



UPU Think Tank Brief

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Digital trade regulations – an analysis of their impact on postal volumes

I. Introduction

Digital trade, as defined by the OECD, encompasses digitally-enabled transactions of goods and services that can be delivered either digitally or physically, involving consumers, firms and governments.

This policy brief **focuses on physical digital trade**, specifically the cross-border e-commerce of tangible goods ordered through digital platforms. It discusses the impacts of preferential trade agreements (PTAs) with **digital trade provisions on cross-border e-commerce**, with a particular emphasis on their implications for designated operators¹ and policymakers.

For physical goods, these provisions typically aim to facilitate customs processes, establish de minimis thresholds, streamline returns, enhance access to delivery services, harmonize safety standards, improve parcel tracking and optimize risk management for e-commerce shipments. These measures collectively seek to create a conducive environment for cross-border e-commerce, reducing barriers and establishing common standards between participating countries.

Utilizing “difference-in-differences” econometric methods, the UPU and the Asian Development Bank (ADB) have started a joint research project that aims to use novel high-frequency international postal data to explore, understand and monitor the dynamic effects of PTAs on cross-border parcel delivery volumes, as a proxy for digital trade.

The joint research tries to identify and test the causal relationship between digital trade agreements and the growth of cross-border postal volumes. It assesses both anticipatory and responsive behaviours to digital trade policies between January 2018 and June 2023.

The analysis also provides several crucial insights

into the impacts of PTAs with digital provisions on e-commerce volume growth.

Initial findings from the ongoing analyses already suggest **significant anticipatory behaviours by businesses and consumers**, as well as **varied impacts across different mail categories**.

For designated operators, these results highlight the need to **adapt logistics and operational strategies to respond to changing trade volumes and customer demands**.

For postal policymakers, the research outcomes underscore the importance of **developing international standards and harmonizing regulations** to facilitate smooth cross-border e-commerce through different postal channels.

These insights emphasize the **need for clear, targeted digital trade policies** to promote economic growth, reduce supply chain disruptions, and ensure greater alignment between international postal policies and global digital trade regulations.

II. Key findings

Overarchingly, our analysis reveals that businesses often adjust their operations before the implementation of PTAs.

As shown in Figure 1 (overleaf), five months before PTA implementation, trade volumes decreased by approximately 7.1% on average (marked as zone A), indicating that **businesses strategically reduced their activities owing to uncertainty about the upcoming regulations**.

This reduction suggests a cautious approach by businesses as they anticipate the new regulations, which may affect their trade dynamics.

Conversely, one month before the PTAs came into effect, the volume of tracked small packets surged

¹ Note that the terms “designated operator” and “postal operator” have the same meaning.

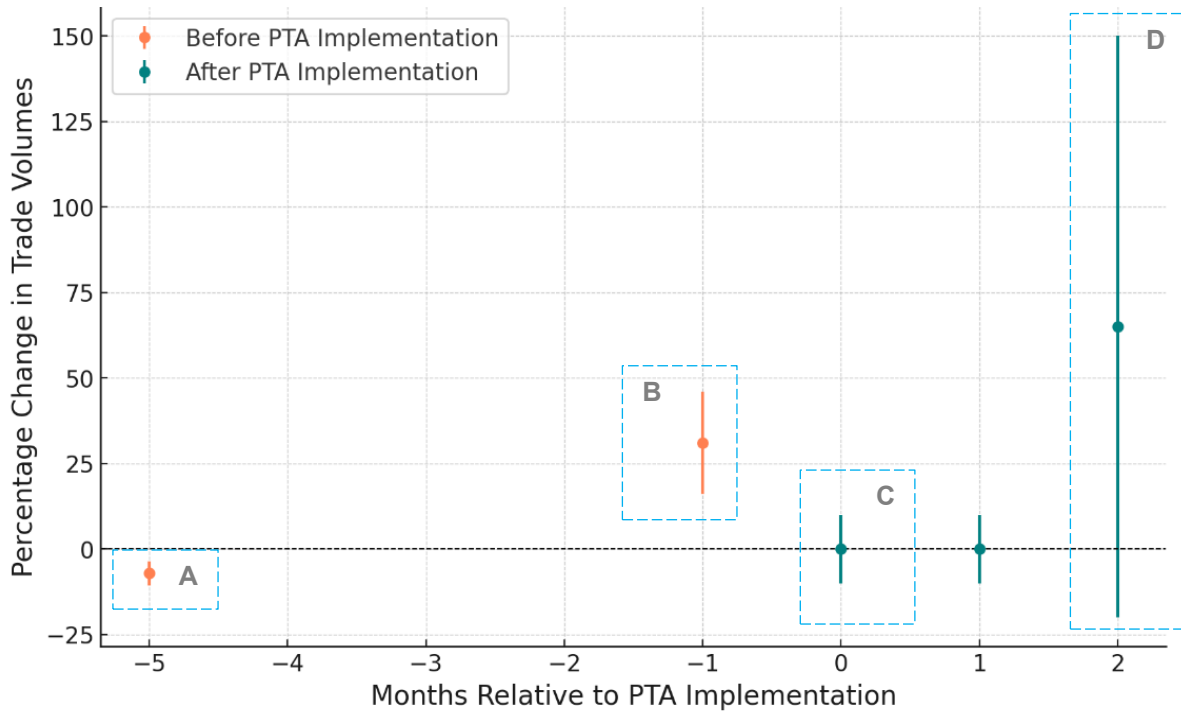


Figure 1: Impact of PTAs on trade volumes between Jan 2018 and Jun 2023

by about 31% on average (marked as zone B), indicating that those businesses **were ramping up their activities in anticipation of favourable conditions** under the new trade rules.

This behaviour indicates a strategic increase in trade activities to benefit from the expected improvements in trade conditions brought by the PTAs.

Immediately after the PTAs were implemented, there was no significant change in trade and international postal volumes (zone C).

This suggests that the **direct, short-term impact of these agreements on postal deliveries is limited**.

The lack of immediate significant change highlights that businesses and consumers might need time to fully understand and adjust to the new trade regulations and that the initial adaptation phase does not drastically alter trade volumes.

However, two months after the PTAs were implemented, there was a **notable increase in trade volumes, with postal deliveries rising by around 65%** (zone D).

Unfortunately, the lack of statistical significance of the causality between these increases and the new PTAs could indicate an uncertain potential rebound effect as businesses and consumers adapted to the new trade environment.

Nevertheless, the delay in observing this rebound suggests that while initial responses to PTAs might be cautious, the **longer-term adjustments by businesses and consumers** could eventually result in a **substantial increase in trade volumes** as they become more comfortable and confident with the new regulations.

Furthermore, the impact of digital trade provisions varied across different types of mail.

Higher-value goods in tracked packages showed a significant increase in trade volumes before PTA implementation, highlighting strategic adjustments by traders.

This variation underscores the need to consider the specific characteristics of different goods when evaluating the impacts of digital trade provisions.

Businesses dealing with **higher-value goods appear to be more responsive to anticipated regulatory changes**, adjusting their trade volumes more significantly than those dealing with lower-value goods.

III. Implications for policymakers

The UPU–ADB research findings have several practical implications for policymakers. They need to provide **clear and stable signals regarding trade agreements** to reduce uncertainties and allow businesses to make informed decisions.

Transparent communication about policy changes is crucial.

Our preliminary findings on anticipatory behaviours indicate that **businesses react strategically to policy announcements**. Therefore, clear and consistent communication from policymakers can help reduce uncertainties and enable businesses to plan more effectively for future changes, enhancing the overall impact of PTAs.

Future digital trade policies should also address the specific needs of different sectors and types of goods. For instance, offering **differentiated treatment for low-value versus high-value goods** can maximize the benefits of digital trade provisions.

The varied impacts observed in the study suggest that a one-size-fits-all approach may not be effective. Tailoring policies to the unique characteristics of different goods and sectors can help ensure that the benefits of PTAs are more evenly distributed and effectively realized across the economy.

Furthermore, in order to promote inclusive socio-economic growth in their respective countries, policymakers need to realize that small and medium-sized enterprises (SMEs) require targeted support to help them adapt to and benefit from new digital trade regulations. SMEs often face more significant challenges in adjusting to new regulations owing to limited resources and expertise.

This support includes training programmes, financial incentives, and technical assistance to enhance SME participation in international e-commerce.

By providing targeted support, policymakers can help these businesses overcome barriers and fully participate in the opportunities created by PTAs, promoting inclusive economic growth.

Lastly, **continuous monitoring and evaluation of the impacts of digital trade provisions** are essential.

Policymakers should establish mechanisms to track the effects of these agreements and adjust policies as necessary to achieve desired outcomes without unintended negative consequences.

IV. Implications for designated operators

This joint UPU–ADB analysis has potentially

significant implications for postal operators and postal policymakers, especially within the framework of the UPU.

As PTAs with digital trade provisions increasingly shape international e-commerce dynamics, postal operators need to **adapt and innovate to remain competitive and meet evolving demands**.

Firstly, postal operators should **anticipate changes in trade volumes and adjust their logistics and operational strategies** accordingly.

The significant fluctuations in postal volumes observed before and after PTA implementation indicate that postal services must be **flexible, adaptable, and demand-responsive to sudden shifts** in trade volumes.

This might require designated operators to optimize supply chains, enhance delivery infrastructure, and leverage technology solutions to streamline operations. For example, investing in advanced tracking systems and automation can improve efficiency and provide better service to customers.

Secondly, the uncertain rebound in digital trade and postal volumes two months post-implementation highlights the need for postal operators to **scale their capacity and capabilities quickly to seize these new opportunities**.

This may involve the ability of postal operators to enter into **strategic partnerships with other logistics providers, expanding warehousing facilities and improving last-mile delivery capabilities**.

By ensuring that infrastructure and resources are scalable, postal operators can effectively manage increased volumes and maintain high service levels during periods of peak demand.

Moreover, the **differentiated impacts on various types of mail**, particularly the increase in higher-value tracked items, suggest that postal operators should **tailor their services to cater to different market segments**.

Offering **specialized services for high-value goods**, such as enhanced security, faster delivery options and premium customer support, can attract and retain customers who deal in valuable commodities.

Lastly, creating **service tiers based on the specific needs of different e-commerce**

segments can enhance customer satisfaction and loyalty.

V. Policy recommendations

By implementing a set of comprehensive policy recommendations, policymakers and designated operators can better navigate the dynamic impacts of digital trade agreements, fostering a resilient and innovative postal ecosystem.

This, in turn, can support sustainable economic growth and development in the digital trade era.

1. Harmonize cross-border digital trade policies.

To effectively address the challenges and opportunities presented by digital trade agreements, it is crucial to **harmonize digital trade regulations across countries**.

This standardization can ensure consistency and reduce trade friction, thereby facilitating smoother cross-border e-commerce transactions.

Such harmonization can also **enable postal operators to optimize their logistics and operations more effectively**, ensuring a seamless flow of goods and services.

2. Proactively monitor regulatory changes.

Designated operators should **implement a proactive approach to scanning for and anticipating changes in the regulatory environment**, particularly regarding PTAs with digital trade provisions. By closely monitoring trade negotiations and policy developments, operators can begin adjusting their operational capabilities well in advance of regulatory changes coming into force. This **foresight allows for timely investments in infrastructure, technology and human resources to meet evolving market demands**.

Establishing dedicated teams or processes for regulatory intelligence gathering and analysis can help translate regulatory insights into concrete operational plans. This proactive stance transforms the **operational response to regulatory changes from a reactive to a real-time approach**, enabling operators to optimize resource allocation, develop new services and engage in early discussions with policymakers and industry partners.

3. Invest in flexible, scalable, postal technology.

Investing in advanced technological infrastructure for postal services is another essential

recommendation.

By adopting advanced tracking systems, automation and digital platforms, postal services can significantly **improve their efficiency and customer experience**.

This technological upgrade can enable postal operators to better **manage fluctuating trade volumes, enhance delivery speeds and provide superior service, especially for high-value goods**.

4. Support SMEs to benefit from trade policies.

Developing specialized postal services tailored to different market segments, particularly high-value goods and SMEs, is vital.

These specialized services could include **enhanced security, expedited shipping and premium customer support, which will attract businesses dealing with valuable commodities**. Additionally, supporting SMEs in navigating the complexities of digital trade through tailored services will foster their growth and participation in international e-commerce.

5. Clearly communicate PTA provisions.

Ensuring **transparent and consistent communication of digital trade policies** and PTA implementation to businesses and postal operators is critical. Clear communication **can reduce uncertainties** and help businesses and postal services anticipate and prepare for regulatory changes.

This will enable them to **optimize their operations and strategic planning, minimize disruptions and leverage new opportunities effectively**.

6. Leverage the UPU for global standards.

Promoting international cooperation through the UPU to establish global standards for digital trade and postal services is essential.

International cooperation can **help harmonize customs procedures, enhance interoperability among postal networks and reduce barriers to cross-border e-commerce**.

All of these combined can facilitate smoother international transactions and strengthen global trade networks.

7. Evaluate the effectiveness of the PTA.

Implementing mechanisms for ongoing monitoring

and evaluation of the impacts of digital trade provisions on postal services is crucial.

Continuous data collection and analysis will **inform necessary policy adjustments**, ensuring that regulations remain effective and responsive to evolving trade dynamics. This **data-driven approach** can help policymakers identify areas where policies are working well and where improvements are needed.

8. *Leverage partnerships for postal resilience.*

Encouraging partnerships between postal operators and private logistics providers is another important recommendation.

Such collaborations could help **expand capacity, enhance service quality and improve last-mile delivery capabilities**. Public-private partnerships can enable postal operators to scale their operations and better manage increased trade volumes, ensuring high service levels during peak demand periods.

By fostering **innovation and technological adoption**, postal operators can **enhance their efficiency and customer satisfaction**.

9. *Ensure customer data protection.*

Developing robust data protection regulations to **safeguard the consumer and business data involved in cross-border e-commerce is crucial**.

Ensuring data security and privacy can help build trust among consumers and businesses, promoting greater participation in digital trade. A strong regulatory framework for data protection will enhance the overall integrity and reliability of digital trade transactions.

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