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A COMPREHENSIVE REVIEW OF MODERN LOGISTICS AND SUPPLY CHAIN MANAGEMENT: CONCEPTS, CURRENT APPROACHES, AND FUTURE DIRECTIONS

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Abstract

This paper provides a short review of modern logistics and Supply Chain Management (SCM) and their rising strategic significance in today's increasingly globalized world with rapid technological advancement and change management, and the role that logistics plays within corporate strategy, and core logistics functions, including such areas as demand planning, procurement, inventory management, and after-sales service. It also looks at the relationship between logistics and SCM, articulating the transition towards integrated tech-driven logistics systems. One of the key current shifts is occurring towards Green Supply Chain Management, which seeks to address the environmental sustainability of procurement, production and distribution. It discusses also transformative trends such as Artificial Intelligence, the Internet of Things, and blockchain because of their impact on operational efficiency, transparency, and resilience. The paper concludes with the need for future adaptive, digital and sustainable supply chain practices to remain competitive.

1. Introduction

Today, with the world becoming increasingly globalized, many innovations have started to enter our daily lives both economically and technologically, and technological tools have started to be used rapidly. In terms of companies, it does not seem possible for companies that cannot keep up with these technological innovations or insist on using old technology, software and information to leap forward in the competitive environment. Every firm, company, etc. should follow innovations and make breakthroughs that will benefit them. Competition in the global world is gaining importance day by day, and logistics companies have entered into a change in order to keep up with this competitive environment. They have begun to revise themselves according to today's technologies and customers' requests through methods such as feedback via social media, customer feedback on the companies' own web pages, surveys, etc. However, it should not be forgotten that this change brings an extra cost on companies. Logistics companies are in search of high quality and minimum cost philosophy until the product is delivered to the customer. From the point of view of logistics companies and their connections with the supply chain, supply chain management, which is seen as the model of the future, should take into account parameters such as the communication of these companies both within themselves and with other companies, the proper functioning of control mechanisms, and the minimization of the cost function in the parts from the transportation of the product to the customer.

In the study, logistics and its concepts, the importance of logistics, logistics services, how the supply chain is made in logistics and today's logistics supply chain approaches, etc. issues were examined. The aim of this study is to conduct research on the current supply chain approaches,

the relationship between logistics and supply chain, and the trend approaches of the future. As a research method, a literature review was conducted, the main and sub-headings of the research were created, and a detailed examination was made according to these headings. The research emphasized how the concept of logistics and important issues such as supply chain are made and maintained, and the importance of transportation in national and international areas. In the first part of this study, definitions and concepts related to logistics, the importance of logistics, the relationship between logistics competition and logistics activities were reviewed and explained. In the second part of the study, definitions related to the supply chain method are given. In the last part of the study, the results are given.

2. Conceptual Framework

2.1.Logistics Concept

The term "logistics" (derived from the French *logistique*, meaning the art of calculating and organizing movement) traces its roots to military and mathematical contexts. While earlier theories linked it to Latin origins, modern scholarship emphasizes its evolution from 19th-century French military terminology, where it referred to the systematic coordination of troop movements and supply chains (Coşkun, 2020). Effective information sharing across the supply chain—from a product's origin to its delivery to end consumers—is critical for optimizing storage, planning, and meeting customer expectations. Modern logistics emphasizes seamless coordination to enhance satisfaction, loyalty, and trust, as these factors directly influence long-term business success (Coyle et al., 2020). Logistics processes start with the procurement of the material or the purchase of the material in a ready-made form. Then the production process starts. The product or products whose production and packaging processes are completed are sent to distribution points according to supply and demand. In addition, ground services such as information flow, product control, etc. on the system must be carried out simultaneously.

2.2. Logistics Scope, Importance and Reasons for Emergence

The formalization of logistics as a discipline traces back to the mid-20th century with the establishment of the *National Council of Physical Distribution Management* (NCPDM) in the United States, later renamed the *Council of Supply Chain Management Professionals* (CSCMP). The institution originally defined logistics as the process of managing product flows from origin to consumption, including storage, inventory planning, and efficiency control to fulfil consumer demands. Today, this framework has evolved to emphasize resilience and adaptability, with modern logistics prioritizing dynamic strategies to maintain trust and responsiveness in increasingly complex supply chains (Gattorna, 2020). In today's globalized world, emerging technologies and intensifying competition have elevated the importance of innovative strategies. To thrive, businesses must leverage these competitive pressures as opportunities for differentiation—a shift that has profoundly reshaped the logistics sector (Wieland & Durach, 2021). Companies are increasingly integrating logistics functions internally to streamline operations and enhance efficiency. This integration fosters cross-functional collaboration, aligning logistics with production, procurement, and customer service

(Ivanov et al., 2022). Today, logistics is a cornerstone of competitive advantage, with mature markets increasingly relying on agile, interconnected logistics networks to meet dynamic consumer demands (Winkelhaus & Grosse, 2020). In the U.S., for instance, corporations have prioritized digital transformation and institutional resilience, adopting advanced logistics technologies to optimize cash flow and operational scalability. However, as production and procurement plateau, businesses face challenges in balancing supply with stagnating consumer demand gap that adaptive logistics strategies aim to bridge (Belhadi et al., 2021).

2.3. Logistics-Competition and Marketing Relationship

The strength of a company's logistics competitiveness hinges on its ability to empower customers to thrive in their respective markets. In today's dynamic business environment, rapidly shifting market demands and heightened competition have pushed firms to adopt agile, technology-driven strategies. By fostering collaboration and alignment across supply chain partners, companies can reduce operational costs, enhance efficiency, and deliver greater value to end-users. This synergy not only drives cost savings but also creates a competitive edge through streamlined processes and data-driven decision-making (Soysal et al., 2022). Moreover, logistics has evolved into a strategic lever for innovation, with digital tools like AI and blockchain enabling real-time visibility and adaptive resource allocation (Queiroz et al., 2021).

In today's hypercompetitive and digitally driven logistics landscape, sector leaders emphasize the following strategic objectives to ensure sustainable growth and market leadership (Wang et al., 2022):

1. **Leverage data-driven customer segmentation** to identify high-value clients and tailor end-to-end supply chain solutions to their evolving needs.
2. **Enhance service quality through omnichannel visibility** using IoT and AI to provide real-time tracking, proactive issue resolution, and personalized delivery options.
3. **Expand service portfolios with eco-friendly solutions**, such as carbon-neutral shipping, circular logistics, and blockchain-enabled transparency.
4. **Balance profitability with resilience** by diversifying supply networks, adopting predictive analytics for cost optimization, and investing in automation.
5. **Prioritize customer-centric innovation**, embedding feedback loops into logistics processes to drive loyalty and long-term partnerships.

In order to increase their sales and market shares in domestic and foreign markets, logistics companies use various methods to meet the demands of customers and to satisfy the customers. These can be given as providing the right service, offering different service options, reasonable prices, advertising, improving control mechanisms, expanding distribution networks.

For logistics service providers operating in the logistics sector, it is indispensable for the business to ensure an optimization between the most basic activities that constitute the value flow within the logistics value chain (Koban and İşçioğlu, 2020).

The interface of marketing and logistics functions that play an important role in creating satisfied customers is customer relations. Customer satisfaction, which is the main factor in ensuring sustainability and profitability in businesses, is possible by meeting customer demands and needs in the desired feature, quality and time (Ersoy & Tehci, 2020).

2.4. Logistic Services and Types

Delivering products to consumers on time is considered as a measure of logistics performance. Sectoral, regional and international competitive advantages are determined based on performance criteria such as efficiency, speed, quality, low cost and trust (Öztekin, 2019). Logistics service components can be listed as product, price, distribution, promotion, process and consumer. Delivery in a short time, keeping stocks at the lowest level, minimum cost, high quality and continuous control can be expressed as the objectives of logistics services (Çolak, 2019: 11).

2.5. Key Activities in Logistics

Logistics activities constitute critical functional domains that play a fundamental strategic role in overall business success. The effectiveness of each logistics function significantly impacts the core performance and competitiveness of the enterprise (Grant et al.,
2019; Rushton et al., 2022). Fundamentally, logistics encompasses the integrated management of all activities governing the flow of products, services, and related information from the point of origin (supply) to the point of consumption (the receiver) within a supply chain channel (Waters & Rinsler, 2021; Stock & Boyer, 2020).

Daily logistics operations revolve around the effective management of five key elements (van Goor & Ploos van Amstel, 2021; Myerson, 2021):

1. **Logistics Network Design:** Structuring the physical and organizational framework for movement and storage.
2. **Operation Planning and Execution:** Coordinating and implementing the day-to-day movement and handling of goods.
3. **Logistics Partnership Management:** Developing and managing collaborative relationships with suppliers, carriers, and third-party logistics providers (3PLs).
4. **Information Technology Management:** Leveraging systems and data for visibility, coordination, and decision support.
5. **Logistics Performance Management:** Measuring, analyzing, and improving logistics efficiency and effectiveness.

The components of logistics management can be understood through a systemic input-management-output framework (Grant et al., 2019; Christopher, 2021). Inputs encompass essential resources, including human expertise, natural resources (materials), financial capital, and information/data. The management process consists of the core functions of planning (strategic and tactical), implementation (operational execution), and control (monitoring and corrective action). This process initiates with material input and progresses through transformation and movement activities until the final product or service reaches the end

customer (output). Successful logistics management delivers significant output advantages, such as enhanced competitive positioning, the creation of time and place utility, reliable on-time delivery, and assured product availability.

2.6. Demand Planning

Demand planning involves the use of advanced predictive analytics, artificial intelligence (AI), and collaborative data ecosystems to forecast the quantity, timing, and drivers of demand for a company's products or services. While traditional factors like pricing, competitor actions, and consumer income remain relevant, modern demand planning incorporates dynamic variables such as real-time market sentiment, supply chain disruptions, sustainability trends, and omnichannel consumer behaviours (Fildes & Goodwin, 2021). For example, AI-driven models now analyse social media trends, geopolitical events, and ESG (Environmental, Social, Governance) preferences to refine forecasts (Choi et al., 2023).

The contemporary demand planning cycle operates as a closed-loop system consisting of five interrelated stages:

1. **Market Intelligence & Scenario Modelling:** Integrate data from IoT sensors, ERP systems, and external databases to simulate demand under varying conditions (e.g., inflation, climate policies).
2. **Collaborative Forecasting:** Align stakeholders (suppliers, retailers, distributors) via cloud-based platforms to share real-time insights.
3. **Predictive Analytics:** Deploy machine learning algorithms to generate statistical forecasts, adjusting for anomalies like supply bottlenecks or viral demand spikes.
4. **Decision Integration:** Harmonize sales forecasts with production schedules and inventory targets using digital twin technology.
5. **Continuous Optimization:** Monitor outcomes via dashboards and recalibrate models using feedback loops (Sanders & Graman, 2020).

2.7. Purchasing and Supply

In today's hypercompetitive markets, companies increasingly prioritize strategic procurement as a core driver of competitive advantage and profitability, shifting from a transactional "buying to sell" mindset to a value-driven "buying to win" philosophy (Handfield et al., 2022). Modern procurement integrates advanced analytics, supplier ecosystems, and sustainability practices to optimize costs, mitigate risks, and foster innovation.

The Chartered Institute of Procurement & Supply (CIPS) defines key concepts as follows (Monczka et al., 2020):

- **Purchasing:** The acquisition of goods or services at the right quality, quantity, time, and cost, with an emphasis on ethical sourcing, digital contracting, and supplier relationship management.
- **Procurement:** A strategic function encompassing demand planning, supplier diversification, AI-driven inventory optimization, and blockchain-enabled supply chain transparency to secure materials, components, and services aligned with organizational ESG (Environmental, Social, Governance) goals.

For instance, leading firms now leverage predictive analytics to anticipate disruptions and automate procurement workflows, transforming it from a cost center to a value generator (Kähkönen et al., 2021).

While traditional procurement frameworks emphasize linear steps (e.g., need identification → contract signing), today's processes prioritize digital agility, supplier collaboration, and sustainability integration. Table 1 (adapted from Handfield et al., 2022) outlines a contemporary procurement workflow, enhanced with AI, blockchain, and ESG (Environmental, Social, Governance) criteria:

Phase	Modernized Step	Key Tools/Innovations
Pre-Tender	1. Predictive need identification	AI-driven demand sensing, IoT-enabled usage tracking
	2. Digital specification design	3D modeling, digital twins, ESG compliance checkers
	3. Automated requisition	E-procurement platforms (e.g., SAP Ariba, Coupa)
	4. Dynamic cost modeling	Machine learning for real-time market price forecasting
Tender Execution	5. Agile tender strategy selection	Scenario analytics for risk vs. cost optimization
	6. Stakeholder approval workflows	Blockchain-based governance tokens for decentralized OKRs
	7. Smart tender documentation	Generative AI for drafting, clause libraries
	8. Omnichannel tender announcements	Cloud-based portals, supplier ecosystems (e.g., Jaggaer)
	9. Digital tender access	NFT-style secure document distribution
	10. Real-time bidder Q&A	AI chatbots, collaborative platforms (e.g., Slack/MS Teams)
Post-Tender	11. Automated bid evaluation & award	AI scoring algorithms, carbon footprint analytics
	12. AI-augmented contract finalization	Smart contracts (e.g., Ethereum-based legal frameworks)
	13. E-signature & digital contract management	DocuSign, blockchain-ledger compliance tracking

Table 1: Modern Procurement Workflow
Source: Adapted from Handfield et al. (2022)

2.8. After Sales Services

Product sales and distribution encompass the strategic pricing, omnichannel delivery, and seamless transfer of goods to end consumers, often leveraging AI-driven dynamic pricing models and IoT-enabled logistics for real-time inventory management. In contrast, after-sales services have evolved beyond traditional repairs to include predictive maintenance (via embedded sensors), subscription-based product-as-a-service (PaaS) models, and circular economy initiatives (e.g., take-back programs for recycling). These services, now often delivered through digital platforms (e.g., AR-guided troubleshooting apps), ensure prolonged product usability, customer loyalty, and sustainability compliance (Cohen et al., 2023).

Figure 1 shows the services that should be provided after the sale of a product.
When Figure 1 is examined, it is seen that after the sale of the product, in the event of any defect, malfunction, etc., support such as maintenance, repair, service, assembly service should be activated. Likewise, this process should continue for those who call the customer service department. It is of great importance that the practical product has a warranty certificate. It is seen that customer satisfaction and brand value will be ensured if the after- sales services to be offered are found appropriate.

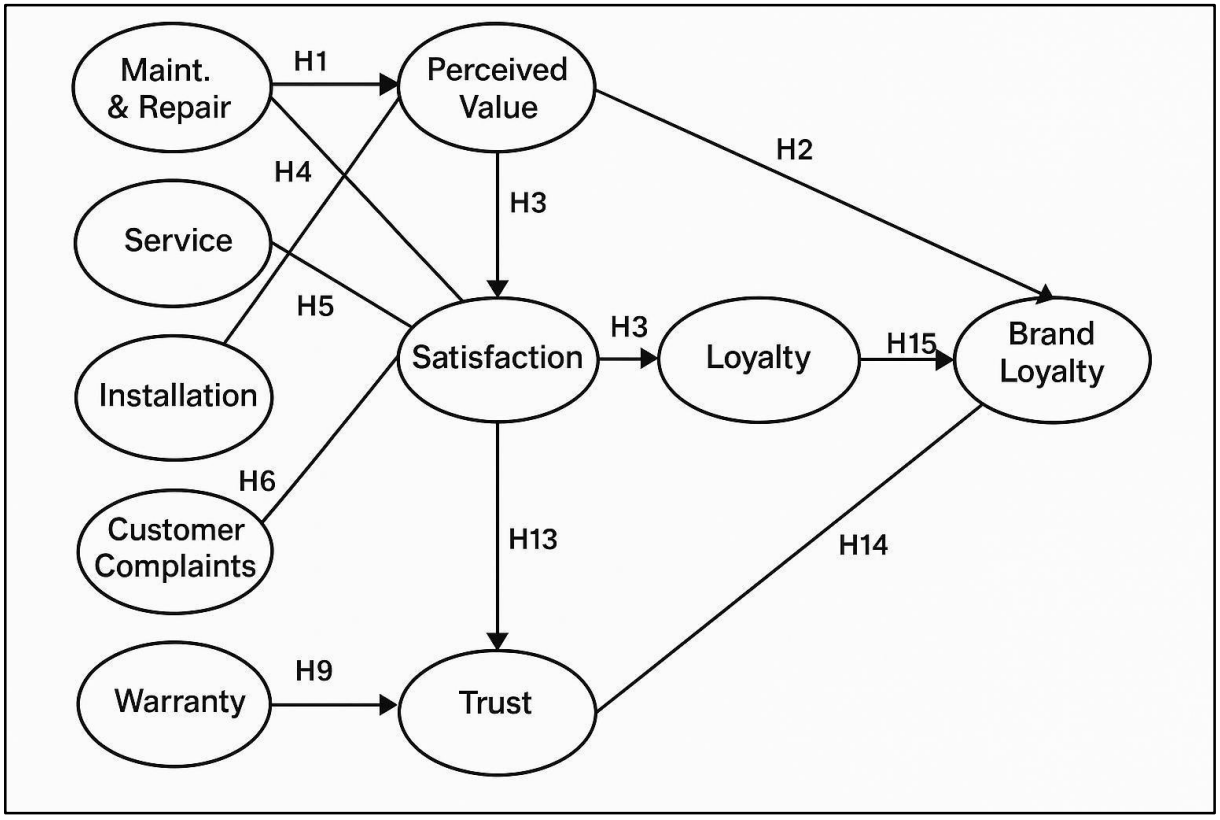

Figure 1: After-Sales Services and Customer Loyalty
Source: Adapted from Cohen et al. (2023)

After-sales services are efforts to ensure customer satisfaction by adhering to the principles of product and service quality of enterprises, using the products correctly and appropriately by the

customer, providing service and spare parts services correctly, quickly and at affordable prices in case of malfunction or complaint.

2.8. Materials and Inventory Management

Materials and inventory management aims to eliminate unnecessary inventory within the system. Inventory reduction is one of the main differences between vertical market systems such as franchise agreements and supply chain management (Şentürk, 2020: 18). Raw materials, spare parts and operating materials can be listed as inventory types. Materials and inventory management covers the processes from the entry of raw materials and materials required in production to the consumer.

2.9. Logistics Strategy and Costs

Logistics strategy aligns with corporate and business objectives while addressing modern challenges such as digital transformation, sustainability, and supply chain resilience. Companies today ensure operational continuity by delivering products and services at the right time, place, quality, quantity, and cost, while also prioritizing ethical sourcing (e.g., conflict-free materials) and carbon-neutral logistics (Melnyk et al., 2020). The interplay between logistics performance (e.g., delivery speed, IoT-enabled transparency) and customer- perceived value has intensified, with firms leveraging AI-driven analytics and blockchain traceability to enhance trust and loyalty (Wieland & Durach, 2021).

3. Modern Logistics Strategies

Contemporary frameworks extend beyond traditional models like Bowersox et al.'s (1987) process, market, and channel strategies. Key approaches include:

1. **Digital Ecosystem Strategy**: Integrates AI, IoT, and cloud platforms for real-time supply chain orchestration (Ivanov et al., 2022).
2. **Circular Logistics Strategy**: Prioritizes reverse logistics, remanufacturing, and waste reduction to meet ESG goals (Agrawal et al., 2022).
3. **Omnichannel Resilience Strategy**: Balances agility (e.g., multi-sourcing) with cost efficiency using predictive analytics (Wiedmer et al., 2021).

Logistics Cost Management

Modern logistics costs encompass both direct expenses (transportation, warehousing) and indirect costs like carbon footprint penalties and supply chain risk mitigation (Wang et al., 2023). Advanced cost measurement tools include:

- **Total Cost of Ownership (TCO)**: Evaluates lifecycle costs, including sustainability and social impact.
- **Digital Twins**: Simulate logistics networks to optimize costs and reduce waste.

4. Supply Chain Management and Current Approaches in Logistics

4.1. Supply Chain Management in Logistics

Supply chain management (SCM) encompasses the management and planning of all activities related to sourcing, procurement, transformation and all logistics management activities. Importantly, it also involves coordination and collaboration with channel partners such as suppliers, intermediaries, third-party service providers and customers (Gürol, 2019: 9).

Supply chain management covers the management of materials and products from the basic raw material supply to the final product stage (including possible recycling and reuse).

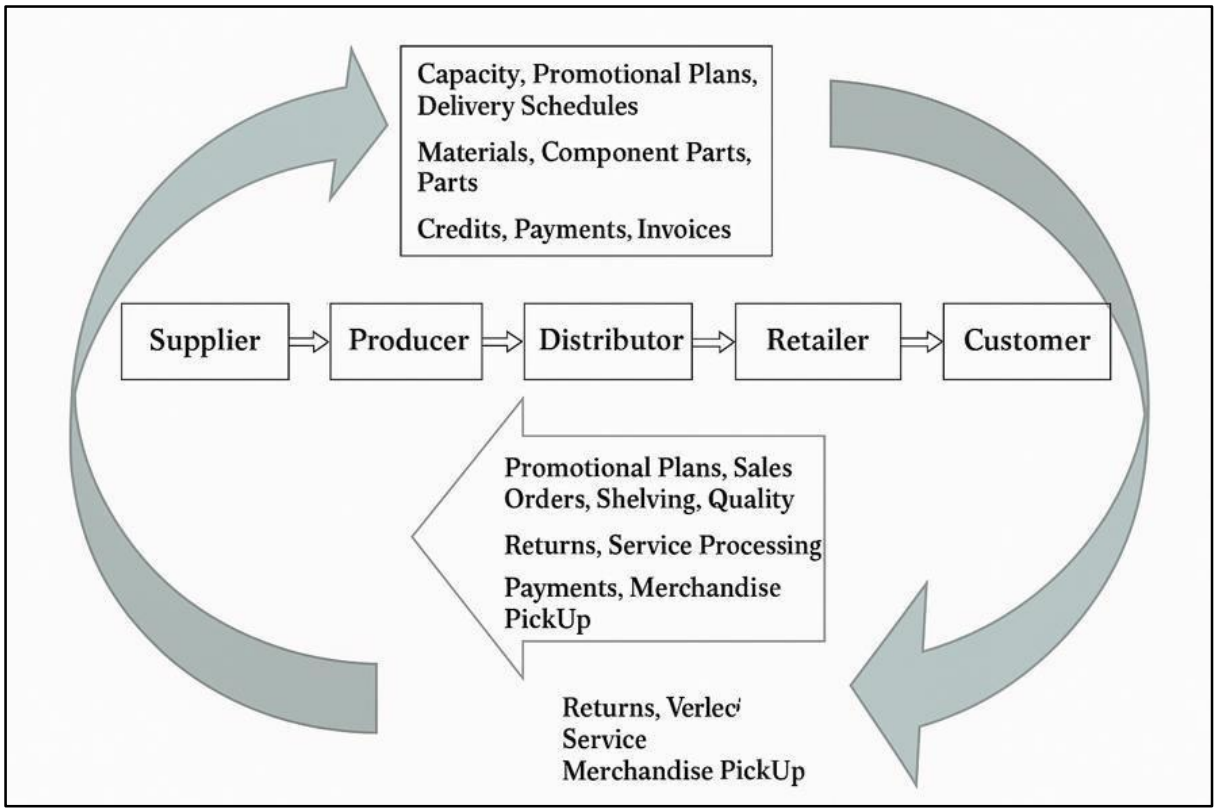

Figure 2: Supply Chain Flow and Reverse Logistics Integration
Source: Adapted from Karakol (2018), Kapıcı (2019), and Şentürk (2020),

Figure 2 above shows the process starting from the person or organization that supplies the product, through the manufacturer, main distributor, retailer and consumer. Supply chain management aims to realize the procurement processes that will be necessary in the development of the products and services to be offered to meet the needs of consumers and the distribution processes used to deliver the resulting products and services to the consumer without any interruption (Karakol, 2018). Supply chain management envisages information exchange based on integration between internal processes and other supply chain elements with which the business cooperates. As a result, a network is created that supports trust-based participation in business process partnerships between businesses in the supply chain. Through this network, it is ensured that resources are used efficiently, performance is increased,

customer satisfaction is ensured by offering added value, and competitiveness in the market is achieved (Kapıcı, 2019: 10).

Supply chain structures extend from the supplier's supplier to the customer's customer. The operation of the supply chain as a whole strengthens the supply chain. The relationship strength between chain members is in competition with the relationship strength between chain members in other supply chain structures (Yıldırım, 2019: 14).

4.2. The Relationship between Logistics and Supply Chain Management

Supply Chain Management (SCM) encompasses the end-to-end orchestration of processes—from product/service creation to delivery, use, and post-consumption recovery— emphasizing sustainability, digital integration, and stakeholder collaboration. Modern SCM extends beyond linear workflows to include circular practices (e.g., remanufacturing, recycling) and digital ecosystems that synchronize suppliers, producers, distributors, retailers, and consumers (Wieland & Durach, 2021).

Logistics Management is a strategic subset of SCM focused on optimizing the flow and storage of goods, services, and data across global networks. It integrates advanced technologies like AI, IoT, and blockchain to ensure efficient, cost-effective, and customer- centric operations. Contemporary logistics prioritizes agility (e.g., real-time route optimization), transparency (e.g., blockchain traceability), and sustainability (e.g., carbon- neutral transportation) (Ivanov et al., 2022).

Key Modern Distinctions

1. **Digital Integration**:
    - **AI-Driven Planning**: Machine learning algorithms forecast demand and optimize inventory (Wang et al., 2023).
    - **Blockchain Traceability**: Secures data sharing across partners, ensuring ethical sourcing and compliance (Agrawal et al., 2021).
2. **Sustainability**:
    - **Circular Logistics**: Reverse logistics systems for returns, refurbishment, and waste reduction (Sarkis et al., 2020).
    - **Green Metrics**: Carbon footprint tracking and ESG (Environmental, Social, Governance) alignment (Melnyk et al., 2023).
3. **Resilience**:
    - **Multi-Sourcing Strategies**: Mitigate disruptions via diversified supplier networks (Wiedmer et al., 2021).
    - **Digital Twins**: Simulate supply chain risks and test mitigation strategies (Tao et al., 2022).

4.3. Evolution of supply chain management

Supply chain management, which has started to develop since the 1960s, has been accepted not only as an operational system but also as one of the basic components of the supply function,

production and distribution businesses. Within these activities, the concept of material needs has emerged. This concept is the system that plans when and how much material is needed by the enterprises. The reason for the creation of this system is the lack of adequate research by consumers in the purchasing process. With this system, the consumer grasped the importance of the purchasing process (Eser, 2018: 57). Since the last years of the 20th century, supply chain management has aimed to increase customer satisfaction and value perception by integrating these systems with the developing technological infrastructure. Today, it is seen that this process is handled in a more comprehensive and multifunctional manner (Yıldırım, 2019: 19).

5. Current Supply Chain Approaches

5.1. Green supply chain approach

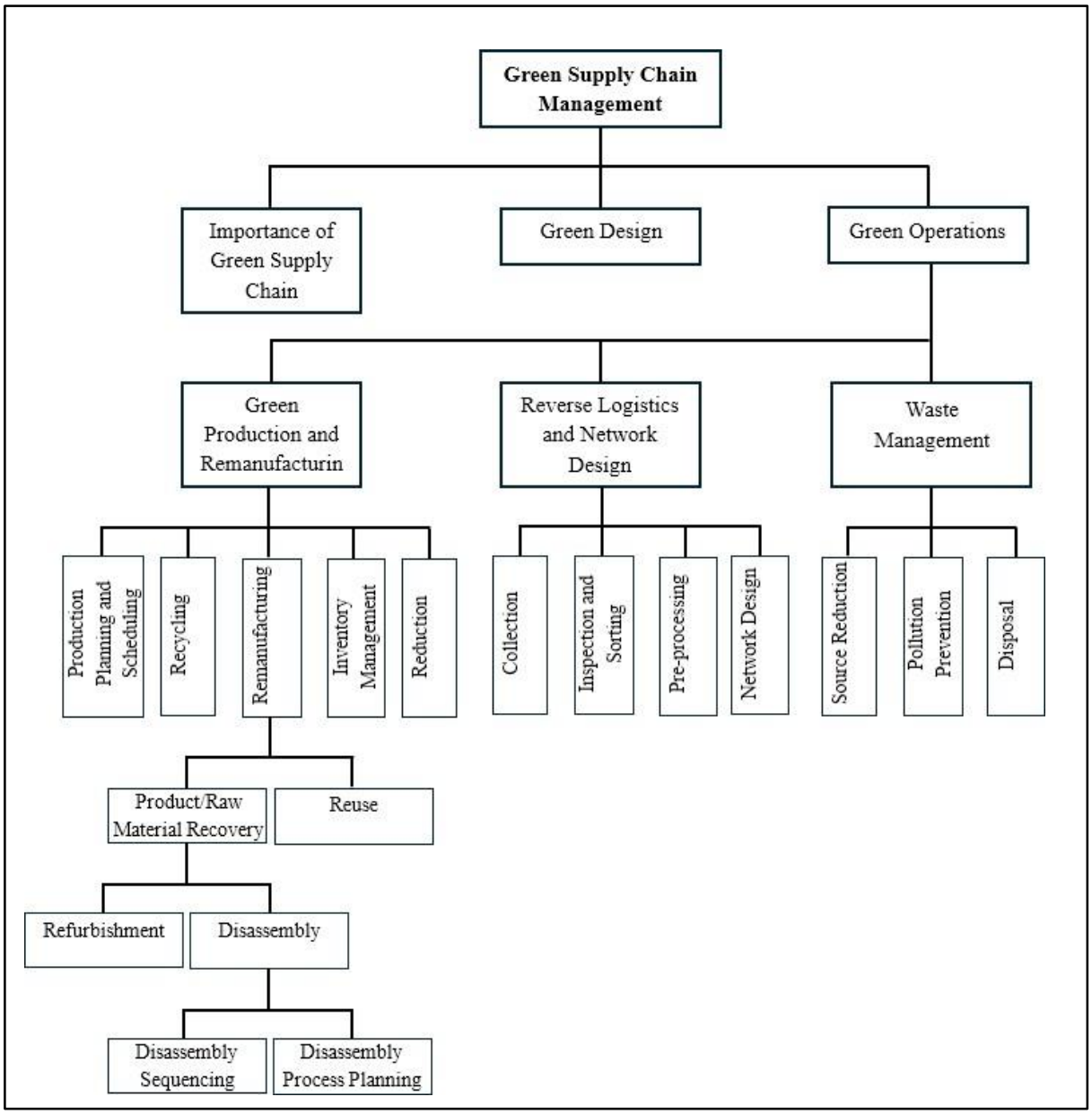

Figure 3: A Classification Model for Green Supply Chain Management
Source: Adapted from Özesen (2009)

In the literature, green supply chain is recognized as a new paradigm. In this paradigm, the production of environmentally sensitive products in procurement and production processes and the execution of procurement activities in an environmentally sensitive manner come to the fore (Yıldırım, 2019: 31). It both increases ecological efficiency by reducing environmental risks and realizes the win-win strategy by helping organizations reach their target profit and market share. The main purpose of the green supply chain is to explain the importance of the environment while creating value in the firm's supply chain. Increasing environmental problems and the depletion of natural resources raise awareness among consumers and mobilize governments to take necessary measures (Özesen, 2009: 13). In his study, Özesen (2009) presented the classification of green supply chain management in Figure 3. When Figure 3 is examined, it is seen that the green supply chain is classified under 3 main headings: importance, design and operations. The green operations category includes sub-sections such as green manufacturing, reverse logistics and waste management. The continuity of the green supply chain is ensured by dividing these subheadings into subcategories within themselves.

5.2. Green Procurement, Green Manufacturing and Green Distribution

Green Purchasing involves selecting raw materials and suppliers based on environmental criteria such as biodegradability, recyclability, and alignment with circular economy principles. Today, this extends beyond material properties to include carbon footprint tracking, ethical sourcing certifications (e.g., Fair Trade, Cradle-to-Cradle), and blockchain-verified sustainability claims (Kouhizadeh et al., 2021). For instance, companies like Patagonia prioritize recycled polyester and organic cotton, while leveraging AI to assess suppliers' ESG compliance (Agrawal et al., 2022).

Green Production is defined as a closed-loop system that integrates advanced recycling technologies, renewable energy, and digital tools to minimize waste, reduce resource depletion, and eliminate pollution. Modern frameworks emphasize Industry 4.0 practices, such as AI-driven waste prediction and robotic disassembly for material recovery, ensuring circularity across product lifecycles (De Sousa Jabbour et al., 2020).

Companies now prioritize:

- **Energy Conservation**: Smart factories powered by solar/wind energy (e.g., Tesla's Gigafactories).
- **Worker Safety**: IoT sensors monitoring workplace conditions in real time.
- **Eco-Design**: Products designed for disassembly using 3D-printed biodegradable materials (Sarkis et al., 2021).

Sustainable Distribution Networks require customer-centric design, leveraging AI and blockchain to optimize logistics. Key factors include:

1. **Dynamic Transportation Selection**: Machine learning models choose low-emission routes (e.g., electric vehicle fleets).
2. **Just-in-Time (JIT) 2.0**: Predictive analytics align production with demand signals, reducing overstock and waste (Wang et al., 2023).

3. **Reverse Logistics Integration**: Blockchain-tracked return channels for refurbishment and recycling (Agrawal et al., 2021).

Environmental regulations and consumer activism have further driven innovations like urban micro-fulfilment centres (reducing last-mile emissions) and carbon-neutral packaging (e.g., Amazon's Frustration-Free Packaging) (Wiedmer et al., 2021).

5.3. Green marketing

Green marketing carries a holistic marketing approach. Here, production, marketing, consumption and waste management are carried out in a way that causes less damage to the environment, thereby raising awareness about global warming, waste that does not decompose into bacteria, and the harmful effects of pollutants (Bahçecik, 2019: 20). It includes situations such as the efficient use and protection of natural and social resources, avoiding situations such as considering the health of future generations and consumers (Yaşar, 2019: 9). Green marketing is defined as a profitable and sustainable holistic management process that is responsible for analysing and identifying consumer needs, forecasting and meeting these needs (Djurdjevac, 2019: 28). Today, eco-friendly products have become the reason for consumers' product choices. Companies that adopt this environmentalist approach have started to increase profitability and efficiency in their sales (Kalmaz, 2019: 35). According to Miles and Russell, green marketing has two objectives. The first of these is to create an environmentally friendly product that is suitable for environmental cleanliness, and the second is to create an image that develops strategies that are sensitive to environmental problems (Günaltay, 2019: 32).

6. Future Trend Approaches

The 5 trends that are expected to shape the supply chain of the future are as follows:

1) Artificial intelligence: Thanks to technological developments, the concept of artificial intelligence has been used in many applications in recent years. One of them is the supply chain process. With the use of artificial intelligence, the supply chain becomes an intelligent system that can correct its own mistakes. Thus, the operations to be carried out will have the opportunity to be done faster and error-free.
2) Internet of Things: With the introduction of the Internet of Things, the supply chain is of great importance in terms of seeing the problems that may occur by using various sensors, GPS and weather modeling.
3) Blockhain: It is a system that will strengthen the power of companies of different sizes by using network hubs in multi-company structures. This system makes the supply chain process more democratic and allows all participants to participate in the system in a secure and transparent manner.
4) Smart order management: In the smart ordering method, there is a multi-channel process from free ordering by the customer to the delivery of a purchased product on the way to work, and it is stated as a form of management that companies want to achieve.
5) Quantum: Technological advances are constantly evolving today, and many of the products or software that are said to be on the cutting edge today can actually be

developed further, and this can be done with quantum computers. Quantum computers will be used to analyse and compute big data in the supply chain process, solving optimization challenges.

7. Conclusions And Recommendations

It has been observed that the logistics sector is a developing sector in the world. The logistics sector, which tries to make life easier in every aspect, which people can reach more easily, which is always open to the discussion of how services can be done better, tends to supply chain approaches, including today and in the future.

Logistics behaviors from the past to the present as an example also tell us how important this sector is in our advanced life. We see that most situations in our lives are linked to logistics. It explains that a company is less likely to fail if it adopts the discipline of supply chain management in its operating principles. It is obvious that supply chain management is looking for ways to be more environmentally friendly and more scientific.

In the future, methods that cause less or no damage to the environment are certain to emerge. It is not difficult to see that the more successful we are in this regard, especially in the cognitive field, the easier our lives will become. We are moving towards a time when human life will become easier, and companies will be able to do business more easily.

We should not forget that logistics and supply chain management are in every aspect of life and we can state that we will reach more comfortable lives with the development of this sector.

Thanks to software such as artificial intelligence, smart ordering methods, etc., which are becoming increasingly popular today, it will become easier and more traceable to track every step from logistics to transportation, storage, product shipment, and delivery of the product to the final buyer.

Green supply chain, one of the issues that have gained importance in recent years, is increasingly taking its place in the supply chain as a system that many companies attach importance to, paying attention to ecology at every stage from production to the buyer.

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