From "Repeated Overseas Expansion" to "Ecological Breakthrough": Temu's Global Market Penetration Logic of Tripartite Integration

Guihua Zhang, Yuan Tian*

Beijing Union University, Beijing 100101, China

zhangguihua0709@163.com, yuan.tian@buu.edu.cn

Received date: Sept. 6, 2024, revision date: Oct. 8, 2024, Accepted: Nov.12, 2024

ABSTRACT

Under the tide of the digital economy, the cross-border e-commerce sector in our country is developing rapidly. The vigorous rise of this sector has not only profoundly reshaped the international trade landscape but also injected strong momentum into the high-quality development of our country's economy. Faced with this historic opportunity and challenge, it is particularly crucial and urgent to deeply explore and research the path choices for Chinese enterprises to go global. In the context of the digital economy era, the overseas expansion of Chinese e-commerce companies relies not only on traditional trade advantages but also integrates digital technology, policy support, and the trend of globalization in a deep and unique competitive pattern and development path. This case study takes Temu, the cross-border e-commerce platform under Pinduoduo, as the object to explore the typical path of Chinese cross-border e-commerce companies' international expansion in the digital context. The case study shows that the digital economy era provides Chinese e-commerce companies with technological and policy dividends for going global. However, enterprises need to find a balance between compliance, localization, and technological innovation. Successful international expansion requires the integration of digitalization into all aspects of platform operations, including digital operations, digital supply chain management, and digital marketing. Through the triple path of "digital infrastructure + industrial belt upgrading + global rule coordination," companies can continuously unleash growth potential in the complex international environment.

Keywords: cross-border e-commerce, tripartite digital integration, global market penetration.

1. Introduction

The Central Economic Work Conference of the People's Republic of China explicitly highlights the pivotal role of cross-border e-commerce in foreign trade development, calling for the acceleration of new growth drivers, the strengthening of foreign trade and investment foundations, and the proactive expansion of cross-border e-commerce exports. Against this backdrop, Temu, a subsidiary of Pinduoduo, stands out as a major innovation. It not only represents the continued evolution and innovative application of Pinduoduo's unique business model in international markets but also serves as a trailblazer for Chinese e-commerce enterprises exploring new pathways to globalization. In the digital economy era, the global expansion of Chinese e-commerce firms depends not only on traditional trade advantages but also on the deep integration of digital technologies, policy support, and globalization trends, shaping a distinct competitive landscape and development trajectory. The rapid advancement of digital technology has further deepened and complicated the interactions between enterprises and individuals, reshaping corporate value creation models while also presenting new opportunities for expanding business boundaries, particularly in overseas markets (Luo, 2021; Chen & Zhang, 2021; Strange & Zucchella, 2017).

Since its official launch in Boston, USA, in September 2022, Temu has rapidly expanded worldwide. By leveraging Pinduoduo's domestically accumulated expertise in supply chain management and low-price

positioning, Temu has quickly attracted a vast number of price-sensitive consumers. According to SimilarWeb data, as of December 2024, Temu's independent visitor count had reached 467 million, matching AliExpress and ranking second globally (Sun, 2024). Analyzing Temu's overseas expansion path is crucial not only for understanding how it establishes and sustains rapid growth amid intense international competition but also for providing valuable insights and experience for other enterprises pursuing "going global" strategies. This, in turn, contributes to the continued prosperity of China's cross-border e-commerce industry and offers Chinese expertise and solutions for fostering an open global economy.

2. Literature Review

2.1 Limitations of Low-Price Strategy and the Necessity for Transformation

Early studies have highlighted that low-price strategies are effective tools for cross-border e-commerce platforms, such as Temu, to rapidly capture markets (Chen, 2021). By leveraging China's supply chain advantages, Temu penetrated European and American markets with its "ultra-high cost-performance" positioning, achieving short-term breakthroughs in user scale and download volume (Dong, 2022). However, this model faces multiple challenges: on one hand, price competition squeezes profit margins, making it unsustainable for long-term development (Sun, 2021); on the other hand, the "low-price" label may rigidify brand perception, limiting the expansion of higher-value products (Song et al., 2025). As market competition intensifies and consumer demands evolve, the marginal benefit of relying solely on low prices diminishes, necessitating strategic transformation.

2.2 Digital Technology-Driven Construction of Cross-Border E-Commerce Ecosystems

Digital technology serves as a key driving force for the overseas expansion of platform enterprises, directly influencing the international business environment and corporate decisions (Monaghan et al., 2020). It has not only significantly improved market matching efficiency and service quality but also reduced dependence on geographical location, thereby accelerating the pace of internationalization (Liu et al., 2020; Vial, 2019). In the context of the digital economy, competition among cross-border e-commerce platforms has shifted from single-dimensional price rivalry to ecosystem competition (Wu et al., 2020). Temu achieves this ecological breakthrough through the tripartite integration of "technology-data-users": first, it optimizes product selection and supply chain responsiveness using big data analytics on user behavior (Meng et al., 2022); second, it employs AI algorithms to precisely match supply and demand, enhancing the user experience (Zhang, 2020); third, it constructs an open platform ecosystem that attracts third-party service providers (e.g., logistics, payment, marketing) to foster synergy (Peng, 2023). Digital technology has provided a robust impetus for the global expansion of cross-border e-commerce supply chains by establishing integrated digital platforms. These platforms enable end-to-end resource integration, ensuring transparency and visibility across operational processes. Through data-driven management and decision-making support, this technological infrastructure enhances both the operational efficiency and responsiveness of supply chains (Zhou, 2025).

2.3 Ecological Logic of Global Market Penetration

Existing research indicates that successful internationalization requires overcoming the "liability of foreignness" (Zaheer, 1995). Temu achieves market penetration through localized operations and ecological integration: on one hand, it enhances brand recognition via localized teams and cultural adaptation strategies (Zhao, 2022); on the other hand, it leverages digital technologies to build a symbiotic network of "platform-users-suppliers" for cross-regional collaboration. For example , Temu's overseas warehouses deployment, combined with blockchain technology, optimizes logistics efficiency and transparency (Zhang, 2020); its social e-commerce features strengthen community engagement through user-generated content

(UGC), forming a closed-loop of "low-price customer acquisition - ecological value-added" (Chen, 2021).

Current literature primarily focuses on the short-term effects of low-price strategies or isolated technological applications, lacking systematic exploration of the "low-price-technology-ecology" tripartite integration. This study uses Temu as a case to examine how digital capabilities can restructure supply chains, user relationships, and business models to transcend low-price dependence and form sustainable global competitiveness. The research expands ecological theories of cross-border e-commerce and provides a new paradigm for Chinese brands' globalization.

3. Research Methods

This study employs a single-case study approach to examine Temu's internationalization process from 2022-2024, analyzing the strategic measures adopted during its globalization journey. In addition, the paper also adopts the comparative analysis method, comparing similar cross-border e-commerce platforms at home and abroad, highlighting Temu's unique strengths and innovations, and then summarizing the path of globalization development of cross-border e-commerce with general guiding significance. Primary data sources include platform announcements and corporate annual reports, while secondary data are derived from the General Administration of Customs of the People's Republic of China, SimilarWeb traffic analytics, and third-party monitoring reports including Statista, MetaAdLibrary, and so on. Grounded in Resource Action Theory, this research constructs a three-dimensional analytical framework comprising "digital infrastructure—industrial cluster upgrading—global regulatory coordination."

Based on the innovation-evolution process model of Temu's international operations from the resource-action perspective (as shown in Fig. 1), this paper studies the problems faced by Temu in different internationalization stages and deeply analyzes its business model, operational strategy, and market performance, which can provide valuable experience and inspiration for subsequent enterprises to implement the "going global" strategy, further promote the prosperous development of China's cross-border e-commerce industry, and contribute Chinese wisdom and solutions to the construction of an open world economy.

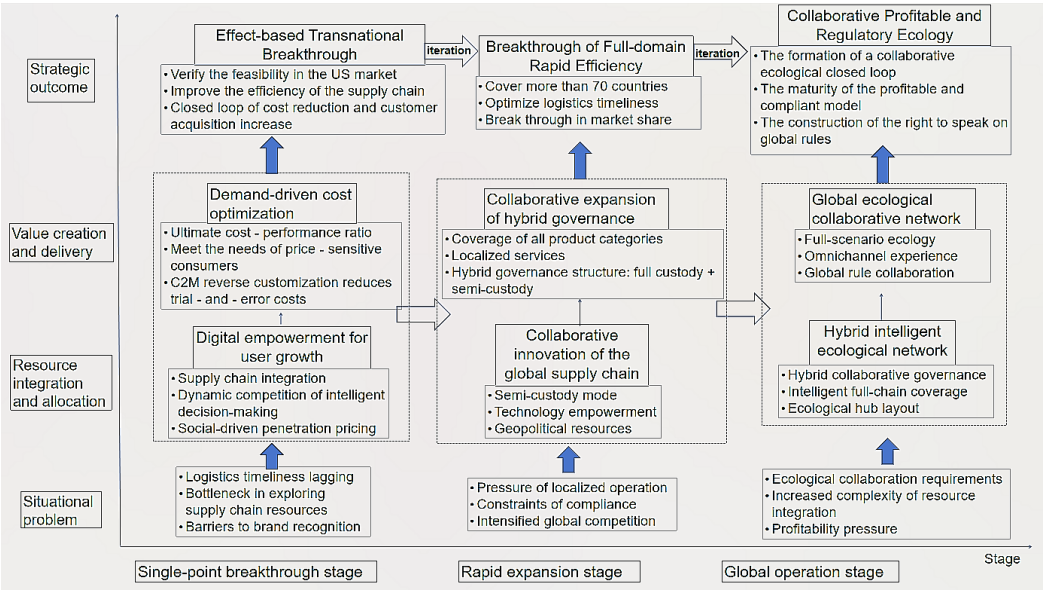

Figure1: Model of Temu's international business innovation evolution process under the resource action perspective

4. Analysis

4.1 Development Path of the Temu Platform

As a globally emerging e-commerce platform, Temu's growth trajectory follows the logic of "latecomer leapfrog development." Leveraging its parent company Pinduoduo's supply chain resources, Temu launched its cross-border operations in 2022, rapidly penetrated North American markets through agile iteration strategies and achieving coverage in over 70 countries across continents (including North/ South America, Europe, Asia, Africa, and the Middle East) within 18 months. This evolution can be divided into three phases: single-point breakthrough, rapid expansion, and global operation (Fig. 2).

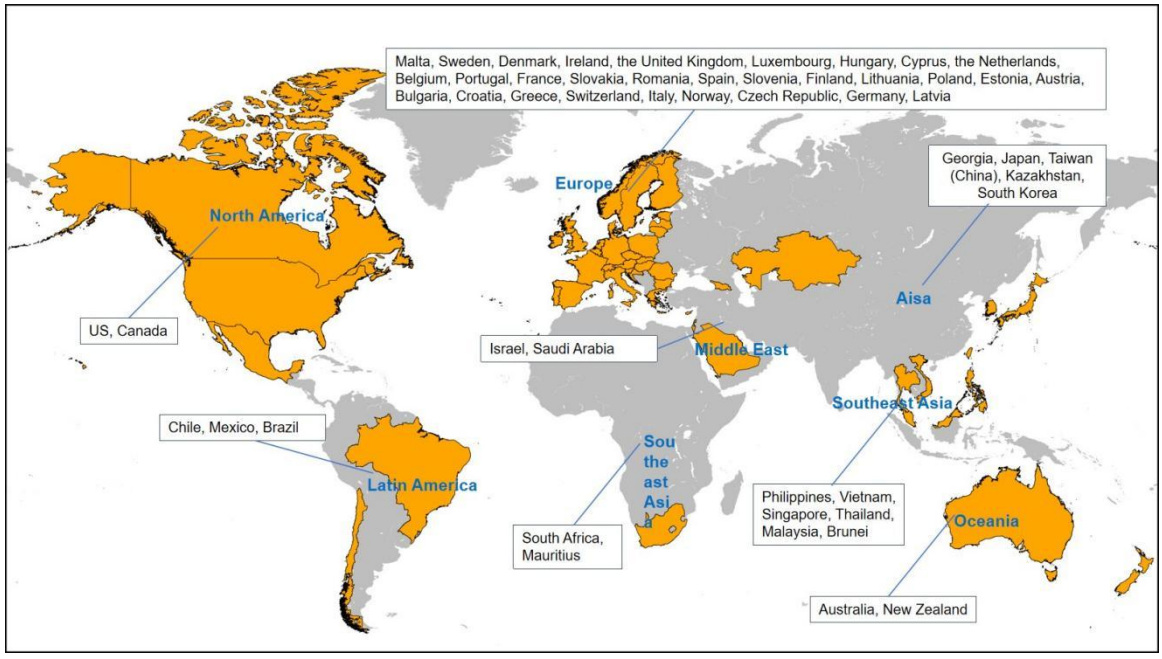

Figure 2: Temu's geographical presence in the global market

4.1.1 Phase of Single-Point Breakthrough

In September 2022, Temu made its debut in Boston, USA. During its initial market entry, it faced the dual challenges of new market uncertainties and the need for precise consumer demand insights. To address these challenges, Temu prioritized information integration and intelligent decision-making. Against this backdrop, Temu focused on integrating information resources and implementing intelligent decision-making. On one hand, it achieved user growth through digital empowerment. Firstly, replicating Pinduoduo's domestic model, Temu rapidly penetrated lower-tier markets via social referral incentives and price subsidies, forming the foundation for its user base expansion (Dong, 2023). Subsequently, Temu employs AI-driven price comparison systems and data-based product selection to achieve precision pricing decisions and dynamic competition through intelligent algorithms, ensuring that the merchandise listed on its platform remains price-competitive. Finally, by leveraging the innovative full-entrusted model (F2C: Factory-to-Consumer), Temu integrates supply chain resources, reduces intermediary links, and significantly lowers market transaction costs.

On the other hand, Temu positioned "ultra-high cost-performance" as its core value proposition. By utilizing the platform as a key touchpoint to precisely target consumers and adopting private domain marketing strategies to reduce Customer Acquisition Cost (CAC), it successfully achieved single-point breakthroughs in early-stage markets. This not only validated the business model's feasibility but also accumulated valuable user data and market experience for subsequent development. Within one month of its launch, Temu surpassed Amazon to claim the top spot in the U.S. App Store's free shopping apps ranking.

4.1.2 Phase of Rapid Expansion

In 2023, Temu entered a phase of accelerated global expansion. The platform launched its Canadian site in January, followed by European markets, including the UK (on April 21), Germany, the Netherlands, Italy, France, and Spain. By July, it expanded into Asia with Japan and South Korea, and in August/September, it entered the Middle East with Israel and Saudi Arabia, covering the region's largest e-commerce market.

In 2024, Temu further extended its global footprint by launching South Africa (its first African market) and Mauritius, underscoring its strategic commitment to the continent. It expanded into South America with Brazil (February) and Mexico (May), solidifying its presence across both Americas. In Southeast Asia, after establishing operations in Malaysia, Singapore, and the Philippines, Temu added Thailand (July) and Vietnam/Brunei (October), marking deeper regional penetration. Additionally, new sites in Kazakhstan, Georgia, and Malta (Central Asia, West Asia, and Southern Europe) signaled intensified globalization efforts.

Amid its rapid expansion, Temu faced substantial challenges stemming from the need for localization adaptation and the increasing intensifying of global e-commerce competition. To tackle these issues, Temu pioneered a hybrid operational model in supply chain management. This model combined the full-entrusted system with a semi-entrusted model, which was mainly aimed at local sellers having overseas warehouses. By doing so, it could flexibly integrate localized resources and achieve a significant improvement in logistics efficiency. In terms of product strategy, the platform broadened its offerings from single-category to full-category products and provided customized localized services to enhance the user experience. With regard to marketing, Temu adopted a dual-track strategy that combined global marketing with localized marketing. This approach effectively broadened the market coverage and increased the size of the user group. Through these measures, Temu not only enhanced its international reputation and market share but also strengthened its adaptability to different regional markets and greatly improving logistics efficiency, thus successfully achieving its strategic goal of rapid expansion.

4.1.3 Phase of Global Operation

Currently, Temu has established a global network spanning over 70 countries and regions, marking its transition to a phase of global operation that demands addressing complex ecological synergy requirements and navigating challenges posed by intensified global market competition and regulatory environments. To meet these demands, Temu actively constructs a global supply chain ecosystem, implementing end-to-end digital management and integrating intelligent algorithms into critical business processes such as product selection, pricing, and marketing. By consolidating capabilities in logistics, finance, and data analytics, the platform continuously enhances its position in the global value chain. In terms of value creation and delivery, Temu introduces omnichannel services to foster online-offline integration while providing full-cycle support covering the pre-sales, in-sales, and post-sales phases, thereby further enhancing user value and loyalty. Through these strategic initiatives, Temu has successfully transformed into a globally influential e-commerce platform, establishing ecosystem-level competitive advantages and securing significant discursive power and industry leadership. It now serves as a paradigmatic example of digital transformation and globalization in international commerce.

4.2 Core Strategies

4.2.1 Lower-Tier Market Strategy: Reconstructing Value Propositions Based on Cost Leadership

Against the backdrop of booming digital economies, e-commerce enterprises seeking global expansion increasingly target lower-tier markets as new growth frontiers. Leveraging continuous innovations in digital technology, Temu employs a precise market positioning strategy to focus on the high demand for cost-performance among consumers in these markets, emphasizing affordable yet quality merchandise. This approach not only aligns with the practical needs of price-sensitive consumers in lower-tier regions but also

capitalizes on digital economy advantages—through efficient supply chain management and innovative e-commerce models—to break geographical barriers and deliver high-quality products directly to end-users (Lu, 2024). Temu's successful implementation of this strategy demonstrates the vast potential for e-commerce globalization in the digital era, while also injecting new momentum into consumption upgrading in lower-tier markets and the sustainable development of the e-commerce industry. Temu's low - price strategy is mainly achieved through the following three mechanisms:

The first mechanisms is its supply-side structural innovation: value chain reconstruction of non-branded goods. Temu leverages digital product selection systems to aggregate long-tail manufacturing capacities in China, constructing economies of scale for non-branded ("white-label") merchandise. The platform employs a "reverse customization" model, using consumer data analytics to guide C2M (Customer-to-Manufacturer) production and reduce market trial costs. According to third-party monitoring, non-branded goods account for over 75% of Temu's product portfolio, with average procurement costs 62% lower than branded alternatives. This strategy aligns with macroeconomic trends: rising inflation rates in countries like the U.S. have created favorable conditions for low-cost merchandise, as declining purchasing power shifts consumer priorities from speed/quality to price. Amid the dual pressures of economic downturn and interest rate hikes, demand for affordable goods in the U.S. has intensified, particularly as pre-pandemic e-commerce penetration left lower-tier markets underserved.

In mature markets with high e-commerce penetration (e.g., U.S., UK), Temu's ability to outprice competitors like Shein and Amazon stems from rigorous cost control and supply chain efficiency. While Temu maintains significant price advantages in low-value/non-branded categories (Table 1), its edge narrows in high-value/branded segments (Table 2). For example, products priced under $10 on Temu typically cost 2–3 times more on Amazon, whereas price differentials for premium or branded items are negligible.

Table 1: High-Value/Brands price comparison between Temu and Amazon platforms

Product	Specific Name	Temu Price (USD)	Amazon Price (USD)
Smartphone	Xiaomi Redmi Note 124G LTE(256GB+8GB)	184.98	187.5
Electronic Piano Keyboard	88.Key Full Size Electric Piano Keyboard Set	145.98	199.99
Garbage Disposal	Garbage Disposal 3/4 HP	109.49	133.89
Instant Camera	Fujifilm Instax Mini 12	75.48	95.54
Wireless Earbuds	Xiaomi Redmi Buds 4 Wireless Earbuds ANC	50.58	59.99
Air Fryer	Air Fryer 5.8QT	50.15	59.99
Portable Clothes Dryer	Portable Mini Clothes Dryer	50.30	69.99
Smart Bracelet	Xiaomi Band 7	36.43	40.00

Table 2: Low-Value/Non-Brands price comparison between Temu and Amazon platforms

Product Category	Item	Temu Price (USD)	Amazon Price (USD)
Mobile Accessories	Mobile Screen Protector	1.5-2.5	6-8
	Mobile Phone Case	3-5	10-20
Beauty & Personal Care	Eyebrow Pencil	0.8-1.5	3-10
	Lipstick	1-3	1.3-10
		1-3	7-10
Outdoor & Sports	Plastic Water Bottle (2000ml)	4-7	10-15
	Sunglasses	2-7	10-16
	Jump Rope	2-7	6-11

The differences in price advantages across product categories fundamentally reflect disparities in supply chain mastery between Western local channels and Chinese cross-border e-commerce platforms. For high-value and branded goods, Western local channels and Chinese platforms exhibit comparable supply chain coverage. In contrast, Chinese platforms demonstrate substantially stronger supply chain advantages in low-value and non-branded segments.

The second strategy is its dynamic game mechanism—competitive intelligence function of AI-powered price comparison system. Temu maintains low prices through a proprietary AI-powered price comparison system that dynamically adjusts pricing strategies using real-time competitor data from platforms like Amazon and Walmart via reinforcement learning models, ensuring core category price indices remain below 85% of industry averages. This mechanism operates by leveraging Chinese wholesale platform price benchmarks (e.g., 1688) to compress intermediary margins while implementing a "price race" model allowing multiple bids for identical products with automatic selection of the lowest offer (Hu, 2024). Concurrently, it enforces strict performance thresholds—products failing to meet 14-day sales activity, 30-unit/30-day revenue, or 4.2-rating criteria face delisting or mandatory price reductions—while excluding zero-sales items from comparisons to maintain accuracy. Furthermore, the system audits both historical (15-day) and real-time cross-platform prices, compelling merchants to match competitor lows or risk placement penalties, with algorithmic prioritization given to consistently low-priced listings to enhance visibility in search and personalized recommendations.

The final mechanism is its operational efficiency optimization which based on granular governance model. Temu constructs an efficient and competitive e-commerce platform through precise pricing governance and favorable commission/service fee policies.

(1) Granular pricing governance: In its commercial operations, sellers negotiate supply prices with the platform, which must comprehensively account for cost-profit structures in the sales process—including merchandise costs and last-mile logistics expenses (under semi-entrusted models). The platform determines

retail prices based on multiple factors such as market conditions, logistics costs, and operational expenses, employing a pricing strategy of "auction-based listing + forced delisting of high-priced items + substantial subsidies." This approach ensures price competitiveness while optimizing resource allocation through dynamic price adjustments and subsidy mechanisms.

(2) Commission-free incentives: Currently, both Temu's full-entrusted and semi-entrusted models implement zero commission, zero entry fees, and zero store setup fees. This initiative not only effectively attracts sellers to expand product diversity on the platform but also feasible space for achieving low retail prices by reducing seller fees, thereby enhancing market competitiveness.

(3) Stable Profit Margins: For sellers, profits are primarily derived from the differential between supply prices and retail prices. Although this model reduces seller autonomy and profit margins compared to self-operation models, it allows sellers to maintain stable profit rates under rational operational conditions by relieving them of intermediary operational responsibilities. Additionally, the platform implements a unified pricing strategy, settling accounts with sellers based on supply prices. By generating profits through the procurement-retail price margin, this approach ensures platform revenue sustainability while delivering competitive consumer pricing (Fig. 3).

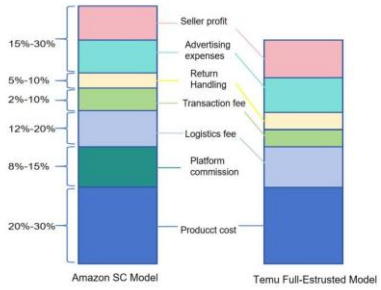

Figure 3: Profit comparison between Amazon's SC (Seller Central) model and Temu's full-entrusted model

4.2.2 Supply Chain Paradigm Innovation: Institutional Advantages of the Full-Entrusted Model

Temu's supply chain management model has evolved from the initial full - consignment model to the exploration of the semi - consignment model. Currently, it adopts a supply chain governance structure with the parallel operation of the "full - consignment + semi - consignment" models, which has significant institutional advantages compared to other cross - border e - commerce platforms.

In 2022, Temu pioneered the full-entrusted model in cross-border e-commerce, whereby merchants only need to ship goods to domestic warehouses while the platform assumes responsibilities for pricing, sales, fulfillment, and after-sales services—streamlining seller costs to merchandise expenses and domestic logistics fees (shipping charges from merchants to Temu's domestic warehouses) (Chen, 2024). Under this model, the platform deeply integrates into the entire value chain—from product development and pricing to logistics and customer service—with merchants solely responsible for manufacturing. This reduces cross-border transaction costs for small and medium-sized manufacturers, enabling them to focus on their core competencies. According to customs data, full-entrusted goods clear customs in 1.8 days, a threefold improvement over traditional models.

Temu's full-entrusted model imposes stringent price compression, primarily engaging factory-based sellers. When merchants upload products, the system adjusts declared prices, with a baseline requirement that prices be lower than those on the Chinese wholesale platform 1688—often approaching factory gate prices. This places high demands on seller supply chains, explaining the predominance of factory sellers on the platform.

The evolution from traditional foreign trade to the full-entrusted cross-border e-commerce model fundamentally shortens transaction chains. Traditional export trade involves complex processes where goods traverse five intermediaries—"domestic factory → foreign trade company → destination-country importer → destination-country wholesaler → destination-country retailer"—resulting in lengthy product flows, high markup rates, and suboptimal pricing and delivery experiences. In B2C cross-border e-commerce, Chinese merchants sell through third-party platforms like Amazon, reducing intermediaries and improving efficiency. The full-entrusted model, however, represents an advanced F2C (Factory-to-Customer) framework that eliminates traditional distribution layers, enabling direct factory-consumer connections. By further minimizing circulation links, this model delivers products with ultra-high cost-performance ratios to overseas consumers. Fig. 4 compares the operational processes of traditional foreign trade, B2C cross-border e-commerce, and the full-entrusted cross-border e-commerce model.

Figure 4: Process Comparison of Traditional Foreign Trade / B2C Cross - border E - commerce / Cross - border E - commerce Full - Entrusted Model

The full-entrusted model, akin to a quasi-in-house operational framework, grants the platform ultimate pricing authority and control over sales/logistics processes to streamline overall operations. Relative to traditional platform models, this structure redefines the allocation of responsibilities between the platform and sellers, conferring significant advantages in operational cost reduction and efficiency enhancement. However, by assuming control over most intermediary stages, the model substantially restricts seller autonomy while consolidating platform dominance in pricing, traffic allocation, logistics, and operations. This centralized management approach enhances the operational efficiency and consistency of the model.

Under Temu's full-entrusted model, delivery timelines lag significantly behind Amazon due to China-based sourcing. The logistics process comprises three sequential stages: 1) domestic first-mile transportation from suppliers to Temu's domestic warehouses; 2) cross-border trunk transportation managed by the platform, primarily via air freight; and 3) third-party last-mile delivery through providers like UPS (United Parcel Service) and USPS (United States Postal Service). Given its China-originated supply chain, Temu's delivery efficiency contrasts starkly with localized channels. According to official disclosures, free standard shipping requires 8–12 days, while premium express shipping takes 5–9 days. In comparison, Amazon achieves 2–3-day U.S. domestic delivery through pre-stocked local warehouses and an integrated logistics network.

However, the full-entrusted model's supply chain resource utilization will soon plateau due to inherent structural limitations, including restricted SKU (Stock Keeping Unit) breadth that creates a ceiling on GMV (Gross Merchandise Volume) growth and concentration of sales among mid-to-large sellers, resulting in supply-side imbalances that pose long-term sustainability risks. Additionally, the model's heavy reliance on centralized logistics management exposes vulnerabilities in warehouse and transportation capacity, as exemplified by the two-week warehouse congestion crisis triggered by Temu's Super Bowl advertising

campaign in March 2023, which overwhelmed operational systems despite generating unprecedented traffic and orders.

Due to challenges such as slower logistics timelines and plateauing supply chain resource utilization in the full-entrusted model, Temu launched the semi-entrusted model in March 2024, following in the footsteps of AliExpress. Positioned as a hybrid service model between full-entrusted operations and merchant self-management, this initiative targets local sellers to effectively fill gaps in domestic operations.

Under Temu's semi-entrusted model, sellers retain autonomy in selecting logistics providers, targeting merchants with pre-stocked overseas warehouses capable of fulfilling orders. The "semi" in "semi-entrusted" primarily manifests in warehousing and logistics, where sellers are no longer required to use platform-designated providers but instead can independently choose first-mile, last-mile, and reverse logistics services. This hybrid governance structure balances standardization and flexibility, enabling high-ticket items to account for 28% of merchandise volume (EMICSLL PLATFORM, 2024). In other operational domains—including store management, website traffic generation, customer service, and intellectual property compliance—the semi-entrusted model maintains parity with the full-entrusted model. By leveraging sellers' existing overseas logistics resources, this initiative enhances delivery efficiency for merchants with pre-positioned overseas inventory (China Merchants Bank, 2024).

Relative to the full-entrusted model, the semi-entrusted framework enhances seller autonomy and operational flexibility by allowing partial logistics management control, enabling nimble inventory/order processing to meet diversified market demands while leveraging pre-positioned U.S. inventory to eliminate domestic first-mile/trunk transportation processes and reduce delivery times in response to Amazon's same-day delivery-driven consumer expectations. Additionally, the model mitigates seller operational burdens by assuming advertising/customer service responsibilities and expands category diversity by enabling bulky goods previously restricted by airfreight costs through overseas warehouse inventory utilization, providing sellers with excess stock alternative distribution channels. This hybrid governance structure balances standardization and flexibility, achieving 28% high-ticket item penetration while maintaining parity with the full-entrusted model in non-logistics domains like intellectual property compliance and store management (Table 3).

Table. 3: Comparison of Full - Entrusted Model and Semi - Entrusted Model

Model	Full - Entrusted	Semi - Entrusted
Launch Time	September 2022	March 2024
Suitable Seller Types	Integrated Industry and Trade, Factory - type Businesses	Sellers with local inventory and overseas operation experience
Entry Conditions	Both enterprises and individuals can enter	Both enterprises and individuals can enter
Goods Requirements	Mainly cost - effective products	All categories

Product Selection Right	Seller: product selection, inventory preparation, sample sending; Platform: review the version, check the price and then put on the shelf	Seller: open a store, product selection, inventory preparation; Platform: assist in pricing and putting on the shelf
Product Pricing	Platform pricing	Platform pricing
Inventory Requirements	Prepare inventory to domestic warehouses	Prepare inventory to overseas warehouses
Operation Cost	Low	Medium
Warehousing and Logistics	Seller is responsible for part of the first - leg transportation, and the platform is responsible for all subsequent warehousing and transportation	Seller is responsible for the entire process of warehousing and logistics by themselves
Advertising Placement	No fees, the platform is responsible for traffic promotion	No fees, the platform is responsible for traffic promotion
Daily Operation	Platform operation	Seller has light operation rights
Customer Service	Platform is responsible	Seller is responsible
Commission and Service Fee	0 commission, 0 handling fee, 0 advertising fee	0 commission, 0 handling fee, 0 advertising fee
Autonomy	Low	Medium
Payment Cycle	15-30days	

For the platform, launching the semi-entrusted model holds strategic significance by complementing the full-entrusted framework through expanded seller coverage—targeting merchants with existing overseas fulfillment capabilities — and diversifying the platform ecosystem. This hybrid approach balances operational risks and enhances flexibility by leveraging seller capabilities to reduce platform-side burdens, positioning the semi-entrusted model as a key growth driver for cross-border e-commerce platforms that will coexist with the full-entrusted model in the long term.

For merchants adopting the semi-entrusted model, the platform primarily serves as an inventory liquidation channel with three core advantages: Firstly, profit margins remain attractive compared to domestic markets despite being slightly lower than Amazon's; Secondly, it provides incremental traffic through diversified sales channels to mitigate risks and boost overall revenue; Lastly, early adoption allows merchants to proactively capture market share in anticipation of Temu's potential to become the next major traffic hub.

The transition from full-entrusted to semi-entrusted models fundamentally represents intensified competition for industrial resources, with emerging trends highlighting the growing strategic importance of warehousing logistics and service capabilities. Competitive focus has shifted from production-centric optimization to full-chain efficiency improvements, while platform supply chain capabilities are increasingly evaluated not just on "availability" and "speed" but also on "stability" and "rational structural design." This evolution necessitates the continuous enhancement of supply chain management capabilities to adapt to dynamic market demands and competitive pressures.

Relative to SHEIN's supplier bidding system and Amazon's FBA model, Temu's full-entrusted framework achieves supply chain visibility through a digital command center. Its EDI (Electronic Data Interchange) system integrates with over 2,000 factory ERPs, enabling order response times 2.3 times the industry average and constructing imitation barriers.

Temu's "semi-entrusted" model also diverges significantly from competitors' offerings (Table 4). On AliExpress, semi-entrusted operations primarily extend logistics services to POP (Platform Open Plan) sellers—merchants with autonomous store management capability. Alibaba.com, a B2B leader, provides sellers with simplified end-to-end logistics fulfillment under its semi-entrusted model. Hua Kai Yi Bai's "Yimai" platform offers sellers a comprehensive value chain—including product catalogs, operational guidance, and logistics services—allowing merchants to focus solely on store management.

Temu's semi-entrusted model fundamentally differs from competitors' offerings (Table 4). On platforms like AliExpress, Alibaba.com, and Yimai, sellers retain pricing authority and operational control under their semi-entrusted models, with platforms primarily providing logistics services. In contrast, Temu's semi-entrusted model centralizes pricing and operations within the platform while delegating logistics responsibilities to sellers. This divergence reflects disparities in market positioning, resource allocation, and strategic planning. Competitors like AliExpress emphasize seller autonomy through logistics support to foster collaborative development, whereas Temu constructs a unique business model by retaining pricing/operations control and transferring logistics accountability. These differences not only shape platform-seller relationships but also profoundly influence market competition dynamics. In cross-border e-commerce, diverse semi-entrusted frameworks provide sellers with flexible options while compelling platforms to optimize services and enhance competitiveness in response to evolving seller needs and market conditions.

Table. 4: Comparison of Semi - Entrusted Models of Major Cross - border E - commerce Platforms

Platform	Yimai Platform	AliExpress	Alibaba.com	Temu
Launch Time	Second half of 2021	January 2024	January 2024	March 2024
Business Model	B2C	B2C	B2B	B2C
Target Customers	Overseas consumers	Overseas consumers	Overseas retailers and other major B2B buyers	Overseas consumers
Pricing	Merchant-	Merchant-	Merchant-	Platform-

Mechanism	determined	determined	determined	determined
Logistics	Platform-managed	Platform-managed	Platform picks up goods (3–7 days delivery)	Sellers self-deliver overseas
Operation	Merchant-managed	Merchant-managed	Merchant-managed	Platform-managed

4.2.3 Data-Driven Marketing Revolution: The Coupling Mechanism of Localization and Virality

Temu reconstructs its marketing strategy with data at its core, achieving comprehensive enhancements from traffic acquisition to customer retention through a triple synergy of precise advertising targeting, social virality mechanisms, and localized content operations (Wang, 2021). This data-centric approach not only leverages algorithmic insights for audience segmentation but also amplifies organic growth through referral incentives and culturally tailored campaigns, thereby demonstrating the scalability of data-driven marketing in global markets. Temu has emerged as the pinnacle of data-driven marketing, ranking first in global app download growth velocity in 2023, according to data.ai. This accomplishment stems from its strategic integration of diverse marketing channels — including social media, app stores, and Super Bowl sponsorships—that collectively amplified brand visibility through massive advertising investments. Meta Ad Library data reveals Temu deployed over 10,000 ads in the first eight months of 2023, achieving rapid exposure and promotional impact(Jia, 2024). Temu's digital marketing is manifested in the following two aspects:

The first aspect is its precise targeting in programmatic advertising. As Pinduoduo's cross-border e-commerce arm, Temu leverages its parent company's resources to expand international through diversified advertising strategies. In November 2023, paid search accounted for 37.05% of Temu's customer acquisition—the largest channel—followed by direct visits (34.75%), organic search (13.99%), and social media engagement (7.69%) (Liu et al., 2024).

Temu rapidly built brand awareness and user basse through massive advertising investments. Bernstein estimates Temu spent $3 billion on U.S. advertising in 2023. Social platform spending was particularly significant, with $2 billion allocated to Facebook and Instagram ads, propelling Pinduoduo into Google's top five global advertisers globally. Meta Ad Library data reveals Temu deployed over 10,000 ads in the first eight months of 2023, compared to SHEIN's 1,100 during the same period.

In traffic acquisition, Temu capitalizes Pinduoduo's strengths by centering its marketing around affordable quality products. While Pinduoduo's strategy emphasizes social platform with scattered channel distribution, Temu mirrors this approach by establishing official accounts on overseas social media giants like Facebook, Instagram, and Twitter. Through large-scale advertising campaigns—including short-form video commerce and influencer unboxing content—it has successfully attracted a massive customer base. As for December 2023, Temu boasted 4.18 million Instagram followers, 390,000 Facebook followers (Temu Europe), and 300,000 YouTube subscribers, with 95% of traffic originating from Facebook and YouTube. This effort propelled cumulative downloads to 300 million, topping the charts for consecutive months in its category.

Additionally, Temu secured multiple Super Bowl commercial slots in 2023, launching the viral "shop like a

billionaire " campaign (Fig. 5). Each 30-second ad spots, costing between $6 – 7.2 million, was complemented by $10 million in giveaways and rewards, underscoring Pinduoduo's aggressive international expansion strategy.

Figure 5: Temu's Super Bowl Advertisement

The second aspect is its network dynamics applications in social virality. Pinduoduo's social virality mechanisms are replicated in Temu's marketing strategy through a "holiday marketing combined with social referral" framework. Under this model, user can direct discounts or cash rewards by inviting new users (Fig. 6 and 7). For example, the referral program offers free merchandise for one download/registration and $20 cash incentives for five referrals, mirroring Pinduoduo's original growth playbook.

This social virality approach capitalizes network propagation effects to achieve rapid, cost-efficient user acquisition and market expansion. User-to-user recommendations enhance brand awareness and reputation while strengthening customer retention and loyalty. Aligned with contemporary social media trends, this strategy provides a competitive edge for Temu's international growth.

Figure 6: Temu Discount Coupons

Figure 7: Temu 2024 Summer Shopping Season Homepage Promotional Advertisement

5. Discussion

This study uncovers the innovative logic by which cross-border e-commerce enterprises transcend traditional competitive paradigms in the digital economy era through analyzing Temu's global expansion trajectory. The research identifies that Temu's success fundamentally stems from constructing a "technology-institution-geopolitics" strategic tripod—a three-dimensional synergy ecosystem. Its core implications manifest at three interrelated levels:

Firstly, at the supply chain restructuring level, institutional innovation under the full-entrusted model disrupts traditional international trade intermediaries by vertically integrating value chains through centralized pricing, logistics, and operational control. This approach not only transforms China's manufacturing long-tail capacity into a global pricing competitiveness but also reduces trial-and-error costs by 62% via its C2M reverse customization system. Notably, when confronting logistics timelines bottlenecks, the semi-entrusted model's flexible supplementation demonstrates dynamic adaptability in institutional design, establishing a "dual-track" governance structure that provides a new paradigm for cross-border e-commerce supply chain management.

Secondly, innovation in digital marketing systems demonstrates globalization applications of network effects theory, as Temu successfully transfers Pinduoduo's rural market penetration strategies overseas through social virality mechanisms, reducing customer acquisition costs from $35 to $18 per user while increasing repurchase rates to 43%. Furthermore, its AI-driven price comparison system maintains core category price indices below 85% of industry averages via millisecond-level dynamic pricing, redefining traditional price wars through algorithmic competition strategies that transform low-price tactics from cost advantages into systemic competitive weapons.

Finally, Temu's geopolitical layout strategy exemplifies risk-diversified globalization wisdom through a "multi-nodal hubs + regional deepening" network configuration. After validating its business model in North America, it rapidly established an eight-country collaborative network in Europe while fostering regional synergy in Southeast Asia via J&T Express logistics. This approach not only mitigates single-market risks but also optimizes supply chains through RCEP policy dividends. Notably in the Middle East, Temu combines its full-entrusted model with local consignment arrangements to effectively overcome consumption barriers posed by religious and cultural differences.

This study contributes theoretically by expanding transaction cost theory's explanatory boundaries in the digital economy era, demonstrating that hybrid governance structures can reduce cross-border transaction uncertainties through digitalization. Practically, it provides a replicable framework for Chinese enterprises' globalization: technology-enabled capabilities must advance in tandem with institutional innovation, while global layouts should balance scale expansion and risk diversification. Future research could further explore AI's adaptability in cross-cultural consumption contexts and the transplantation feasibility of digital governance models across institutional environments.

6. Conclusions

This study offers a multi-dimensional analysis of Temu's globalization expansion trajectory, revealing the innovative logic by which cross-border e-commerce enterprises transcend traditional competitive frameworks in the digital economy era. The research highlights Temu's successful strategic transformation from "low-cost globalization" to "ecosystem disruption" through its triad integration model of "digital infrastructure + industrial cluster upgrading + global regulatory synergy." Its innovative value manifests in three ways: restructuring supply chain governance via the full-entrusted model to convert China's manufacturing long-tail capacity into global price competitiveness; leveraging AI price comparison systems and C2M reverse customization to monetize demand-side data assets, reducing trial-and-error costs by 62%; and diversifying geopolitical risks through a multi-nodal warehouse network layout, demonstrating how the digital platforms' "speed economy" of surpasses traditional incremental internationalization paths.

However, due to time and resource constraints, this study has limitations—including a single-case design without comparative analysis of other cross-border platforms and an underdeveloped exploration of the geopolitical impacts on long-term strategies. Future research should address these gaps by examining AI algorithms adaptability in cross-cultural consumption contexts and the transplanting feasibility of digital governance models across institutional environments. The study concludes that in the post-globalization era, competitive advantage increasingly hinges on ecosystem institutional design capabilities rather than resource possession. Temu's evolution offers critical insights for multinational operations in the digital economy, warranting continued longitudinal research.

Acknowledgements

This thesis is the result of the collective efforts of many, and I am deeply indebted to all those who have supported me throughout this journey.

I would like to express my heartfelt gratitude to my esteemed supervisor—Tian Yuan. Your profound insights, patient guidance, and meticulous feedback have been instrumental in shaping this research. Your constructive criticism and suggestions have helped me refine my ideas and improve the quality of this thesis significantly.

Furthermore, I would like to thank the numerous scholars and researchers whose works I have referenced in this thesis. Your research has provided me with inspiration, theoretical frameworks, and empirical evidence, which have been essential in developing my arguments. Your contributions to the field have paved the way for my research and have deepened my understanding of the complex issues surrounding cross - border e - commerce and new venture growth.

Additionally, Additionally, this research particularly acknowledges the financial support from the Humanities and Social Sciences Research Project of the Ministry of Education, "Research on China's Carbon Emission Forecasting, Emission Reduction Pathways, and Industry Responsibility Allocation under the Carbon Neutrality Goal" (21YJC630127), and the Excellent Young Talent Cultivation Plan of Beijing Municipal Institutions.

In conclusion, I am truly grateful to everyone who has played a role in the completion of this thesis. Your contributions have made this research possible, and I will always cherish the experiences and lessons learned along the way.

References

China Merchants Bank. (2024). In-depth report on cross-border e-commerce industry: China's cross-border e-commerce industrial upgrading, "four dragons" sounding the assembly call for global expansion. DJyanbao.com. https://www.djyanbao.com/preview/3960891?from=search_list

Chen D H. Research on the Problems and Countermeasures of TEMU's Overseas Expansion[J]. *Issues in International Trade*, 2021(3): 45-52.

Chen D H, Guo M Y. Research on the Problems and Countermeasures of TEMU's Overseas Expansion[J]. *Northern Economy and Trade*, 2024(8): 62-66.

Chen G X. Research on the Marketing Strategy of Pinduoduo, a Social E-Commerce Enterprise[D]. Shihezi University, 2021.

Chen, Y., &Zhang, P. (2021). Connotation, characteristics, and development trends of digital globalization[J]. *People's Tribune*, 30(13), 26-29.

Dong Y H. Performance, Issues, and Recommendations of Cross-Border E-Commerce Platform Temu in the U.S. Region[J]. *Northern Economy and Trade*, 2023(5): 61-64.

EMICSLL PLATFORM. (2024, June 26). Research report on emerging platform models in cross-border e-commerce 2024. DJyanbao.com. https://www.djyanbao.com/preview/3939102?from=search_list

Hu X L. Pinduoduo's International Expansion: Breaking the Circle[J]. *Enterprise Management*, 2024(4): 27-30.

Jia A S. TEMU's Global Downloads Exceed Nearly 700 Million: Supply Chain Management Is Invaluable[N]. *Modern Logistics Daily*, 2024-09-04(001).

Liu H, Men J S, Xu F H. Research on Overseas Operation Strategies of Cross-Border E-Commerce Enterprises: A Case Study of Temu Platform[J]. *Time-Honored Brand Marketing*, 2024(14): 113-116.

Liu Y., Dong J Y., & Wei J. (2020). Digital innovation management: Theoretical framework and future research directions[J]. *Management World*, 36(7), 198-217.

Luo Y.. New OLI advantages in digital globalization[J]. *International Business Review*, 2021, 30(2): 101797.

Meng T, Wang C J, Fan P H. Research on High-Quality Development Strategies of Cross-Border E-Commerce from the Perspective of Digital Economy[J]. *International Trade*, 2022(10): 6-11.

Monaghan, S., Tippmann, E., Coviello, N.. Born digitals: Thoughts on their internationalization and a research agenda[J]. *Journal of International Business Studies*, 2020, 51(1): 11-22.

Peng T. Exploration of Platformization (PaaS) Path for Cross-Border E-Commerce Services under the Background of Digital Trade[J]. *Journal of Commercial Economics,* 2023(11): 124-127.

Song L H, Zhou L, Ding K. Research on Innovative Paths for Cross-Border E-Commerce Brand Going Global[J]. *Economic & Trade Update*, 2025(3): 19-22.

Sun Q. Research on Domestic B2C Export Cross-Border E-Commerce Platforms: A Case of Temu Platform[J]. *Journal of Commercial Economics,* 2021(12): 78-82.

Sun Q. A Study on Seller Satisfaction of Domestic B2C Export Cross-Border E-Commerce Platforms: A Case of Temu Platform[J]. *Journal of Wuhu Vocational Institute of Technology*, 2024, 26(2): 55-60.

Strange, R., Zucchella, A.. Industry 4.0, global value chains and international business[J]. *Multinational Business Review*, 2017, 25(3): 174-184.

Vial, G.. Understanding digital transformation: A review and a research agenda[J]. *The Journal of Strategic Information Systems*, 2019, 28(2): 118-144.

Wang Y N. Research on the Marketing Strategy of Pinduoduo E-Commerce Platform[D]. Beijing University of Posts and Telecommunications, 2021.

Wu C Q, Shi L, Zhang K X. Research on the Internationalization of Crowdfunding Platforms in the Context of Digital Economy: From the Perspective of Value Co-Creation[J]. *Economic and Management Research,* 2020(6): 3-18.

Xiao Y T, He J Q. Platform Going-Global Strategy Based on Ecosystem Competitive Advantage: A Case Study of Cheetah Mobile's Light Game Platform Internationalization[J]. *China Soft Science*, 2023(5): 118-133.

Zaheer S. Overcoming the Liability of Foreignness[J]. *Academy of Management Journal,* 1995, 38(2): 341-363.

Zhang X H, Li D D. Research on the Coupling Development of Digital Economy, Cross-Border E-Commerce, and Digital Trade: Also on the Application of Blockchain Technology in the Three Fields[J]. *Theoretical Exploration,* 2020(1): 115-121.

Zhao C Y. Research on the Business Model of Cross-Border E-Commerce Platform Temu[J]. *Management Modernization,* 2022(5): 65-69.

Zhou, C L. Research on the global expansion path of cross-border e-commerce supply chain enabled by digital technology[J]. *Modern Business*, 2225(02), 68-71.