

Knowledge Intensive Business Services (KIBS), Digital Services (DS) and Barriers Faced by Women in International Trade in Services

APEC Group on Services

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Asia-Pacific
Economic Cooperation



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I. Introduction

In recent years, public opinion has increasingly focused on the future direction of international trade. A growing emphasis on fostering inclusive economic growth is a key component of broad trade liberalization initiatives. This approach is justified not only by moral considerations, such as “doing the right thing”, but also by recognizing that inclusive approaches can yield positive economic benefits for both the economy and businesses.

Despite extensive discussions and analyses on the expected results of inclusive growth, globalization, and digitization, the gender aspect of inclusivity has yet to reach its full potential. Organizations such as APEC, the International Trade Centre, and initiatives carried out under the Organization for Economic Co-operation and Development (OECD) have made remarkable efforts to promote inclusive trade¹ focused on closing the gender gap. The World Trade Organization's (WTO) Declaration on Trade and Women's Economic Empowerment in December 2017, along with provisions in some Regional Trade Agreements (RTAs) has prioritized this issue on the trade agenda. However, despite this policy priority, the lack of data makes it unclear to what extent these initiatives have been effective in increasing the participation of women in trade in digital services. Additionally, it remains uncertain which approaches would be most effective in tailoring trade agreements to produce tangible results for women.

Digitization, new technologies, and increased connectivity are redefining trade in services, fostering the cross-border supply of Knowledge-Intensive Business Services (KIBS) and Digital Services (DS). These are crucial enablers of global value chains, enhancing the traceability of services and promoting the participation of women in more inclusive trade.

This report aims to identify the barriers women and women-owned businesses face when participating in trade in KIBS and DS within the APEC region. The analysis specifically focuses on trade and regulatory measures that may impede or adversely affect the participation of women and women-owned small and medium-sized enterprises (SMEs) in supplying these services.

The report comprises three chapters. Chapter One presents a statistical analysis of international trade in KIBS and DS, with a focus on the role and participation of APEC economies. It also provides background information on trade restrictions and regulatory barriers KIBS and DS face in the APEC region, identifying barriers women face when such data is available.

Chapter Two analyzes the responses to 33 questions from 86 questionnaires completed by participants from APEC economies. The questionnaire aimed to identify possible restrictions and regulatory barriers that are gender-based and how they may affect the participation of women in trade in KIBS and DS.

Chapter Three summarizes the main arguments and findings from the research and provides specific recommendations for promoting better integration of women in trade in

¹ Inclusive trade involves trade practices and policies designed to distribute the benefits of trade more evenly across various segments of society, including marginalized and disadvantaged groups. It focuses on reducing inequalities by fostering opportunities for SMEs, upholding fair labor practices, supporting sustainable development, and encouraging equitable economic growth.

the KIBS and DS sectors. These recommendations include potential policy changes, suggestions on further research that could be undertaken, and specific next steps to address the findings. Additionally, specific recommendations are provided to help APEC economies improve women's participation in trade in these sectors.

II. Regulatory barriers and statistics on trade in the KIBS and DS sectors

A. Trade and regulatory barriers

During the COVID-19 pandemic, many women-led SMEs emerged, particularly in KIBS and DS, as technology enabled businesses to continue operating despite confinement measures. Nonetheless, DS presents unique challenges, especially for businesswomen. Women entrepreneurs' participation in international KIBS and DS markets face additional hurdles, primarily due to trade and regulatory barriers, as well as global economic and geopolitical challenges. These factors can limit women's participation of and increase the costs for businesswomen engaging in trade.

However, liberalizing digital trade and services can offer significant benefits. It can help provide women entrepreneurs and consumers with broader access to services and products, enhancing productivity, efficiency, and innovation across APEC economies. It enables businesses to tap into global digital markets and connect with innovative, and competitive digital suppliers worldwide. RTA's with digital trade chapters along with WTO plurilateral initiatives such as the Joint Statement Initiative (JSI) on E-Commerce facilitate digital trade and lower barriers. Access to information about international trade barriers is essential for businesswomen seeking to expand globally. In addition, regulatory frameworks that promote and facilitate the provision of KIBS and DS can help increase women's participation.

i. Trade restrictions

This section relies on the Digital Trade Restrictiveness Index (DTRI)² a comprehensive tool that measures and evaluates the various barriers affecting digital trade across economies. The DTRI assesses restrictions in areas such as data policies, infrastructure, and market access that impact the flow of digital goods and services. By analyzing these constraints, the DTRI provides insights into how regulatory environments influence digital trade, highlighting more open economies and those that impose significant limitations. This index helps policymakers, businesses, and researchers understand the landscape of digital trade restrictions, facilitating more informed decisions to promote a freer and more competitive digital market. It serves as the basis for identifying barriers that women-owned businesses and women consuming KIBS and DS face in APEC economies.

The DTRI identifies China; Russia; Viet Nam; Thailand; and Indonesia as the most restrictive economies for trade in KIBS and DS among APEC economies, holding the top five global positions in trade restrictions. Conversely, New Zealand and Hong Kong, China exhibit openness in digital trade, benefiting from their service-oriented economies and a history of embracing open international trade and investment. For their part, Chile;

² The DTRI is elaborated by the European Center for International Political Economy and measures the restriction in digital trade in 64 economies: the higher the data restrictions, the higher the position in the rank. The index is clustered around four larger areas of digital trade policy, namely (A) Fiscal restrictions and Market Access, (B) Establishment Restrictions, (C) Restrictions on Data, and finally (D) Trading Restrictions. Each cluster contains more specific areas. For the purposes of this study, we selected some areas of each cluster and were denominated subindex: establishment restriction, data, and trading restrictions.

Japan; and Peru show few barriers, placing them among the most open economies for digital trade (See Annex II. DTRI Score and Ranking).

Developed economies typically exhibit fewer restrictions compared to emerging ones. Consequently, women-owned SMEs in emerging economies often face significant market access limitations, whereas women entrepreneurs in developed economies encounter fewer obstacles and enjoy easier market access. This disparity underscores the challenges faced by businesswomen in economies with high restrictions and highlights the need for policy reforms to support greater equality in digital trade opportunities.

The DTRI **establishment restrictions subindex**³ identifies China; Thailand; Viet Nam; Chinese Taipei; and Malaysia as having the highest restrictions. While China's digital market is robust, its quantitative and e-commerce restrictions limit opportunities for foreign digital entrepreneurs, especially women-led businesses. Despite China's rapid growth in digital trade services and the development of a substantial domestic market and global digital platforms, extensive restrictive measures in areas like public procurement, foreign investment, and intellectual property rights hinder foreign participation. For its part, in Viet Nam, companies must establish a physical presence to fulfill licensing and registration requirements, along with foreign investment constraints.

Conversely, open economies such as New Zealand; Hong Kong, China; Australia; and Singapore hold fewer restrictions. Chile and Peru stand out with the best access to digital services. In terms of establishment restrictions, China and Russia hold the first and second places as the most restrictive economies, while New Zealand and Hong Kong, China rank as the most open and accessible economies for trading digital services as it relates to this subindex.

When it comes to the **Data subindex**⁴ and its rankings, China leads as the economy with the highest restrictions, followed by Russia; Indonesia; Viet Nam; and Korea. For example, Russia imposes stringent data localization and retention rules that impose high costs for women-owned firms. Viet Nam applies restrictive measures to data movement.

At the other end of the spectrum are Chile; Japan; the Philippines; Chinese Taipei; and the United States, that show fewer restrictions. The United States trades digital goods and services extensively and its regulations allow data to flow freely. This helps reduce costs for women-owned small and medium-sized businesses and increases cross-border digital trade.

The **Trading Restrictions subindex**⁵ and its rankings highlight China; Viet Nam; Indonesia; Russia; and Malaysia as the most restrictive economies. Some economies that belong to the Association of Southeast Asian Nations (ASEAN)⁶ are represented in this section, suggesting that they have the potential to increase digital services as the

³ Establishment restriction subindex refers to data in Foreign Investment, IPR, and Business Mobility.

⁴ Data subindex covers data policies, intermediate liability, and content access.

⁵ Trading restrictions index contains information about quantitative trade restrictions, standards, and online sales and transactions.

⁶ ASEAN members are Brunei Darussalam; Cambodia; Indonesia; Lao PDR; Malaysia; Myanmar; the Philippines; Singapore; Thailand; and Viet Nam.

ASEAN integration process shows. Conversely, New Zealand; Peru; Brunei Darussalam; Japan; and Singapore are the economies that exhibit the fewest restrictions.

There is a pressing need for increased digital competition and opportunities for women entrepreneurs in China, where foreign women-led companies can participate but face obstacles. These businesswomen must navigate rigorous investment screening processes, including demonstrating net economic benefits, undergoing “domestic security” screenings for mergers and acquisitions, and complying with procedures for transactions involving sensitive sectors.

For its part, Russia is one of the most digitally restricted economies when it comes to tariffs and trade protections, content access, quantitative trade barriers, and e-commerce.

Indonesia imposes restrictions on e-commerce operations and foreign ownership in online retailing and express delivery services, among other barriers, which further compound e-retail restrictions. It maintains restrictive measures on intellectual property rights, intermediary liability, content access, quantitative trade restrictions, and standards.

Viet Nam enforces strict licensing and registration requirements for online platforms, general information websites, mobile telecommunications network-based services, and certain online gaming services, along with competition policy requirements. These regulations further complicate entry for foreign businesses.

While the United States hosts numerous digital giants and leads in technological investments and innovation, it still maintains some restrictions. Competition plays a crucial role in eliminating restrictions in international markets. Despite this, the United States provides abundant opportunities for women entrepreneurs to engage in trade in DS and KIBS.

Addressing digital barriers may help to empower women to grow their businesses beyond domestic border and in global markets. Open digital markets spur technological advancements, enhance product/service quality, and drive economic growth. Eliminating regulatory barriers will help to foster healthy competition, ultimately benefiting consumers and businesses alike. Increased participation of women in trade in KIBS and DS will not only advance gender equality but also stimulate economic prosperity and innovation across APEC economies.

Examining cooperation experiences within APEC, particularly in DS and KIBS, holds significant promise for fostering better opportunities for women-led SMEs. For example, in the Pacific Alliance (PA) integration process, economies with fewer restrictions like Chile; Peru; and Mexico, strike a balance between restrictions and open markets. APEC could leverage PA best practices and share them with more restrictive economies. For instance, the PA Regional Digital Market could serve as a model on how to eliminate barriers and enhance the participation of businesswomen in DS and KIBS trade.

Indeed, implementing the Serena Roadmap⁷, could allow APEC economies to reduce barriers in digital services, empowering women-led SMEs by benefitting from more inclusive growth.

ii. Regulatory barriers to digital trade

RTA with digital trade chapters and Digital Economy agreements play critical roles in promoting and implementing domestic laws and regulations in these policy areas to facilitate trade. Recent bilateral and RTA cover various aspects of digital trade and services, including mandates for regulatory frameworks that facilitate remote transactions, promote trust-building regulations, and establish rules governing the digital trade ecosystem.

Furthermore, nineteen member economies participate in the WTO JSI on E-Commerce which aims to establish global rules on digital trade. On 5 December 2024, 71 Member parties (including 12 APEC member economies) to the Agreement on Electronic Commerce informed WTO Members of the conclusion of the negotiations, and their intention to incorporate the Agreement into the WTO legal framework as a plurilateral agreement.⁸

New digital economy agreements are emerging, expanding beyond digital trade or e-commerce issues to include cooperation commitments and promote shared values in areas such as artificial intelligence, digital identity, and open government data. Examples include the Digital Economy Partnership Agreement (DEPA) between Chile; Korea; New Zealand; and Singapore, as well as the Digital Economy Agreement between Australia and Singapore.⁹

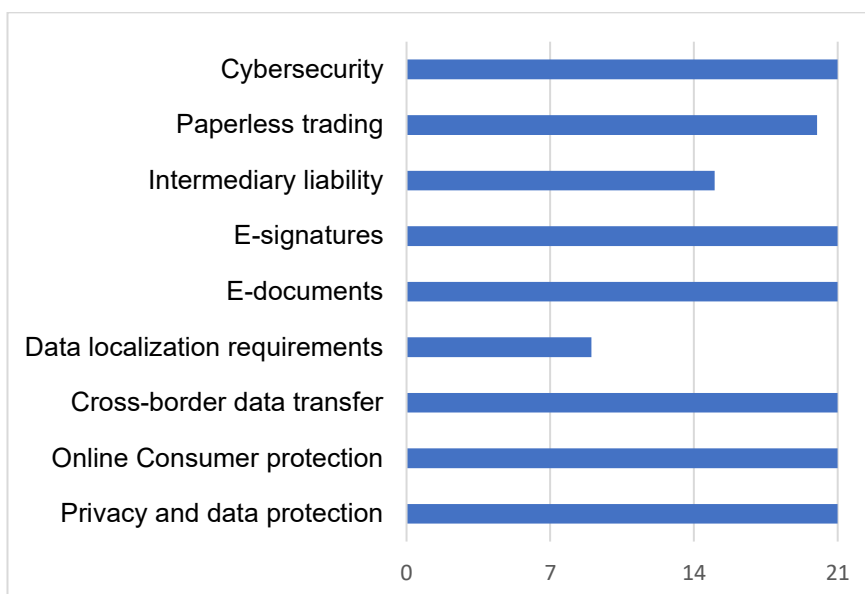
According to the OECD Digital Services Trade Restrictiveness Index (STRI) and the DTRI, all APEC economies have regulations on cyber security, e-signatures, e-documents, cross-border data transfer, online consumer protection, and privacy and data protection. However, only nine economies apply regulations on data localization requirements and 15 on intermediary liability (See figure 1).

⁷ The La Serena Roadmap for Women and Inclusive Growth (2019-2030) is an APEC initiative that provides concrete direction and catalyzes policy actions across APEC that will drive greater inclusive economic development and participation of women in the Asia-Pacific region.

⁸ Joint Statement Initiative on E-Commerce
(https://www.wto.org/english/tratop_e/ecom_e/joint_statement_e.htm)

⁹ *Ibidem* p. 30.

Figure 1. Regulatory barriers to digital trade in some APEC economies



Source: Digital Trade Restrictiveness Index, DTRI. European Centre for International Political Economy.

This section relies on The World Bank Policy Group report "Regulation of Digital Trade, Key Policies, and International Trends"¹⁰ (DTRR), which identifies key domestic measures and regulatory policies that can either promote or hinder digital trade. According to the report, regulations can play three roles in digital markets: a. enabling, b. trust-building, and c. hindering.

For each economy, we assessed existing laws or regulations in these three roles. Due to the scope of this study, we did not analyze the adequacy of each domestic law or regulation in promoting women's participation in KIBS trade. Instead, the results indicate only whether a broad domestic framework exists in these three roles.

a. Enabling conditions and promotion of electronic transactions

Enabling conditions facilitate the promotion of electronic transactions, including electronic signatures, electronic contracts, and paperless trading, through essential regulatory tools.

Most economies have regulations for digital markets, including laws on electronic contracts, electronic signatures, and paperless trading. All economies have enacted laws or regulations specifically addressing electronic signatures and electronic contracts or documents.

¹⁰ Daza Jaller, Lillyana Sophia; Gaillard, Simon; Molinuevo, Martín, "The Regulation of Digital Trade: Key Policies and International Trends", World Bank Group. <http://documents.worldbank.org/curated/en/998881578289921641>

Regarding paperless trading, most economies have implemented regulations accepting electronically submitted documents as equivalent to their paper counterparts, except for Papua New Guinea.

The legal recognition of electronic transactions, along with the facilitation of cross-border trade and the use and recognition of electronic signatures, enables faster and more cost-efficient business transactions. Economies must strive towards harmonizing local approaches to electronic contracting and signature laws across the region, aligning them with relevant international standards. These standards include the United Nations Commission on International Trade Law (UNCITRAL) Model Law on Electronic Signatures (2001) and the Model Law on Electronic Commerce (1996), as well as the United Nations Convention on the Use of Electronic Communications in International Contracts (2005).¹¹

b. Promoting trust and confidence in the digital markets

Trust and confidence include cybersecurity laws, privacy or protection of personal data, consumer protection, and liability of intermediaries. Trust and security in markets enhance consumers' confidence in DS and digital trade.

All economies have committed, either through RTA or domestic laws, to maintaining legal frameworks that prevent fraudulent and deceptive business practices and protect users' personal information. All have adopted regulations or laws for consumer protection, to protect personal information,¹² and for cybersecurity.

Regulations governing the relationship between interactive computer services or Internet intermediaries and content providers also contribute to increasing users' confidence, innovation, and the expansion of KIBS and services trade. But intermediary liability rules should also seek to balance protecting consumer rights while supporting the expansion of digital markets, including through intermediary platforms. Fifteen APEC economies have implemented different forms of regulation for interactive computer services.¹³

Economies should also ensure that their legal frameworks are robust enough to secure, protect, and manage personal data. This involves regulating the collection, use, storage, and transfer of personal data following international principles or guidelines.

c. Regulatory barriers that hinder the provision of KIBS

Certain regulations or laws may hinder the supply of these services by restricting or increasing the cost of free data flow, or by imposing requirements or obligations to establish Information Technology (IT) facilities within the territory where the services are provided.

¹¹ This Convention aims to enhance legal certainty and commercial predictability where electronic communications are used in relation to international contracts.

¹² The most recent example is Korea which in 2023 amended its data protection rules in relation to digitally enabled services.

¹³ Except Papua New Guinea; the Philippines; Chinese Taipei; Thailand; and Viet Nam.

Restrictions on data flows and data localization requirements, such as storing or processing data within specific geographic locations, have several negative effects: they reduce productivity, hinder companies' ability to participate in global value chains, and increase costs, particularly for SMEs that cannot afford multiple data storage locations. These restrictions also reduce foreign investment flows and overall economic efficiency.

While all economies currently allow cross-border data transfer of information and have adopted their regulatory frameworks, eight economies¹⁴ impose certain requirements to use or locate computer facilities within their territory. For instance, China has recently introduced new Measures for Security Assessment for Outbound Data Transfer, mandating stringent security assessments for data and personal information transferred abroad.¹⁵

Another example is Viet Nam, which approved a new decree on the protection of personal data effective July 2023, introducing stricter regulations for cross-border data transfers. Companies are now required to obtain approval from the Ministry of Public Security on a case-by-case basis before proceeding with any cross-border data transfers.¹⁶

Allowing cross-border electronic data transfers significantly contributes to the development of digital markets and reduces costs for businesses, especially for SMEs. In KIBS, data and information play a pivotal role in transactions encompassing professional advice, customer care, images, videos, sounds, the app-based intermediation services, and more.¹⁷

Given the diverse approaches to personal information protection and data transfer of information regulatory requirements, it is advisable to promote cooperation and compatibility between different regulatory frameworks. Economies are encouraged to promote regional initiatives aimed at implementing common standards for cross-border data transfer and data interoperability. Initiatives such as the APEC Cross-Border Privacy Rules (CBPR) System, which advocates a flexible approach that avoids unnecessary barriers to data flows, and the ASEAN Model Contractual Clauses for Cross-Border Data Flows can be used as benchmarks.

In broad terms, we have provided a general overview of the regulatory environment, and barriers encountered by women and women-owned businesses in APEC economies when endeavoring to participate in the digital economy and engage in trade in KIBS and DS.

¹⁴ Brunei Darussalam; China; Indonesia; Korea; New Zealand; Russia; Singapore; and Viet Nam.

¹⁵ These new measures are dated 7 July 2022. China has implemented several measures to regulate data transfers and data protection, especially in response to the COVID-19. These measures were preceded by the adoption of the Data Security Law on 10 June 2021, establishing comprehensive rules for data activities by businesses. The Cybersecurity Law, in effect since 2017, remains the primary framework for cross-border data transfers.

¹⁶ OECD (2024), OECD Services Trade Restrictiveness Index: Policy Trends up to 2024, OECD Publishing, Paris, <https://doi.org/10.1787/b9e5c870-en>, p.43.

¹⁷ Lilyana Daza Jaller, Simon Gaillard, Martín Molinuevo, The regulation of Digital Trade. Key policies and international Trade, World Bank, p.31.

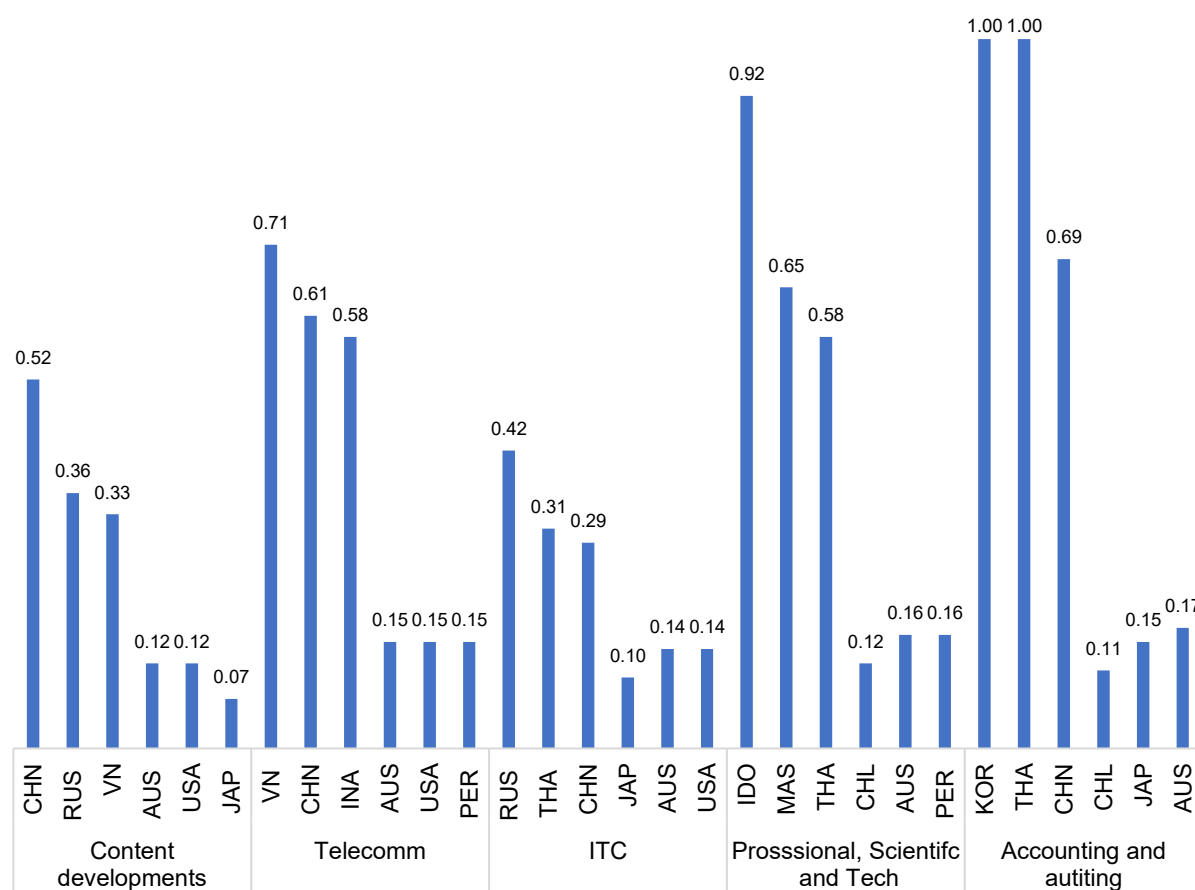
iii. Trade restrictions by KIBS and DS sectors

This section describes recent developments in APEC economies and presents the most restrictive and most open economies according to the 2022 STRI in selected sectors, such as: content development, telecommunications, information and communication technologies, and professional, scientific, and technological services.

In 2022, Japan; Australia; and Chile were among the top ten economies with the highest STRI, which translates into the best regulatory performance. For their part, Thailand; Indonesia; and Russia show the highest average STRI, which means the worst regulatory performance or most restrictive economies.

Figure 2 highlights the most open and restrictive economies across the main KIBS and DS sectors. The following subsections provide detailed information on each sector.

Figure 2. Most open and most restrictive APEC economies by sector



Source: OECD's Digital Services Trade Restrictiveness Index (STRI)

a. Content developments. Motion Pictures and Audiovisual

In the motion pictures sector, the STRI ranks China (0.52); Russia (0.36); and Viet Nam (0.33) as the three most restrictive economies among APEC peers. Conversely, Japan (0.07), Australia (0.12); and the United States (0.12) are the most open APEC economies in this sector.

It is worth to mention that in 2023, Viet Nam's removal of minimum capital requirements for film production¹⁸ allows more players to enter the market, fostering creativity and competition in the audiovisual sector. For its part, Peru adopted the *Decreto de urgencia que promueve la actividad cinematográfica y audiovisual* in December 2019, which introduced screen quotas.^{19 20}

Regarding sound recording, China (0.49); Russia (0.41); and Thailand (0.29) are the three leading restrictive economies, while Japan (0.06); Australia (0.14); and the United States (0.16) are among the most open.

On broadcasting, China (0.65); Mexico (0.62); and Peru (0.60) are at the top of the most restrictive economies. New Zealand (0.18); Australia (0.20); and Japan (0.23) are among the least restrictive.

b. Telecommunications

The STRI places Viet Nam (0.71); China (0.61); and Indonesia (0.58) as the top three most restrictive APEC economies in the telecom sector, while Australia (0.15); the United States (0.15); and Peru (0.15) remain the most open economies.

Malaysia and Mexico have approved reforms to promote competition in the telecommunications sector by easing foreign investment conditions and increasing foreign participation. Similarly, in 2016, Indonesia opened its telecommunications sector to foreign investment. This has led to more innovative services and better quality and pricing for consumers and businesses. Canada, as well, has adopted changes in legislation allowing mobile carriers to access existing carriers' networks and to implement seamless roaming as part of their wholesale roaming service.²¹ By contrast, in Thailand, the telecommunications sector remains subject to specific competition regulations under the Trade Competition Act.

c. Information and communication technologies (ICT)

When examining computer services, the disparity in approaches to data protection becomes apparent. The most restrictive economies, such as Russia (0.42); Thailand (0.31); and China (0.29), sharply contrast with the most open APEC economies, including Japan (0.10); Australia (0.14); and the United States (0.14).

Computer and information services offer a host of services including information storage and processing, network management systems, and over-the-top (OTT) services. These services and devices need huge amounts of data. The relaxation of data protection regulations, such as Korea's 2023 amendments to the Personal Information Protection

¹⁸ Decree 131/2022, which comes into effect on 1 January 2023.

¹⁹ OECD (2024), OECD Services Trade Restrictiveness Index: Policy Trends up to 2024, OECD Publishing, Paris, <https://doi.org/10.1787/b9e5c870-en>, p.37.

²⁰ Screen quotas are usually defined as legislative policies that mandate a minimum number of days each year for the screening of domestic films in theaters, aiming to safeguard the nation's film industry.

²¹ Ibidem p.24.

Act (PIPA), has the potential to enhance cross-border data flows and collaboration, thereby bolstering growth and innovation capabilities within the IT sector.

d. Professional, scientific, and technological services

According to the STRI, Indonesia (0.92); Malaysia (0.65); and Thailand (0.58) are the three most restrictive APEC economies, while Chile (0.12); Australia (0.16); and Peru (0.16) are the most open.

In the engineering services sector, the STRI places Russia (0.34); Thailand (0.33); and Malaysia (0.28) as the three most restrictive APEC economies, while Japan (0.06); Australia (0.13); and Canada (0.16) maintain their positions as the most open. Among APEC economies, this subsector shows the lowest disparity in the STRI rank, with Russia (0.34) at one end and Japan (0.06) at the other.

For accounting and auditing services, Korea and Thailand are the most restrictive economies, with a rank of 1.0 (the highest), followed by China (0.69). By contrast, Chile (0.11); Japan (0.15); and Australia (0.17) are the most open among the APEC economies. This subsector has the most significant disparity among APEC economies, with Korea; Thailand at 1.0 and Chile at 0.11.

Legal, accounting, and auditing services, on average, were the most restrictive sectors.²² The key restrictive measures concerning the entry and movement of professionals manifest in the form of licenses or authorizations required to practice a profession. Additionally, professionals often must undergo local or domestic examinations in the territory where they intend to provide services. Furthermore, many jurisdictions mandate that most members of the board of directors and managers hold professional licenses.

In 2023, the relaxation of restrictions imposed during the COVID-19 pandemic had a significant impact on the movement of architectural and engineering professionals. The easing of these restrictions improved conditions for their mobility in most economies, facilitating the exchange of expertise and promoting international collaboration in these sectors.

Enhanced access to international talent and diverse expertise significantly boosts KIBS's innovation potential. Notably, liberalizing reforms in economies like Australia; Canada;²³ and Singapore, which have streamlined the recognition of foreign qualifications and reduced barriers for foreign professionals, are paving the way for the entry of highly skilled individuals and firms. This, in turn, is increasing the availability and diversity of professional services, offering a promising outlook.

²² OECD (2024), OECD Services Trade Restrictiveness Index: Policy Trends up to 2024, OECD Publishing, Paris, <https://doi.org/10.1787/b9e5c870-en>, p.8.

²³ *I.e.* In 2021, it establishes a process to recognize qualifications of engineers in the constructions sector conferred by foreign universities and improved conditions for the recognition of professional qualifications gained abroad for actuaries.

Chile, the 2022 Law of Migration and Foreigners has brought about significant changes. It has restructured the types of permits for foreigners, extending the general validity of permits for contractual and independent services suppliers from 12 to 24 months.²⁴

For architectural and engineering activities, Malaysia and Singapore have implemented new reforms to facilitate foreign ownership in engineering firms,²⁵ and to allow foreign architects from jurisdictions with mutual recognition agreements,²⁶ respectively. For instance, Canada's removal of local experience requirements for engineers can introduce diverse problem-solving approaches and advanced technical skills.²⁷

Liberalizing reforms in KIBS sectors, including professional, scientific, and technological services, content development, telecommunications, information and communications technologies, and other knowledge-intensive business services, have the potential to significantly enhance the supply and quality of these services, driving innovation and competitiveness. For women, these reforms can provide new opportunities, improve work-life balance, and promote greater representation and diversity, which are crucial for inclusive economic growth and development. However, to fully realize these benefits, it is crucial to address persistent gender biases and provide targeted support to women in these sectors, ensuring their participation and leveraging the full potential of the workforce.

B. Trade trends

Based on the WTO's Digitally Delivered Services Trade Dataset²⁸, trade trends are analyzed across seven subsectors of digitally delivered services. These subsectors include 1. other business services, 2. computer services, 3. financial services, 4. charges for the use of intellectual property, 5. insurance and pension services, 6. telecommunications services, personal, cultural, and recreational services, and 7. information services. Annex II on Trade Statistics provides tables with detailed information for each of the following sections.

i. DS trade trends in APEC and the World

Between 2019 and 2023, there was steady and promising growth in total digitally delivered services trade within the APEC region, rising by 43.25% from USD1.9 trillion to USD2.7 trillion. While this growth rate is slightly below the 45.0% world average, it is a positive indicator of the considerable potential within DS trade.

²⁴ Ibidem., p.25.

²⁵ The amendment to the Registration of Engineers Regulations allows full ownership. It entered into force in 2015.

²⁶ New reforms in Singapore dated from 2017.

²⁷ The old rules stipulated that at least 12 months of the required 48-month professional experience must have been acquired in a Canadian jurisdiction. In November 2023, this requirement was lifted by amendments to the Professional Engineers Act R.R.O. 1990, Regulation 941: General.

²⁸ https://www.wto.org/english/res_e/statis_e/gstdh_digital_services_e.htm

Between 2019 and 2023 APEC's contribution to world trade in DS remained practically stable, with a slight decrease from 35.4% to 34.9%. During this period, APEC's exports saw a modest decline from 36.9% to 35.3%, while global imports experienced a marginal increase from 33.7% to 34.5%.

APEC economies' exports increased from USD1.04 trillion in 2019 to USD1.50 trillion in 2023, reflecting a 44.3% growth. Despite this, APEC's share of global exports decreased from 36.9% to 35.3%. In contrast, global exports rose from USD2.8 trillion to USD4.2 trillion marking, a 50.8% increase over the same period.

On the import side, APEC's DS imports grew by 42%, from USD0.87 trillion in 2019 to USD1.24 trillion in 2023. Meanwhile, world imports grew by 38.9% rising from USD2.58 trillion to USD3.59 trillion. Consequently, APEC's share of global imports grew from 33.7% to 34.5%.

ii. APEC trade by economy

There is a high concentration of DS trade in the APEC region where five economies dominate regional trade: the United States (37.5%); China (12.9%); Singapore (12.7%); Japan (12.1%); and Canada (6.5%). In 2019, they accounted for 82% of exports, 73.5% of imports, and 78.2% of total trade. The shares in 2023 showed a similar share, 82.3% of exports, 74.6% of imports, and 78.8% of total trade. In 2019 and 2023, the United States and China, the top two economies, accounted for 50% of total DS trade.

Meanwhile, ten economies contributed the least to DS trade in the region; they were the Philippines (1.1%); Malaysia (1.9%); Indonesia (1.9%); Russia (1.1%); New Zealand (0.7%); Chile (0.8%); Viet Nam (0.4%); Peru (0.4%); Papua New Guinea (0.1%); and Brunei Darussalam (0.0%). In 2019, they accounted for 5.8% of exports, 10.0% of imports, and 7.7% of total DS trade. In 2023, their shares reduced to 5.2% of exports, 8.6% of imports, and 6.7% of total DS trade.

iii. APEC trade by DS sector

In the period 2019-2023, four sectors accounted for 86.9% of total digital services trade, i.e., other business services (41%), charges for the use of intellectual property (17.1%), financial services (15.9%), and computer services (12.9%).

- The sectors that experienced the fastest growth in DS trade were computer services (79.8%), personal, cultural, and recreation services (72.9%), and other business services (59.2%).
- Four sectors accounted for 90.6% of exports, i.e., other business services (40.5%), financial services (20.6%), charges for the use of intellectual property (16.6%), and computer services (13%).
- DS imports show four sectors that account for 83.2%; i.e., other business services (41.7%), charges for the use of intellectual property (17.6%), computer services (11.0%), and insurance and pension services (11.0%).

iv. APEC trade by main sectors and economies

Other business services

From 2019 to 2023, APEC economies exported to the world other business services worth USD2.65 trillion. The United States contributed with 36%; China with 15.5%; and Singapore with 13.1%.

In the same period, imports totaled USD2.29 trillion. The three main importers were the United States (56.1%); Singapore (16%); and Japan (14.6%).

Charges for the use of IP

From 2019 to 2023, APEC economies exported USD1.08 trillion where the main exporters were the United States (57.2%); Japan (21.8%); and Singapore (5.3%). Imports totaled USD968.5 billion, with the United States (23.8%); China (21.2%); and Japan (14.6%) as the leading import markets.

Financial services

Regarding financial services, between 2019 and 2023 APEC exported USD1.34 trillion. The United States led this sector with a 59.9% share, followed by Singapore (14.4%) and Hong Kong, China (8.9%). Imports registered USD567.4 billion, with the United States accounting for 45.9%; followed by Singapore (9.6%); and Japan (8.4%).

Computer services

From 2019 to 2023, APEC Economies exported USD851.1 billion. China led with a 37.2% share, followed by the United States (24.2%) and Singapore (9.8%). Imports totaled USD706.2 billion, led by the United States (25.9%); China (21.5%); and Japan (13.2%).

III. Regulatory Barriers faced by Women in the KIBS and DS sectors

This analysis examines the challenges women face in participating in foreign markets, particularly in providing digital services in international trade. The data is derived from the survey "*Knowledge Intensive Business Services (KIBS) and Barriers Faced by Women in International Trade in Services*" conducted across the APEC region, with participation from 18 members. The survey, launched in October 2023, encompasses 33 questions divided into three sections:

- A. General Information and Participation of Women in the Company
- B. Challenges Related to Access to Markets or International Trade Opportunities for Women in KIBS
- C. Public Policies

The survey collected 120 responses²⁹ and was conducted remotely via the link <https://kibs-apec.org/survey> (Annex III). The charts presented in this analysis (Annex IV) illustrate the percentage of respondents who have experienced each challenge. This section highlights the key findings related to the "Knowledge Intensive Business Services (KIBS) and Barriers Faced by Women in International Trade in Services" survey.

A. General Information and Participation of Women in the Company

The survey indicates that the respondent pool predominantly comprises SMEs, with many having between 1 to 10 employees (34.8%). This suggests that a significant share of DS businesses are startups or SMEs, highlighting the need for tailored support and resources for them. When examining barriers to women's participation by leadership gender, women-led organizations predominantly identify "Gender biases or stereotypes" and "Lack of access to financial resources" as primary challenges. This variation highlights the influence of leadership dynamics on the perception and experience of market barriers when offering DS.

Moreover, according to the survey respondents, the size of the city is also related to the barriers that women face. For example, the participants consider that in highly populated cities, "Gender biases" and "Lack of digital skills" are prominent, whereas in smaller cities or rural areas, "Cultural or societal factors" and "Lack of support for women-owned enterprises" are more frequently cited. Regional differences also emerged, with Asia-Pacific economies facing significant barriers such as "Lack of digital skills" and "Gender biases or stereotypes," North American economies citing "Lack of access to financial resources" and "Cultural or societal factors," and Latin American economies predominantly reporting "Gender biases or stereotypes" and "Lack of support or resources for women-owned enterprises."

²⁹ Respondents' economies: Australia; Brunei Darussalam; Canada; Chile; People's Republic of China; Hong Kong, China; Indonesia; Republic of Korea; Malaysia; Mexico; New Zealand; Papua New Guinea; Peru; The Philippines; Singapore; Chinese Taipei; Thailand; United States; and Viet Nam. As of October 15, 2024.

B. Challenges Related to Access to Markets or International Trade Opportunities for Women in KIBS

The survey responses provide a comprehensive view of the main challenges women face in DS and of the critical factors that need to be addressed to expand their opportunities for exporting DS. Regional variations in the types of challenges and key factors offer insights into the specific needs and priorities of different economies.

The data reveals varying degrees of challenges across different areas. For instance, identifying and accessing technology-savvy individuals is frequently seen as a major challenge, with 25% of respondents viewing it as a huge challenge and 41% considering it one of their challenges. Understanding customer needs is challenging for many respondents, with 23% seeing it as a huge challenge and 41% considering it one of their challenges.

Internet quality remains a critical concern, with 23% of respondents identifying it as one of their challenges and 20% as a huge challenge. Similarly, access to human capital to improve processing or fulfill orders is a prevalent issue, with 35% of respondents viewing it as one of their challenges and 22% as a huge challenge. Digital marketing is another crucial area, with 38% considering it a huge challenge and 32% viewing it as one of their challenges.

Finding and reaching customers also poses significant difficulties, with 41% of respondents finding it a huge challenge and 40% viewing it as one of their challenges. Managing customer interactions is also significant, with 22% viewing it as a huge challenge and 33% as one of their challenges. Additionally, accessing capital for digital transformation is a major issue, with 41% seeing it as a huge challenge and 33% as one of their challenges.

One of the questions helps to identify the importance of various factors for organizations when considering the expansion of their service supply abroad. The response types range from "Very important" to "Not important," with each segment representing the percentage of respondents who rated a specific factor. The graph shows that factors such as technological skills and digital marketing capabilities are frequently rated as very important. For instance, 47% of respondents rate technological skills as very important, and 34% consider them important. Similarly, digital marketing capabilities are highly valued, with 48% considering them very important and 33% important.

When asked about rating the capabilities or assets in their company needs to expand its supply of services abroad, 37% of respondents indicated that adding human capital or staff employed to complete purchase orders is very important. Internet access is a top priority as well, with 43% of respondents rating it as very important and 20% as important. Access to foreign financing for digital projects is critical, with 31% seeing it as very important and 31% as important.

Understanding these priorities can guide targeted support and resource allocation to address the most critical areas, ensuring that women-owned businesses have the necessary capabilities and assets to expand their service supply abroad effectively.

In Asia-Pacific economies such as Malaysia; Thailand; and the Philippines, significant challenges include accessing capital for digital transformation and finding tech-savvy

individuals to meet customer needs. These economies face substantial financial and technological barriers, emphasizing the need for increased access to capital and technical training programs to support digital transformation. Addressing these barriers can enable women-led businesses to innovate and remain competitive in the global market.

North American economies, specifically Canada and the United States, frequently cited managing customer interactions and understanding customer needs as primary challenges. These findings suggest a need for improving customer relationship management and gaining better market insights. Ensuring cross-border data flows, investing in Customer Relationship Management (CRM) systems, and conducting thorough market research could enhance customer satisfaction and retention.

In Latin American economies like Chile; Mexico; and Peru, cultural or social factors that contribute to the underrepresentation of women and a lack of support for women-owned enterprises are predominant challenges. These economies show significant cultural barriers and resource limitations. Efforts to launch socio-cultural campaigns to promote gender equality and provide more support for women entrepreneurs are essential for fostering a more inclusive business environment where women can thrive.

The regional analysis of challenges and important factors reveals distinct priorities and obstacles faced by organizations across different APEC economies. By tailoring support and resources to address these specific needs, stakeholders can effectively promote digital transformation and international service expansion, fostering a more inclusive and competitive global economy. Understanding and addressing these regional and sector-specific insights can help policymakers and business leaders develop targeted strategies that support women entrepreneurs and drive economic growth in the DS sector.

A major challenge identified is "Unequal access to financial resources or services," affecting 41.1% of respondents. This highlights that financial barriers are a primary concern for women in these markets, suggesting a pressing need for targeted financial support programs to help women entrepreneurs enter international markets. Additionally, 22.3% of respondents reported "Limited access to information," and 14.3% cited "Cultural norms and societal expectations" as significant barriers. These findings underscore the importance of providing better market information and addressing cultural biases to support women's business ventures abroad.

Regulatory challenges also pose significant obstacles. The most common regulatory challenge, reported by 35.3% of respondents, is the "Authorization of the investment." Another prevalent issue, affecting 21.6% of respondents, is "Mandatory to associate with a local company." These barriers indicate the complexities that women-owned businesses must navigate to operate successfully in foreign markets. Policies promoting more flexible regulatory environments could encourage foreign investment and ease business operations.

In establishing businesses in foreign markets, 38.8% of respondents identified "Hire local employees" as a primary barrier. This was followed by "To have a subsidiary" (35%) and "Established in the territory" (11.7%). These challenges indicate a need for regulatory reform to simplify incorporation processes and reduce mandatory local partnerships, easing the regulatory burden on women entrepreneurs. It also emphasizes the need for targeted interventions to improve access to market information, provide financial support

mechanisms, and simplify legal requirements, thereby facilitating the establishment and growth of women-owned businesses.

Adopting digital tools also presents challenges, with "Electronic documents not legally valid" impacting 32% of respondents and "Electronic signatures not regulated" affecting 29.9%. This reflects the urgent need for updated electronic transactions legislation to support the adoption of digitization, enhancing business efficiency and innovation.

Cybersecurity and personal data protection are critical issues as well, with 50.5% of respondents citing "There are no regulations on data protection, the existing regulations are not clear or do not provide us with enough legal protection". Additionally, "We are subject to rigorous cybersecurity policies to be able to supply our services" (22.1%) and "We are required to carry out specific procedures, such as processing or storing data on computing facilities in foreign markets as a condition for conducting business" (16.8%) pose further barriers. These findings highlight the need for cybersecurity regulatory reforms to foster trust in business operations as well as robust legal frameworks to secure, protect, and manage personal data. This involves regulating the collection, use, storage, and transfer of personal data in accordance with international principles or guidelines. If economies want to ensure more women participate in trade in KIBS and DS restrictions on data localization requirements should be assessed, since they hinder companies' ability to participate in global value chains and increase costs, particularly for SMEs that cannot afford multiple data storage locations.

Financial aspects present additional hurdles, particularly "Double tax payment," which affects 34% of respondents, and "Higher taxes or fees for foreigners" (24.7%). Addressing these financial barriers requires policy interventions to improve financial access for women-owned businesses, simplify banking procedures, and reduce legal restrictions.

Consumer protection regulations also pose challenges, with 62.8% of respondents identifying "The regulation on consumer protection is not clear" as a major issue. "Regulations on consumer protection establish a high standard of responsibility to service suppliers in the economies that we export or intend to export" was cited by 37.2% of respondents. These challenges indicate the need for greater cooperation among economies to adopt common frameworks for consumer protection in line with international standards and recommendations.

Online payment regulations are another area of concern. "Regulations unclear" was the primary challenge, affecting 41.4% of respondents, followed by "There are restrictions for payments or transfers applied to service suppliers not established in the territory" at 23.2%. This calls for standardization and promoting interoperability of regulatory frameworks to support businesses in managing cross-border transactions more effectively.

Issues related to licenses, qualifications, and other requirements also emerged as significant barriers. "As foreign service suppliers, we are subject to conditions that are substantially different" were cited by 54.3% of respondents, followed by "License or special authorization" (27.7%) and "Laws and regulations are not clear" (17%). Addressing these issues through streamlined licensing processes and the development and implementation of Mutual Recognition Agreements (MRAs) for the recognition of qualifications and licensing processes can reduce barriers for women and facilitate smoother business operations.

Regulations on the transfer of profits, capital contributions, dividends, interests, and payments present further complexities. "Transfer funds" was the primary challenge, affecting 57.6% of respondents, followed by "Quantitative/qualitative restrictions" (15.3%). Simplifying these regulations can enhance the efficiency of cross-border financial transactions and support international business activities.

Operating restrictions in export markets, such as "Licenses, permits or authorizations" (26.7%) and "Quantitative restrictions on employees" (21.1%), highlight the kind of trade restrictions and regulatory barriers businesses face when seeking market access. These constraints can significantly hinder a company's ability to operate efficiently and competitively, impacting their strategic decisions and overall success in international trade.

Access to information and transparency of laws and regulations also present challenges. "Access to information" affects 39.1% of respondents, followed by "Transparency of laws" (34.8%). Improving access to transparent and comprehensive regulatory information is crucial for supporting international business operations and reducing compliance costs. The inclusion of domestic regulation provisions in trade agreements and the subscription by Participants of the WTO Joint Initiative on Services Domestic Regulation would help enhance greater transparency for laws and regulations to facilitate business operations.

High import duties and non-tariff restrictions are significant barriers to importing goods or services, each affecting 38.8% of respondents. Policy reforms aimed at reducing these barriers can diminish costs and facilitate smoother import processes for businesses, enhancing their ability to supply services internationally.

Finally, professional challenges such as the non-recognition of technical knowledge and previous professional experience affect 53.5% of respondents. Adopting MRAs can reduce barriers for professionals and support the mobility and integration of skilled workers across different economies.

C. Public Policies

The Public Policies section of the survey provides a comprehensive view of the perceptions of public policies and initiatives related to international trade and women's entrepreneurship in DS. Notably, a significant portion of respondents (43%), believe that public policies in their economy facilitate the import and export of goods and services. This favorable perception indicates that many economies are providing the necessary infrastructure and regulatory support to engage in international commerce effectively.

In the same fashion, 48% of respondents agree that policies or initiatives in their economy support women-owned businesses. This positive view reflects the perceived efforts made to encourage and sustain women-owned firms, suggesting that these supportive measures are recognized and valued across different aspects of trade and entrepreneurship.

Further, more than half of the respondents (51.3%) consider that there are initiatives specifically aimed at fostering the development of women entrepreneurs. This indicates

that many economies have dedicated programs to help women overcome unique challenges and barriers, contributing to their entrepreneurial growth and success.

While 51.3% of respondents acknowledge the existence of legal frameworks promoting gender equality in business, 48.7% perceive these frameworks as insufficient or are unaware of them. This underscores the need for further improvements in establishing and promoting gender equality laws and regulations to ensure they are more widely recognized and effectively implemented.

Moreover, 43.2% acknowledge the existence of trade agreements that include specific provisions for gender equality. This demonstrates that gender considerations are being integrated into trade policies, though there is room for enhancement to ensure these provisions are robust and impactful.

D. Findings

The survey highlights a range of challenges related to access to markets and international trade opportunities for women. Financial barriers, regulatory complexities, cultural biases, and technological issues such as internet access and a skilled workforce are significant obstacles that need to be addressed. By implementing targeted interventions and supportive policies, stakeholders can create a more conducive environment for women entrepreneurs, promoting greater participation and success in the global economy. These efforts are essential for achieving more equitable and sustainable economic growth, benefiting individual businesses and the broader international trade landscape.

Overall, the survey responses indicate a generally positive perception of public policies and initiatives supporting women in trade and entrepreneurship. There is clear recognition of the supportive measures in place, particularly those facilitating trade and promoting women-owned businesses. However, mixed perceptions regarding legal frameworks for gender equality and specific provisions in trade agreements highlight areas for improvement. Strengthening these aspects through clearer communication and more robust implementation can enhance the effectiveness of public policies in promoting gender equality and supporting women entrepreneurs in international trade.

IV. Conclusions and recommendations

This report intended to provide a comprehensive overview of the challenges and opportunities faced by women and women-owned businesses in participating in international trade, particularly in the KIBS and DS sectors within the APEC region.

Our analysis finds that:

1. **Inclusive Trade** is key to offering economic benefits to economies and businesses. The gender aspect of inclusivity has become central to the trade agendas in recent years as evident in the gender and inclusive provisions incorporated in the different RTA among APEC economies. The non-discrimination obligation contained in the WTO Joint Initiative on Services Domestic Regulation outcome is a good example of the kind of provisions that may be included in future RTAs. Despite these serious efforts, gender biases and structural barriers still hinder women's full participation and progression in KIBS sectors and trade in DS and KIBS. Ongoing efforts to address these issues through policies promoting gender equality and diversity are a reality and commonly accepted.
2. **Barriers to Women in Trade:** Women entrepreneurs and women-owned SMEs face significant barriers when accessing and participating in trade in KIBS and DS. These barriers include regulatory measures related to data localization requirements, limitations on cross-border data transfers, and lack of trust and confidence in digital markets. In 2022, Australia; Chile; and Japan were among the top ten economies with the best regulatory performance. Trade restrictions such as market access limitations, establishment requirements, and foreign investment limits, are especially prevalent in economies such as China; Indonesia; Russia; Thailand; and Viet Nam.
3. The COVID-19 pandemic highlighted opportunities for women-led SMEs in **digital trade** to the extent that technology-enabled businesses allowed those SMEs to continue operating despite confinement measures. Open digital trade policies, such as those implemented in Hong Kong, China and New Zealand can significantly benefit women and businesswomen by granting broader access to services and products, fostering productivity, efficiency, and innovation.
4. **Trade in DS and KIBS sectors within the APEC region** has shown steady growth; notably economies such as Canada; China; Japan; and the United States enjoy a dominating position. These economies account for a significant share of total trade in DS and KIBS, however, there is a high concentration of trade activities in a few subsectors where women participate.
5. **Specific sectors** such as other business services, charges for the use of intellectual property, financial services, and computer services are prominent in APEC trade. These subsectors also show significant growth trends.

Recommendations

1. This study has added evidence that cultural biases against women's participation in the economy are deeply ingrained and appear to be the most significant obstacles businesswomen face when trying to participate in trade in DS and KIBS.

Therefore, to be effective, inclusive trade policies must fully consider these cultural and societal biases. For instance, incorporating non-discrimination provisions, gender commitments, and cooperation activities in trade agreements can address gender inequalities and promote greater participation of women in the economy. Such provisions are already found in the disciplines agreed under the WTO Joint Initiative on Services Domestic Regulation, where sixteen APEC economies are participants.

2. APEC economies should consider crafting provisions in upcoming **FTAs** and modernization processes, including in an eventual Asia-Pacific Free Trade Agreement, to promote non-discrimination regarding women's participation in the services trade. To promote women's participation and greater equality in the supply of KIBS and overall trade in services, negotiating multilateral and regional trade agreements that leverage the potential of digitization of services and access to digital technologies is essential.
3. **Improving telecommunications infrastructure and services** is key to enabling better access to connectivity and remote work opportunities, benefiting women who may prefer or need to work from home. The **expansion of IT services** facilitated by liberalizing data transfer regulations can promote remote and flexible work arrangements. This flexibility is crucial for women, who often juggle professional and personal responsibilities, i.e., work-life balance.
4. Removing trade and regulatory barriers can particularly benefit women, who often face additional challenges in gaining local experience due to gender biases or family responsibilities. This would facilitate their entry and progression in engineering and other professional fields. **Easing restrictions on ownership**, as seen in several economies' reforms, creates more opportunities for women entrepreneurs to start and lead businesses in male-dominated sectors.
5. **Liberalizing reforms in the audiovisual sector** can lead to more diverse content creation, offering women greater visibility and representation both on and off-screen. This can inspire and encourage more women to pursue careers in these fields. Supplementary measures such as capacity-building workshops, networking opportunities, and training initiatives focused on empowering women can enhance the impact of liberalizing reforms. These programs help women navigate and capitalize on new opportunities created by regulatory changes.
6. **Educating and training girls and women in technical abilities** is key to having more women participate in trade in DS and KIBS that rely on science, knowledge, and technical skills. **Compulsory STEM programs** from basic to higher education should be part of the school curriculum in all economies. This will enable women's participation in traditionally male-dominated sectors, such as ICT.
7. Among women entrepreneurs, **mentorship programs** could reduce the barriers women experience when trying to access markets at home and abroad. To address these issues, APEC economies have developed policies and activities, as established in the La Serena Roadmap for Women and Inclusive Growth and its Implementation Plan, as well as the San Francisco Declaration on Women. There needs to be an ambitious outreach campaign to properly inform women about these kinds of programs and achievements. Sharing best practices among economies could support a more significant participation of women in these activities.
8. Strong participation by the **APEC Business Advisory Council (ABAC)** in APEC activities is crucial to fostering businesswomen's participation in DS and KIBS. Public and private sectors should also collaborate to expand networks and

platforms tailored to expand the participation of women entrepreneurs in international trade.

9. Regular **monitoring and evaluation** of the impact of these policies on women's participation in the digital economy and their performance in the KIBS are crucial. This will ensure that more women can take advantage of inclusive trade policies for DS and KIBS while also addressing any unintended consequences.

An important finding of this study was that despite efforts to circulate the survey only 86 responses were obtained out of the 210 expected (a 40.9% participation rate). This reflects a need for increased outreach to women-owned businesses across APEC economies, particularly in the KIBS and SD sectors.

Annex I. Methodology

Trade trends and restrictions

The purpose of this analysis is to identify barriers women and women-owned businesses face in their participation in the trade of KIBS and DS in the APEC region.

With this in mind, we identify regulations that apply to trade in both sectors and that affect or may hinder women and women-owned SMEs' participation.

For this analysis, we referred to KIBS as “digitally deliverable services”, defined by the WTO as “financial services, charges for intellectual property, licenses, telecommunications and computer services, and professional and technical services”. In the same line, the OECD considers KIBS as telecommunications, IT and information services, financial and insurance activities, professional, scientific, and technical services, and content development.

Some academics³⁰ define KIBS as an organization or private company frequently using professional knowledge related to a specific discipline or a domain, generating intermediary knowledge businesses (products or services)³¹. Others classify and distinguish two types of KIBS: P-KIBS (professional services, such as marketing, design, and advertising, among others) and t-KIBS (technology-based use such as software development, computer networks, research, and development). In general, innovation and knowledge creation are the main features of KIBS.³²

Last, Eurostat defines the following activity sectors as knowledge-intensive based services:

- High-tech knowledge-intensive service
- Knowledge-intensive market services (excluding financial intermediation and high-tech services)
- Knowledge-intensive financial services
- Other knowledge-intensive services

In sum, considering the previous definitions, the available literature, the KIBS and DS sectors scope that we examine looking for trade restrictions is the following:

1. Content development
 - Motion picture, film, video, and television program production, sound recording and music publishing activities, and video game and animation development
2. Telecommunications

³⁰ Antony Taubman and Jayashtree Watal. Trade in Knowledge. Intellectual Property and Development in a Transformed Economy. WTO.
https://www.wto.org/english/tratop_e/trips_e/tradeinknowledge22_e.htm

³¹ Hertog, Den, “Knowledge-Intensive Business Services as Co-Producers of Innovation. International Journal of Innovation Management, 2000.

³² Boden, M.; Miles, I., “Services and the Knowledge-based Economy”, 2000, London: Continuum.

3. Information and communications technologies (ICT)
 - Computer programming, consultancy, and related activities
 - Information services activities
 - Software and App development
 - Data processing and hosting activities
 - Web portals
4. Professional, scientific, and technological services
 - Legal and accounting activities
 - Activities of head offices, management consultancy activities
 - Architectural and engineering activities; technical testing and analysis
 - Scientific research and development
5. Other knowledge business-intensive services
 - Publishing activities
 - Educational services
 - Travel tech
 - Advertising and market research

We used the DTRI database to analyze, for each APEC economy, the level of restrictiveness in three main areas:

1. Establishment Restrictions. Covers policy measures in four main areas
 - Foreign Investment Restrictions
 - Intellectual Property Rights
 - Competition Policy
 - Business Mobility
2. Restrictions on Data. Covers policy measures in three main areas
 - Data Policies
 - Intermediate Liability
 - Content Access
3. Trading Restrictions. Covers policy measures in three main areas
 - Quantitative Trade Restrictions
 - Standards
 - Online Sales and Transactions

The regulation of Digital Trade, key policies, and international trends, published by the DTRR identifies key domestic measures and regulatory policies that can foster or hinder digital trade.

In this report we analyzed, for each APEC economy, the regulatory framework in nine policy areas to identify whether regulation exists or not, and to evaluate whether the APEC economies maintain regulations for enabling and fostering digital services. This analysis was supplemented with the results of the survey through the set of questions dealing with regulatory barriers to digital deliverable services and KIBS.

The nine policy areas of analysis are the following:

- i. Electronic documentation

- ii. E-signature
- iii. Consumer protection
- iv. Cybersecurity
- v. Privacy and data protection
- vi. Data localization
- vii. Intermediary liability
- viii. Paperless trading
- ix. Data transfers

The information for each APEC economy was obtained from the STRI, DTRI, and was complemented with the survey to identify the adequate or inadequate regulations for digital services or KIBS companies.

Regarding trade trends, we used the WTO's Digitally Delivered Services Trade Dataset, which offers export and import data for seven digitally delivered services subsectors. These subsectors are other business services, computer services, financial services, charges for the use of intellectual property, insurance and pension services, telecommunications services, personal, cultural, and recreational services, and information services.

Trade trends

Based on the WTO's Digitally Delivered Services Trade Dataset, trade trends are analyzed across seven subsectors of digitally delivered services. These subsectors include 1. other business services, 2. computer services, 3. financial services, 4. charges for the use of intellectual property, 5. insurance and pension services, 6. telecommunications services, personal, cultural, and recreational services, and 7. information services.

Survey questionnaire

We drafted a questionnaire to identify if and when there are binding or non-binding restrictions or regulatory barriers that are gender-based and whether they may affect the potential participation of women in trade in KIBS and DS.

We conducted online surveys among the 21 APEC economies and obtained 120 answers to the survey. The list of the stakeholders was provided by the Project Overseers, including female entrepreneurs, representatives of non-governmental organizations, and academia.

The survey contains 33 questions divided into three sections: a) general information and participation of women in the company; b) challenges related to access to markets or international trade opportunities for women in KIBS; and c) public policies across 21 APEC economies.

The survey was designed to gather qualitative data regarding international trade and regulatory restrictions that may affect women's participation. It supplements the analysis contained in sections II: Digital trade level of restrictiveness and III: regulatory restrictions. The responses provided a better and deeper understanding of the conditions women face when engaging in international trade in KIBS and DS.

The survey received 86 responses from women entrepreneurs and women-owned businesses across APEC economies. It collected specific information from both the private and public sectors, including demographic and enterprise profile data for each APEC economy.

Annex II. DTRI Score and Ranking by APEC Economies

DTRI		
Economy	Rank	Index
AUS	27	0.23
BD	20	0.26
CDA	29	0.23
CHL	56	0.15
PRC	1	0.70
HKC	61	0.13
INA	4	0.43
JPN	50	0.18
ROK	15	0.31
MAS	11	0.34
MEX	18	0.27
NZ	65	0.09
PNG	NA	NA
PE	58	0.15
PHL	32	0.22
RUS	2	0.46
SGP	57	0.15
CT	23	0.25
THA	10	0.35
USA	22	0.26
VN	5	0.41

B. Establishment restrictions		
Economy	Rank	Index
AUS	27	0.28
BD	22	0.32
CDA	26	0.29
CHL	52	0.17
PRC	1	0.77
HKC	65	0.07
INA	13	0.36
JPN	14	0.35
ROK	34	0.25
MAS	5	0.45
MEX	25	0.30
NZ	64	0.07
PNG	NA	NA
PE	36	0.24
PHL	16	0.34
RUS	9	0.40
SGP	37	0.24
CT	4	0.46
THA	2	0.54
USA	12	0.38
VN	3	0.50

C. Restrictions on Data		
Economy	Rank	Index
AUS	25	0.25
BD	9	0.38
CDA	27	0.25
CHL	63	0.04
PRC	1	0.82
HKC	50	0.16
INA	5	0.44
JPN	62	0.04
ROK	8	0.39
MAS	11	0.35
MEX	23	0.26
NZ	35	0.22
PNG	NA	NA
PE	34	0.22
PHL	61	0.11
RUS	2	0.63
SGP	28	0.25
CT	59	0.12
THA	20	0.29
USA	53	0.15
VN	6	0.43

D. Trading Restrictions		
Economy	Rank	Index
AUS	36	0.15
BD	54	0.08
CDA	20	0.26
CHL	44	0.12
PRC	1	0.63
HKC	18	0.27
INA	5	0.48
JPN	48	0.11
ROK	16	0.28
MAS	10	0.35
MEX	19	0.27
NZ	65	0.00
PNG	NA	NA
PE	62	0.05
PHL	33	0.17
RUS	6	0.43
SGP	47	0.11
CT	14	0.30
THA	17	0.28
USA	43	0.12
VN	3	0.51

Source: Digital Trade Restrictiveness Index, European Centre for International Political Economy.

Annex III. Trade Statistics

A. APEC and World DS Total Trade, 2019 - 2023

Trillion US Dollar

		2019	%	2023	%	Growth 2023/2019
TOTAL EXPORTS	APEC	1.04	36.9%	1.50	35.3%	44.3%
	WORLD	2.8	100.0%	4.25	100.0%	50.8%
TOTAL IMPORTS	APEC	0.87	33.7%	1.24	34.5%	42.0%
	WORLD	2.58	100.0%	3.59	100.0%	38.9%
TOTAL TRADE	APEC	1.916	35.4%	2.73	34.9%	43.2%
	WORLD	5.40	100.0%	7.84	100.0%	45.1%

Source: WTO's Digitally Delivered Services Trade Dataset

B. APEC DS Total Trade, by economy, 2019 – 2023.

Billion US Dollar and % Share

	2019						2023						Growth 2023/2019		
	Exports	%	Imports	%	Total Trade	%	Exports	%	Imports	%	Total Trade	%	Exports	Imports	Total Trade
AUS	14.6	1.4%	17.7	2.0%	32.3	1.7%	19.2	1.3%	25.8	2.1%	45.0	1.6%	31.3%	45.9%	39.3%
BD	0.0	0.0%	0.4	0.0%	0.4	0.0%	0.0	0.0%	0.4	0.0%	0.4	0.0%	178.1%	-1.9%	1.3%
CDA	56.3	5.4%	55.5	6.4%	111.8	5.8%	80.1	5.3%	80.7	6.5%	160.8	5.9%	42.3%	45.4%	43.8%
CHL	2.0	0.2%	7.3	0.8%	9.2	0.5%	3.1	0.2%	10.0	0.8%	13.1	0.5%	58.8%	37.0%	41.7%
PRC	114.0	11.0%	108.6	12.4%	222.6	11.6%	207.0	13.8%	159.6	12.9%	366.6	13.4%	81.6%	47.0%	64.7%
HKC	38.4	3.7%	20.5	2.4%	59.0	3.1%	45.9	3.1%	24.9	2.0%	70.8	2.6%	19.5%	21.2%	20.1%
INA	5.2	0.5%	13.4	1.5%	18.5	1.0%	9.8	0.7%	24.4	2.0%	34.3	1.3%	90.6%	83.0%	85.1%
JPN	104.5	10.1%	121.4	13.9%	225.9	11.8%	116.2	7.7%	150.4	12.1%	266.6	9.7%	11.2%	23.9%	18.0%
ROK	36.0	3.5%	44.4	5.1%	80.5	4.2%	62.3	4.2%	67.3	5.4%	129.7	4.7%	72.9%	51.6%	61.2%
MAS	9.2	0.9%	15.0	1.7%	24.2	1.3%	13.4	0.9%	23.2	1.9%	36.6	1.3%	46.0%	55.1%	51.6%
MEX	8.8	0.8%	22.3	2.6%	31.1	1.6%	15.1	1.0%	31.8	2.6%	46.9	1.7%	71.5%	42.7%	50.8%
NZ	3.4	0.3%	6.1	0.7%	9.5	0.5%	4.3	0.3%	9.2	0.7%	13.5	0.5%	25.3%	52.4%	42.7%
PNG	0.2	0.0%	1.0	0.1%	1.2	0.1%	0.1	0.0%	1.0	0.1%	1.1	0.0%	-64.6%	-2.7%	-10.7%
PE	0.9	0.1%	3.8	0.4%	4.7	0.2%	1.1	0.1%	5.5	0.4%	6.6	0.2%	25.9%	44.8%	41.3%
PHL	18.6	1.8%	8.9	1.0%	27.5	1.4%	29.4	2.0%	14.2	1.1%	43.6	1.6%	57.8%	60.4%	58.6%
RUS	19.8	1.9%	29.4	3.4%	49.2	2.6%	11.3	0.8%	13.9	1.1%	25.2	0.9%	-43.0%	-52.7%	-48.8%
SGP	107.4	10.3%	91.5	10.5%	198.9	10.4%	181.9	12.1%	157.2	12.7%	339.1	12.4%	69.3%	71.9%	70.5%
CT	17.7	1.7%	16.9	1.9%	34.6	1.8%	27.4	1.8%	27.8	2.2%	55.3	2.0%	54.8%	64.4%	59.5%
THA	9.7	0.9%	22.4	2.6%	32.0	1.7%	17.6	1.2%	30.7	2.5%	48.3	1.8%	82.3%	37.2%	50.8%
USA	471.2	45.3%	264.7	30.3%	735.9	38.5%	649.3	43.3%	377.4	30.4%	1,026.6	37.5%	37.8%	42.6%	39.5%
VN	1.3	0.1%	2.4	0.3%	3.7	0.2%	4.8	0.3%	4.8	0.4%	9.6	0.3%	277.3%	100.7%	162.6%
Total	1,039.1	100.0%	873.5	100.0%	1,912.6	100.0%	1,499.5	100.0%	1,240.3	100.0%	2,739.8	100.0%	44.3%	42.0%	43.2%

Source: WTO's Digitally Delivered Services Trade Dataset

C. APEC DS Total Trade, by sector, 2019 – 2023.

Billion US Dollar and % Share

Subsector	2019						2023					
	Exports	%	Imports	%	Total Trade	%	Exports	%	Imports	%	Total trade	%
Charges for the use of intellectual property n.i.e.	206.3	19.9%	176.5	20.2%	382.8	20.0%	229.2	15.3%	198.7	16.0%	427.9	15.6%
Computer services	109.8	10.6%	94.7	10.8%	204.4	10.7%	205.1	13.7%	162.5	13.1%	367.6	13.4%
Financial services	239.8	23.1%	96.3	11.0%	336.1	17.6%	293.5	19.6%	132.9	10.7%	426.4	15.6%
Information services	17.5	1.7%	8.7	1.0%	26.1	1.4%	21.8	1.5%	11.4	0.9%	33.2	1.2%
Insurance and pension services	41.0	3.9%	101.5	11.6%	142.5	7.5%	54.6	3.6%	134.9	10.9%	189.4	6.9%
Other business services	377.8	36.4%	350.0	40.1%	727.8	38.1%	627.3	41.8%	531.2	42.8%	1,158.5	42.3%
Personal, cultural, and recreational services	23.4	2.3%	25.2	2.9%	48.6	2.5%	39.4	2.6%	44.7	3.6%	84.0	3.1%
Telecommunications services	23.6	2.3%	20.7	2.4%	44.3	2.3%	28.6	1.9%	24.0	1.9%	52.7	1.9%
Total	1,039.1	100.0%	873.5	100.0%	1,912.6	100.0%	1,499.5	100.0%	1,240.3	100.0%	2,739.8	100.0%

Subsector	Period 2019 – 2023						Growth 2023/2019		
	Exports	%	Imports	%	Total trade	%	Exports	Imports	Total Trade
Charges for the use of intellectual property n.i.e.	1,084.2	16.6%	968.5	17.6%	2,052.6	17.1%	11.1%	12.6%	11.8%
Computer services	851.1	13.0%	706.2	12.9%	1,557.2	12.9%	86.9%	71.7%	79.8%
Financial services	1,348.0	20.6%	567.4	10.3%	1,915.3	15.9%	22.4%	38.1%	26.9%
Information services	88.9	1.4%	52.4	1.0%	141.3	1.2%	24.8%	31.4%	27.0%
Insurance and pension services	233.5	3.6%	602.3	11.0%	835.8	6.9%	33.2%	32.8%	32.9%
Other business services	2,649.4	40.5%	2,290.4	41.7%	4,939.7	41.0%	66.1%	51.8%	59.2%
Personal, cultural, and recreational services	167.0	2.5%	184.8	3.4%	351.8	2.9%	67.9%	77.5%	72.9%
Telecommunications services	127.6	1.9%	115.9	2.1%	243.4	2.0%	21.6%	16.1%	19.0%
Total	6,549.5	100.0%	5,487.8	100.0%	12,037.3	100.0%	44.3%	42.0%	43.2%

Source: WTO's Digitally Delivered Services Trade Dataset

D. APEC DS Exports, by sector and economy, 2019 – 2023.
Billion US Dollar and % Share

	Charges IP		Computer services		Financial services		Information services		Insurance & pension services		Other business services		Personal, cultural & recreational		Telecom services		Total	
		%		%		%		%		%		%		%		%		%
AUS	5.7	0.5%	16.1	1.9%	15.3	1.1%	2.0	2.2%	3.1	1.3%	38.7	1.5%	4.0	2.4%	2.6	2.0%	87.4	1.3%
BD	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.1	0.0%
CDA	38.8	3.6%	56.2	6.6%	53.8	4.0%	8.9	10.0%	7.6	3.3%	170.4	6.4%	17.5	10.5%	6.4	5.0%	359.6	5.5%
CHL	0.3	0.0%	2.0	0.2%	1.3	0.1%	0.0	0.0%	1.8	0.8%	6.5	0.2%	0.2	0.1%	0.1	0.1%	12.3	0.2%
PRC	52.2	4.8%	316.4	37.2%	22.9	1.7%	0.0	0.0%	27.3	11.7%	409.4	15.5%	6.9	4.1%	16.0	12.6%	851.1	13.0%
HKC	3.6	0.3%	4.6	0.5%	119.3	8.9%	0.5	0.6%	6.7	2.9%	64.0	2.4%	0.8	0.5%	12.2	9.6%	211.8	3.2%
INA	0.7	0.1%	3.6	0.4%	4.4	0.3%	0.0	0.0%	1.3	0.6%	17.2	0.6%	0.7	0.4%	5.7	4.4%	33.6	0.5%
JPN	236.3	21.8%	39.7	4.7%	68.9	5.1%	1.3	1.5%	11.0	4.7%	188.1	7.1%	7.0	4.2%	5.3	4.2%	557.6	8.5%
ROK	39.7	3.7%	34.2	4.0%	21.0	1.6%	16.7	18.8%	3.0	1.3%	126.9	4.8%	5.9	3.6%	2.3	1.8%	249.7	3.8%
MAS	1.0	0.1%	10.8	1.3%	3.0	0.2%	1.4	1.5%	2.4	1.0%	30.6	1.2%	3.0	1.8%	4.4	3.4%	56.6	0.9%
MEX	7.8	0.7%	1.2	0.1%	3.2	0.2%	0.0	0.0%	17.9	7.7%	23.0	0.9%	0.3	0.2%	3.8	3.0%	57.2	0.9%
NZ	5.0	0.5%	4.4	0.5%	1.6	0.1%	0.2	0.2%	0.1	0.1%	7.0	0.3%	1.6	1.0%	0.3	0.3%	20.2	0.3%
PNG	0.0	0.0%	0.0	0.0%	0.1	0.0%	0.0	0.0%	0.0	0.0%	0.3	0.0%	0.0	0.0%	0.0	0.0%	0.4	0.0%
PE	0.2	0.0%	0.3	0.0%	0.6	0.0%	0.0	0.0%	0.5	0.2%	3.0	0.1%	0.0	0.0%	0.3	0.2%	4.9	0.1%
PHL	0.1	0.0%	27.3	3.2%	1.1	0.1%	0.1	0.1%	0.4	0.2%	91.6	3.5%	0.6	0.4%	2.0	1.6%	123.3	1.9%
RUS	4.9	0.5%	23.5	2.8%	5.7	0.4%	0.6	0.6%	2.1	0.9%	48.9	1.8%	1.4	0.9%	3.5	2.8%	90.7	1.4%
SGP	57.6	5.3%	83.7	9.8%	193.7	14.4%	4.1	4.6%	37.4	16.0%	346.8	13.1%	9.6	5.8%	13.6	10.6%	746.4	11.4%
CT	8.9	0.8%	15.6	1.8%	19.3	1.4%	5.6	6.3%	1.9	0.8%	59.1	2.2%	1.4	0.8%	5.6	4.4%	117.4	1.8%
THA	1.3	0.1%	0.7	0.1%	3.8	0.3%	0.0	0.0%	1.0	0.4%	57.3	2.2%	0.8	0.5%	1.6	1.2%	66.5	1.0%
USA	619.9	57.2%	206.1	24.2%	807.9	59.9%	45.3	51.0%	107.5	46.0%	954.8	36.0%	105.2	63.0%	40.6	31.9%	2,887.4	44.1%
VN	0.1	0.0%	4.6	0.5%	1.1	0.1%	2.2	2.4%	0.4	0.2%	5.8	0.2%	0.0	0.0%	1.1	0.9%	15.3	0.2%
Total	1,084.2	100%	851.1	100%	1,348.0	100%	88.9	100%	233.5	100%	2,649.4	100.0%	167.0	100.0%	127.6	100.0%	6,549.5	100.0%

Source: WTO's Digitally Delivered Services Trade Dataset

E. APEC DS Imports, by sector and economy, 2019 – 2023.

Billion US Dollar and % Share

	Charges IP	%	Computer services	%	Financial services	%	Information services	%	Insurance & pension services	%	Other business services	%	Personal, cultural & recreational	%	Telecom services	%	Total	%
AUS	19.0	2.0%	11.6	1.6%	8.9	1.6%	1.7	3.3%	4.6	0.8%	52.7	2.3%	6.4	3.4%	6.4	5.5%	111.3	2.0%
BD	0.1	0.0%	0.3	0.0%	0.0	0.0%	0.0	0.0%	0.2	0.0%	1.5	0.1%	0.0	0.0%	0.1	0.1%	2.2	0.0%
CDA	77.7	8.0%	34.3	4.9%	46.6	8.2%	5.8	11.1%	23.2	3.8%	156.9	6.8%	14.9	8.1%	6.7	5.8%	366.1	6.7%
CHL	7.7	0.8%	10.5	1.5%	10.3	1.8%	0.0	0.0%	3.0	0.5%	10.7	0.5%	0.2	0.1%	0.4	0.3%	42.7	0.8%
PRC	205.8	21.2%	151.7	21.5%	18.5	3.3%	0.0	0.0%	77.3	12.8%	236.3	10.3%	14.5	7.8%	11.7	10.1%	715.7	13.0%
HKC	9.9	1.0%	3.7	0.5%	36.7	6.5%	0.9	1.7%	8.3	1.4%	47.3	2.1%	0.8	0.4%	7.3	6.3%	114.8	2.1%
INA	9.7	1.0%	15.2	2.1%	8.4	1.5%	0.0	0.0%	7.6	1.3%	44.1	1.9%	0.2	0.1%	6.0	5.2%	91.2	1.7%
JPN	141.2	14.6%	93.4	13.2%	47.5	8.4%	6.5	12.3%	62.3	10.3%	335.3	14.6%	5.8	3.2%	7.5	6.5%	699.6	12.7%
ROK	54.9	5.7%	33.0	4.7%	15.4	2.7%	3.4	6.6%	4.0	0.7%	167.0	7.3%	3.2	1.7%	3.1	2.7%	284.0	5.2%
MAS	12.8	1.3%	10.7	1.5%	3.2	0.6%	2.2	4.2%	12.3	2.0%	42.5	1.9%	3.3	1.8%	6.9	6.0%	93.9	1.7%
MEX	23.2	2.4%	20.8	2.9%	17.5	3.1%	0.0	0.0%	33.6	5.6%	27.8	1.2%	4.3	2.3%	1.6	1.4%	128.8	2.3%
NZ	4.7	0.5%	7.6	1.1%	1.8	0.3%	0.3	0.5%	8.2	1.4%	13.8	0.6%	2.1	1.2%	0.4	0.4%	39.0	0.7%
PNG	0.0	0.0%	0.1	0.0%	0.1	0.0%	0.0	0.0%	0.1	0.0%	5.3	0.2%	0.0	0.0%	0.2	0.1%	5.8	0.1%
PE	2.4	0.2%	3.2	0.4%	2.4	0.4%	0.0	0.0%	3.8	0.6%	8.7	0.4%	0.1	0.1%	1.7	1.5%	22.3	0.4%
PHL	3.0	0.3%	3.9	0.6%	4.2	0.7%	0.3	0.6%	8.9	1.5%	29.4	1.3%	0.7	0.4%	4.4	3.8%	54.9	1.0%
RUS	28.6	3.0%	17.9	2.5%	10.4	1.8%	1.8	3.5%	4.0	0.7%	51.4	2.2%	4.3	2.3%	4.6	4.0%	123.0	2.2%
SGP	83.0	8.6%	92.3	13.1%	54.5	9.6%	6.3	12.0%	33.6	5.6%	365.8	16.0%	4.8	2.6%	11.7	10.1%	651.8	11.9%
CT	21.9	2.3%	9.5	1.3%	10.8	1.9%	3.4	6.6%	6.6	1.1%	54.2	2.4%	0.8	0.4%	3.4	3.0%	110.7	2.0%
THA	26.9	2.8%	2.1	0.3%	8.0	1.4%	0.0	0.0%	11.5	1.9%	74.0	3.2%	1.0	0.5%	2.9	2.5%	126.4	2.3%
USA	230.3	23.8%	183.0	25.9%	260.3	45.9%	19.3	36.9%	285.6	47.4%	561.7	24.5%	117.3	63.4%	27.8	24.0%	1,685.3	30.7%
VN	5.7	0.6%	1.3	0.2%	1.8	0.3%	0.4	0.9%	3.9	0.6%	3.9	0.2%	0.1	0.0%	1.1	0.9%	18.2	0.3%
Total	968.5	100.0%	706.2	100.0%	567.4	100.0%	52.4	100.0%	602.3	100.0%	2,290.4	100.0%	184.8	100.0%	115.9	100.0%	5,487.8	100.0%

Source: WTO's Digitally Delivered Services Trade Dataset

Survey

Women in *KIBS*

**Knowledge Intensive Business Services
(KIBS) and Barriers Faced by Women in
International Trade in Service**

Objective: *Identify regulatory and market barriers to the participation of women entrepreneurs and women-owned businesses in APEC economies that may explain why their participation in KIBS and Digital Deliverable Services is lower than men's participation.*

1. General Information and Participation of Women in the Company

Name:

Question No. 1

What is your role within the organization?

- CEO
- Owner
- General Director

Other:

Question No. 2

In which APEC economy is your enterprise located?

—Please type your economy—

Question No. 3

Your company is located in:

- A highly populated city (with more than one million inhabitants)
- The suburbs of a highly populated city
- A city between 300,000 and 1 million inhabitants
- A city between 25,000 and 300,000 inhabitants
- A rural area or city with less than 25,000 inhabitants

Question No. 4

What kind of services does your enterprise provide?

- Development of software or mobile applications
- Website development
- Network development or deployment
- Cloud or hosting services
- Web design
- Database maintenance and licensing
- Social networks
- Game development
- Film or video development
- Illustration, animation and/or design services
- Digital photography and/or photo editing
- Data visualization
- Development of educational content
- Content platform
- Electronic commerce platform (for goods and/or services)
- Online payment services
- E-Commerce
- Distribution Center
- Online marketing and/or communication services
- Automatic translations, interpretation and/or voice recognition

- Information processing and/or analytics
 - Architectural design
 - Interior design
 - Digital engineering in innovation processes and development of products and services
 - Software engineering and business solutions for digital transformation
 - Smart City (mobility and urban logistics, sustainability, emergency management)
 - Human Resources
 - Handling and processing of documents
 - Customer service
 - Market studies and/or public opinion surveys
 - Customer service center services (call-center)
 - Information technology (IT) consulting services
 - Professional consulting or advisory services that require state, provincial or federal license to be exercised
 - Professional consulting or advisory services that do not require state, provincial or federal license to be exercised
- Other:

Question No. 5

How many employees does your company have?

- It is a sole proprietorship: the sole owner is a man
- It is a sole proprietorship: the sole owner is a woman
- 1 to 10
- 11 to 50
- 51 to 100
- 101 to 250
- 251 to 500
- More than 500

Question No. 6

What gender are the employees who lead your company?

- Woman
- Man
- It is co-led by a woman and a man
- Does not identify with a particular gender

Question No. 7

What percentage of your organization's workforce is women?

- 0%
- 1 to 10%
- 11 to 25%
- 26 to 50%
- 51 to 75%
- More than 75%

Question No. 8

How many women hold leadership positions within your organization?

- 0%
- 1 to 10%
- 11 to 25%
- 26 to 50%
- 51 to 75%
- More than 75%

Question No. 9

What are the main barriers, if any, that prevent women from participating in the digital deliverable services trade in your economy? *Please select one or more*

- Cultural or societal factors that contribute to the underrepresentation of women in this sector.
- Lack of specific skills or qualifications
- Challenges related to work-life balance that affect women's participation in this sector
- Gender biases or stereotypes that impact women's opportunities
- Financial barriers that prevent women from pursuing careers in this sector
- Lack of networking or mentorship opportunities available for women
- Lack of specific training or capacity-building programs targeted towards women
- Lack of awareness or information about opportunities in this sector for women
- Lack of role models or female representation in the digital deliverable services trade
- Lack of support or resources for women-owned enterprises in this sector
- Lack of access to technology or digital infrastructure that affect women's participation
- Legal or regulatory barriers that hinder women's participation in the digital deliverable services trade

2. Challenges related to access to markets or international trade opportunities for women in KIBS

Question No. 10

To which economy/economies or region/s does your company export services?

- A)
- B)
- C)

Question No. 11

What share of your total sales were exports or foreign sales in 2019-2022 (on average)?

- 0%
- 1 to 10%
- 11 to 25%
- 26 to 50%
- 51 to 75%
- More than 75%

Question No. 12

How do you rate the following as your main challenges or not when considering selling or increasing your sales in foreign markets?

	It is a huge challenge	It is one of our challenges	It's less of a challenge	It is not a challenge	Not applicable
i. Doing marketing, finding, and reaching the customer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii. Doing digital marketing in foreign markets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii. Understanding customer needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

iv. Managing customer interactions and after-sales service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
v. Identifying and accessing technology-savvy individuals who can meet customer needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
vi. Accessing capital for the digital transformation of our company and improvement of our services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
vii. Accessing to human capital to improve processing and fulfill orders	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
viii. Better quality of internet access	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Question No. 13

How would you rate the capabilities or assets your company needs to expand its supply of services abroad?

	It is one of our top three priorities	It is important, it is among our priorities	It's not that important	Not applicable
i. Matchmaking between foreign buyers and sellers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii. Financing to attend foreign events to meet clients	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii. Digital Marketing Capabilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv. Accessing to foreign investors in our sector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
v. Presence in markets or e-commerce platforms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
vi. Ability to provide after-sales services to foreign customers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
vii. Human capital or more staff employed to complete purchase orders	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
viii. More financing to trade digitally through electronic commerce platforms (e-commerce)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ix. Customer data analysis capabilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
x. Technological skills to provide new or better services to our clients	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
xi. International sales and marketing staff	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
xii. Availability of electronic payments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
xiii. Better quality internet Access	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Question No. 14

Please select the challenges you have experienced for women to enter or supply your services in foreign markets. Please clarify in the next section the economies where you encountered such barriers, if any

- Unequal access to financial resources or financial services. This can include difficulties in obtaining loans, lack of collateral, and limited access to trade finance and export credit facilities.
- Unequal access to internet.
- Limited access to information about international markets, trade regulations, and export opportunities.
- Limited access to networks and connections such as access to trade associations, business networks, and mentorship opportunities.
- Cultural norms and societal expectations, that may include traditional gender roles, stereotypes, and biases that limit their mobility, decision-making power, and ability to negotiate in international business settings.
- Legal and regulatory barriers that restrict your participation in foreign trade, which may include discriminatory trade policies, customs procedures, and bureaucratic hurdles that disproportionately affect women-owned businesses.

Economies where you primarily encountered these barriers:

- A)
- B)
- C)

Other challenges

Question No. 15

Please select the challenges you experienced in establishing your company, subsidiary, branch, or representative in the markets to which you export or seek to export services. Please clarify in the next section the economies where you encountered such barriers, if any.

- The authorization of the investment is subject to the presentation of an “economic necessity test” to authorize new service suppliers or entrants in the foreign market.
- Restrictions to the participation of foreign capital in companies that supply services in our sector.
- Restrictions on the type and limits to the number of shares owned by the foreign supply services company, because it is a foreign company.
- Restrictions to the form of incorporation of the company under which we can establish ourselves (for example, it must be a limited company, a branch, a subsidiary, etc.).
- It is mandatory to associate with a local company, through contracts, temporary associations or joint ventures with local companies or other similar figures to be able to export our services.

- A)
- B)
- C)

Other challenges

Question No. 16

Please select the challenges you experienced related to the establishment of your company in the markets to which you export or seek to export services, such

as requirements, location of computer facilities or data centers and limitations on the cross-border transfer of information to export. Please clarify in the next section the economies in which such barriers occurred, where applicable

- It is necessary to hire local employees to be able to export our services.
- It is necessary to have a subsidiary, branch or other commercial presence or representation of some kind to export our services.
- We have experienced export restrictions due to the economy in which our company is established or due to the origin of our services.
- We are required to have special commercial arrangements with local suppliers to export our services.
- We were required that our directors, legal representatives, or members of the company have a specific citizenship or residence for supplying services.
- We have restrictions on the supply of digital services because we are foreign suppliers not established in the territory.

Economies where you primarily encountered these barriers:

- A)
- B)
- C)

Other challenges

Question No. 17

Please select the challenges you have experienced in relation to electronic documents and electronic signatures in the markets to which you export or seek to export services. In the next section, clarify the economies in which these barriers occurred, when applicable

- Electronic documents are not legally valid, so there is no legal equivalent of the paper documents.
- Electronic signatures are not legally valid, so there is no legal equivalent of the paper signature.
- Electronic signatures are not legally regulated, so we are not sure whether they can be compared to paper signatures.
- Specific restrictions or requirements are applied to foreigner suppliers by authorized certifiers that are not required to citizenship.

Economies where you primarily encountered these barriers:

- A)
- B)
- C)

Other challenges

Question No. 18

Please select the challenges you experienced in relation to cybersecurity and personal data protection in the markets to which you export or seek to export services. Please clarify in the next section the economies in which such barriers occurred, where applicable

- There are no regulations on data protection, the existing regulations are not clear or do not provide us with enough legal protection.
- There are no regulations on cybersecurity, the existing regulations are not clear or do not provide us with enough legal protection.
- We are subject to rigorous cybersecurity policies to be able to supply our services.
- We are required to carry out specific procedures, such as processing or storing data on computing facilities in foreign markets as a condition for conducting business.

Economies where you primarily encountered these barriers:

- A)
- B)
- C)

Other challenges

Question No. 19

Please select the challenges you experienced in relation to tax payments, fees, contributions, tariffs, or access to subsidies (including double taxation problems) in the markets to which you export or seek to export services. In the next section, identify the economies in which these barriers occurred, when applicable

- We are subject to double payment of taxes (in our economy of origin and in the market or markets to which we export services).
- We are subject to the payment of certain taxes, fees, contributions, tariffs, or other payments that citizen do not have to pay.
- We pay certain taxes, fees, contributions, tariffs, or other payments in the same way as citizens, but the amounts are higher for foreigners.
- We are not eligible to receive subsidies due to the economy of origin of our company / from which our services come.
- We are authorized to receive subsidies in the economy to which we export, but only up to a maximum amount, as opposed to citizens.

Economies where you primarily encountered these barriers:

- A)
- B)
- C)

Other challenges

Question No. 20

Please select the challenges you experienced in relation to consumer protection regulations in the markets to which you export or seek to export services. In the next section, identify the economies in which these barriers occurred, when applicable

- The regulation on consumer protection is not clear and/or does not provide us with sufficient legal protection.
- The regulations on consumer protection establish a high standard of responsibility to service suppliers in the economies that we export or intend to export.

Economies where you primarily encountered these barriers:

- A)

B)

C)

Other challenges

Question No. 21

Please choose the challenges you have experienced in relation to online payment regulations in the markets to which you export or seek to export services. In the next section, identify the economies in which these barriers occurred, when applicable

- There are no regulations regarding online payment of our products or services; or the existing regulations are not clear or do not provide us with sufficient or adequate legal protection.
- There are restrictions for payments or transfers applied to service suppliers not established in the territory.
- There are no regulations regarding the protection of our rights to charge for the supply of our services or the existing regulations are not clear or do not provide sufficient legal protection.
- We are only allowed to receive payments in the local currency of the economy to which we export.

Economies where you primarily encountered these barriers:

A)

B)

C)

Other challenges

Question No. 22

Please select the challenges you have experienced in relation to regulations regarding intellectual property or copyright, in the markets to which you export or seek to export services. In the next section, identify the economies in which these barriers occurred, when applicable

- There are no regulations regarding intellectual property protection, the existing regulations are not clear; or do not provide us with effective legal protection.
- The existing regulations regarding intellectual property protection provide effective legal protection but do not have practical application or enforcement.
- There are no regulations, or the regulations are not clear regarding our professional margin of action to avoid breaching copyright regulations in the economy to which we export our goods or services.

Economies where you primarily encountered these barriers:

A)

B)

C)

Other challenges

Question No. 23

Please select the challenges you have experienced in relation to regulations regarding licenses, authorizations, minimum qualifications, or titles of aptitude to provide services in the markets to which you export or seek to export services. In the next section, identify the economies in which these barriers occurred, when applicable

- As foreign service suppliers, we are subject to conditions that are substantially different, or we face additional conditions compared to those faced by local service suppliers in terms of requirements or procedures to obtain a license or authorization to supply our services.
- As foreign service suppliers, we require a license or special authorization to be able to supply our services.
- As foreign service suppliers, the laws and regulations grant us a lower degree of protection or rights than citizens.
- As foreign service suppliers, the laws and regulations are not clear about our rights and obligations in the domestic market, unlike what happens with local suppliers.

Economies where you primarily encountered these barriers:

- A)
- B)
- C)

Other challenges

Question No. 24

Please, select the challenges you experienced in relation to regulations on the transfer of profits, capital contributions, dividends, interests, payments, or when accessing the foreign exchange market and currencies to which you export or seek to export services. In the next section, identify the economies in which these barriers occurred, when applicable

- Restrictions were applied to us when trying to transfer our funds (return the funds to the economy of origin).
- We cannot access the foreign exchange market.
- Quantitative and qualitative restrictions were applied to us to access the foreign. exchange market.
- We are obliged to carry out specific operations, such as liquidating our currencies.

Economies where you primarily encountered these barriers:

- A)
- B)
- C)

Other challenges

Question No. 25

Please select the challenges you experienced in relation to other operating restrictions in the markets to which you export or seek to export services. In the next section, identify the economies in which these barriers occurred, when applicable

- Quantitative restrictions were applied to our transactions (in terms of value, number of transactions or otherwise).
- We face quantitative restrictions on the number of employees we can hire or their citizenship.
- We face restrictions on the duration of our licenses, permits or authorizations to provide services.
- We are required and enforce to export a given percentage of goods or services; to purchase a good or service from a person in the foreign territory, subcontracting local suppliers, etc.
- Our prices are regulated in the market.
- We are forced to achieve a given level or percentage of domestic content.
- We are forced to transfer technology or proprietary knowledge to a person in the market where we are supplying the service.

Economies where you primarily encountered these barriers:

- A)
- B)
- C)

Other challenges

Question No. 26

Please select the challenges you experienced in relation to access to information or issues related to the transparency of laws and regulations in the markets to which you export or seek to export your services. In the next section, identify the economies in which these barriers occurred, when applicable

- It was difficult for us to access the laws and regulations related to our sector.
- The regulations that apply to our sector are not clear enough.
- It was difficult for us to understand that the laws and regulations applied to our sector require licenses or authorizations, programs, exams, assessments or have different criteria from those applied to domestic service suppliers.

Economies where you primarily encountered these barriers:

- A)
- B)
- C)

Other challenges

Question No. 27

Please select the challenges you faced in relation to access to import of inputs or equipment (goods or services) in your economy of origin or in the economies to which you export or seek to export

- The goods or services that I need to import to supply my services are subject to high import duties.
- The goods or services that I need to import to supply my services are subject to quantitative or other non-tariff restrictions.
- It is not possible for me to import the goods or services that I need to import to supply my services.

Other challenges

Please select the options that apply in relation to the exercise of your profession.

- My profession requires a professional license to be able to legally engage/ practice in my economy.
- My profession requires a professional license or state license to be able to legally practice in the economy to which I'm seeking to engage in a business activity at a professional level.
- My profession requires affiliation to a professional association or group of professionals, to get an authorized license and be able to engage in my profession.
- My profession requires affiliation to a professional association or group of professionals in the economy to which I'm seeking to engage in a business activity at a professional level, to have an authorized license and be able to engage in my profession.
- My specialization or branch of profession requires approving professional exams to fully engage in my specialization in my economy.
- My specialization requires approving professional exams to be able to fully practice/engage the profession in the economy to which I'm seeking to engage in a business activity.
- My specialization requires compliance with certain professional practices to fully practice/engage the specialization in my economy.
- My specialization requires complying with certain professional practices in the economy to which I'm seeking to engage in a business activity.
- To exercise the profession in my economy of origin, I need a license issued by a state, provincial or federal government.
- To practice the profession in the economy to which I'm seeking to engage in a business activity at a professional level, I require a certificate or license issued by a state, provincial or federal government.

Question No. 28

Please select the challenges you experienced in connection with the exercise of your professional services in foreign markets to which you supply a professional service or are seeking to engage in a business activity at a professional level. In the next section, identify the economies in which these barriers occurred, when applicable

- The regulations of the economy to which I supply a professional service or are seeking to engage in a business activity at a professional level, do not recognize as equivalent the bachelor's degree or the professional license that I have.
- The regulations of the economy to which I supply a professional service or are seeking to engage in a business activity at a professional level do not recognize as equivalent the technical knowledge or my previous professional experience.
- The regulations of the economy to which I supply a professional service or are seeking to engage in a business activity at a professional level do not allow me to practice my profession there because I do not hold that citizenship.
- The regulations of the economy to which I supply a professional service or are seeking to engage in a business activity at a professional level do not allow me to practice my profession there because I do not have a permanent residence there.
- I had approved language, capacities, technical aptitudes, or similar evaluations tests to have the possibility of fully practicing my profession in the economy to which I supply a professional service or are seeking to engage in a business activity at a professional level.
- I had approved language, capacities, technical aptitudes, or similar evaluations tests to have the possibility of fully practicing my profession in the economy to which I supply a professional service or are seeking to engage in a business activity at a professional level and there are limitations to the exercise of my profession that do not apply to citizenship.
- It was not possible for me, or it was very difficult for me to obtain affiliation to the professional association or group of professionals in the economy to which I supply a professional service or are seeking to engage in a business activity at a professional level to have a qualifying registration and be able to practice there.
- I must pay taxes, fees, contributions, tariffs, or special duties to practice my profession in the economy to which I supply a professional service or are seeking to engage in a business activity at a professional level, solely because I am a foreigner.
- I must pay taxes, fees, contributions, tariffs, or special duties to practice my profession in the economy to which I supply a professional service or are seeking to engage in a business

activity at a professional level, in the same way as citizens, but the amounts that I must pay are higher for foreigners than for locals.

Economies where you primarily encountered these barriers:

- A)
- B)
- C)

Other challenges

3. Public Policies

Question No. 29

Does your economy have in place local laws or regulations regarding non-discrimination of women that participate in KIBS or that promote women participation in KIBS

- Yes
- No

If yes, please specify

Question No. 30

Does your economy have any program or local public policy that promotes the participation of women in the KIBS sector(s)?

- Yes
- No

If yes, please specify

Question No. 31

In your economy, are there initiatives or public policies that aim at training women in STEM or STEM programs for women in KIBS?

- Yes
- No

If yes, please specify

Question No. 32

Does your economy have in place alliances or programs between the public and private sectors and/or academia to promote women's economic participation and/or empowerment in KIBS?

- Yes
- No

If yes, please specify

Question No. 33

Has your economy negotiated trade agreements that include specific provisions regarding non-discrimination of women or that promote women’s economic empowerment in KIBS?

- Yes
- No

If yes, please specify

Share with us comments about your experiences facing gender barriers in your professional career

Thank you for taking the time to complete this survey

We truly value the information you have provided



Annex V. Results of the Questionnaire

This section presents the graphical results derived from the descriptive analysis of the "Knowledge Intensive Business Services (KIBS) and Barriers Faced by Women in International Trade in Services" survey. Conducted across the APEC economies, this survey provides insights into the various challenges women face in international trade and digital services markets. The following charts illustrate key findings on respondents' demographics, business characteristics, and the barriers they encounter, offering a comprehensive overview of the data collected.

1. General Information and Participation of Women in the Company

Chart 1 shows the number of respondents by economy, highlighting the participation from various APEC economies. Economies with highly populated urban centers show significant participation, indicating a concentration of digital services businesses in economically active regions with robust infrastructure.

Chart 1. Respondents by Economy

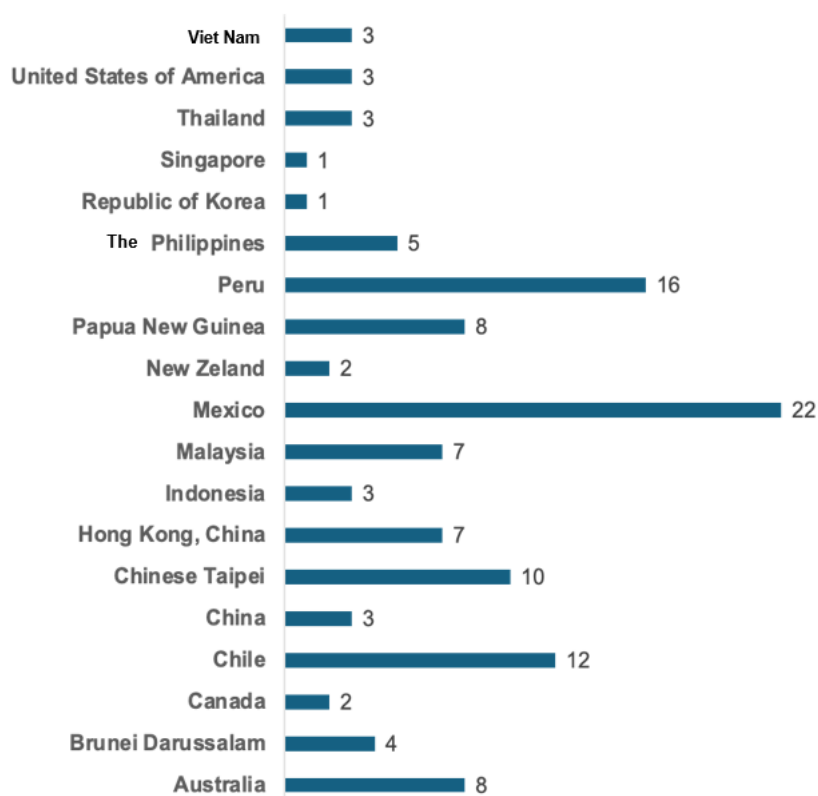


Chart 2 displays the distribution of respondents by the number of employees in their organizations. The most common category is "1 to 10" employees, representing 34.8% of the respondents, followed by "11 to 50" employees at 33.1%, and "More than 500" employees at 15.3%. This indicates a significant presence of small to medium-sized enterprises among the respondents. The high percentage of small to medium-sized enterprises (SMEs) suggests that these organizations form the backbone of the business landscape in this sample. Support policies and resources tailored for SMEs could significantly impact the economic growth and sustainability of these enterprises.

Chart 2. Number of Employees in the Organization

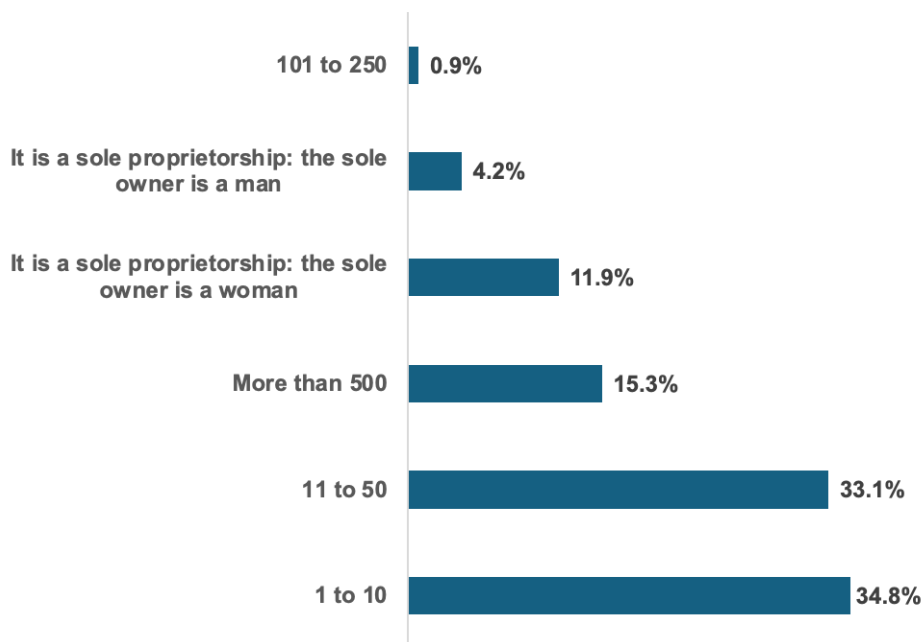


Chart 3 displays the distribution of respondents by their role within the organization. Most respondents identified as "Owner" at 56.7%, followed by "General Director" at 25%, and "CEO" at 9.2%. This indicates that the survey primarily reached top-level executives and business owners who are decisionmakers. The high percentage of owners and top-level executives among the respondents suggests that the survey insights are heavily influenced by those in leadership positions.

Chart 3. Respondents by Role within the Organization

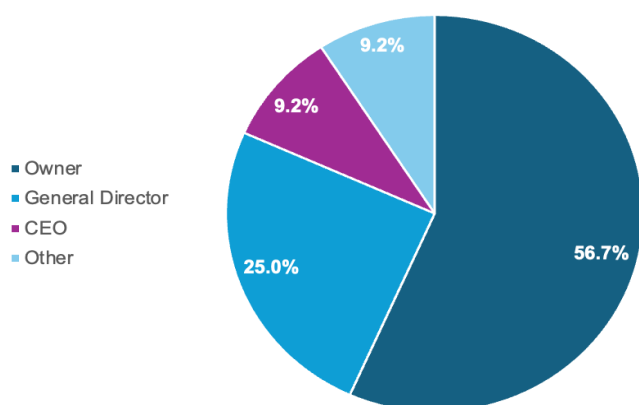


Chart 4 displays the distribution of respondents by their company's location. Companies are in "A highly populated city (with more than one million

inhabitants)" at 58%, followed by "A city between 300,000 and 1 million inhabitants" at 19.3%, and "A city between 25,000 and 300,000 inhabitants" at 10.9%. This indicates a significant urban presence among the respondents' companies. The high percentage of companies located in highly populated cities suggests that urban centers are key hubs for business activities. This urban concentration may influence access to markets, talent, and infrastructure, highlighting the importance of infrastructure development in supporting business growth.

Chart 4. Respondents by Location



Chart 5 shows the distribution by the type of services their enterprises provide. The most common service type is "Others", representing 37.1% of the respondents, followed by "Professional consulting" at 12.9%, and "Software engineering" at 10.3%. This indicates a diverse range of services provided by the respondents' enterprises. The significant proportion of respondents providing consulting and IT services suggests a strong presence of knowledge-based industries. This diversity in service types highlights the varied expertise within the respondent pool, indicating potential areas for specialized support and development in the knowledge-intensive business services sector.

Chart 5. Sectors or Service Type



Chart 6 "Leader's Gender at the Companies" illustrates the percentage distribution of respondents by the gender of the employees who lead their companies. The data reveals that most company leaders are female (49.2%), with a smaller yet notable segment being male leaders. This high representation of female leaders is primarily due to the survey's focus on companies led by women. This distribution highlights the prevalence of female leadership within the surveyed companies and underscores the importance of supporting and promoting women in leadership roles.

Chart 6. Gender distribution

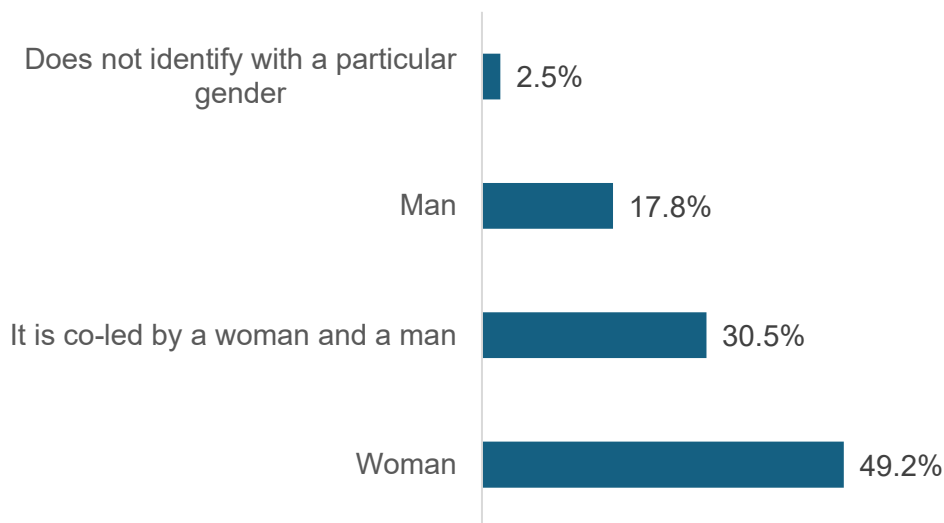
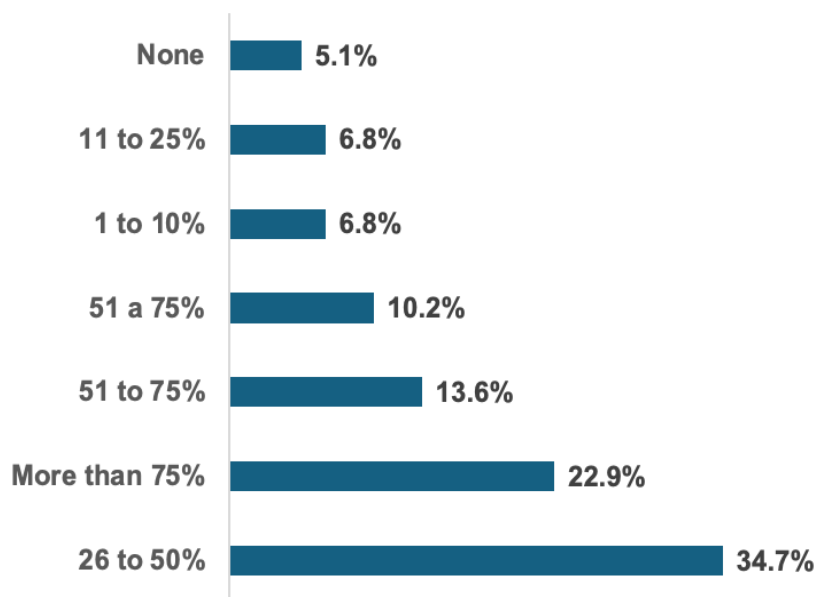


Chart 7 reveals a diverse range of gender compositions within the surveyed companies. The largest group, comprising 34.7% of respondents, reported that women make up between 26% to 50% of their workforce. Following this, 22.9%

of respondents indicated that women constitute more than 75% of their workforce, and 13.6% of respondents noted that women represent 51% to 75% of their workforce. Smaller proportions of respondents reported lower percentages of women in their workforce. Notably, a significant number of companies have a workforce where women comprise between 26% and 50%, as well as those where women make up more than 75% of the workforce. This distribution highlights the varying degrees of gender diversity across different organizations, emphasizing the need for tailored strategies to support women's participation in the workforce at varying levels.

Chart 7. Workforce Composition



Bar chart 8 "Women in Leadership Positions in my Company" shows the distribution of responses regarding the percentage of women in leadership roles within companies. The largest group of respondents, representing approximately 28.4% of the total, reported that "26 to 50%" of their leadership positions are held by women. The data suggests that there are some companies taking steps towards gender diversity in leadership, but there is room for improvement. Increasing the percentage of women in leadership roles could enhance organizational performance and innovation, highlighting the need for continued efforts to promote gender diversity and inclusion in the workplace.

Chart 8. Women Leading my Company

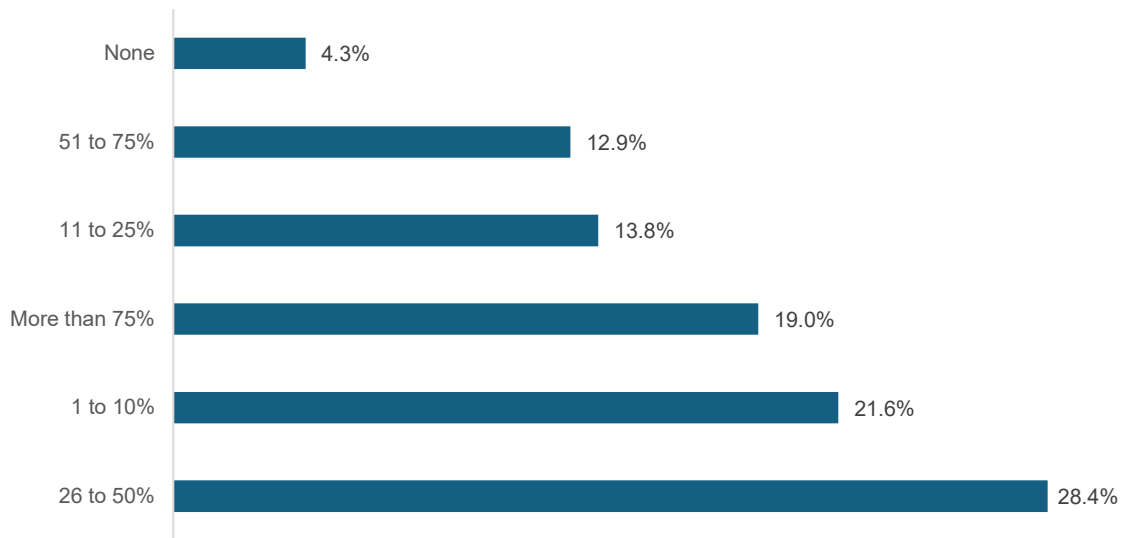


Chart 9 depicts the main barriers to women's participation in digital services. The most frequently cited barrier, mentioned by 30.4% of respondents, is "Cultural or societal factors that contribute to the underrepresentation of women in this sector." This is followed by "Lack of specific skills or qualifications," identified by 20.9% of respondents, and "Challenges related to work-life balance that affect women's participation in this sector," mentioned by 17.4% of respondents. The data highlights that cultural and societal factors, along with specific skill gaps and work-life balance challenges, are the predominant barriers to women's participation in digital services. These findings suggest the need for comprehensive policies that address cultural biases, provide skill development opportunities, and support work-life balance to enhance women's involvement in the digital services sector. Additionally, addressing gender stereotypes and increasing support for women-owned enterprises can further facilitate women's participation and advancement in this field.

Chart 9. Main Barriers to Women’s Participation in Digital Services



In Chart 10, the chart displays the correlation between the main barriers that prevent women from participating in digital services, categorized by economy. The distribution of barriers varies significantly across economies, highlighting the unique challenges women face in different regions. As shown, different economies report varying primary barriers, reflecting diverse socio-economic and cultural contexts. Lack of specific skills or qualifications is a common barrier across multiple economies.

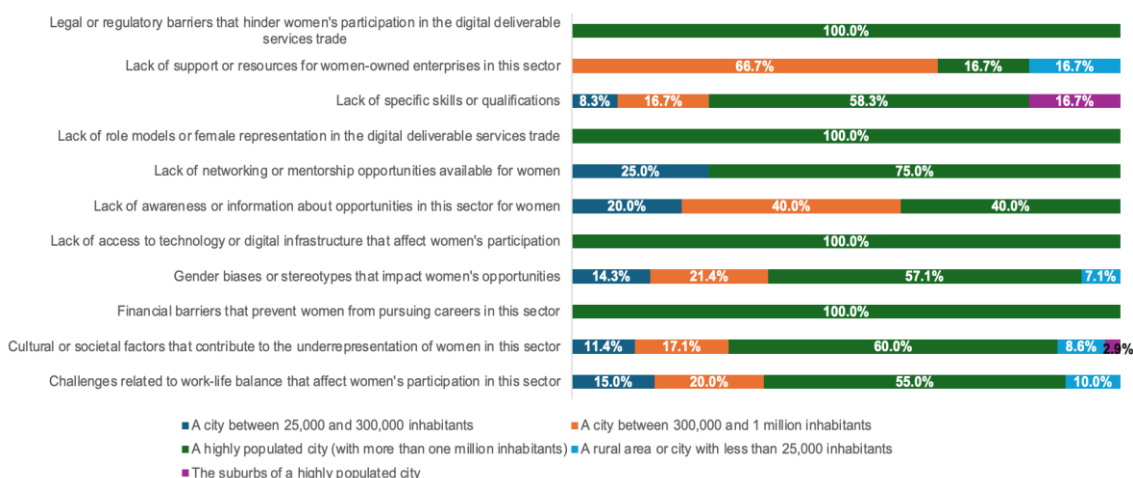
Chart 10. Main Barriers by Economy

	Australia	Brunei Darussalam	Canada	Chile	China	China Taipei	Hong Kong, China	Indonesia	Malaysia	Mexico	New Zealand	Papua New Guinea	Peru	The Philippines	Republic of Korea	Singapore	Thailand	United States of America	Viet Nam
Challenges related to work-life balance that affect women's participation in this sector	25%	50%		17%	33%		43%	100%		23%				20%				33%	
Cultural or societal factors that contribute to the underrepresentation of women in this sector	25%			50%	33%	10%			29%	41%	100%	63%	25%		100%	100%	33%		
Financial barriers that prevent women from pursuing careers in this sector										5%		13%						33%	
Gender biases or stereotypes that impact women's opportunities		25%	100%	8%			14%							38%				33%	67%
Lack of access to technology or digital infrastructure that affect women's participation													6%						
Lack of awareness or information about opportunities in this sector for women	25%	25%							29%										
Lack of networking or mentorship opportunities available for women					33%								13%						33%
Lack of role models or female representation in the digital deliverable services trade	25%																		
Lack of specific skills or qualifications				8%		90%			43%	18%		13%	13%	80%					
Lack of support or resources for women-owned enterprises in this sector				17%			14%			9%		13%							
Legal or regulatory barriers that hinder women's participation in the digital deliverable services trade										5%									
Total Respondents	8	4	2	12	3	10	5	3	7	22	2	8	15	5	1	1	2	2	3

Chart 11, a horizontal stacked bar chart, displays the correlation between the main barriers preventing women from participating in digital services, categorized by the size of the city where their companies are located. The data shows that companies in highly populated cities report barriers such as lack of specific skills, financial barriers, and gender biases. On the other hand, smaller cities or rural areas also face significant barriers, though the nature and intensity of these barriers can vary. This bias could be explained, among others, by the frequency

of the questions received since most of them come from urban centers. Finally, urban-centric policies might be necessary, along with rural-focused initiatives, to address the unique challenges faced by companies in different city sizes.

Chart 11. Main Barriers by City Size



2. Challenges related to markets access or international trade opportunities for women in KIBS

Chart 12. displays a correlation chart illustrating the distribution of responses for each challenge identified when we asked about the main challenges when considering selling or increasing your sales in foreign markets. The five response types are: "It is a huge challenge," "It is one of our challenges," "It's less of a challenge," "It is not a challenge," and "Not applicable." Each segment represents the percentage of respondents who rated a specific challenge. The chart reveals varying degrees of challenges across different areas. For instance, "Accessing capital for the digital transformation of our company and improvement of our services", "Identifying and accessing technology-savvy individuals who can meet customer needs" and "Identifying and accessing technology-savvy individuals who can meet customer needs" are frequently seen as major challenges. By breaking down these responses, we can identify priority areas where companies may benefit from specific policies and support, such as funding opportunities, skill-building programs, or strategic alliances. This analysis ultimately enables a more tailored approach to helping businesses overcome specific obstacles in their journey to expand globally.

Chart 12. Main Challenges for Selling in Foreign Markets

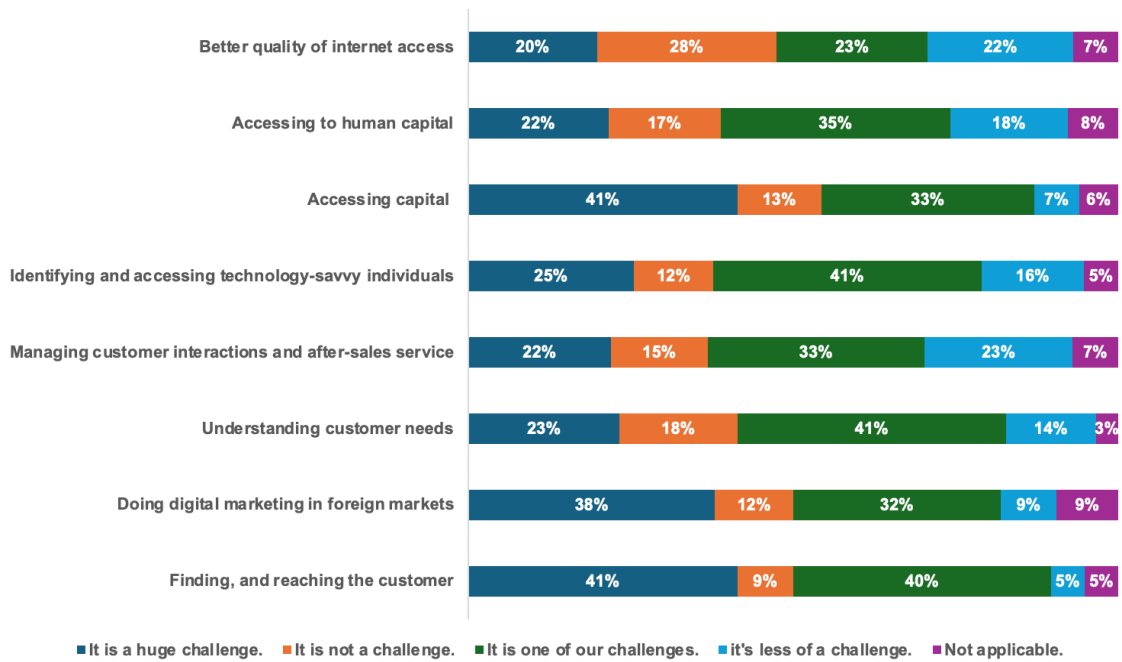


Chart 13 displays the importance of various factors for organizations when considering the expansion of their service supply abroad. The five importance levels are: "Very important," "Important," "Moderately important," "Slightly important," and "Not important." Each segment represents the percentage of respondents who rated a specific factor. Similar to the previous chart, "Matchmaking between foreign buyers and sellers" are one of the top three priorities. The visual shows that factors such as "Technological skills to provide new or better services to our clients" and "Digital Marketing Capabilities" are frequently rated as very important. In particular, the emphasis on technological skills and digital marketing capabilities highlights a trend toward digital transformation, as organizations seek to improve their competitive edge in foreign markets. By aligning resources to strengthen these high-priority areas, organizations can enhance their service offerings and better meet the expectations of international clients. This data suggests that support strategies should focus on developing digital competencies and fostering connections between buyers and sellers to facilitate smoother market entry and sustainable growth.

Chart 13. Main Capabilities or Assets Needed for Expansion

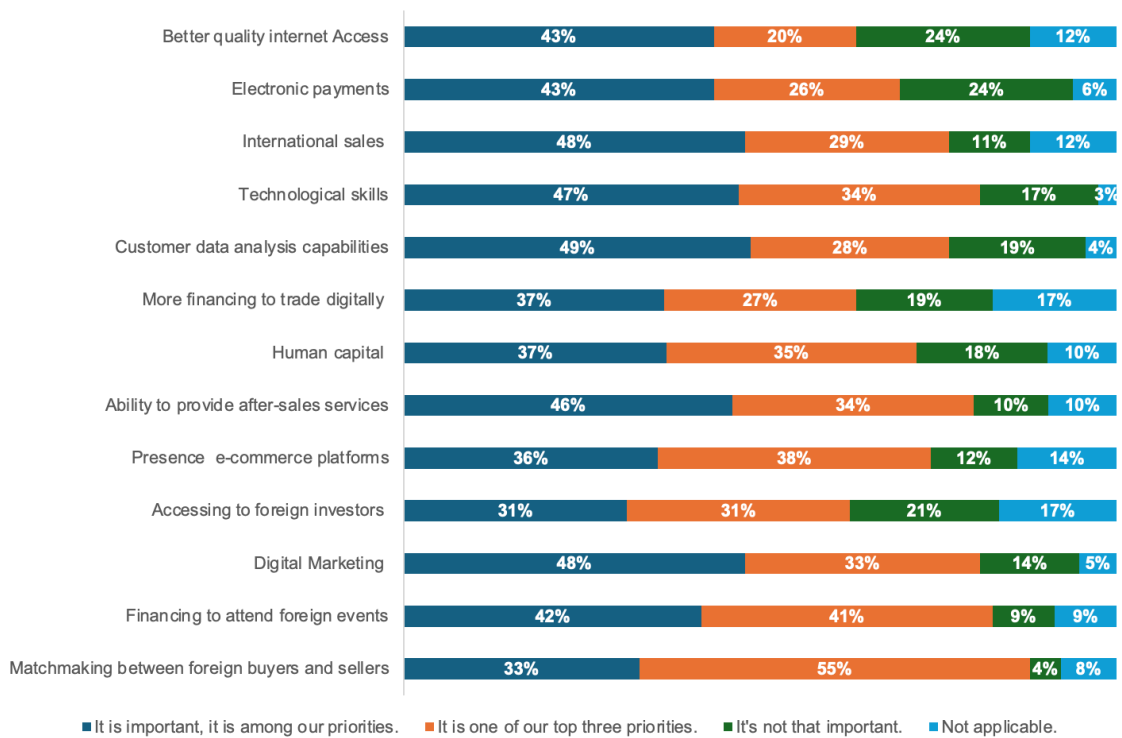
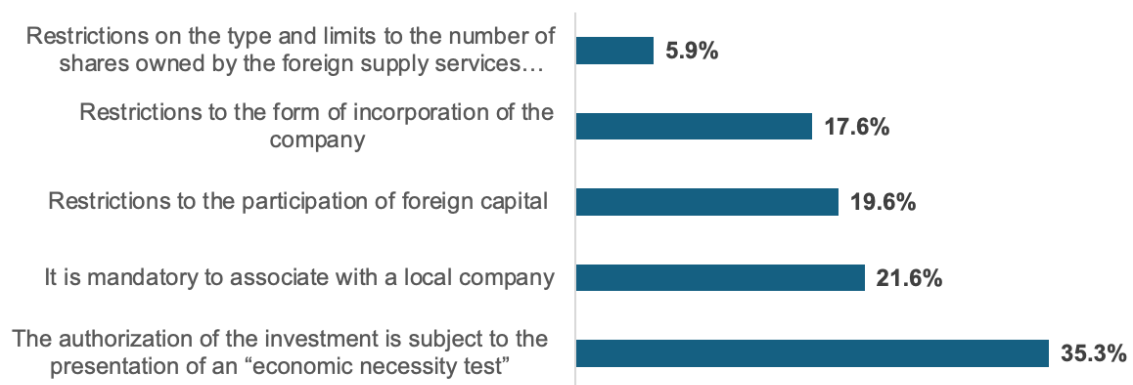


Chart 14 shows the regulatory challenges faced by businesses in different economies. The most common challenge is “The authorization of the investment is subject to the presentation of an “economic necessity test” affecting 35.3% of respondents, followed by “It is mandatory to associate with a local company” (21.6%). This indicates significant regulatory barriers that businesses must navigate to operate successfully. The high prevalence of mandatory local associations suggests that businesses may benefit from policies that promote more flexible regulatory environments to encourage foreign investment and ease of operation.

Chart 14. Challenges Experienced by Women Establishing a Business in Foreign Markets



In Chart 15 the most frequently cited challenge, mentioned by 38.8% of respondents, is "It is necessary to hire local employees to be able to export our services". This is followed by "It is necessary to have a subsidiary, branch or other commercial presence or representation of some kind to export our services" at 35%, and "We have restrictions on the supply of digital services because we are foreign suppliers not established in the territory" at 11.7%. It is shown that the primary barriers for women in establishing businesses in foreign markets are the need to employ local workforce. This finding highlights the critical need for policies that reduce entry barriers and support business operations in foreign markets, especially for women entrepreneurs. Addressing these challenges requires targeted interventions such as improving access to market information, providing financial support mechanisms, and simplifying legal requirements. These measures can facilitate the establishment and growth of women-owned businesses in international markets, promoting greater economic participation and diversity. The main Economy named by the respondents where they find this challenge is Viet Nam.

Chart 15. Challenges Experienced by Women Establishing Companies in Export Markets

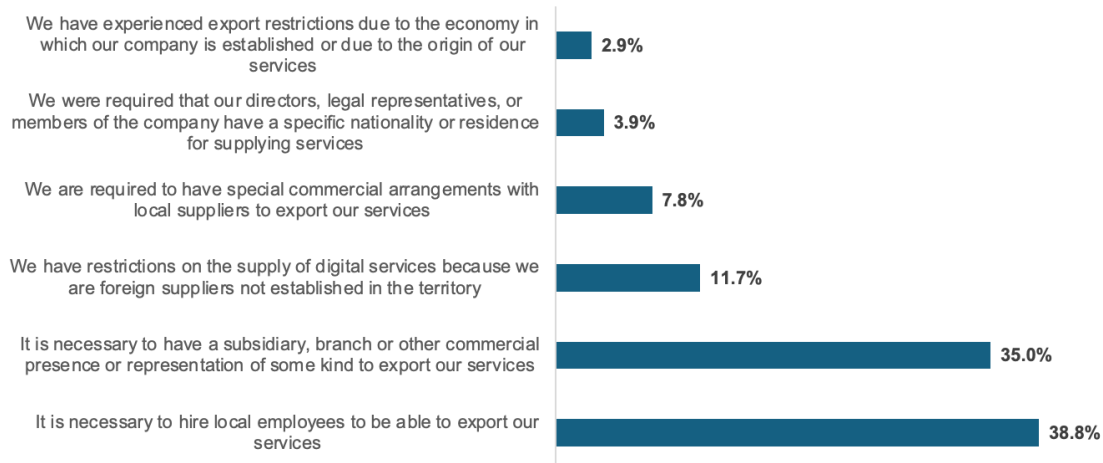


Chart 16 outlines the challenges in adopting digital tools in business operations. The top challenge is "Electronic documents not legally valid," impacting 32% of respondents. "Electronic signatures not regulated" is another significant barrier at 29.9%. The lack of legal recognition for electronic documents and signatures limits businesses' ability to streamline operations and engage in cross-border transactions. Addressing these regulatory gaps through updated legislation can facilitate a smoother transition to digital practices, reducing administrative burdens and promoting innovation. Harmonizing digital regulations with international standards will be crucial for businesses aiming to operate seamlessly in global markets, enabling them to leverage digital tools to their full potential. The main economy named by the respondents where they find this challenge is China.

Chart 16. Challenges Experienced by Women with Electronic Documents or E-Signatures in Export Markets

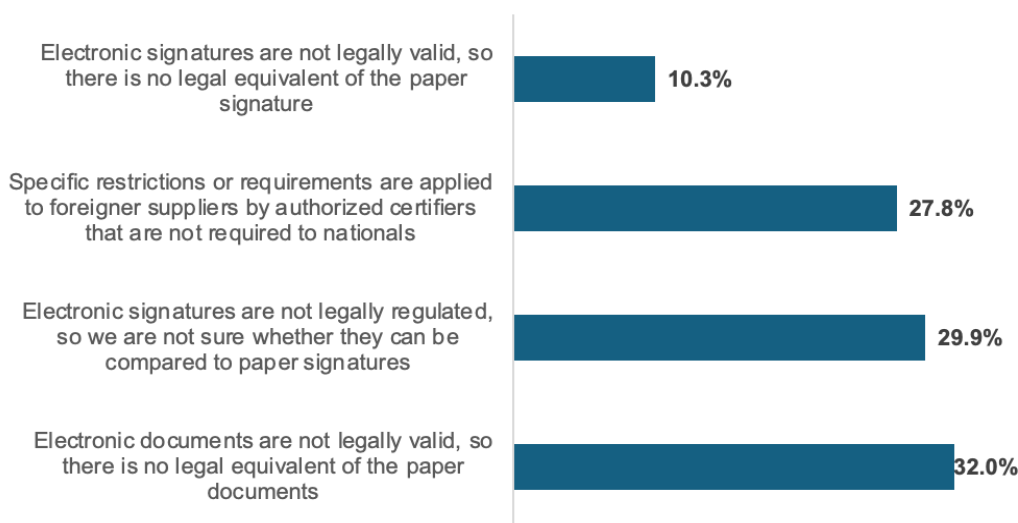


Chart 17 illustrates the challenges related to cybersecurity and personal data protection (Question 18). The main challenge, noted by 50.5% of respondents, is the "There are no regulations on data protection, the existing regulations are not clear or do not provide us with enough legal protection" This is followed by "We are subject to rigorous cybersecurity policies to be able to supply our services" at 22.1%, and "We are required to carry out specific procedures, such as processing or storing data on computing facilities in foreign markets as a condition for conducting business" at 16.8%. The data highlights that the primary challenge in cybersecurity and personal data protection is the lack of clarity in the regulation and legal framework. This lack of regulatory clarity poses significant obstacles for companies, as it creates uncertainty about compliance requirements and hinders their ability to fully protect customer data. Additionally, the high percentage of respondents who face strict cybersecurity policies indicates that while security protocols are essential, overly stringent requirements can be a burden, especially for smaller firms. Moreover, the need to comply with data localization demands, such as maintaining data in specific jurisdictions, adds further complexity and can increase operational costs for businesses aiming to expand internationally. Addressing these issues requires the adoption of international data protection and cybersecurity standards as well as harmonizing laws to facilitate smoother business operations. These measures can significantly improve women entrepreneurs' ability to navigate cybersecurity and data protection requirements in international markets.

**Chart 17. Challenges Experienced by Women
Cybersecurity and Personal Data Protection**



When we asked about the challenges related to tax payments and financial aspects faced by women in international trade, the most frequently cited challenge, mentioned by 34% of respondents, is "Double tax payment" (See Chart 18). Higher taxes or fees for foreigners" at 24.7%, and "We are not eligible to receive subsidies" at 20.6%. As shown, the primary financial barriers for women in international trade are difficulties in opening bank accounts and accessing finance. Addressing these challenges requires policy interventions such as improving financial access for women-owned businesses, simplifying banking procedures, and reducing legal barriers. These measures can support the financial integration of women entrepreneurs in global markets, fostering greater economic participation and growth. The main economy named by the respondents where they find this challenge is Viet Nam.

**Chart 18. Challenges Experienced by Women
Tax Payments and Financial Aspects**

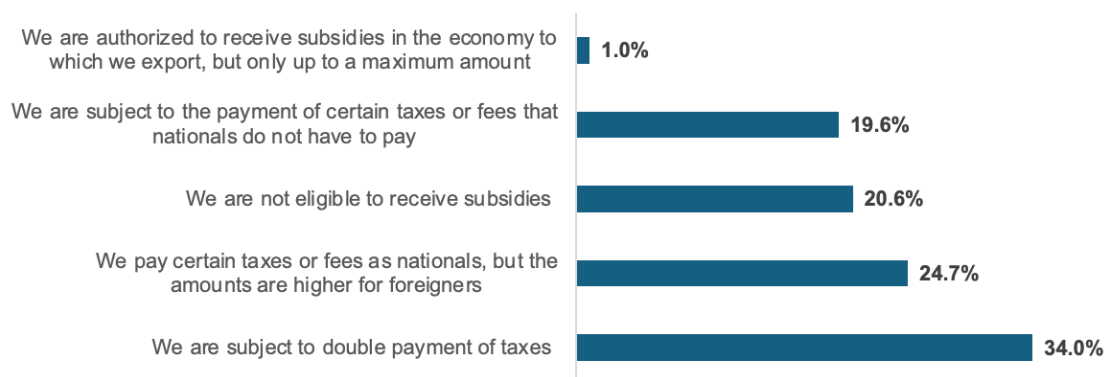


Chart 19 presents the challenges related to consumer protection regulations encountered (Question 20). It shows that the most prevalent challenge, identified

by 62.8% of respondents, is "The regulation on consumer protection is not clear and/or does not provide us with sufficient legal protection". This is followed by "The regulations on consumer protection establish a high standard of responsibility to service suppliers in the economies that we export or intend to export" selected by 37.2% of respondents. This data underscores that the ambiguity and perceived inadequacy of consumer protection regulations create significant hurdles for businesses, as unclear legal frameworks can complicate compliance efforts and heighten the risk of liability. The second major challenge highlights that stringent consumer protection standards in export markets impose a considerable burden on service providers, who must meet elevated accountability standards to operate internationally. Together, these challenges reflect a regulatory environment that may limit market access and increase operational risks for women entrepreneurs seeking to expand into foreign markets.

Chart 19. Challenges Experienced by Women Consumer Protection Regulation

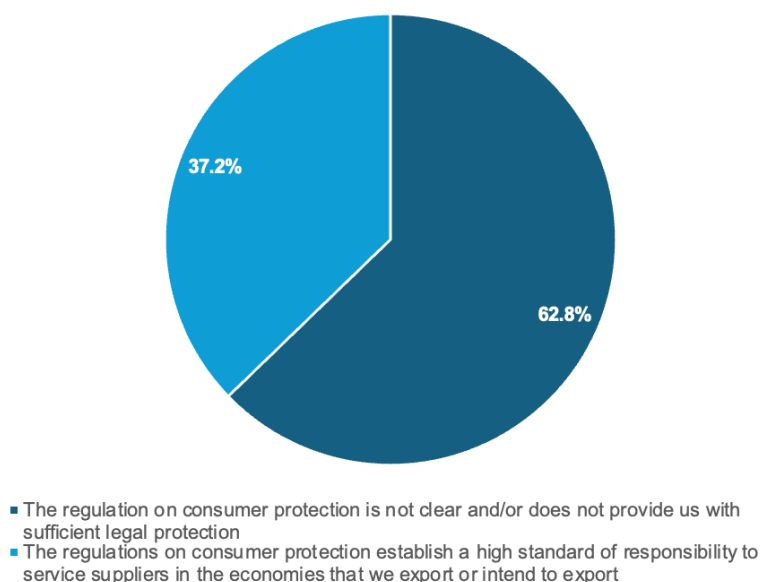


Chart 20 shows the challenges related to online payment regulations in the markets where businesses export or seek to export services (Question 21). The primary challenge is "Regulations unclear," affecting 41.4% of respondents, followed by "There are restrictions for payments or transfers applied to service suppliers not established in the territory" at 23.2%. This demonstrates the difficulties businesses face due to ambiguous regulations and limited payment options. There is a perception of ambiguity in online payment regulations that calls for standardization and clarity in regulatory frameworks to support businesses in managing cross-border transactions more effectively. Improving access to e-payment services can also enhance the ease of doing business internationally. The main economy named by the respondents where they find this challenge is Viet Nam.

Chart 20. Challenges Experienced by Women Online Payment Regulations

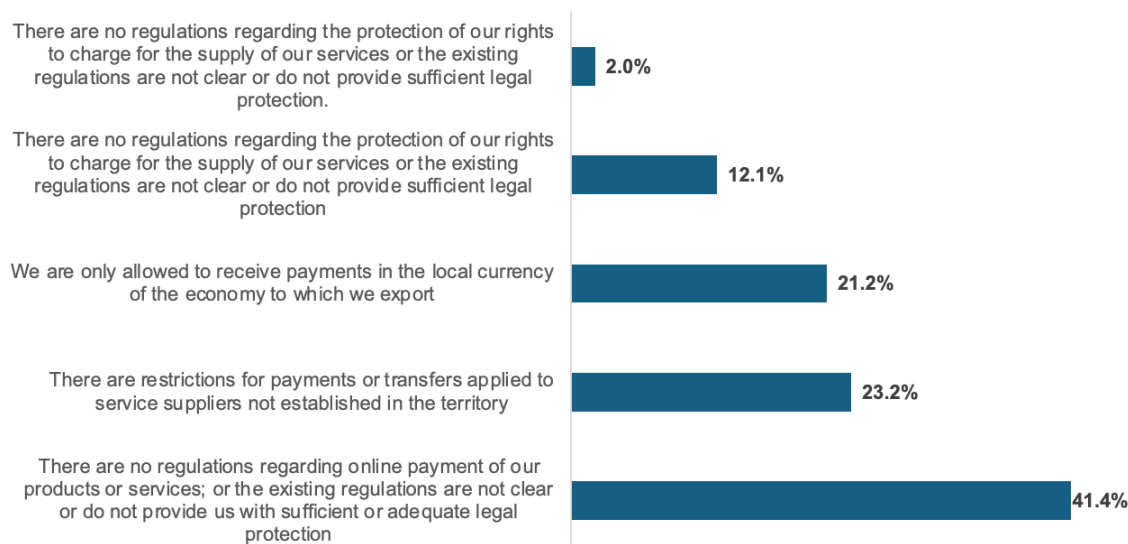


Chart 21 shows the difficulties companies face regarding intellectual property regulations. According to the data, 42.9% mentioned that existing regulations are not practical for application. 40.8% answered that there is not IP protection. The lack of clear and applicable regulations on intellectual property poses a significant issue for most respondents. The lack or impracticality of these regulations can create uncertainty and hinder the legal protection of intellectual property rights. This highlights the need for robust and effective regulations to safeguard intellectual property and foster innovation in a secure and reliable business environment.

Chart 21. Challenges with Intellectual Property Regulation

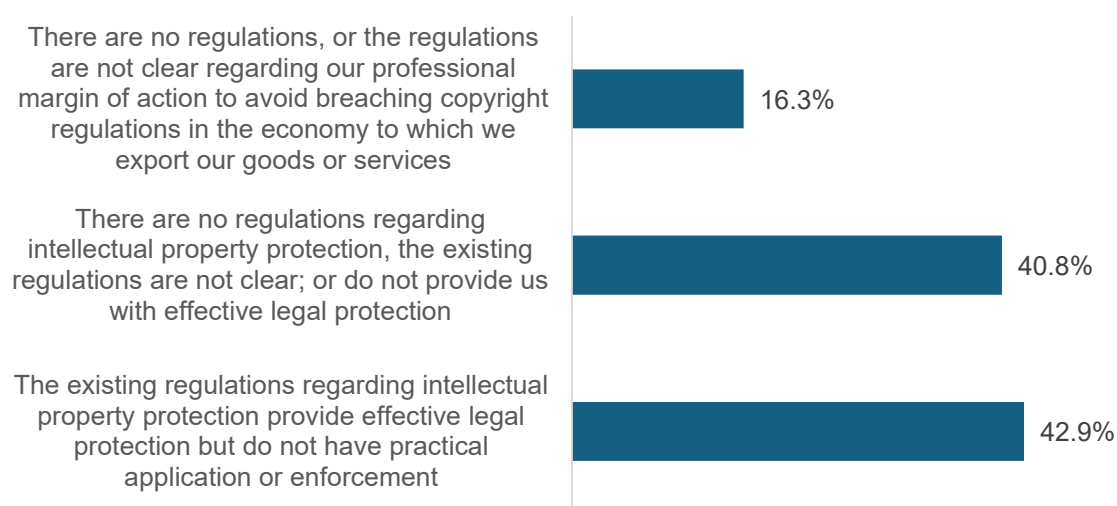


Chart 22 presents the difficulties companies face with regulatory requirements. According to the data, 54.3% of respondents indicated that as foreigners, they face additional conditions or differentiated regulatory treatment. Meanwhile,

27.7% reported needing special authorization or licensing, 17% mentioned that the laws and regulations are not clear, and 1.1% stated that the laws grant them a lower degree of protection for foreigners. The need for special authorizations or licenses, reported by over a quarter of respondents, indicates significant procedural hurdles that can increase time and costs for companies seeking to expand. Moreover, the 17% who identified a lack of regulatory clarity underscore the challenges women businesses face in interpreting and complying with ambiguous rules, which can elevate compliance risks and legal uncertainty.

Additionally, the perception of a lower degree of legal protection for foreign entities, albeit noted by a smaller percentage, suggests that foreign businesses may feel disadvantaged in legal disputes or enforcement issues. Addressing these issues through regulatory reforms or increased transparency could foster a more equitable business environment and support foreign investment. The main economy named by the respondents where they find this challenge is Viet Nam.

**Chart 22. Challenges Experienced by Women
Licenses, Authorizations, Minimum Qualifications or Titles of Aptitude**

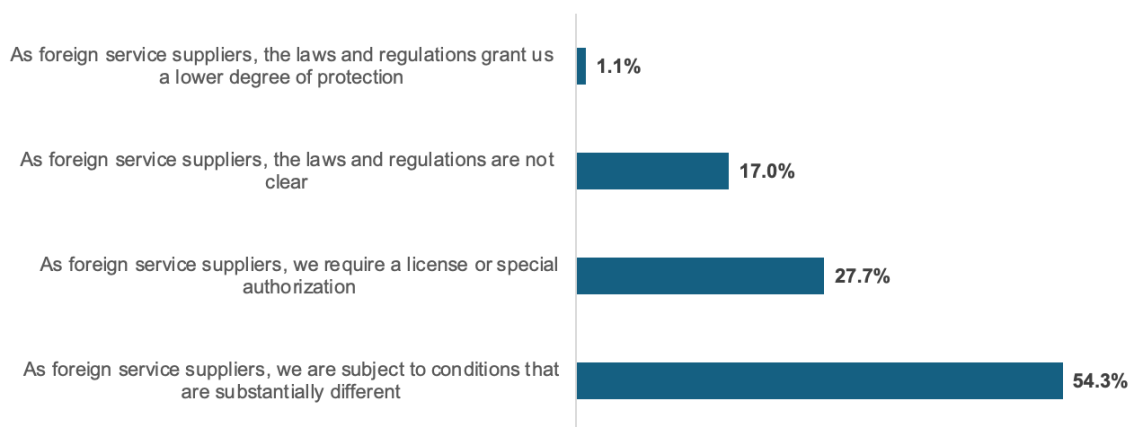


Chart 23 displays the challenges related to regulations on the transfer of profits, capital contributions, dividends, interests, and payments in export markets. (Question 24) The primary challenge is "Restrictions were applied to us when trying to transfer our funds (return the funds to the economy of origin)" affecting 57.6% of respondents, followed by "Quantitative/qualitative restrictions were applied to us to access the foreign" at 15.3%. The significant issue of being obliged to carry out specific operations suggests a need for more flexible and transparent financial regulations. These restrictions on transferring funds present a substantial obstacle for businesses, particularly those relying on the seamless movement of profits and capital between home and export markets. For over half of the respondents, restrictions on fund repatriation complicate financial planning, as companies may face delays or even barriers in returning profits to their economies of origin, which can impact cash flow and investment decisions. The quantitative and qualitative restrictions affecting 15.3% of respondents further illustrate the regulatory burden, as such limitations can hinder companies' ability to access the foreign exchange needed for operational expenses or reinvestment.

These challenges suggest that strict controls on fund transfers and access to foreign exchange can discourage foreign investment by reducing financial flexibility. Companies operating in markets with restrictive capital flow regulations may need to allocate additional resources for financial compliance or risk management, potentially deterring expansion efforts in these economies. The main economy named by the respondents where they find this challenge is Viet Nam.

Chart 23. Challenges related to Transfer of profits or Exchange Markets Access

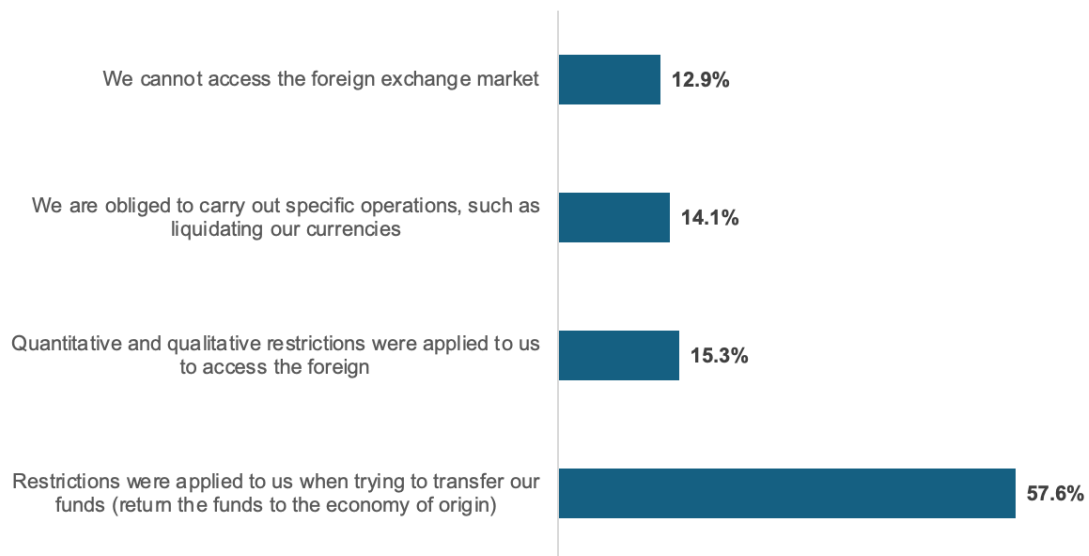


Chart 24 highlights the challenges related to other operating restrictions in export markets (Question 25). "We face restrictions on the duration of our licenses, permits or authorizations to provide services" affecting 26.7% of respondents, followed by "Quantitative restrictions on employees" (21.1%). This underscores the kind of performance requirements businesses face in acquisition, conducting, and operating in markets. Eliminating these restrictions can promote fair competition and encourage businesses to engage more actively in international trade.

Chart 24. Challenges Experienced by Women Operating Restrictions

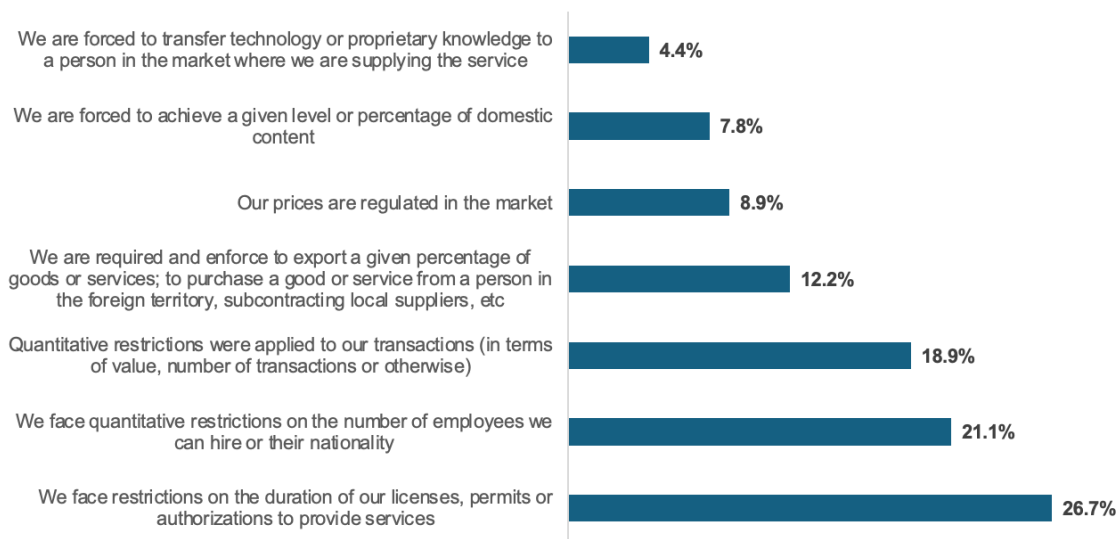


Chart 25 shows the challenges related to access to information and transparency of laws and regulations in export markets (Question 26). The primary challenge is "It was difficult for us to access the laws and regulations related to our sector" affecting 39.1% of respondents, followed by "The regulations that apply to our sector are not clear enough" (34.8%). This highlights the difficulties businesses face in obtaining clear and reliable regulatory information. Enhancing access to transparent and comprehensive regulatory information is crucial for supporting international business operations. Implementing measures to improve information dissemination can reduce uncertainty and compliance costs for businesses.

Chart 25. Challenges Experienced by Women Transparency of Laws and Regulations

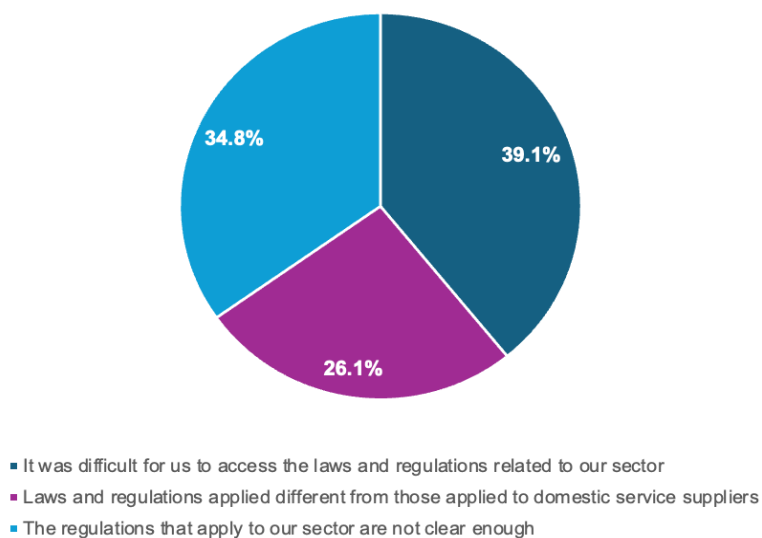


Chart 26 displays the challenges faced by businesses about importing goods or services (Question 27). The most significant challenges are "The goods or services that I need to import to supply my services are subject to high import duties", affecting 38.8% same as "The goods or services that I need to import to supply my services are subject to quantitative or other non-tariff restrictions". These findings highlight the substantial barriers imposed by import duties and non-tariff restrictions. High import duties can significantly increase costs, making it challenging for companies to price their services competitively in both domestic and international markets. Similarly, non-tariff restrictions, such as quotas or complex regulatory requirements, can delay supply chains and disrupt operational efficiency, limiting companies' ability to meet demand promptly. Addressing these issues, either through trade agreements or regulatory reforms, could support a more streamlined and competitive environment for businesses that depend on services to deliver value.

**Chart 26. Challenges Experienced by Women
Access to Import of Inputs or Equipment**

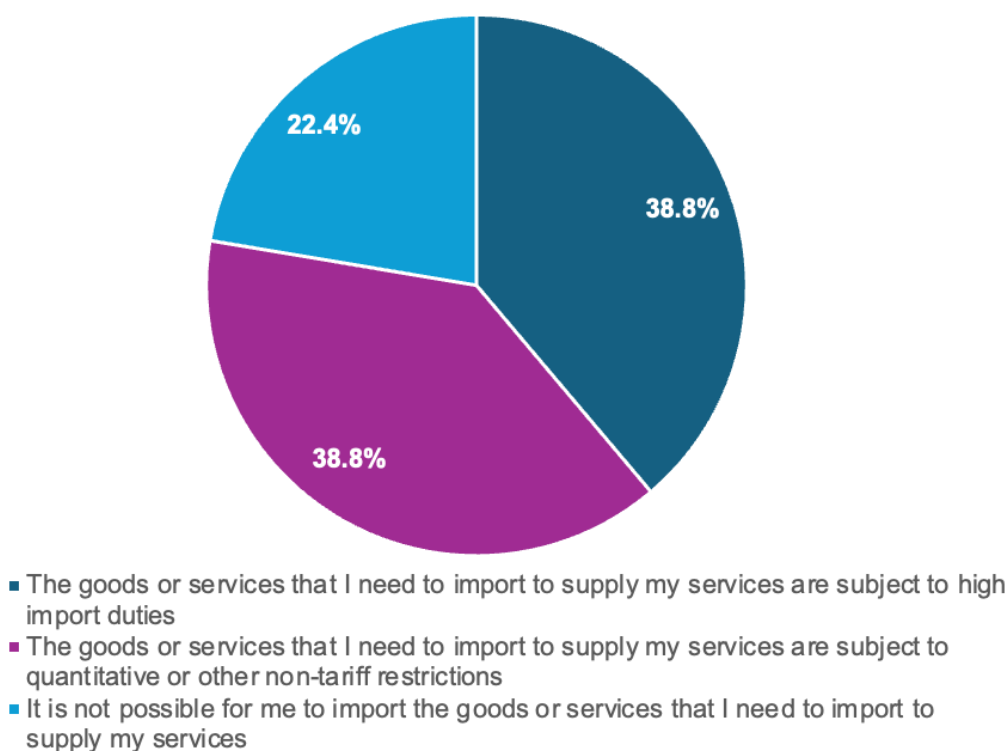


Chart 27 displays the professional challenges faced by individuals in their respective economies (Question 28). The most pressing issue is "The regulations of the economy to which I supply a professional service or are seeking to engage in a business activity at a professional level do not recognize as equivalent the technical knowledge or my previous professional experience," affecting 53.5% of respondents. This lack of recognition for prior professional experience or technical qualifications poses a considerable barrier for women attempting to engage professionally in foreign markets. Without equivalent recognition, skilled

women professionals may face delays, costly re-certifications, or additional training requirements to meet local standards, which can discourage cross-border career mobility and professional exchange. This challenge, affecting over half of respondents, not only limits women’s opportunities for career advancement but can also hinder companies looking to leverage international talent with specialized expertise.

For economies aiming to attract foreign professionals, addressing this issue through mutual recognition agreements or streamlined credential assessment processes could facilitate a more dynamic and diverse professional landscape. Simplifying recognition processes and negotiating MRAs could reduce barriers for professionals and support the mobility, innovation and integration of skilled workers across different economies.

Chart 27. Challenges Experienced by Women Exercise of their Professional Services



3. Public Policies

The survey responses provide a comprehensive view of the perceptions of public policies and initiatives related to international trade and women's entrepreneurship. In Question 29, related to trade facilitation, a significant portion of respondents (43%) believe that public policies in their economy facilitate the import and export of goods and services. This indicates a favorable perception of government support for trade activities, suggesting that many respondents feel their economies are providing the necessary infrastructure and regulatory support to engage in international commerce effectively.

Similarly, in Question 30, 48% of respondents agree that policies or initiatives in their Economy support women-owned businesses. This reflects a positive view of the efforts made to encourage and support women-owned enterprises. The alignment of these responses with those of Question 29 suggests a consistent

recognition of supportive measures across different aspects of trade and entrepreneurship.

In Question 31, more than half of the respondents, 51.3%, acknowledge that there are initiatives specifically supporting the development of women entrepreneurs. This suggests that many economies have dedicated programs aimed at fostering women's entrepreneurial growth. These initiatives are perceived as vital components in the broader ecosystem supporting women in business, helping them overcome unique challenges and barriers.

However, the perception of legal frameworks promoting gender equality in business is somewhat mixed. In Question 32, 51.3% of respondents agree that such frameworks exist. While this indicates that at least half of respondents recognize the presence of gender equality laws, it also highlights that a significant portion still feels these frameworks may be lacking or are inadequately communicated. This suggests a need for further improvements in establishing and promoting gender equality laws to ensure they are more widely recognized and effectively implemented.

Lastly, in Question 33, 43.2% acknowledge the existence of trade agreements that include specific provisions for gender equality. This shows that gender considerations are being integrated into trade policies, though further efforts may be needed to enhance these provisions and ensure they are robust and impactful.

Overall, the insights from the survey responses indicate a generally positive perception of public policies and initiatives supporting women in trade and entrepreneurship. There is a clear recognition of the supportive measures in place, particularly those facilitating trade and promoting women-owned businesses. However, the mixed responses regarding legal frameworks for gender equality and specific provisions in trade agreements highlight areas where further improvements and clearer communication are necessary. Strengthening these aspects can enhance the effectiveness of public policies in promoting gender equality and supporting women entrepreneurs in international trade, leading to more equitable and sustainable economic growth.

Chart 28. Public Policies Related Questions (Q29 to Q33)

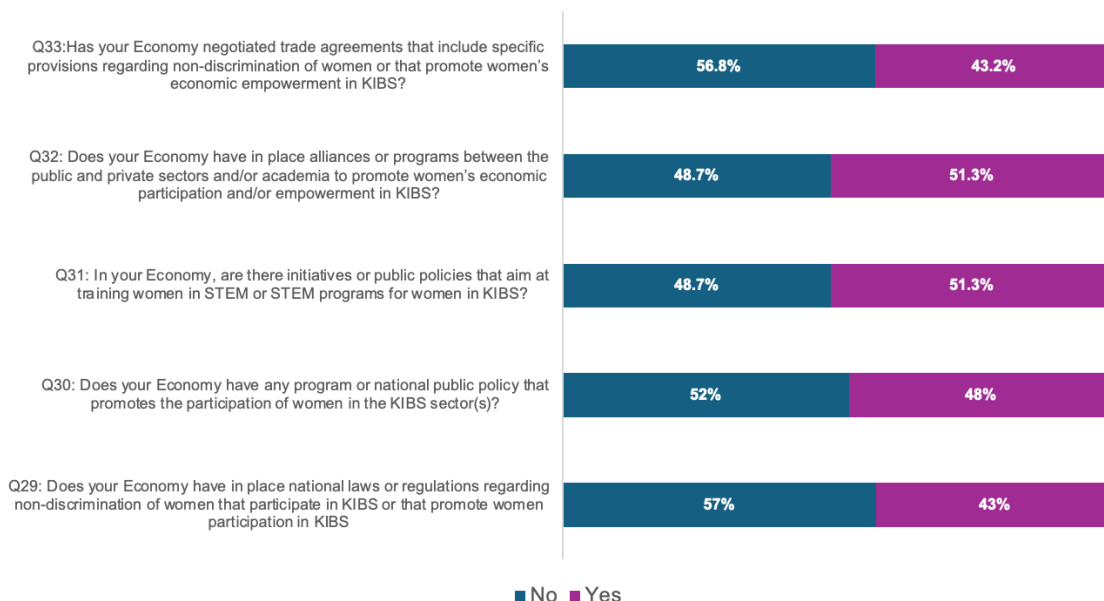


Chart 29. Survey Response Dynamics

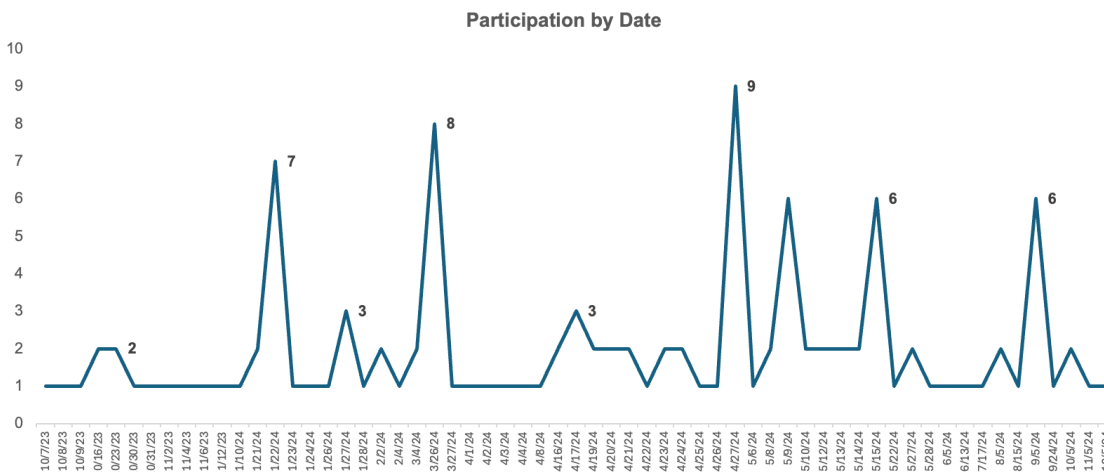


Chart 29 reveals periods of high activity where a significant number of responses were submitted, as well as days with no responses. On average, there were approximately 13 responses per month and 0.4 responses per day.

List of abbreviations

Acronym or abbreviation	Description
APEC	Asia-Pacific Economic Cooperation
ASEAN	Association of Southeast Asian Nations
CBPR	Cross-Border Privacy Rules
DEPA	Digital Economy Partnership Agreement
CRM	Customer Relationship Management
DS	Digital Services
DTRI	Digital Trade Restrictiveness Index
DTRR	World Bank Report on Regulation of Digital Trade, Key Policies, and International Trends
ECIPE	European Centre for International Political Economy
JSI	WTO Joint Statement Initiatives
KIBS	Knowledge Intensive Business Services
MRA	Mutual Recognition Agreements
OECD	Organization for Economic Co-operation and Development
PA	Pacific Alliance
RTA	Regional Trade Agreement
SME	Medium-Sized Enterprises
STRI	OECD Digital Services Trade Restrictiveness Index
UNCITRAL	United Nations Commission on International Trade Law
WTO	World Trade Organization