A COMPREHENSIVE TRADE FACILITATION MEASURES AND THEIR IMPACT ON CENTRAL ASIA: UZBEKISTAN'S CASE

Saodat Umarova,
Doctoral Researcher at the University of World Economy and Diplomacy

Abstract: The article is about the critical role of a well-defined theoretical framework and the effective implementation of trade facilitation measures in overcoming trade-related challenges, enhancing competitiveness, and fostering economic development. Continuous improvements in information availability, advance rulings, appeal procedures, and various formalities are identified as crucial for the sustained economic advancement of Uzbekistan and other nations in Central Asia. Ultimately, the ongoing efforts to streamline trade procedures and reduce associated costs align with the broader goal of promoting inclusive growth and prosperity on a global scale.

Keywords: Trade facilitation, theoretical framework, international trade, Central Asia, Kazakhstan, Uzbekistan, trade competitiveness, soft infrastructure

Theoretical framework for trade facilitation measures

First-time trade facilitation as a matter of theory has been discussed by Anderson and van Wincoop in 2004, according to these scholars trade facilitation aims to reduce trade costs, which in their broadest definition include all costs, apart from the cost of production, incurred in getting a good from a producer to a final consumer.

Many scholars (Helble, Shepherd & Wilson, 2007) state that trade facilitation does not have a universally agreed definition and there is no standard definition of trade facilitation (McLinden, Fanta, Widdowson & Doyle, 2011). According to Wilson in a narrow sense, trade facilitation simply addresses the logistics of moving goods through ports or customs at the border. A broader definition includes the environment in which trade transactions take place, including the transparency of regulatory environments, harmonization of standards, and conformance to international or regional regulations. (Wilson, J. S., Mann, C. L., & Otsuki, T., 2003)

The commonly accepted aim of trade facilitation is to "simplify and streamline international trade procedures to allow the easier flow of trade across borders and thereby reduce the costs of trade." (Congressional Research Service,

2017) WTO 2015. Countries introduce trade facilitation reforms to achieve various policy goals. These include attracting investment and manufacturing to create jobs; reducing trade costs for importers, exporters, and consumers of goods; and participating in global value chains. According to the WTO, full implementation of the TFA will reduce global trade costs by an average of 14.3 percent and will result in export gains of between US$750 billion and US$1 trillion per annum, depending on several factors.

Trade facilitation measures, comprising a range of policy initiatives and infrastructural enhancements, play a pivotal role in promoting international trade and economic growth (Anderson & van Wincoop, 2004). These measures encompass customs simplification, the reduction of trade barriers, and improvements in logistics and transportation infrastructure, all of which contribute to the reduction of transaction costs in cross-border trade (Limão & Venables, 2001). Such reductions in transaction costs are critical as they directly impact the competitiveness of nations in the global marketplace. Trade facilitation measures not only enhance the efficiency of trade processes but also have the potential to foster economic development by enabling small and medium-sized enterprises (SMEs) to participate in international markets (Bernard & Jensen, 1999). Consequently, the implementation of effective trade facilitation measures remains a subject of academic and policy interest, as they are closely tied to enhancing economic welfare and promoting inclusive growth.

Grainger (2011) divides trade facilitation into four interconnected components that delineate its essence: (1) the simplification and alignment of relevant regulations and processes, (2) the advancement of trade compliance systems, specifically the exchange of information and submission of declarations between governmental authorities and businesses, (3) the supervision and coordination of trade and customs procedures, and (4) the establishment of institutional frameworks to ensure the successful adoption of trade facilitation principles and the sustained dedication to reform.

Portugal-Perez and Wilson (2012) state that trade facilitation measures can be divided into two aspects: a tangible aspect involving physical infrastructure such as roads and ports, and an intangible aspect involving issues like transparency, customs management, and the business environment. The Bali Agreement emphasized the importance of measures about the intangible aspect.

Investing in the intangible aspect can improve trade facilitation outcomes quicker for countries with extensive customs controls and bureaucratic processes, including landlocked countries (Grainger, 2014).

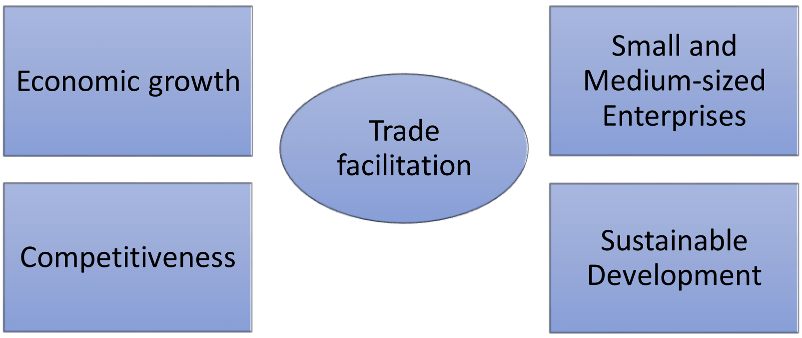
Alaamshani and others (2022) research has demonstrated that an enhancement in the trade facilitation process, coupled with a reduction in trade costs, leads to an augmentation in trade flows. This research endeavor seeks to quantify the repercussions of trade facilitation improvements on trade costs within a sample of 111 developed and developing nations during the period spanning from 2008 to 2014. The analytical methodology employed in this study involves the utilization of the Poisson-Pseudo Maximum Likelihood (PPML) estimator. The empirical results elucidate that various elements of trade facilitation, encompassing border administration, the business environment, and the development of transport and communication infrastructure, exert a mitigating effect on trade costs.

Conceptual understanding of trade facilitation

The theoretical framework underpinning the investigation of trade facilitation measures within the context of this article is rooted in various seminal academic papers authored by prominent scholars in the field. A foundational work in this area is the paper by Anderson and van Wincoop (2003), which introduced the gravity model of trade. This model, initially developed by Tinbergen (1962) and further elaborated upon by Eaton and Kortum (2002), underscores the importance of factors such as distance, economic size, and trade costs in determining international trade patterns. Building upon this framework, the work of Djankov et al. (2010) highlights the significance of regulatory quality and institutional factors in shaping the effectiveness of trade facilitation measures. Moreover, Baldwin (2011) provides insights into the evolution of global value chains and the role of trade facilitation in enhancing supply chain efficiency.

The conceptual understanding and definition of trade facilitation draw upon key academic papers authored by prominent scholars in the field. One pivotal work in this domain is the paper by World Trade Organization (WTO) economists, Wilson and Mann (2003), which offers a comprehensive conceptual framework for trade facilitation. Their definition posits that trade facilitation encompasses measures and policies aimed at simplifying, harmonizing, and expediting cross-border trade procedures and transactions. This foundational perspective aligns with the work of Limão and Venables (2001), who emphasize the reduction of both tariff and non-tariff barriers as essential components of trade facilitation efforts. Additionally, the contributions of Djankov et al. (2002) and Shepherd (2007) underscore the significance of customs procedures, administrative processes, and infrastructure development in enhancing trade facilitation. By synthesizing insights from these seminal papers, this article aims to develop a nuanced and comprehensive understanding of trade facilitation, encompassing not only the removal of explicit trade barriers but also the broader spectrum of initiatives aimed at promoting efficiency, transparency, and predictability in international trade processes.

Trade facilitation can be studied within 4 main aspects of interaction.



Trade Facilitation and Economic Growth:

Numerous studies have established a positive correlation between trade facilitation and economic growth. For instance, Arvis et al. (2016) conducted a comprehensive analysis of trade facilitation measures in 143 countries and found that improvements in trade facilitation lead to increased trade flows and ultimately contribute to economic development. Similarly, Djankov et al. (2010) examined the impact of trade facilitation reforms on economic growth in 109 countries and concluded that enhancing trade facilitation has a significant positive effect on GDP growth.

Trade Facilitation and Competitiveness:

Trade facilitation measures are crucial in enhancing a country's competitiveness in the global marketplace. The efficient movement of goods across borders simplified customs procedures, and improved logistics networks can provide a competitive advantage to firms operating within a country. A study by Wilson and Mann (2017) examined the relationship between trade facilitation and competitiveness in East Asia and found that countries with better trade facilitation infrastructure tend to have higher levels of competitiveness in international trade.

Trade Facilitation and Small and Medium-sized Enterprises (SMEs):

SMEs play a vital role in many economies, and trade facilitation measures can significantly impact their ability to participate in international trade. Research by Shepherd and Wilson (2020) explored the specific challenges faced by SMEs in trade facilitation processes and highlighted the importance of tailored measures to address their unique needs. The study emphasized the role of information and communication technologies (ICTs) in improving SMEs' access to trade information and reducing trade costs.

Trade Facilitation and Sustainable Development:

The relationship between trade facilitation and sustainable development has also garnered attention. Scholars argue that well-designed trade facilitation measures can contribute to the achievement of sustainable development goals. For instance, Limão and Rocha (2016) examined the impact of trade facilitation on environmental outcomes and found that efficient customs procedures and reduced trade costs can lead to a decrease in carbon emissions associated with trade.

Key Elements and Dimensions of Trade Facilitation Measures

Trade facilitation measures constitute a critical component of international trade policy, aiming to streamline cross-border trade processes and reduce associated transaction costs. This academic discussion explores the essential elements and dimensions of trade facilitation measures, drawing on seminal works by distinguished scholars in the field. Trade facilitation, as conceptualized by the World Trade Organization (WTO), encompasses a wide array of policies and interventions designed to simplify and expedite international trade, ultimately fostering economic growth and development (WTO, 2014). This definition underscores the multifaceted nature of trade facilitation, which can be dissected into several core elements and dimensions.

1. Customs Procedures and Documentation. A fundamental dimension of trade facilitation lies in the simplification and modernization of customs procedures and documentation requirements. Schaur (2018) highlights the significance of efficient customs processes, emphasizing that lengthy and cumbersome customs clearance procedures can significantly impede trade flows.

Reductions in paperwork, the implementation of electronic documentation systems, and the automation of customs clearance have been key strategies to expedite customs procedures (Kaplinsky & Lall, 2009).

2. Infrastructure and Logistics. Trade facilitation measures also encompass the enhancement of infrastructure and logistics networks, which play a pivotal role in enabling the smooth flow of goods across borders. Arvis et al. (2013) argue that inadequate infrastructure, such as road networks, ports, and customs facilities, can create bottlenecks and delays in trade. Investment in infrastructure development, coupled with efficient logistics management, is essential to alleviate these constraints and improve trade facilitation.

3. Harmonization and Standardization. Ensuring harmonization and standardization of trade-related processes and regulations both domestically and internationally is another critical dimension of trade facilitation. This aspect is elucidated by Limão and Venables (2001), who emphasize that differences in technical standards and regulations across countries can hinder trade. Harmonizing and aligning standards can reduce trade barriers and improve predictability for traders, making it easier for them to comply with requirements.

4. Information and Transparency. The availability of accurate and up-to-date information related to trade procedures, requirements, and regulations is paramount for efficient trade facilitation. Arvis et al. (2016) emphasize the role of information and transparency in reducing uncertainty for traders. Online portals, single-window systems, and accessible databases provide traders with essential information, thereby reducing compliance costs and delays associated with misinformation.

5. Capacity Building and Institutional Strengthening. Strengthening institutional capacity at the national and regional levels is essential for the effective implementation of trade facilitation measures. Melo et al. (2003) underscore the importance of building the skills and capabilities of customs officials, as well as enhancing the capacity of relevant government agencies. Institutional reforms and capacity-building initiatives are key components of trade facilitation strategies (Besedes & Prusa, 2006).

6. Trade Facilitation Agreements and Multilateral Frameworks. At the international level, trade facilitation agreements and multilateral frameworks provide a platform for cooperation among nations. The Trade Facilitation Agreement (TFA) established by the WTO, as described by Hoekman and Nicita

(2011), serves as a prime example of a multilateral initiative aimed at standardizing and harmonizing trade facilitation measures globally. Such agreements provide a framework for mutual recognition of trade facilitation efforts and foster international collaboration.

Trade facilitation measures encompass a range of interconnected elements and dimensions, as elucidated by seminal academic papers and scholars in the field. Customs procedures, infrastructure development, harmonization, information availability, capacity building, and international agreements collectively constitute the core components of trade facilitation efforts. Understanding these dimensions is crucial for policymakers, as well as practitioners, seeking to enhance the efficiency and competitiveness of international trade. These insights provide a foundation for further research and analysis in the realm of trade facilitation, contributing to the advancement of international trade theory and policy.

Trade Facilitation Agreement (TFA)

The Trade Facilitation Agreement (TFA) within the framework of the World Trade Organization (WTO) entered into force on February 22, 2017, after an extensive period of negotiations. Since its first meeting, trade facilitation (TF) has remained a significant topic on the World Trade Organization (WTO) agenda. The signing of the WTO Trade Facilitation Agreement took place on 7 December 2013, involving the participation of 159 Member States[1]. The Bali Agreement introduced a reconfiguration of the key elements previously discussed within the WTO framework and established a comprehensive framework for the implementation of trade facilitation measures. This agreement stands as a prominent achievement arising from the Ministerial Conference held in Bali. The anticipated advantages stemming from the Agreement are believed to be substantial. Esteemed institutions like the World Bank, UNCTAD, and the Organization for Economic Co-operation and Development (OECD) have conducted comprehensive studies utilizing macroeconomic models to demonstrate the potential magnitude of these benefits.

Quantitative and qualitative methods for assessing trade facilitation

According to Orliac (2012), 12 trade facilitation indicators underscore the significance of trade facilitation. These encompass the "Doing Business" (DB)

[1] Agreement on trade facilitation, 11/12/2013, WTO, WT/L/911 ; WT/MIN(13)/36 (wto.org)

indicators provided by the World Bank Group, particularly those about cross-border trade; the Logistics Performance Index (LPI) by the World Bank; the Trade Facilitation Indicators (TFIs) by the Organisation for Economic Co-operation and Development (OECD); and the Enabling Trade Index (ETI) by the World Economic

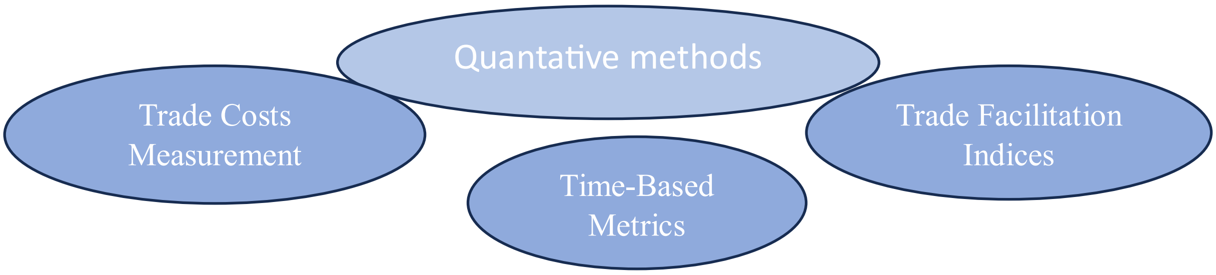
Doing Business Indicators (DBI)	
1	Starting a business
2	Dealing with construction permits
3	Getting electricity
4	Registering property
5	Paying taxes
6	Trading across borders
7	Getting credit
8	Protecting minority investors
9	Enforcing contracts
10	Resolving insolvency
11	Labor market regulation

Trade Facilitation Index (TFI)
1) "Ease of Doing Business", which ranks countries according to their relative performance (World Bank, 2014);
2) The "Distance to Frontier" score, which refers to how distant, on average, an economy is at a given time from the best practice, i.e. the best-performing economy.

Logistics Performance Index (LPI)	
1	Customs
2	Infrastructure
3	Ease of arranging shipments
4	Quality of logistics services
5	Tracking and tracing
6	Timeliness

3) LPI
The six indicators are summarized into the LPI index by using a Principal Component Analysis (PCA), which is a statistical technique used to reduce the dimensionality of a dataset. The LPI is, then, a weighted average of the scores assigned to each indicator with the weights determined by the PCA. The index goes from 1 (worst score) to 5 (best score)

The assessment of trade facilitation measures is a multifaceted endeavor that requires a comprehensive approach, integrating both quantitative and qualitative research methods. Academic literature offers a rich repository of scholarly works by esteemed authors, providing insights into these methodological dimensions. In the realm of quantitative assessment, methodologies often center around the measurement of trade costs, time, and efficiency, while qualitative approaches delve into understanding the qualitative aspects of trade facilitation, such as the experiences of traders and the institutional context.



First quantative method is trade costs measurement. Trade facilitation measures are frequently evaluated quantitatively through the estimation of trade costs. Anderson and van Wincoop (2003) pioneered the application of gravity models to measure trade costs, wherein variables such as transportation costs, tariffs, and logistics expenses are quantified. Their approach has been refined and expanded upon in subsequent works by Behar and Venables (2011) and Novy (2013), offering nuanced insights into the quantitative assessment of trade facilitation.

Scholars typically developed a trade facilitation assessment framework, as outlined by Wilson et al. (2003). In light of this framework, the study of Chu Qiao (2023) has opted to incorporate four primary indicators, namely port efficiency, customs environment, institutional environment, and e-commerce. Subsequently, a comprehensive trade facilitation evaluation system for China and its 30 trading partners has been established, encompassing these four primary indicators and an additional ten secondary indicators. See Table 1 for a detailed representation of this evaluation system.

Table 1 Trade Facilitation Evaluation System

Primary indicators	Secondary indicators
Infrastructure	Quality of roads
	Quality of railroad infrastructure
	Quality of port infrastructure
	Quality of air transport infrastructure

Customs environment	Burden of customs procedures
	Prevalence of non-tariff barriers
Institutional environment	Regulatory quality
	Corruption perceptions index
	Rule of law
Electronic commerce	Individuals using Internet

Source: Highlights in Business, Economics and Management, Author: Chu Qiao

Time-Based Metrics is the second quantitative method also encompass the measurement of time-related trade facilitation indicators. Djankov et al. (2002) introduced the World Bank's "Doing Business" report, which includes metrics like the time required for customs clearance and port handling. This framework has been further developed and refined over time, providing a standardized quantitative basis for comparing trade facilitation across countries (Pauwels et al., 2017).

Another quantitative method of measuring trade facilitation is using quantitative indices, such as the World Bank's Logistics Performance Index (LPI), offer a systematic assessment of trade facilitation conditions. Arvis et al. (2016) have notably contributed to the development and refinement of the LPI, which incorporates a variety of quantitative indicators related to infrastructure, customs, and logistics services.

Qualitative Methods:

Stakeholder Interviews and Surveys: Qualitative methods for assessing trade facilitation often involve stakeholder interviews and surveys to capture the experiences and perspectives of traders and other relevant actors. Shepherd (2007) employed qualitative research to investigate the impact of trade facilitation reforms on small and medium-sized enterprises (SMEs) in Southeast Asia, shedding light on the challenges and opportunities faced by these businesses.

Case Studies: Qualitative approaches frequently employ case studies to delve deeper into specific trade facilitation initiatives and their outcomes. As a great example on how to measure effect of implementing the TF can be studying Single Window system. Key features of a Single Window According to the UN/CEFACT Recommendation, a *Single Window* facility should allow:

• Parties involved in trade and transport to lodge standardized information and documents with a single entry point to fulfil all import, export, and transit-related regulatory requirements. If information is electronic, then individual data elements should only be submitted once.

• The sharing of all information in respect of international trade transactions, which is supported by a legal framework that provides privacy and security in the exchange of information.

• The addition of facilities to provide trade related government information and receive payment of duties and other charges.

• Such a single entry point to disseminate, or provide access to, the relevant information to participating governmental authorities or authorised agencies

• Co-ordination of the controls and inspections of the various governmental authorities.

A Single Window brings meaningful gains to all parties engaged in cross-border trade.

Benefits for government
Correct revenue yields
Improved trader compliance
Enable the use of sophisticated "risk management" techniques for control and enforcement purposes
More effective and efficient deployment of resources
Benefits for trade
Cutting costs by reducing delays
Faster clearance and release
Predictable application and explanation of rules
More effective and efficient deployment of resources

Source: United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT)

Institutional Analysis:

Qualitative research also encompasses institutional analysis to understand the contextual factors influencing trade facilitation. Melo et al. (2003) conducted a qualitative institutional analysis of customs administrations in Latin America, exploring the governance structures and administrative capacities that affect trade facilitation outcomes.

The assessment of trade facilitation measures necessitates a multifaceted approach that incorporates both quantitative and qualitative research methods. Quantitative methods focus on the measurement of trade costs, time-based metrics, and indices, providing a quantitative basis for cross-country comparisons. Qualitative methods, on the other hand, offer insights into the experiences of stakeholders, the impact of trade facilitation reforms, and the institutional context in which these measures are implemented. By integrating these quantitative and qualitative approaches, researchers and policymakers can gain a holistic understanding of trade facilitation and its implications for international trade. These methodological insights contribute to the advancement of knowledge in this critical area of trade policy and economics.

Analysis of international trade facilitation indicators and indices

The evaluation and analysis of international trade facilitation indicators and indices play a pivotal role in assessing the effectiveness of trade facilitation measures, tracking progress, and informing policy decisions. This academic discussion explores the key academic contributions in this domain, drawing upon influential works by distinguished authors. International trade facilitation indicators and indices are vital tools for quantifying and benchmarking trade facilitation performance across countries.

Quantitative Indicators:

Trade Facilitation Indicators: The World Bank's Logistics Performance Index (LPI) is a widely recognized quantitative indicator used to assess trade facilitation. Arvis et al. (2016) have contributed significantly to the development and refinement of the LPI, which encompasses various sub-indicators related to infrastructure, customs efficiency, logistics services, and more. This quantitative approach provides a comprehensive view of trade facilitation conditions at the national level.

Time-Based Metrics: Time-based metrics, such as those highlighted by Djankov et al. (2002), are essential quantitative indicators for evaluating trade facilitation. The measurement of the time required for customs clearance, port handling, and border compliance procedures offers a tangible assessment of the efficiency and effectiveness of trade facilitation measures, enabling cross-country comparisons.

Cost-Based Metrics: Quantitative assessment also extends to the measurement of trade costs, as elucidated by Anderson and van Wincoop (2003). This approach quantifies trade costs, including transportation, tariffs, and logistics expenses, providing insights into the cost-effectiveness of trade facilitation measures.

Composite Indices:

Global Indices: Numerous composite indices, aggregating various quantitative indicators, have been developed to provide a holistic view of trade facilitation. The Global Enabling Trade Report by the World Economic Forum (WEF), as discussed by Zahoor et al. (2015), compiles a composite index assessing trade facilitation, which incorporates factors such as border administration, transport infrastructure, and regulatory environment. These global indices offer a broader perspective on trade facilitation performance.

Regional Indices: Regional trade facilitation indices, such as the Asia-Pacific Trade Facilitation Report discussed by Sarker et al. (2016), offer a nuanced analysis of trade facilitation within specific geographical contexts. These indices adapt global indicators to regional nuances and provide valuable insights for policymakers and stakeholders in those regions.

Qualitative Dimensions:

While quantitative indicators and composite indices provide valuable quantitative insights, qualitative dimensions are equally crucial for a comprehensive analysis of trade facilitation.

Case Studies and Qualitative Research: Qualitative methods, as exemplified by the work of Osei et al. (2018), employ case studies and qualitative research to delve deeper into the real-world impact of trade facilitation measures. Such studies shed light on the experiences and perspectives of traders, businesses, and government officials affected by trade facilitation reforms.

Institutional Context: Qualitative analysis also includes the examination of the institutional context within which trade facilitation measures are implemented, as explored by Melo et al. (2003). This dimension helps us understand the governance structures, administrative capacities, and institutional challenges that influence trade facilitation outcomes.

The analysis of international trade facilitation indicators and indices combines quantitative and qualitative approaches to provide a comprehensive assessment of trade facilitation measures. Quantitative indicators and composite indices offer standardized metrics for cross-country comparisons, while qualitative dimensions provide a deeper understanding of the real-world impact and contextual factors influencing trade facilitation. By synthesizing these approaches, researchers and policymakers can develop informed strategies to enhance trade facilitation, ultimately fostering economic growth and international trade. These methodological insights contribute significantly to the advancement of knowledge in the field of trade policy and economics.

Case studies and empirical approaches for evaluating the effectiveness of trade facilitation measures

The evaluation of trade facilitation measures often requires a nuanced understanding of their real-world impact on international trade flows, economic development, and the experiences of various stakeholders. Case studies and empirical approaches are indispensable tools for gaining these insights, offering a dynamic and context-specific perspective. This academic discussion explores the significance of case studies and empirical research in assessing the effectiveness of trade facilitation measures, drawing upon influential works by esteemed authors.

Case Studies:

Experiences of Traders and Businesses: Case studies provide an invaluable lens through which to examine the tangible impact of trade facilitation measures on the experiences of traders and businesses. In their research on the Ghana National Single Window (GNSW) system, Osei et al. (2018) employed case studies to understand how the implementation of a digital trade facilitation platform affected the operations of customs brokers, importers, and exporters. Such in-depth qualitative analysis illuminates the challenges and benefits experienced by those directly involved in trade, shedding light on the practical implications of trade facilitation reforms.

Specific Trade Facilitation Initiatives: Case studies also allow for a detailed exploration of specific trade facilitation initiatives, offering a deep dive into their design, implementation, and outcomes. Shepherd (2007) conducted case studies in Southeast Asia to assess the impact of trade facilitation reforms on small and medium-sized enterprises (SMEs). Through this qualitative research, Shepherd revealed the nuanced effects of customs modernization and infrastructure improvements on SMEs, highlighting the importance of context-specific analysis in trade facilitation evaluation.

Empirical Approaches:

Quantitative Analysis of Trade Data: Empirical approaches often rely on quantitative analysis of trade data to assess the impact of trade facilitation measures on trade flows. Using gravity models, Anderson and van Wincoop (2003) pioneered the quantification of trade costs and trade facilitation's impact on trade volumes. Their empirical analysis demonstrates the significant role of trade facilitation measures in reducing trade costs and promoting trade expansion, providing valuable insights for policymakers.

Impact Assessment Surveys: Empirical research also includes the use of impact assessment surveys to measure the effects of trade facilitation measures on key trade-related variables. Pauwels et al. (2017) conducted surveys in several countries to assess the impact of time-saving trade facilitation reforms on firms' competitiveness. Their empirical findings underscore the importance of time-based trade facilitation indicators in enhancing firms' export capabilities.

Trade Facilitation and Economic Growth: Empirical studies frequently extend their focus beyond trade flows to explore the broader economic implications of trade facilitation measures. Hertel and Winters (2006) employed a computable general equilibrium (CGE) model to analyze the impact of trade facilitation improvements on global income and welfare. Their empirical approach reveals that trade facilitation reforms can have far-reaching economic benefits, affecting not only trade volumes but also overall economic growth.

Case studies and empirical approaches serve as essential tools for assessing the effectiveness of trade facilitation measures from both qualitative and quantitative perspectives. Case studies offer a detailed exploration of specific initiatives and the experiences of stakeholders, providing contextual insights into the on-the-ground effects of trade facilitation reforms. Empirical research, on the other hand, enables the quantitative measurement of trade facilitation's impact on trade flows, economic growth, and competitiveness. By combining these methodological approaches, researchers and policymakers can develop a comprehensive understanding of the multifaceted dynamics of trade facilitation, facilitating evidence-based decision-making and the refinement of trade policy measures. These methodological insights contribute significantly to the advancement of knowledge in the field of trade policy and economics.

UNCTAD and trade facilitation

To support the fulfillment of the technical and institutional responsibilities arising from the World Trade Organization's Trade Facilitation Agreement (TFA) in 2017, the UNCTAD Trade Facilitation Programme (UNCTAD, 2020) works towards enhancing trade processes and promoting the competitiveness of developing countries, including economies in transition, least developed countries (LDCs), landlocked developing countries (LLDCs), and small island developing states (SIDS). The program's primary objective is to assist in implementing trade facilitation reforms and strengthen countries' capacity to adhere to relevant international and regional regulations and standards, including the commitments outlined by the WTO.

Since 2016, UNCTAD has developed capacity in 56 countries around the world to improve their trade facilitation. Of these, 34 countries were in Africa, 10 in Latin America and the Caribbean, and 12 in Asia and Oceania. In total, 21 countries were SIDS and 17 LLDCs (see Map 1). 60 percent of capacity development was done in English, 35 percent in French, and 5 percent in Portuguese.

Out of the 56 countries, a total of 45 are members of the World Trade Organization (WTO). Among these member countries, 89 percent have ratified the WTO trade facilitation agreement, demonstrating their commitment to its principles. Additionally, 96 percent of these countries have provided notifications to the WTO Committee on Trade Facilitation, indicating their adoption of specific provisions categorized as A, B, and C.

To effectively support the implementation of trade facilitation measures, the UNCTAD Trade Facilitation Programme collaborates with other relevant technical assistance programs within UNCTAD. Notably, the UNCTAD ASYCUDA program, which is utilized by Customs administrations in over 90 countries, and the UNCTAD Trade Portals program are instrumental in implementing various provisions outlined in the WTO Trade Facilitation Agreement. These programs serve as crucial tools in enhancing trade processes and facilitating efficient customs procedures.

OECD and trade facilitation

The trade facilitation indicators developed by the Organization for Economic Cooperation and Development (OECD) encompass a comprehensive range of border procedures, spanning from advance rulings to transit guarantees. Launched in 2013 and updated every two years, the OECD Trade Facilitation Indicators (TFIs) allow countries to identify strengths and challenges in trade facilitation, prioritise areas for action, and mobilise technical assistance and capacity building in a more targeted way, TFI alsi cover the full spectrum of border procedures. These indicators have been applied to 163 countries, representing diverse income levels, geographical regions, and stages of development. By utilizing these indicators, governments can derive estimates that serve as a foundation for prioritizing trade facilitation initiatives. Additionally, these estimates enable governments to effectively allocate technical assistance and capacity-building resources, with a particular focus on addressing the needs of developing countries in a more targeted manner.

Why trade facilitation is important to implement in Central Asian countries?

Central Asia is a geographically isolated area grappling with suboptimal transportation logistics, resulting in elevated expenses associated with the movement of commodities for global commerce. Consequently, the enhancement of the region's transportation infrastructure holds the potential to streamline and augment international trade for economies within Central Asia (Shepherd and Wilson, 2007). Notably, substantial investments have been allocated to bolster such infrastructure over the past decade. However, for Central Asian nations to maximize the advantages stemming from heightened external economic engagement, it is imperative to recognize that more than just physical infrastructure is requisite. The development of soft infrastructure addressing the issues of sluggish trade flow and elevated expenses related to inbound and outbound international trade across the region is equally indispensable for the realization of enhanced trade facilitation. The research by Inkyo Cheong, Valijon Turakulov (2021) found that Central Asian leaders' protectionist policy, on top of the landlocked geographical environment, made trade costly, rendering these countries further isolated. Consequently, economic development slows down, unemployment increases, and poverty rate extremes. Eventually, the isolated region (relatively, excluding Kazakhstan) is imprisoned in a low-income trap and framed into a vicious circle. The trade facilitation scenarios impact the region's economy as much as positively do tariff liberalization scenarios.

Kazakhstan ratified the TFA in October 2015. This is the reason why Kazakhstan's experience in trade facilitation is an important area of study in implementing trade facilitation in Uzbekistan.

- Kazakhstan is the world's largest landlocked country;
- Kazakhstan shares borders with Russia, China, Kyrgyzstan, Uzbekistan, and Turkmenistan;
- Kazakhstan is a member of WTO

Overview of the trade competitiveness challenges faced by Uzbekistan

Uzbekistan, as a landlocked Central Asian nation, faces several trade competitiveness challenges rooted in its geographical location and historical economic structure. One significant challenge is cross-border trade's high cost and time, exacerbated by its double-landlocked status. Landlocked countries tend to experience longer transit times and higher transportation costs, reducing their competitiveness in global markets (Carrère, 2006). Moreover, Uzbekistan's trade has traditionally been dominated by cotton, gold and natural gas exports, making its economy vulnerable to price fluctuations and global market dynamics (Babakhanov & Mukhamedova, 2017). To enhance trade competitiveness, diversification into value-added sectors and improving trade logistics infrastructure are essential (Ghani, Goswami, & Kerr, 2016). Addressing these challenges requires strategic policy measures and international cooperation to unlock Uzbekistan's full potential in global trade.

Category	Uzbekistan	Best practice
Average trade facilitation performance	0.854	
A-Information availability	0.789	1.667
B-Involvement of the trade community	1.286	1.75
C-Advance rulings	1.333	1.909
D-Appeal procedures	1.286	1.615
E-Fees and charges	1	1.857
F-Documents	0.875	1.778
G-Automation	0.308	1.692
H-Procedures	0.857	1.6
I-Internal border agency co-operation	0.455	1.273
J-External border agency co-operation	0.455	1.273
K-Governance and impartiality	0.75	1.889

Source: OECD Trade Facilitation Indicators 2022 edition

For the subset of nations classified as lower-middle-income, a category inclusive of Uzbekistan, an evaluation of the repercussions of trade facilitation measures on bilateral trade flows and associated costs reveals that reforms yielding the most substantial advantages pertain to formalities, governance, impartiality, information accessibility, engagement of the trade community, advance rulings, and appeal procedures. Considering the potential augmentation in trade flows and reduction in costs attributable to these policy dimensions and recognizing the domains where optimal performance has not yet been attained, sustained enhancements in the following areas would be advantageous for the economy - Information availability, Advance rulings, Appeal procedures, Formalities – documents, Formalities – automation, Formalities – procedures

Conclusion

The theoretical framework for trade facilitation measures provides a comprehensive understanding of their significance in international trade. The foundational work of Anderson and van Wincoop in 2004 initiated discussions on trade facilitation's core objective of reducing trade costs, encompassing all expenses, aside from production costs, involved in moving goods from producers to consumers. Despite the absence of a universally agreed-upon definition, scholars such as Helble, Shepherd, Wilson, and McLinden have acknowledged the multifaceted nature of trade facilitation, extending beyond logistical considerations to encompass regulatory transparency, standard harmonization, and conformity to international or regional regulations.

In the context of Central Asia, trade facilitation emerges as a critical factor for economic growth. The region, characterized by geographical isolation and suboptimal transportation logistics, can significantly benefit from the implementation of trade facilitation measures. Notably, investments in physical infrastructure must be complemented by the development of soft infrastructure to address issues of trade flow and cost associated with international trade.

Uzbekistan, facing trade competitiveness challenges due to its landlocked status and historical economic structure, can draw valuable lessons from Kazakhstan's experience. Kazakhstan, being the world's largest landlocked country and a WTO member, provides a relevant case study for Uzbekistan's pursuit of effective trade facilitation. The analysis of trade facilitation indicators for Uzbekistan underscores the need for continuous improvements in information availability, advance rulings, appeal procedures, formalities (documents, automation, procedures), and governance and impartiality.

In essence, a well-defined theoretical framework and effective implementation of trade facilitation measures are crucial for overcoming trade-related challenges, enhancing competitiveness, and fostering economic development. The ongoing efforts to streamline trade procedures and reduce associated costs align with the broader goal of promoting inclusive growth and prosperity on a global scale.

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