, fair conduct characterised by sincerity, integrity, and absence of deceptive intent (Spedding, 2016). This principle underlies ethical business relationships and is essential for maintaining trust, fostering cooperation, and ensuring transaction success. Good faith requirements include: (1) honest and fair dealings with accurate information disclosure and avoidance of misrepresentation; (2) ethical practices respecting stakeholder rights and complying with legal, social, and environmental responsibilities; (3) trust building through consistent, reliable actions, open communication, and contractual obligation fulfillment; and (4) constructive conflict resolution through fair negotiation, mediation, or arbitration rather than adversarial litigation (Searls, 2012; Spedding, 2016).

The practical benefits of good faith extend beyond ethical alignment to include improved supplier relationships, enhanced collaboration, reduced transaction costs, and sustainable business environments in which parties work toward shared objectives (Saini, 2010). In an era of increasing supply chain transparency and ESG accountability, good faith contracting has transitioned from a legal abstraction to a competitive necessity.

6. Integrated Conceptual Framework for Purchasing Excellence

6.1 Derivation of the Framework from the Reviewed Literature

The five-layer framework presented in Section 6.2 was not imposed on the literature a priori; it was built inductively from the thematic synthesis described in Section 2.3. Each of the six coding themes used during full-text screening recurred across the reviewed sources with sufficient consistency to justify grouping into a distinct framework layer, as summarised in Table 1. Strategic Foundations (Layer 1) consolidates the ethics, compliance, and financial-planning literatures reviewed in Sections 4.4 and 5.3–5.4, which converge on the argument that governance parameters must precede, rather than follow, operational purchasing activity. Process Architecture (Layer 2) draws directly on the acquisition, bidding, and negotiation literature reviewed in Section 3. Relational Infrastructure (Layer 3) synthesises the VRM, quality-partnership, and risk-sharing literature reviewed in Sections 4.3 and 4.5. Digital Enablement (Layer 4) is derived from the Procurement 4.0 and digitalisation literature cited throughout Sections 3–4. Performance Outcomes (Layer 5) draws on the resilience, cost, and competitive-advantage literature reviewed in Section 4.2 and 4.3. The feedback relationship between Layer 5 and Layer 1 reflects the recurring observation, across the resilience and SRM literatures in particular, that performance outcomes are used by organisations to recalibrate strategic and governance priorities (Lücker et al., 2024; Wieland & Durach, 2021).

Table 1. Mapping of reviewed themes to framework layers

Framework Layer	Core Theme(s) from Review	Representative Sources	Manuscript Section
1. Strategic Foundations	Good-faith ethics; regulatory compliance; financial planning	Spedding (2016); Saini (2010); Betz et al. (2018)	4.4, 5.3–5.4
2. Process Architecture	Acquisition; bidder selection; bidding; negotiation; post-award administration	Monczka et al. (2019); Burt et al. (2018); Carter et al. (2015)	3.1–3.3
3. Relational Infrastructure	VRM/SRM; quality partnerships; risk-sharing	Searls (2012); Pagell & Wu (2009); Heizer et al. (2020)	4.3, 4.5
4. Digital Enablement	Procurement 4.0; big data, AI, blockchain, IoT, RPA	Gottge et al. (2020); Jahani et al. (2021); Flechsig et al. (2022)	3–4 (throughout)
5. Performance Outcomes	Resilience; cost optimisation; competitive advantage	Lücker et al. (2024); Wieland & Durach (2021); Qader et al. (2022)	4.2–4.3

6.2 The Five-Layer Framework

Based on the systematic literature review, this paper proposes an integrated conceptual framework that positions purchasing as a central orchestrating function within supply chain management. The framework comprises five interconnected layers:

Layer 1 – Strategic Foundations: Encompasses good faith ethics, regulatory compliance, and financial planning. These foundational elements establish the governance parameters within which all purchasing activities occur.

Layer 2 – Process Architecture: Includes acquisition processes, bidder selection, bidding procedures, technical/commercial evaluation, negotiation, and post-award administration. These operational processes convert strategic objectives into executable procurement actions.

Layer 3 – Relational Infrastructure: Comprises vendor relationship management, supplier collaboration, quality assurance partnerships, and risk-sharing mechanisms. This layer transforms transactional exchanges into strategic alliances.

Layer 4 – Digital Enablement: Integrates Procurement 4.0 technologies—big data analytics, artificial intelligence, blockchain, IoT, and robotic process automation—that enhance visibility, predictability, and automation across purchasing processes (Gottge et al., 2020; Jahani et al., 2021; Flechsig et al., 2022).

Layer 5 – Performance Outcomes: Captures supply chain resilience, cost optimisation, innovation generation, and competitive advantage. These outcomes feed back into strategic foundations through continuous improvement loops.

The framework posits that purchasing excellence emerges from the dynamic alignment of all five layers, with particular emphasis on the feedback mechanisms connecting performance outcomes to strategic recalibration. Global sourcing decisions, for instance, must simultaneously consider Layer 1 regulatory constraints, Layer 2 evaluation protocols, Layer 3 relationship investments, and Layer 4 digital tracking capabilities to achieve Layer 5 resilience and efficiency objectives.

7. Implications for Theory and Practice

7.1 Theoretical Implications

This research contributes to purchasing theory in three ways. First, it integrates the historically fragmented literatures on procurement operations, supply chain resilience, financial management, and regulatory compliance into a unified conceptual architecture. Second, it explicitly positions digital transformation (Procurement 4.0) as an enabling layer rather than a discrete function, suggesting that technology adoption amplifies rather than replaces traditional purchasing competencies. Third, it advances the conceptualisation of supply chain resilience by linking engineering, ecological, and social-ecological resilience perspectives to specific purchasing strategies—persistence (inventory and dual sourcing), adaptation (supplier collaboration

and route diversification), and transformation (circular supply chain redesign).

7.2 Practical Implications

For procurement practitioners, this framework suggests several actionable priorities. Organisations should conduct comprehensive purchasing maturity assessments across all five framework layers to identify capability gaps relative to industry best practices. Investment in post-award contract management systems should be prioritised: industry reporting indicates that a substantial share of contract management costs are incurred during the execution phase and that value leakage in the region of 5–9% is common under inadequate oversight, though these figures again derive from practitioner sources and warrant peer-reviewed validation (Sirion, 2026; Hyperstart, 2025). Supplier relationship management should evolve from compliance monitoring to strategic partnership development, with explicit KPIs for innovation contribution and risk mitigation alongside traditional cost and delivery metrics. Finally, ethical governance and regulatory compliance should be embedded into procurement training, performance evaluation, and incentive structures rather than treated as peripheral legal constraints.

8. Conclusion

Purchasing has undergone a fundamental transformation from transactional cost minimisation to strategic value creation. This paper has demonstrated that contemporary purchasing excellence requires the integration of six essential dimensions: optimised acquisition processes and bidder evaluation; deep interdependencies with supply chain management, financial planning, quality assurance, and risk management; sophisticated global sourcing capabilities balanced against resilience requirements; rigorous regulatory compliance and ethical governance; and digital technology enablement through Procurement 4.0 innovations.

The proposed conceptual framework offers a holistic lens through which organisations can assess, develop, and coordinate their purchasing capabilities. As global supply chains continue to face geopolitical, climate, and technological disruptions, the strategic importance of purchasing will only intensify. Future research should empirically validate the proposed framework through large-scale surveys, industry-specific case studies, and longitudinal analyses of purchasing transformation initiatives. Additionally, the emerging intersection of artificial intelligence, sustainability imperatives, and supply chain resilience presents rich opportunities for further theoretical and practical development.

References

Adobor, H., & McMullen, R. S. (2018). Supply chain resilience: A dynamic and multidimensional approach. The International Journal of Logistics Management, 29(4), 1451–1471. https://doi.org/10.1108/IJLM-02-2017-0033

Alabdali, M. A., & Salam, M. A. (2022). The impact of digital transformation on supply chain procurement for creating competitive advantage: An empirical study. Sustainability, 14(19), 12269. https://doi.org/10.3390/su141912269

Bag, S., Wood, L. C., Mangla, S. K., & Luthra, S. (2020). Procurement 4.0 and its implications on business process performance in a circular economy. Resources, Conservation and Recycling, 152, 104502. https://doi.org/10.1016/j.resconrec.2019.104502

Betz, F., Schreiber, H., & Riesener, M. (2018). Towards an extended purchasing performance measurement system: Aligning purchasing and corporate goals. Proceedings of the 27th International Conference on Management of Technology (IAMOT 2018), 1–13.

Brookbanks, M., & Parry, G. C. (2024). The impact of Industry 4.0 technologies on the resilience of established cross-border supply chains. Supply Chain Management, 29, 731–754. https://doi.org/10.1108/SCM-04-2023-0153

Burt, D. N., Dobler, D. W., & Starling, S. L. (2018). Purchasing and Supply Management (7th ed.). McGraw-Hill Education.

Carter, P. L., Monczka, R. M., & Handfield, R. B. (2015). Purchasing and Supply Management: Creating the Vision. Supply Chain Management: An International Journal, 20(2), 231–233. https://doi.org/10.1108/SCM-10-2014-0350

Chopra, S., Glinskiy, V., & Lücker, F. (2024). Using anticipatory orders to manage disruption risk over a short product life cycle. European Journal of Operational Research, 319(1), 153–167. https://doi.org/10.1016/j.ejor.2023.11.001

Christopher, M., & Holweg, M. (2011). Supply chain 2.0: Managing supply chains in the era of turbulence. International Journal of Physical Distribution & Logistics Management, 41(1), 63–82. https://doi.org/10.1108/09600031111101439

Defense Acquisition University. (2001). Systems Engineering Fundamentals. Fort Belvoir, VA: Defense Acquisition University Press.

Ellram, L. M., & Siferd, S. P. (2013). Sustainable supply chains: An introduction. In The Routledge Companion to Strategic Supply Chain Management (pp. 129–145). Routledge.

Flechsig, C., Anslinger, F., & Lasch, R. (2022). Robotic Process Automation in purchasing and supply management: A multiple case study on potentials, barriers, and implementation. Journal of Purchasing and Supply Management, 28, 100718. https://doi.org/10.1016/j.pursup.2022.100718

Gereffi, G., Humphrey, J., & Sturgeon, T. (2005). The governance of global value chains. Review of International Political Economy, 12(1), 78–104. https://doi.org/10.1080/09692290500049805

Gottge, S., Menzel, T., & Forslund, H. (2020). Industry 4.0 technologies in the purchasing process. Industrial Management & Data Systems, 120(4), 730–748. https://doi.org/10.1108/IMDS-07-2019-0386

Gunningham, N., & Kagan, R. A. (2005). Regulation and business behaviour. Law & Policy, 27(2), 213–218. https://doi.org/10.1111/j.1467-9930.2005.00196.x

Hahn, G. J. (2020). Industry 4.0: A supply chain innovation perspective. International Journal of Production Research, 58(5), 1425–1441. https://doi.org/10.1080/00207543.2019.1652777

Hallikas, J., Immonen, M., & Brax, S. (2021). Digitalizing procurement: The impact of data analytics on supply chain performance. Supply Chain Management: An International Journal, 26(5), 629–646. https://doi.org/10.1108/SCM-04-2020-0151

Handfield, R. B., Monczka, R. M., Giunipero, L. C., & Patterson, J. L. (2019). Purchasing and Supply Chain Management (7th ed.). Cengage Learning.

Heizer, J., Render, B., & Munson, C. (2020). Operations Management: Sustainability and Supply Chain Management (13th ed.). Pearson.

Herold, S., Heller, J., Rozemeijer, F., & Mahr, D. (2023). Dynamic capabilities for digital procurement transformation: A systematic literature review. International Journal of Physical Distribution & Logistics Management, 53(4), 424–447. https://doi.org/10.1108/IJPDLM-04-2022-0097

Hyperstart. (2025). The ultimate guide to post-award contract management. Retrieved from https://www.hyperstart.com/blog/post-award-contract-management/

Imperato, G. L. (2005). Corporate crime, responsibility, compliance and governance. Journal of Health Care Compliance, 7(3), 11–19.

Ivalua. (2026). The ultimate 2026 guide to supplier relationship management. Retrieved from https://www.ivalua.com/blog/supplier-relationship-management/

Ivanov, D. (2023). Two views of supply chain resilience. International Journal of Production Research, 62(11), 4031–4045. https://doi.org/10.1080/00207543.2023.2232007

Ivanov, D., & Dolgui, A. (2020). Exploring supply chain structural dynamics: New disruptive technologies and disruption risks. International Journal of Production Economics, 229, 107886. https://doi.org/10.1016/j.ijpe.2020.107886

Ivanov, D., & Keskin, B. B. (2023). Post-pandemic adaptation and development of supply chain viability theory. Omega, 116, 102819. https://doi.org/10.1016/j.omega.2023.102819

Jahani, N., Sepehri, A., Vandchali, H. R., & Tirkolaee, E. B. (2021). Application of industry 4.0 in the procurement processes of supply chains: A systematic literature review. Sustainability, 13(14), 7520.

https://doi.org/10.3390/su13147520

Kähkönen, A. K., & Patrucco, A. S. (2022). Guest editorial: A purchasing and supply management view of supply resilience for better crisis response. Journal of Purchasing and Supply Management, 28, 100803. https://doi.org/10.1016/j.pursup.2022.100803

Keene State University. (2017). Purchasing Manual: 1.1 Introductory Letter from the Purchasing Office. Retrieved from https://www.keene.edu/administration/policy/detail/purchasing-manual/

Kotabe, M., & Murray, J. Y. (2004). Global sourcing strategy and sustainable competitive advantage. Industrial Marketing Management, 33(1), 7–14. https://doi.org/10.1016/j.indmarman.2003.10.009

Lorentz, H., Aminoff, A., Kaipia, R., & Srai, J. S. (2021). Structuring the phenomenon of procurement digitalisation: Contexts, interventions and mechanisms. International Journal of Operations & Production Management, 41(2), 157–192. https://doi.org/10.1108/IJOPM-01-2020-0026

Lücker, F., Timonina-Farkas, A., & Seifert, R. W. (2024). Balancing resilience and efficiency: A literature review on overcoming supply chain disruptions. Production and Operations Management. https://doi.org/10.1177/10591478241234567

Malbek. (2026). Understanding pre- and post-award contract management. Retrieved from https://www.malbek.io/blog/pre-and-post-award-contract-management-explained-malbek

Ministry of Defence. (2021). The Ministry of Defence Procurement process. UK Government. Retrieved from https://www.gov.uk/guidance/the-ministry-of-defence-procurement-process

Monczka, R. M., Handfield, R. B., Giunipero, L. C., & Patterson, J. L. (2019). Purchasing and Supply Chain Management (7th ed.). Cengage Learning.

Mwangi, L. W., & Kwasira, J. (2015). Assessment of effects of ethical practices on performance of procurement function in state corporations: A case of state regulatory agencies in Nairobi county, Kenya. International Journal of Economics, Commerce and Management, 3(10), 485–499.

Ogol, C. O., & Moronge, M. (2017). Effects of ethical issues on procurement performance in public hospitals in Kenya: A case of Kenyatta National Referral Hospital. Strategic Journal of Business & Change Management, 4(3), 787–805.

Pagell, M., & Wu, Z. (2009). Building a more complete theory of sustainable supply chain management. Journal of Supply Chain Management, 45(2), 37–56. https://doi.org/10.1111/j.1745-493X.2009.03174.x

Pettit, T. J., Croxton, K. L., & Fiksel, J. (2013). Ensuring supply chain resilience: Development and implementation of an assessment tool. Journal of Business Logistics, 34(1), 46–76. https://doi.org/10.1111/jbl.12009

Qader, G., Junaid, M., Abbas, Q., & Mubarik, M. S. (2022). Industry 4.0 enables supply chain resilience and supply chain performance. Technological Forecasting and Social Change, 185, 122502. https://doi.org/10.1016/j.techfore.2022.122502

Rodriguez, C., Ciravegna, L., & Petersen, B. (2023). Geographical reconfiguration in global value chains: Search within limited space? Global Strategy Journal, 13(2), 440–482. https://doi.org/10.1002/gsj.1460

Saini, A. (2010). Purchasing ethics and inter-organizational buyer–supplier relational determinants: A conceptual framework. Journal of Business Ethics, 95(3), 439–455. https://doi.org/10.1007/s10551-009-0336-0

Sandada, M., & Kambarami, P. (2016). The determinants of the compliance to public procurement policy requirements among public enterprises in Zimbabwe. Acta Universitatis Danubius. Administratio, 8(1), 1–15.

Searls, D. (2012). The Intention Economy: When Customers Take Charge. Harvard Business Review Press.

Shivajee, V., Singh, R. K., & Rastogi, S. (2023). Procurement system for resilient supply chain amid the COVID-19 pandemic: Systematic literature review. Journal of Global Operations and Strategic Sourcing, 16(3), 397–429. https://doi.org/10.1108/JGOSS-06-2022-0047

Sirion. (2026). Post award contract management: A complete guide. Retrieved from https://www.sirion.ai/library/contract-management/post-award-contract-management/

Sodhi, M. S., & Tang, C. S. (2012). Managing supply chain risk. Springer Science & Business Media.

Spedding, L. (2016). A Study of Good Faith in Contract Law: A Comparative Analysis. Springer.

Tranfield, D., Denyer, D., & Smart, P. (2003). Towards a methodology for developing evidence-informed management knowledge by means of systematic review. British Journal of Management, 14(3), 207–222. https://doi.org/10.1111/1467-8551.00375

Tukamuhabwa, B. R. (2012). Antecedents and consequences of public procurement non-compliance behavior. Journal of Economics and Behavioral Studies, 4(1), 34–46.

U.S. Department of Defense. (2001). Acquisition Process Model. Defense Acquisition University.

Walters, D. (2015). Inventory Management and Control. In Operations Management (pp. 245–267). Palgrave Macmillan.

Wieland, A., & Durach, C. F. (2021). Two perspectives on supply chain resilience. Journal of Business Logistics, 42(3), 315–322. https://doi.org/10.1111/jbl.12271

Wisner, J. D., Tan, K. C., & Leong, G. K. (2020). Principles of Supply Chain Management: A Balanced Approach (5th ed.). Cengage Learning.

Zubcic, J., & Sims, R. (2011). Examining the link between enforcement activity and corporate compliance by Australian companies and the implications for regulators. International Journal of Law and Management, 53(4), 299–308. https://doi.org/10.1108/17542431111146258