

Challenges in Cross-Border Supply Chain : Focus on Trade Regulations

Cross-border supply chain faces profound challenges that significantly impact the postal sector, with trade regulations serving as both barriers and enablers to international commerce. The complexities arise from divergent customs procedures, fluctuating de minimis thresholds, documentation requirements, and regulatory harmonization efforts across jurisdictions. These challenges directly affect operational costs, delivery times, and market accessibility for businesses utilizing postal networks. International bodies like the Universal Postal Union (UPU) are actively working to modernize regulatory frameworks while promoting trade inclusion in this rapidly evolving landscape.

Understanding Cross-Border Supply Chain Challenges

Cross-border e-commerce represents the intersection of digital commerce and international trade, where online transactions transcend national boundaries through postal and logistics networks. The sector has experienced remarkable growth, with global cross-border e-commerce valued at approximately \$412.28 billion in 2024 and projected to reach \$1.63 trillion by 2033, reflecting a compound annual growth rate of 15.6%. This exponential expansion has created both opportunities and challenges for postal operators worldwide.

The postal sector serves as a critical infrastructure for cross-border e-commerce, handling millions of small parcels daily. According to the International Post Corporation, postal operators globally experienced revenue growth of 2.1% in 2024, primarily driven by parcel volumes, while traditional mail volumes continued declining by 8.6% in 2023. This transformation highlights the sector's dependence on e-commerce growth and its vulnerability to regulatory change.

Key Trade Regulation Challenges in Postal Supply Chain

Customs and Duty Complexity

The most significant challenge facing cross-border supply chain utilising postal services lies in navigating complex and frequently changing customs rules that differ widely between countries. Postal operators must comply with diverse import duties, tax structures, and documentation requirements that can result in shipment delays, increased costs, and compliance risks.

1) Documentation Requirements:

Each destination country enforces unique customs compliance standards, requiring precise paperwork for parcel clearance. Errors in product classification, valuation, or documentation frequently led to shipment holds, fines, or goods being returned to senders.

2) Customs Valuation and Classification:

The lack of standardization in customs valuation methods, duty thresholds, and tariff schedules creates confusion and operational delays for postal operators. Different countries apply varying methodologies for determining the dutiable value of goods, leading to inconsistent treatment of similar shipments.

Regulatory Divergence and Policy Volatility

Each country maintains unique import and export regulations, including product restrictions, safety certifications, and labelling requirements, significantly complicating international trade through postal networks. This regulatory fragmentation creates operational challenges for postal operators attempting to provide consistent service standards across multiple jurisdictions.

Sudden Policy Changes

Abrupt modifications to regulatory policies, such as significant adjustments to de minimis thresholds, can drastically impact market accessibility and delivery costs. Recent examples include Turkey's reduction of its simplified customs declaration limit from €150 to €30 in August 2024, and the United States' suspension of its \$800 de minimis threshold in August 2025.

Brexit and Geopolitical Factors

Political events and trade disputes trigger rapid regulatory transformations, requiring postal operators to adapt quickly to new compliance requirements. Brexit, for instance, fundamentally altered postal regulations between the UK and EU, affecting millions of cross-border shipments.

Taxation and Compliance Burdens

Import taxes, value-added tax (VAT), and surcharges create additional layers of complexity, particularly where rules for low-value goods are unclear or subject to frequent changes. The administrative burden of collecting, calculating, and remitting these taxes falls heavily on postal operators and their customers.

1) VAT Collection Challenges:

Many countries now require VAT collection at the point of sale or import, even for low-value items. The European Union eliminated its VAT de minimis threshold in 2021, requiring VAT to be charged on all imports regardless of value. This change significantly increased the administrative burden on postal operators processing small packages.

2) Multiple Tax Jurisdictions:

Cross-border transactions often involve multiple tax jurisdictions, each with different rules, rates, and compliance requirements. Postal operators must navigate federal, state, and local tax obligations while ensuring accurate collection and remittance.

The Critical Role of De Minimis Thresholds

De minimis thresholds represent a crucial trade facilitation mechanism that sets value limits below which imported goods are exempt from customs duties and taxes. These thresholds serve multiple purposes: reducing administrative burden on customs authorities, facilitating the flow of low-value goods, and supporting the growth of cross-border e-commerce through postal networks.

Countries maintain vastly different de minimis thresholds, reflecting diverse economic priorities, revenue needs, and trade policies. The variation ranges from zero (meaning all imports are subject to duties and taxes) to \$800 in the United States prior to recent changes.

High-Threshold Countries: Nations with generous de minimis limits, such as the United States (\$800 until August 2025) and Australia (\$1,000 AUD), have experienced significant increases in cross-border e-commerce volumes. These thresholds facilitate trade by eliminating barriers for small-value shipments while reducing processing costs for customs authorities.

Low-Threshold Countries: Countries with restrictive de minimis policies, including many European Union members (€150 for duties) and Turkey (€22), generate more customs revenue but potentially discourage cross-border commerce. These policies often reflect efforts to protect domestic industries and maintain tax revenue streams.

Turkey's De Minimis Framework: Protectionist Approach

Turkey maintains one of the world's most restrictive de minimis environments, with its threshold set at just €22 for most goods. This low threshold ensures that the majority of cross-border e-commerce shipments through postal channels are subject to customs duties and taxes.

In August 2024, Turkey implemented significant changes to its customs regulations affecting cross-border e-commerce through postal services. While maintaining the €22 de minimis

threshold, the country reduced the value limit for Simplified Customs Declaration (SCD) from €150 to €30, effective August 21, 2024.

Duty Rate Increases: The Single and Fixed Duty rates were substantially increased:

a) Shipments from EU countries: increased from 20% to 30%

b) Shipments from non-EU countries: increased from 30% to 60%

These changes specifically target popular e-commerce platforms like Shein, Temu, and AliExpress, which have gained significant market share in Turkey through low-cost direct-to-consumer shipping models.

As per February 2026, Turkey has effectively abolished its **de minimis threshold** for e-commerce, terminating the simplified customs declaration system that previously allowed low-value goods (under €30) to enter with minimal paperwork. Under **Presidential Decree No. 10813**, all business-to-consumer (B2C) shipments, regardless of their low value, must now undergo **standard customs procedures**, which typically require a licensed customs broker and the payment of full applicable duties. For personal, non-commercial goods valued up to €1,500, fixed duty rates have been set at **30% for EU-origin products** and **60% for non-EU products**, with an additional **20% surcharge** for items subject to the Special Consumption Tax. This regulatory shift aims to address product safety concerns and protect domestic competition from a surge in high-volume, low-cost international e-commerce imports.

Turkey's restrictive approach serves multiple policy objectives:

1) Domestic Industry Protection: The low de minimis threshold and high duty rates protect Turkish manufacturers and retailers from low-cost imports. This protectionist stance aims to preserve domestic employment and industrial capacity.

2) Revenue Generation: By subjecting most cross-border shipments to duties and taxes, Turkey maximizes customs revenue. The increased rates and reduced thresholds are expected to generate substantial additional revenue for the government.

3) Quality and Safety Concerns: Turkish officials cited concerns about quality degradation of goods arriving through postal channels and the rapid increase in consumer complaints regarding these imports as justification for the regulatory changes.

Turkey's restrictive policies significantly affect postal operators and cross-border e-commerce patterns:

1) Volume Constraints: The high duty burden discourages cross-border purchases, limiting parcel volumes compared to countries with more generous de minimis thresholds. This constraint affects both international postal revenues and domestic consumer choice.

2) Operational Complexity: Postal operators must process customs declarations for virtually all international packages, increasing administrative costs and processing times. The requirement for detailed documentation and duty collection adds significant operational overhead.

3) Market Adaptation: E-commerce companies have responded by establishing local fulfilment centres in Turkey or partnering with domestic distributors to avoid the high cross-border duties. This adaptation reduces reliance on international postal services but increases logistics costs.

United States De Minimis: From Liberal to Restrictive

The United States historically maintained one of the world's most generous de minimis thresholds, which significantly influenced global cross-border e-commerce patterns and postal volumes.

Historical Development and Growth Impact

The U.S. de minimis threshold evolved from \$200 to \$800 in 2016 under the Trade Facilitation and Trade Enforcement Act, creating a massive stimulus for cross-border e-commerce. This policy change facilitated direct-to-consumer imports and contributed to explosive growth in postal parcel volumes.

Volume Growth: The generous threshold contributed to remarkable growth in cross-border parcels:

2014: 140 million de minimis parcels

2020: 636 million parcels

2024: Over 1.3 billion parcels

This growth represents nearly a 10-fold increase in parcel volumes over a decade, demonstrating the powerful effect of liberal de minimis policies on postal commerce.

Business Model Innovation

The \$800 threshold enabled innovative business models and logistics strategies:

1) Split Shipment Strategies: Companies structured shipments to remain under the de minimis threshold, often splitting larger orders into multiple packages to avoid duties and taxes.

2) Direct-to-Consumer Platforms: e-commerce platforms like Shein, Temu, and AliExpress built their U.S. business models around the generous de minimis threshold, using postal networks for cost-effective delivery.

3) Fulfilment Optimization: The threshold encouraged the development of sophisticated supply chain strategies that optimized package values and shipping methods to maximize the benefits of duty-free treatment.

In August 2025, the U.S administration suspended the \$800 de minimis threshold, subjecting all imports to duties and taxes regardless of value. This dramatic policy reversal reflects growing concerns about:

1) Revenue Loss: The generous threshold resulted in significant foregone customs revenue, estimated in billions of dollars annually.

2) Unfair Competition: Critics argued that the threshold provided e-commerce companies with unfair advantages over U.S. retailers who must collect sales taxes and comply with domestic regulations.

3) Security and Safety Concerns: The high volume of low-value packages made it difficult for customs authorities to inspect shipments for counterfeit goods, unsafe products, and other contraband.

Impact on Postal Operations

The suspension of the de minimis threshold has profound implications for postal operations:

1) Processing Volume: U.S. Postal Service temporarily suspended accepting packages from China and Hong Kong in February 2025, highlighting the operational challenges of processing previously duty-free shipments under formal customs procedures.

2) Cost Increases: All packages now require formal customs declaration and duty assessment, increasing processing costs and delivery times. Additional fees of \$25-50 per package (increasing to \$50 after June 2025) or 30% of value significantly impact pricing.

3) Business Model Disruption: Companies that built their strategies around the generous threshold must adapt their supply chains, potentially establishing U.S. fulfilment centres or accepting higher costs and reduced competitiveness.

Future Challenges and Opportunities

Regulatory Harmonization Needs

The lack of harmonized international regulations continues to create challenges for postal operators and e-commerce businesses. Future developments may include:

1) Standardized De Minimis Approaches: International organizations may develop frameworks for coordinated de minimis policies that balance trade facilitation with revenue protection and security concerns.

2) Mutual Recognition Agreements: Bilateral and multilateral agreements that recognize each country's customs procedures and quality standards could reduce redundant inspections and documentation requirements.

3) Digital Customs Integration: Advanced integration between postal systems and customs authorities using standardized APIs and data formats could significantly reduce processing times and costs.

Technological Advancement Opportunities

1) Artificial Intelligence: AI-powered risk assessment systems could improve the accuracy of customs selectivity while reducing processing times for legitimate shipments.

2) Internet of Things (IoT): Smart packaging with embedded sensors could provide real-time tracking and automated customs declarations, reducing manual documentation requirements.

3) Digital Twins: Virtual representations of physical postal networks could optimize routing and predict capacity needs under different regulatory scenarios.

Environmental and Sustainability Considerations

Cross-border e-commerce growth raises important sustainability questions that may influence future regulations:

1) Carbon Footprint: The environmental impact of increased small package shipments may lead to carbon pricing or packaging regulations that affect postal operations.

2) Circular Economy: Regulations promoting product lifecycle responsibility could require new tracking and documentation systems for postal shipments.

3) Green Logistics: Environmental regulations may favour postal operators that invest in electric vehicles, renewable energy, and sustainable packaging solutions.

Conclusion

Cross-border e-commerce through postal networks faces a complex landscape of trade regulation challenges that significantly impact operational efficiency, costs, and market access. The divergent approaches to de minimis thresholds, demonstrated by Turkey's restrictive

policies and the United States' recent policy reversal, highlight how regulatory frameworks can either facilitate or constrain international commerce.

The Universal Postal Union's modernization initiatives, including digital trade policy research, customs integration programs, and the inclusive trade approach, represent important steps toward addressing these challenges. However, significant work remains to harmonize regulations, standardize processes, and leverage technology solutions that balance trade facilitation with legitimate government concerns about revenue, security, and fair competition.

As the global cross-border e-commerce market continues its rapid expansion, projected to reach \$1.63 trillion by 2033, the postal sector must adapt to evolving regulatory requirements while investing in technological capabilities that enable efficient, compliant operations. Success will depend on close collaboration between postal operators, customs authorities, international organizations, and the e-commerce industry to develop solutions that support sustainable growth in cross-border trade.

The future of cross-border postal supply chain ecosystem will be shaped by how effectively stakeholders can address current regulatory fragmentation, implement technological innovations, and develop policies that promote both trade facilitation and responsible commerce. The sector's ability to navigate these challenges while maintaining universal service obligations and competitive pricing will determine its role in the continuing digital transformation of international trade.

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