The Evolution of International Business (2015-2025): Transitioning Toward the Digital Age of 2035

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I. INTRODUCTION AND RATIONALE

In the past decade, International business has experienced unprecedented transformation, shaped by rapid technological progress, shifting geopolitical alliances, and changing consumer expectations. Traditional globalization—based primarily on physical goods and capital—has expanded into a multidimensional system characterized by digital trade, AI-driven decision-making, and sustainability concerns.

Businesses today operate in an increasingly complex global environment that demands flexibility, innovation, and ethical responsibility.

Table 1. Global Trade Trends (2015-2025)

Year	Global Merchandise Trade (US$ trillion)	Growth Rate (%)	Digital Trade Share (%)	Emerging Market Contribution
2015	16.5	2.3	8	35
2017	19.0	3.5	10	36
2019	21.4	3.2	12	37
2021	17.0	-5.0	18	40
2023	21.0	4.2	22	43
2025*	23.5	3.8	25	47

Source: Author's compilation (based on UNCTAD, OECD, World Bank datasets).

Between 2015 and 2025, digital globalization enabled firms to access international markets through e-commerce platforms, virtual collaboration tools, and AI-enhanced supply chain analytics. External shocks, such as the COVID-19 pandemic, trade wars, and BREXIT, exposed vulnerabilities in global supply chains, prompting firms to adopt resilience-oriented strategies such as near-shoring and diversification. At the same time, the growing importance of ESG principles has shifted corporate strategy toward sustainable and responsible business practices.

This study analyzes the combined impact of technological innovation, AI integration, geopolitical changes, and sustainability initiatives on international business. The primary objective is to

evaluate key trends from 2015 to 2025 and discuss their implications for global competitiveness in the approaching digital age of 2035.

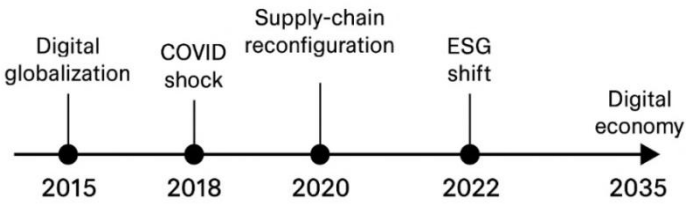

Figure 1: Key milestones from 2015 to 2035 towards Digital economy

II. LITERATURE REVIEW

2.1 Globalization and Changing Trade Patterns

Traditional theories of international business, such as Dunning's Eclectic Paradigm and Porter's Competitive Advantage of Nations, focus on ownership, location, and internalization advantages. Recent studies suggest globalization has entered a new phase, often termed Globalization 4.0, characterized by the integration of digital technology, AI, and knowledge-based assets (World Economic Forum, 2019; Lund & Manyika, 2019). Global trade has increasingly shifted from physical goods to digital services and data flows, allowing SMEs to compete internationally without establishing a physical presence abroad (UNCTAD, 2023).

2.2 Technological Transformation and AI Integration

AI has become a core enabler of international business beyond IT applications. It supports predictive analytics, risk management, and real-time decision-making. AI-enabled Internet of Technology devices, autonomous robots, and edge computing improve supply chain efficiency and responsiveness across borders. AI also helps optimize routes, forecast demand, and monitor trade compliance, reshaping comparative advantage from cost-driven to data-driven competitiveness.

2.3 Supply Chain Resilience and Geopolitical Challenges

Supply chain disruptions due to COVID-19, trade wars, and political shifts prompted firms to adopt resilient, diversified networks (Gereffi, 2020; Evenett & Baldwin, 2022). Near-shoring and friend-shoring strategies reduce reliance on single countries. Walmart's Mexico unit, Walmex, has announced a significant investment exceeding $6 billion for 2025, nearly tripling its

expenditure from the previous year. This capital will be allocated towards opening new stores and advancing the construction of two distribution centers in the Bajío region and Tlaxcala, incorporating artificial intelligence and robotics technologies.

As near-shoring initiatives gain momentum, the demand for efficient cross-border transportation solutions is increasing. PRIMO addresses this need by offering seamless cross-border and ground transportation services between Mexico and the U.S. Utilizing a comprehensive, human-first model that integrates people, processes, and technology, PRIMO ensures 24/7 coverage across North America. Their established and growing network effectively tackles common challenges in intra-Mexico and cross-border trade without compromising on quality, service, or capacity.(Walmart, ESG)

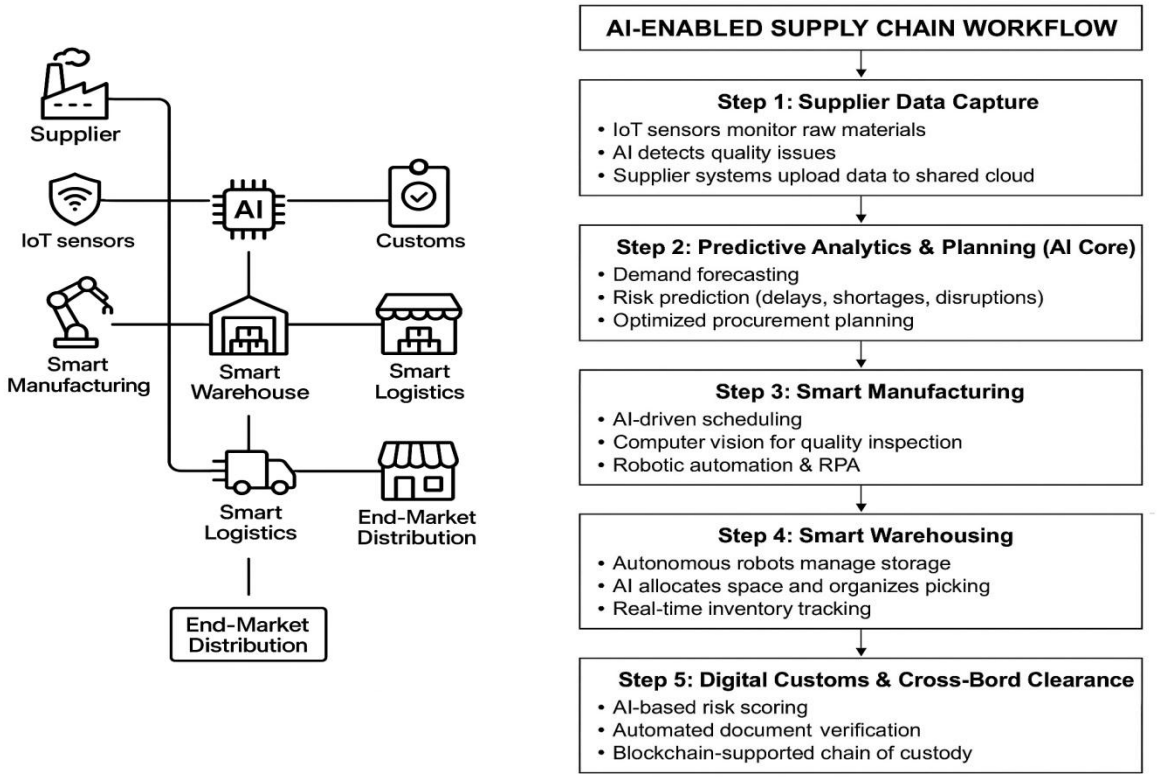

Figure 2 AI-Enabled Supply Chain workflow representing AI Core, Predictive Analytics and Planning, Smart Manufacturing, Smart Warehousing and Digital Customs and Cross Border Clearance and AI Enabled supply chain network schema

2.4 Sustainability, ESG, and Corporate Responsibility

Integration of ESG principles has shifted from peripheral concern to strategic priority (Porter & Kramer, 2011; Kolk, 2016). AI supports monitoring environmental impact, labor practices, and

social responsibility. Block-chain and satellite technologies enhance supply chain transparency, enabling ESG compliance to drive brand equity and financial performance.

Table 2 Artificial Intelligence Hardware in Supply Chain

AI Hardware in Supply Chains: Types, Applications, and Environmental Impacts

Hardware Type	Function	Environmental Impact
IoT Sensors	Data collection	Minimal
Edge Devices	Local data processing	Low energy consumption
Graphics Processing Units	Advanced computing	High energy consumption
Data Centers	Cloud storage and computing	High energy consumption

2.5 Emerging Markets and New Growth Hubs

Emerging economies such as India, Vietnam, and Indonesia are driving global innovation and trade (Khanna & Palepu, 2018). Artificial Intelligence adoption in these markets accelerates digital entrepreneurship and market access, contributing to a multi-polar economy.A multipolar economy is a global economic system where economic and political power is distributed among several major poles or centers, rather than being dominated by a single country, as in a unipolar system. This shift is driven by the growth of economies in the Global South, leading to a more diverse international monetary system and potentially more complex global trade dynamics. This new order could involve increased competition, greater regionalism, and more frequent use of economic tools like tariffs and sanctions. The growth of countries like Brazil, Russia, India, and China (BRICS) is a key driver of this shift. Other nations in Africa and Southeast Asia also contribute to this multi-polar structure.

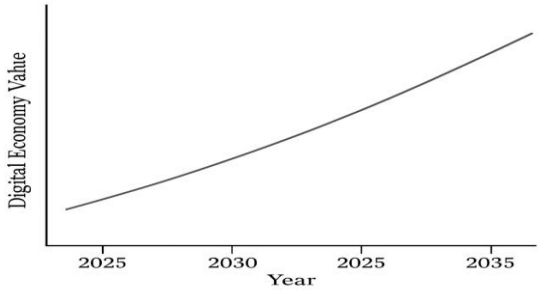

Figure 3. Projected Digital Economy Growth Toward 2035

2.6 AI Hardware and Environmental Implications

2.6.1 AI Hardware

AI integration in supply systems requires high-performance computing, Graphical Processing Units, Tensor Processing Units, edge devices, Internet of Things sensors, and autonomous robotics. These tools enable real-time data processing and decision-making across global supply chains. TPU's are custom ASICs (application-specific integrated circuits) designed to perform the large-scale tensor operations crucial for deep learning, enabling faster training and high efficiency compared to general-purpose processors like CPUs and GPUs in these specific workloads. In machine learning, deep learning focuses on utilizing multilayered neural networks to perform tasks such as classification, regression, and representation learning. The field takes inspiration from biological neuroscience and revolves around stacking artificial neurons into layers and "training" them to process data. The adjective "deep" refers to the use of multiple layers (ranging from three to several hundred or thousands) in the network. Methods used can be supervised, semi-supervised or unsupervised.

2.6.2 Environmental Impact

AI infrastructure increases energy consumption, generates e-waste, and requires water for cooling data centers. Sustainable practices, including renewable energy for data centers and AI-optimized logistics, can mitigate environmental costs.

III. METHODOLOGY

This study adopts a mixed-method approach, combining qualitative case studies and quantitative analysis of secondary data. Data sources include international trade reports, corporate sustainability reports, and academic literature. AI-related supply chain innovations, ESG adoption, and geopolitical influences are analyzed for trends and strategic implications.

Year	Value	Share of GDP
2025	$11 trillion	15%
2030	$18 trillion	20%
2035	$25 trillion	25%

Table 3. Projected Digital Economy Growth Toward 2035

IV. RESULTS AND DISCUSSION

4.1 Digital Globalization and AI

Digitalization and AI have transformed international business. E-commerce platforms and AI analytics enable small and Medium Enterprises and Multi National Companies to access global markets, optimize operations, and predict demand. AI tools such as predictive modeling and machine learning improve efficiency, reduce waste, and enhance competitiveness.

4.2 Supply Chain Resilience

Companies have shifted toward nearshoring, regional diversification, and multi-sourcing. Artificial Intelligence predicts disruptions and recommends optimal strategies. Edge computing allows rapid local decision-making, reducing latency in international logistics.Supply chain resilience is a company's ability to prepare for, respond to, and recover from disruptions with minimal impact on operations and customers.

This is achieved through strategies like diversifying suppliers, improving transparency, and using technology to gain real-time visibility and make better decisions. Building resilience helps organizations mitigate risks from events like natural disasters, geopolitical conflicts, or economic downturns.

4.3 ESG Integration

Sustainability has become a core strategy. AI monitors carbon footprints, ensures ethical sourcing, and supports compliance reporting. Companies integrating ESG perform better financially while enhancing brand reputation. The Wal-Mart Reducing Emissions in the Supply Chain Goal is to Reduce or avoid 1 billion MT CO2 e in the global value chain by 2030 (Project Gigaton) GRI: 305-3 and Operational GHG Emissions is to Reduce absolute global Scope 1 & 2 GHG emissions 35% by 2025 and 65% by 2030 from CY2015 baseline (approved as science based and classified as 1.5°C- aligned, SBTi) GRI: 305-1, 305-2. Reducing Emissions in the Supply Chain Goal is to Reduce or avoid 1 billion MT CO2 e in the global value chain by 2030 (Project Gigaton) GRI: 305-3. Nestle Plans for GHG emissions reductions to reach a 50% cut in absolute terms across their net zero scope by 2030.

4.4 Emerging Markets and Multi-Polarity

Emerging economies are adopting AI-driven digital trade systems, fostering South-South cooperation, and contributing to global innovation. This trend decentralizes global economic power and increases competitiveness.

4.5 Geopolitical and Regulatory Implications

Trade conflicts, sanctions, and regulations like GDPR affect international business. AI helps firms navigate compliance, monitor risks, and maintain adaptive strategies across borders.The GDPR is an important component of EU privacy law and human rights law, in particular Article 8(1) of the Charter of Fundamental Rights of the European Union.

V. CONCLUSION AND SUGGESTED READING

International business has evolved into a digitally integrated, AI-driven, and sustainability-oriented ecosystem. By 2035, AI will underpin global trade ecosystems, enabling real-time decision-making, predictive supply chains, and cross-border digital platforms. Firms that combine AI, digital innovation, and ESG principles will lead global competitiveness and sustainability in the digital age and suggest reading ESG reports of INDEX firms.

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