



Technical and statistical report

The impact of non-tariff measures on women's e-commerce businesses in developing countries



United Nations



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Introduction

E-commerce reshapes global trade, and helps in diversifying its scope and geographical reach, especially for firms in developing countries. The boom in e-commerce has raised new hope in digitalization as a way of promoting inclusive development and gender equality (UNCTAD, 2022a). This is because e-commerce presents many opportunities for women's economic empowerment, especially through supporting business growth and diversification in their roles as entrepreneurs (UNCTAD, 2023a).

E-commerce can ease women entrepreneurs' entry into trade by lowering some of the supply-side barriers that are more severely experienced by women, particularly in terms of access to finance, to business networks and market opportunities. E-commerce can reduce the need for initial investment to begin operations, can help increase the number of customers by making it easier to reach distant markets, and can lower market entry barriers by providing an ecosystem of services through e-commerce platforms. It also provides more time flexibility than traditional modes of trade, which is a

critical aspect for women who face the double burden of combining paid work with unpaid work (UNCTAD, 2023a).

At the same time, benefits from e-commerce are not automatic. While e-commerce may offer increased market reach and efficiency, realizing these benefits requires overcoming numerous barriers, including complying with requirements and standards in destination markets, managing digital payments effectively, and coping with fierce competition, among others. Moreover, persisting gender gaps in the society and the economy and supply-side constraints such



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as reduced access to finance, productive resources and business networks, low levels of education and skills, and time poverty, continue to put women entrepreneurs at a disadvantage also in e-commerce. Digital gender divides, especially in the LDCs, and negative gender stereotypes add to the difficulties that women entrepreneurs face while entering and participating in e-commerce (UNCTAD, 2023a).

Non-tariff measures (NTMs) refer to rules, regulations, and mandatory standards applied to international trade with the aim of preserving legitimate policy objectives such as protecting the environment, ensuring consumer safety, health, and wellbeing. While NTMs are *de jure* considered gender-neutral, they often have different implications on men and women due to the gendered supply-side constraints, as summarized above (UNCTAD, 2022c). In online trade, as well as in offline trade, the process of complying with NTMs may be more burdensome for women than it is for men because of pre-existing gender gaps, compounded with factors related to firm

size, exporters' capacities, the economic sector in which businesses operate, and the accessibility of support systems, among others (Suominen, 2018; UNCTAD, 2022c; OECD, 2019). Recognizing the gendered effects of international trade rules is crucial for fostering an environment where women-led businesses can benefit from e-commerce opportunities.

While the use of external support services can mitigate some of the costs associated with NTMs, comprehensive solutions are needed to ensure that women-led and women-owned enterprises engaged in e-commerce can realise their potential as exporters. The gender implications of NTMs have been investigated in the context of trade in general, as will be summarized in the forthcoming sections. However, the implications of NTMs for women entrepreneurs engaged in e-commerce have not been explored sufficiently. This study aims to fill this gap and present a review of the implications of NTMs for women-led and women-owned enterprises engaged in e-commerce.





1. E-commerce firms in the global economy

Cross-border e-commerce transactions are an important channel through which the digital economy is increasingly contributing to global trade (box 1). E-commerce also creates new opportunities for women in developing countries. Women-led firms stand to make important contributions to development by driving increased trade. Enhanced engagement with international markets, in turn, expands these firms' potential for growth and access to other benefits from engagement with new customers and partners. As such, women's deeper involvement in e-commerce can drive inclusive growth that supports women's economic empowerment. However, gender-based barriers to entrepreneurship and engagement with digital technologies (e.g. women's limited access to the internet, lack of education and skills needed for e-commerce, limited access to finance for starting a business) mean that women-owned businesses are often left behind. These firms are often smaller and have fewer

capacities to comply with market access and other rules on exporting, limiting their potential to grow and benefit from engagement with international markets.

1.1. Global e-commerce

A large and rapidly growing share of economic transactions is ordered and/or delivered online. Total e-commerce sales – including both domestic and cross-border transactions – around the world were estimated to be worth USD 26.7 trillion (about 30 percent of global GDP) in 2019, most of which (81.7 percent) was business-to-business (B2B) e-commerce (UNCTAD, 2021a; UNCTAD, 2023c). Of course, global growth in online sales was boosted by the COVID-19 pandemic. Total online business-to-consumer (B2C) sales – which are smaller than the B2B market – in seven large economies increased from 16 percent in 2019 to 19 percent in 2020. While e-commerce is growing rapidly around the world, the vast majority of

E-commerce can create opportunities for women in developing countries

to contribute to trade and economic growth. Yet, gender-based barriers such as limited access to finance, skills, and ICT infrastructure still hinder their full participation and benefits from e-commerce.





Box 1 Definitions of e-commerce and digital trade

Discussions of e-commerce are complicated by the lack of standard definitions of its scope and of standard measurements in official statistics. National definitions and approaches to measurement can vary on some points, and statistics on these activities are limited or non-existent in many countries (UNCTAD, 2023c). The definitions used by international organisations also vary in important ways. The WTO Work Programme on E-Commerce defines e-commerce as the “production, distribution, marketing, sale or delivery of goods and services by electronic means”. A narrower definition used by the OECD designed to facilitate measurement includes only goods or services ordered over computer networks by specifically designed means (OECD, 2011).

The Handbook on Measuring Digital Trade published jointly by the IMF, OECD, UNCTAD, and WTO (2023) defines digitally ordered trade as “the international sale or purchase of a good or service, conducted over computer networks by methods specifically designed for the purposes of receiving or placing orders”. Digitally ordered trade is, therefore, identical to cross-border e-commerce as defined by the OECD definition, with a focus only on transactions where the buyer and seller are resident in different economic territories.

Digitally ordered trade is one component of “digital trade” defined as “all international trade that is digitally ordered and/or digitally delivered”. Digital trade therefore includes imports and exports of goods and services ordered via ecommerce as well as international services trade transactions delivered over computer networks (IMF, OECD, UNCTAD, and WTO, 2023). As the focus in this report is on the gender impact of non-tariff measures, which affect only trade in goods, the Handbook’s definition of digitally ordered trade guides the analysis herein and is listed in the last column of table 1, which presents a comparison of different definitions of e-commerce and digital trade as outlined above.

Table 1
Comparison of elements included in selected definitions of e-commerce and digital trade

Activity	WTO (e commerce)	OECD (e commerce)	IMF, OECD, UNCTAD, WTO (digitally ordered trade)	IMF, OECD, UNCTAD, WTO (digital trade)
Online order through specially designed means	✓	✓	✓*	✓*
Delivery through electronic means	✓			✓*
Not ordered or delivered online, but involving electronic production	✓		
	... distribution	✓		
	... marketing	✓		

Note: * Refers to international transactions.

Source: UNCTAD’s compilation.

e-commerce sales remain domestic and the extent of ecommerce varies widely between countries (UNCTAD, 2021a).

While digitalisation generally and e-commerce in particular have the potential to contribute to development, these

opportunities are often under-exploited (UNCTAD, 2019a). Consumers in lower-income countries are less likely to purchase goods and services online. Not only is Internet use lower in many of these countries as a result of the higher cost of access and



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limited digital skills, but trust or interest in electronic transactions appears to be lower as well. Although social media can itself be a channel for selling online, individuals' propensities for social network use have far exceeded those for online purchasing in several developing countries. This suggests that factors beyond Internet access barriers limit participation in e-commerce (UNCTAD, 2017). Nevertheless, businesses in some developing countries, such as Mauritius, India or Ecuador, have demonstrated strong participation in e-commerce (figure 1).

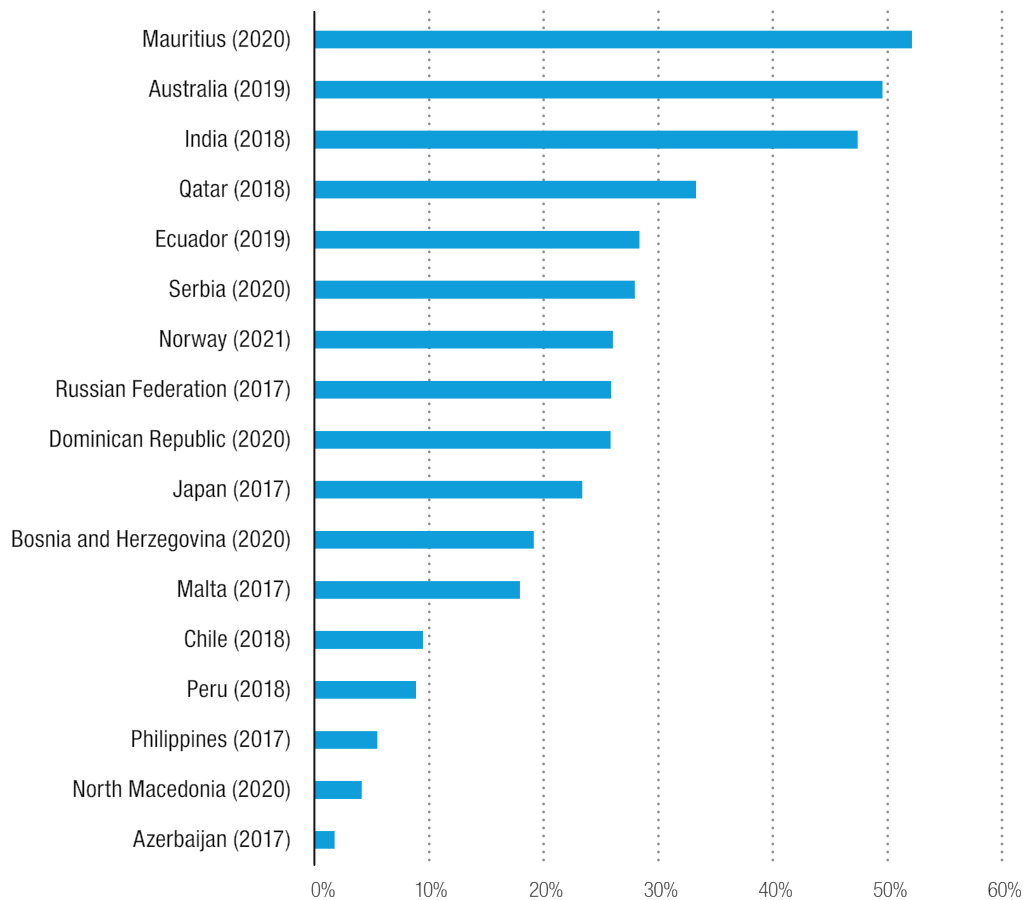
E-commerce is an avenue for Micro, Small and Medium-sized Enterprises (MSMEs) to overcome barriers to international trade by reaching customers at much lower costs. Additionally, MSMEs with high Internet and technology usage grow faster than those without, and e-commerce exporter MSMEs have a higher survival rate (60 percent – 80 percent) than traditional businesses (30 percent – 50 percent) in their first year of business. However, there are some obstacles to doing so, such as the logistics of shipping a good or delivering a



Figure 1

Businesses in developing countries show strong participation in e-commerce

Percentage of businesses receiving orders over the Internet in selected countries



Note: The figure includes the most recent year for all countries for which data is available between 2017-21.

Source: UNCTAD (n.d.), UNCTADstat. UNCTAD. Geneva. <https://unctadstat.unctad.org>.



service, ICT security and data protection, as well as payments issues (ITC, 2016a; UNCTAD, 2023a). Significant investments are required in skills development and connectivity - in order to realise the potential offered by the digital economy and reach all segments of the population. Therefore, developing countries – especially the least developed countries (LDCs) – are still poorly prepared to engage in and benefit from e-commerce (UNCTAD, 2022b). The leading global online platform, e-commerce, digital solutions, and digital content firms are concentrated in developed countries, and especially in the United States (US) (Trentini, de Camargo Mainente, & Santos, 2022). Specifically, out of the top 100 digital MNEs identified by UNCTAD in 2021, 59 are headquartered in the United States and only seven have their headquarters outside of high-income-economies (four in China and one in each of Argentina, South Africa, and Mexico) (Trentini, de Camargo Mainente, & Santos, 2022).

1.2. Women-led e-commerce firms

With the right support for small businesses, digital technologies can contribute to improved inclusiveness within societies. Indeed, the potential for these technologies to contribute to improved gender equality is recognised in the Sustainable Development Goals.¹ The benefits offered by digital technologies for MSMEs – many of which are run by women – can help support inclusiveness by reducing the costs of entry and growth. E-commerce can facilitate a firm's reach into new markets and cut operational costs by reducing the need for physical points of sale. While online transactions involve new forms of gender-based risks and biases (e.g. digital bullying and harassment), online transactions may also help women to overcome gender-based mobility constraints and discrimination (UNCTAD, 2023a).

The use of digital technologies may also allow for flexible modes of work that better suit women (Thystrup, 2018). Indeed, a study among women entrepreneurs participating in e-commerce in Africa shows that women cite “flexibility” and “supplementing existing income” as key benefits of selling online to a greater extent than men. This points at the role of e-commerce in overcoming the barriers to women's female labour force participation (IFC, 2021). However, it should be noted that there is an inherent danger of reinforcement of established gender stereotypes and roles resulting from this flexibility offered by e-commerce to women entrepreneurs (ITC, 2023). Several factors hold women-led e-commerce firms back from reaping the full benefits of e-commerce (UNCTAD, 2023a). For example, female entrepreneurs often face discriminatory legal norms and gender stereotypes in starting and expanding a business, have limited access to business skill development opportunities, finance and other forms of assistance, as well as to business networks (UNCTAD, 2022a; European Commission & OECD, 2018; UNCTAD, 2014a). These pressures are more severely experienced in developing countries than in developed countries. Firms selling online are not immune from these pressures (UNCTAD, 2023a).

While infrastructure and many logistical challenges are universal to both men and women, women experience certain supply-side constraints more severely than men. Access to finance is a major barrier for women-owned e-commerce businesses as it is the case for women entrepreneurs in general (ITC, 2023). For example, women-owned MSMEs were twice as likely during the COVID-19 pandemic to have their loan applications rejected than their male counterparts. Women entrepreneurs were, on average, granted smaller loans, as well. Public procurement is another area in which women-owned businesses face barriers in accessing (ITC 2023).

¹ In particular, Target 5.b calls for the enhanced use of ICT in promoting the empowerment of women, as measured proportion of the population owning a mobile telephone by sex.



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In addition to factors common to both online and offline trade, women's limited access to the Internet and endowment of fewer ICT skills, especially in developing countries, create additional pressures for women-led e-commerce firms. Globally, 57 percent of women use the Internet, compared to 62 percent of men. This gap is higher in lower-income economies, while it is almost closed in both upper-middle and high-income countries, according to 2022 data (ITU, n.d.). Gender gaps in Internet use are both a cause and consequence of skills gaps. Both Internet use and access to other opportunities for skill development are linked to gender inequalities in access to education, economic life as well as gender norms and stereotypes that lead to men's dominance in these areas (EQUALS & UNESCO, 2019). Combined with other barriers to firm growth and internationalisation, skill gaps thus represent one of the important elements of the compounded disadvantages facing female entrepreneurs in the digital economy (UNCTAD, 2023a).

Gender gaps in connectivity, especially in Africa and South-East Asia, reduce logistical capacity, and create difficulties with online payment and consumer engagement for women e-commerce entrepreneurs (ITC, 2023). While being an opportunity for e-commerce, online payments may also create a barrier due to security and privacy risks with which women have harder time to deal with due to their low digital skills. There is also a power imbalance between major e-commerce platforms and MSMEs, among which women concentrate. In terms of security, women and girls are more prone to online harassment, bullying, cyberstalking. Artificial intelligence and machine learning technology, which are used by e-commerce platforms for a wide range of decision-making processes, may lead to unfair decisions made towards

people of a certain gender, ethnicity, religion, or geographic location (ITC, 2023).

The effects of gender gaps in ICT access and use on women's participation in the digital economy are most visible in employment statistics. Women tend to account for a smaller share of total employment in digital sectors in the developed countries that regularly track this data. In 2022, women accounted for just 18.9 percent of ICT specialists in the European Union according to Eurostat.² And in the same year, women were only 26.7 percent of those employed in computer and mathematical occupations in the United States according to the Bureau of Labour Statistics.³ Developing countries face similar imbalances, which constrain their growth prospects and hinder inclusiveness. An estimate from 2022 suggests that gender gaps in the digital economy result in a reduction of USD 1 trillion in the GDP of low- and middle-income countries over the previous decade (UN Women & UN DESA, 2022).

Limited access to finance, business networks, and skill development programmes as well as relatively low levels of ICT skills put female entrepreneurs at a disadvantage in starting online businesses and exporting. This in turn prevents firms from benefiting from trade opportunities (e.g. high growth prospects, trade-induced technical change). There is not internationally comparable, sex-disaggregated statistics on e-commerce firms engaged in international trade. However, an indirect measure of e-commerce firms engaged in trade could be developed from the World Bank's Enterprise Survey as businesses that export directly and have their own website. According to this measure, the gender gap is considerable. Across the 71 countries covered by the World Bank's Enterprise Survey between 2018 and 2022, women

According to World Bank data, **women own on average only 10 percent of exporting firms with websites.**

2 Data Browser: Employed ICT specialists by sex: available at https://ec.europa.eu/eurostat/databrowser/view/isoc_sks_itcps/default/table?lang=en.

3 Labor Force Statistics from the Current Population Survey. Available at: <https://www.bls.gov/cps/cpsaat11.htm>.





Women-owned exporting firms with websites have fewer full-time employees and lower revenues, particularly in developing countries.

owned only 10 percent of exporting firms with their own websites on average.⁴

Firm-level surveys conducted by Nextrade in Indonesia, Kenya, Mexico, Nigeria, South Africa and the United States suggest that the gender of the owner does not make a difference in terms of the ability to use e-commerce and digital technologies as well as to benefit from e-commerce in the form of higher revenues and export opportunities for firms of similar size, technology and human capital. According to these studies, firm size and geography instead play a critical role in explaining differences in e-commerce use and the degree of benefit accruing from e-commerce. For example, microenterprises and firms in rural areas are significantly less likely to use e-commerce than large firms and firms in metropolitan areas. To the extent that women concentrate in smaller and rural firms more than men, they are less likely to engage in e-commerce (Alliance for eTrade Development, 2021). Indeed, many women-led e-commerce operations in developing countries are run by the self-employed or as micro scale businesses in the business-to-consumer market. This makes these firms less resilient and adaptable to changing market conditions (Bamber & Startitz, 2016). For example, during the COVID-19 pandemic, a study of firms using Jumia, one of the largest e-commerce platforms in Africa⁵, found that women-owned firms saw a drop in sales of 7 percentage points compared to an increase of 7 percentage points for men-owned firms (IFC, 2021).

According to the World Bank's Enterprise Survey, among exporters with their own

websites, women-owned firms are on average considerably smaller than men-owned firms. These gender gaps – in terms of the number of full-time employees and revenues – are greater in developing countries than in developed countries (figure 2). It is also often the case that women entrepreneurs enter e-commerce to grow their existing firms while men entrepreneurs are more likely to start new businesses as e-commerce firms, as shown for entrepreneurs on a major platform in Africa (IFC, 2021). Similar findings were found for women e-commerce firms on a major platform in Indonesia and the Philippines. Women were also more likely than men to integrate selling on e-commerce platforms with social media platforms. These findings imply that women are more likely to use e-commerce platforms as a way of getting support and training to develop their businesses (ITC, 2023).

Barriers to women establishing and growing e-commerce firms similarly contribute to their disproportionate concentration in lower value-added sectors, including in e-commerce (ITC, 2016a; UNCTAD, 2023a). Women sellers active on Jumia – a largely B2C online marketplace – over Q1 2019 to Q3 2020, for example, were most active in beauty and perfume and clothes and accessories, and least active in electronics (figure 3). They also tend to be smaller, with lower revenues and fewer employees, than those owned by men. They tend to sell simple products with low profit margins and high competition (e.g. clothing, shoes, and cosmetics), and rely mainly on personal savings to start their businesses (IFC, 2021).

4 Using Enterprise Survey data allows for comparisons on firm characteristics and experience with trade to be made across a wide range of countries in recent years. The biggest limitation for the analyses conducted here is the lack of sufficient data directly concerned with firms' involvement in the digital economy. It is important to stress that firms with their own websites do not necessarily engage in e-commerce, the digital delivery of services, or other aspects of the digital economy. Likewise, it is possible that some firms that do engage in these activities do not have their own websites, such as those doing business through e-commerce platforms. Yet, having a website is a reasonable proxy for involvement in the digital economy. Of the 60,402 firms in the selected surveys, 11,337 had exported directly in the past year and had their own website, and so were included in these analyses. A similar approach is taken, for example by Lanz, Lundquist, Mansio, & Maurer (2018).

5 Jumia is active in Algeria, Egypt, Ghana, Ivory Coast, Kenya, Morocco, Nigeria, Senegal, Tunisia, and Uganda.

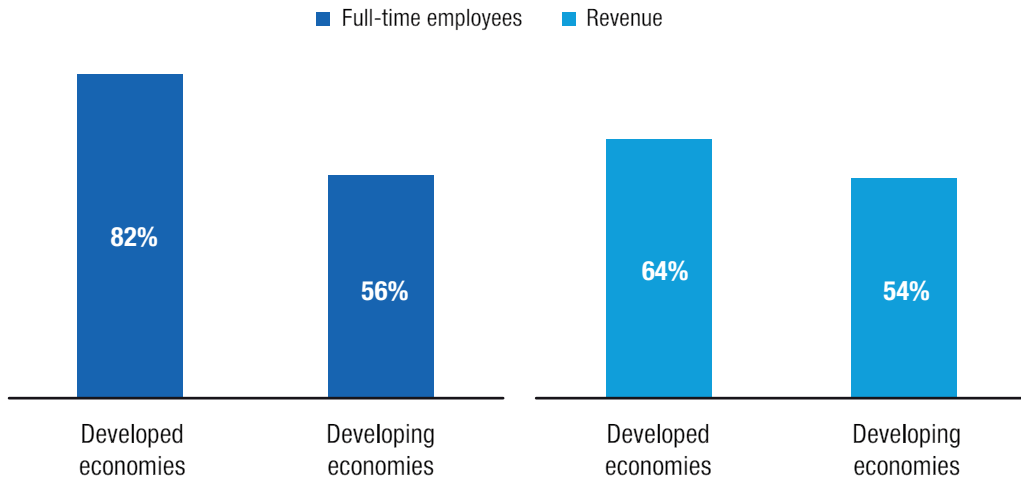




Figure 2

Women-owned exporting firms with websites have fewer full-time employees and lower revenues.

Ratio of the average value of each indicator for women-owned firms to that of men-owned firms



Notes: Country group averages were calculated using data (where available) from the 35 developed economies and 30 developing economies for which surveys were available in the 2018-22 period, weighted by their respective shares of their group's GDP in 2020. The samples include only firms that export directly and have their own website. Women-owned firms are defined as businesses with more than fifty percent female ownership. Country development levels were defined in accordance with UNCTADstat's country classification.

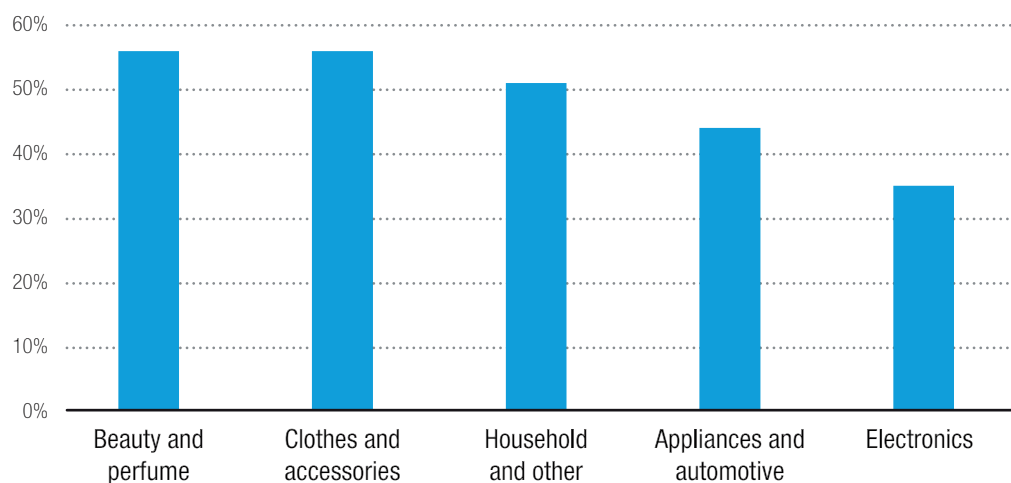
Source: UNCTAD's calculations, using World Bank (n.d.) Enterprise Surveys. World Bank. Washington, D.C. <https://www.enterprisesurveys.org>.



Figure 3

Women businesses active on Jumia are concentrated in less profitable product categories

Women-owned firms on Jumia by sector, Q1 2019 to Q3 2020 (as percent of all active sellers)



Source: IFC (2021). Women and E-commerce in Africa. IFC. Washington, D.C. <https://www.ifc.org/content/dam/ifc/doc/mgrrt/202105-digital2equal-women-and-e-commerce-africa.pdf>.





2. Non-tariff measures and online trade

While non-tariff measures are not applied differently to digitally ordered trade than they are to traditional cross-border trade, exporters engaged in e-commerce can experience NTMs differently than other exporters.

Non-tariff measures (NTMs) are trade policy measures, other than customs tariffs, introduced with the goal of reaching public policy objectives such as protecting public health, consumer safety, and the environment. NTMs are needed for ensuring product safety and quality for consumers while they also often bear high trade costs for trading firms in the form of high information, implementation, and compliance costs (UNCTAD, 2022c). NTMs become more burdensome for trading firms in the context of GVCs, which involve back-and-forth trade and cross-border just-in-time production (World Bank & WTO, 2020).

E-commerce businesses may experience NTMs differently from other firms because of distinct capacities, demand, and concentration by sector and product. While they may be better placed to benefit from the digitalisation of trade administration, they also need to manage complex rules on data regulation. Support offered by logistics providers and major e-commerce

platforms can help online exporters in managing some of these challenges.

2.1. NTM trends

Non-tariff measures affect prices and quantities traded through a range of technical and non-technical requirements including sanitary and phytosanitary (SPS) measures, technical barriers to trade (TBT), pre-shipment inspection and other formalities, contingent trade-protective measures – such as antidumping and countervailing duties, quotas and other control measures affecting the quantity of goods imported, price control measures, and export-related measures (UNCTAD, 2019b).

While the global use of tariffs has declined over the recent decades, the number and impact of NTMs has become increasingly important. In the ten years between 2013 and 2022, for example, the WTO members gave notification of the entry into force of

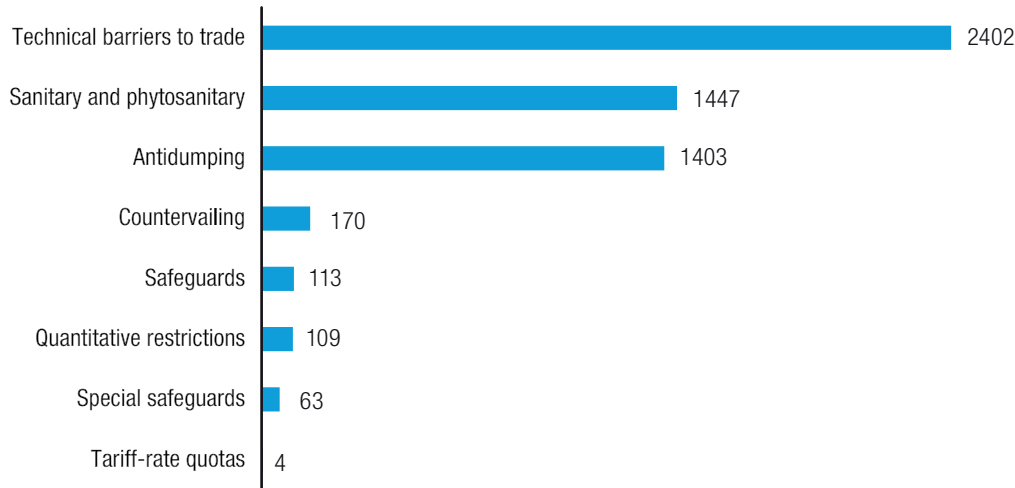




Figure 4

The number of NTMs notified by WTO members is increasing

Number of NTM notifications by the WTO members, 2013–2022



The number of NTMs notified by WTO members is increasing: between 2013 and 2022 the WTO members gave notification of the entry into force of 5,711 new NTMs.

Source: WTO (n.d.). I-TIP Goods. WTO. Geneva. <http://i-tip.wto.org/goods>.

5,711⁶ new NTMs, most of which were TBT, SPS, or antidumping measures (Figure 4).⁷

Some NTMs, such as import prohibitions and quotas, are trade restrictive by definition; other NTMs such as SPS and TBT might promote trade if they help in reducing information asymmetries between producers and consumers (Dolabella, 2020). NTMs are often imposed in pursuit of legitimate policy objectives. These measures can be effective in correcting for market failures by implementing requirements that protect the health and safety of consumers or protect the environment. As a result, NTMs can even support trade by increasing customer confidence in the quality and safety of imported products. For example, labelling and packaging requirements have been shown to have trade-enhancing effects for some agricultural goods (Gourdon, Stone, & van Tongeren, 2020).

NTMs can also distort trade, and may be implemented as protectionist measures to

reduce domestic producers' exposure to international competition. There are three major kinds of costs for firms associated with NTMs from an economic perspective (Shepherd & Peters, 2020): i) a direct compliance cost of producing compliant goods for another market, ii) an indirect cost of demonstrating compliance through testing and certification, iii) an indirect time cost resulting from the need to produce paperwork and demonstrate compliance to border officials. It could be also argued that an additional type of burden on firms would involve the opportunity cost resulting from complying with the NTMs applied in each country. Firms specializing in meeting such requirements may lose market opportunities in other countries.

According to a report by ESCAP and UNCTAD, the total economic cost of technical NTMs (i.e. TBT and SPS measures) has been estimated at up to USD 1.4 trillion, or 1.6 percent of global GDP (ESCAP & UNCTAD, 2019).

6 This figure does not consider that some measures introduced are replacing old ones, in the form of legal amendments.

7 The UNCTAD TRAINS online database offers global standardized data on NTM across countries. This database enables computations of statistics on use of NTM and covers multiple years. While technical regulations were imposed on almost 37 percent of tariff lines in 1999, the equivalent figure for 2010 was over 50 percent (UNCTAD 2013). After 2012, the NTMs classification was updated by UNCTAD and several international organisations, and statistics were made more precise.





Firms engaged in e-commerce are distinctly exposed to NTMs and are also affected by digitalisation in trade facilitation and new trade-related measures on cross-border data flows.

Distinguishing between legitimate and protectionist measures is complicated and those measures can have negative effects on trade regardless of the declared intentions for their use. Additionally, the difference between NTMs and procedural obstacles needs to be distinguished as the latter results from practical challenges, such as long delays in testing or certification, inadequate facilities, lack of adequate information on regulations, or infrastructural challenges, and not from the NTMs themselves (ESCAP, 2019).

The effects of different types of NTMs differ by firm size and level of development of a country. The costs of compliance with NTMs are relatively higher for MSMEs than large firms, leading to a loss of market share for the former group of firms (Fugazza, Olarreaga, & Ugarte, 2018). This is mainly because smaller firms have higher incidence per transaction and less internal resources to deal with non-tariff measures such as labelling requirements, rules of origin, and product certification (ITC, 2019). There are several findings regarding the differential effects of NTMs on countries. For example, an analysis of 65 countries between 2001-2015 shows that the introduction of a new TBT affects low income and lower-middle income exporters the most (Dolabella, 2020). Another study shows that both SPS and TBT measures may negatively affect exports of LDCs (UNCTAD, 2014b). Other studies suggest that regional specialization can influence how countries are impacted by NTMs. For example, TBT measures negatively affect exports of Latin American countries while positively affecting exports of developed and other developing countries (which are more efficient in producing manufacturing exports for which TBT incidence is important). SPS measures instead negatively affect exports of developed and other developing countries while positively affecting exports of Latin American countries (which are more efficient in agricultural exports for which SPS measures prevail). Hence, NTMs may reinforce pre-existing comparative advantages and hinder export diversification

(Ferraz, Ribeiro, & Ritel, 2018). NTMs may also discourage the formalisation of informal cross-border trade that disproportionately involves women (UNCTAD, 2019c).

2.2. NTMs and the digital economy

While non-tariff measures are not applied differently to digitally ordered trade than they are to traditional cross-border trade, exporters engaged in e-commerce can experience NTMs differently than other exporters. Firm capacities, distinctions in demand, customer expectations, and sector and product concentration could result in differential effects of NTMs for exporters engaged in e-commerce.

First, easier access to multiple international markets may increase firms' exposure to NTMs. By trying to reach customers in several countries, exporters are exposed to a greater number of NTMs and other market access conditions that may impinge on the profitability and sustainability of these businesses. As exporters receive orders from all around the world, they experience legal and fiscal requirements (e.g. import duties and taxes, import licenses, import documentation requirements and foreign contracts) that are of greater variety and complexity (Cassia & Magno, 2022). Third-party e-commerce platforms can help firms reach customers in new markets and reduce the barriers to exporting for these firms through the platforms' rating systems, which help build consumer trust as well as through other services the platforms provide (e.g. payment system) (Wang, Cavusoglu, & Deng, 2016; Cassia & Magno, 2022). According to a study on Italian exporters in the food and beverage industry, IT capabilities have a significant and positive effect on cross-border e-commerce performance of MSMEs, and the use of third-party e-commerce platforms help even firms with a low level of IT capabilities to gain satisfactory cross-border e-commerce financial performance (Cassia & Magno, 2022). Another study, which analyses how joining a major e-commerce platform affects



the exports of Peruvian firms that participate, finds that export values increase by 17 percent on average as a result of joining the platform (Carballo, Chatruc, Santa, & Martincus, 2022). This impact appears to be more pronounced for small firms or firms without their own website or media accounts, and those that trade differentiated consumer products (for which information costs are high). These findings suggest that the support offered by major e-commerce platforms to firms (as discussed further in section 3.3) may help compensate for some of the NTMs-related costs faced by exporting MSMEs. It is therefore unclear whether or not, on balance, the use of e-commerce platforms by MSMEs increases their exposure to NTMs.

Second, delays in clearing customs as a result of complex rules of market access may have a greater impact on e-commerce trade due to the time sensitive nature of e-commerce. This is mainly because consumers demand quick delivery times in this downstream package delivery business environment, which requires robust supply chains and flexible and efficient logistics networks in order to compete with physical stores (Hulia, 2019). Costs and delays associated with customs procedures (e.g. requirements to pass through a specific point of entry for SPS and TBT testing) slow down the import clearance process (Ferrantino, 2012).

Third, shipping directly to customers means that e-commerce exports are often in the form of small consignments, which affects other aspects of market access such as tariff concessions. For example, a low value of allowable small parcels (*'de minimis'* value) with zero tariffs discourages e-commerce. As a result, recent trade agreements include higher *de minimis* values to boost e-commerce exports (Pasadilla, 2020).

In addition, because the sectoral and product structure of e-commerce exports is different from that of traditional exports, the implications related to NTMs may also be different for e-commerce exporters from

that of traditional exporters. For example, NTMs are more widespread and significant in agriculture than in other sectors such as manufacturing. Among manufactured goods, however, the *ad valorem* equivalent of NTMs is the highest in apparel, motor vehicles, electrical machinery, communication equipment, and wood and paper (World Bank & UNCTAD, 2017). Therefore, the overall effect of e-commerce firms' exposure to NTMs depends on the structure of e-commerce exports.

In addition to being distinctly exposed to NTMs, firms engaged in e-commerce are also particularly affected by digitalisation in trade facilitation and new trade-related measures imposed on cross-border data flows (e.g. data privacy and protection measures). While the former is likely to ease trade burdens for digitally literate firms, the latter may create both new regulatory burdens and opportunities for businesses that operate online.

Trade facilitation initiatives to support e-commerce include the adoption of measures that reduce administrative costs for exporters with digital capabilities and help customs agencies in adapting to the processing of increasing numbers of low value packages. Digital trade facilitation measures include electronic trade administration documents, electronic transferrable records, customs procedures, enhanced trade facilitation, *de minimis*, single windows data exchange and system interoperability, electronic availability of trade-related information, and the use of technology for the release and clearance of goods. The use of digital tools to reduce administrative costs in trade is embraced in the WTO Agreement on Trade Facilitation's articles on topics including the publishing of information, pre-arrival processing, electronic payment of duties and other charges, submission of supporting documents, and customs cooperation.⁸ Firms with access to digital technologies and the skills to make use of them are best placed to benefit from such digital trade facilitation measures (Sorescu & López González, 2019).

8 WTO (n.d.). Trade Facilitation. WTO. Geneva. https://www.wto.org/english/tratop_e/tradfa_e/tradfa_e.htm.



The impact of non-tariff measures on women's e-commerce businesses in developing countries

Although sometimes considered to be beyond the scope of traditional trade rules, measures on data regulation are increasingly shaping online international transactions. Established in order to protect citizens, enhance national security, or promote economic development, policies on cross-border data flows, data privacy and protection, cybersecurity, content blocking, and a range of other initiatives relevant to digital trade have sometimes been referred to as the “new NTMs” (Pasadilla, Duval, & Anukoonwattaka, 2020). Data governance, competition, and content moderation were among the areas most commonly impacted by these measures (figure 5).

Policies and regulations in these areas can be especially, though not exclusively, relevant to exporters of digital goods and digitally enabled services (OECD, 2019). Even businesses selling physical products are affected by such rules regarding where and how their products are made available,

data collection requirements on customers, and digital payments and validation systems. Data privacy and localisation rules are among the most important barriers to trade identified by small women-led e-commerce firms (Suominen, 2018). Rules on data and data flows also vary considerably around the world. This lack of harmonisation raises compliance costs for firms, with especially strong impacts on small businesses (UNCTAD, 2021b). Increasingly, regional trade agreements are tackling these topics with provisions related to the policy factors that act as enablers of e-commerce (Hsieh, 2022).

2.3. NTMs and services in support of trade in goods

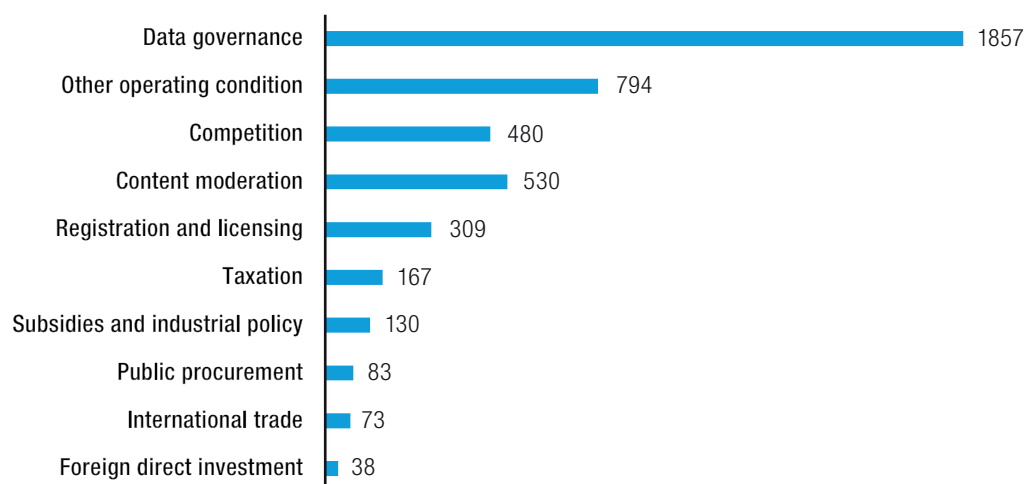
Exporters engaged in e-commerce often rely on external sources of assistance, such as providers of logistics services and



Figure 5

The “new NTMs” are increasingly shaping online international transactions

Policy or regulatory changes affecting cross-border digital commerce by impacted policy area, 2020 to 2023 Q2 (number of policy or regulatory changes).



Note: Individual policy measures may affect multiple policy areas.

Source: Global Trade Alert (n.d.). Digital Policy Alert. Global Trade Alert. St. Gallen. <https://www.globaltradealert.org/digital>.



The impact of non-tariff measures on women's e-commerce businesses in developing countries

e-commerce platforms, in overcoming the challenges of compliance with NTMs and other challenges involved in cross-border trade. Logistics firms providing delivery services are critical because of their role in linking suppliers to customers and markets. E-commerce firms beginning to export or those that do so on a limited scale and to a small number of countries may find it more efficient to manage trade compliance internally, seeking information and guidance from e-commerce platforms and other sources such as government institutions (UNCTAD, 2017).

More export-oriented e-commerce firms outsource at least some of the administrative tasks involved in customs compliance, including the payment of duties and taxes, to brokers or logistics providers that offer customs brokerage services.⁹ The efficacy of trade-related logistics services depends on

the country context and the quality of those services rank low in lower income countries (table 3). This would affect e-commerce exporters adversely as well given that lack of access to cost-effective logistics, in addition to poor access to payment solutions and limitations in firm-level capacities, are among the critical barriers to MSMEs engaging in cross-border e-commerce (ITC, 2017).

The use of e-commerce platforms may increase firms' exposure to NTMs as they start exporting to multiple countries at the same time, as discussed in section 2.2. However, these platforms offer an ecosystem of services, including marketing tools, payment services and logistics that lower barriers to entry, especially for small businesses (UNCTAD, 2023a). Box 2 presents an overview of these services relevant for MSMEs' participation in e-commerce.



Table 3
Bilateral Logistics Performance Index (LPI) assessments by country income group, 2023

		Assessed country			
		High income	Upper middle income	Lower middle income	Low income
Respondent's country	High income	3.7	2.7	2.4	2.0
	Upper middle income	3.7	3.0	2.6	2.5
	Lower middle income	3.8	3.2	3.1	2.3
	Low income	4.3	4.2	3.4	2.9

Note: The Logistics Performance Index scores countries in terms of trade- and transport-related infrastructure, customs and border management, logistics services quality, timeliness of shipments, ability to track and trace, and the availability of competitively priced international shipments on a scale of 1 (low) to 5 (high).

Source: World Bank (2023). Connecting to Compete: Trade logistics in the global economy. World Bank, Washington, D.C. https://lpi.worldbank.org/sites/default/files/2023-04/LPI_2023_report.pdf.

⁹ Exporters with a significant interest in particular markets may consider less flexible arrangements such as shipping to a third-party warehouse and fulfilment service or establishing an officially registered local presence from which deliveries can be made quickly to customers. At a sufficient scale, this approach can also help to reduce the cost of complying with trade rules and ease the management of returned items (ITC, 2021).





Box 2

Services offered by e-commerce platforms

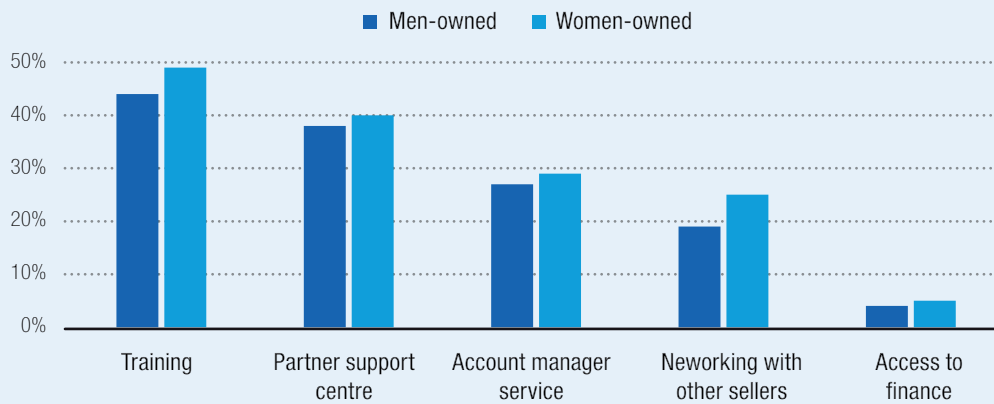
E-commerce platforms offer complementary services for firms that trade on their platform. These services include fulfilment, logistics, customer service and software-as-a-service (SaaS) offerings. The services provided by platforms benefit MSMEs disproportionately as they would otherwise require high upfront investment (OECD, Unpacking e-commerce: Business models, trends and policies, 2019).

Several major platforms have also moved into providing logistics services, making significant investments in last-mile delivery from warehouse to customer. While this can help overcome logistics challenges in developing countries, these services can still be affected by infrastructure, payments, and other common constraints (Hulia, 2019). A number of platforms work with MSMEs, financial institutions and non-traditional sources of finance to improve access to the kinds of support they need. Some of the larger marketplace platforms offer financial services including loans, payment services, and trade financing directly to businesses selling on their sites (OECD, 2021). These services are particularly important for small firms, among which women concentrate. Indeed, women-led e-commerce businesses find the services provided by e-commerce platforms more helpful than men-led firms according to a survey among sellers in Indonesia and the Philippines using Lazada, a subsidiary of Alibaba Group and one of Southeast Asia's largest e-commerce platforms (figure 6).

Figure 6

Services provided by e-commerce platforms considered more helpful by women's businesses than men's businesses

Lazada services that sellers found most helpful in past 12 months by owner's gender (percentage of sellers)



Source: IFC (2021). Women and E-commerce in Southeast Asia. IFC. Washington, D.C. <https://www.ifc.org/content/dam/ifc/doc/mgrt/202105-digital2equal-women-and-e-commerce-southeast-asia.pdf>.

At the same time, succeeding on e-commerce platforms can be difficult for smaller businesses. They face challenges and risks in their use of major platforms, especially where algorithmic price setting and search distorts competition. This may be further complicated where platforms sell products directly in competition with those of hosted firms (Khan, 2017). Firms may also face direct and indirect costs from switching platforms or multi-homing after they have established themselves on a particular service (OECD, 2021). Deciding whether to use a platform and which to use is therefore a strategic decision for a small business starting or moving online (Cassia & Magno, 2022). Platforms can assist new sellers with onboarding that offers assistance in pricing, target markets, and after-sale processes, along with logistics and market access issues (Alliance for eTrade Development, 2021). Governments have implemented policy responses that include protections for small sellers on online marketplaces, such as the European Commission's Digital Single Market Initiative or the national e-commerce policy being developed by India's Ministry of Commerce and Industry (Singh, Munjal, Kundu, & Rangarajan, 2023).





3. Gender and NTMs in the digital economy

NTMs, like other areas of trade policy, are not gender neutral even though they are designed to have gender-neutral objectives. This is because women face supply-side constraints (e.g. limited access to resources and information, lack of skills and education, time poverty, mobility and security constraints) to a greater extent, making it more difficult for women to comply with technical regulations or standards than men; these constraints are deeply rooted in gendered social structures specific to a country or sector (UNCTAD, 2022c). Sections 2.2 and 2.3 discussed the implications of NTMs for e-commerce firms. This section presents an overview of the potential challenges and benefits of NTMs for women-owned e-commerce firms, as outlined in table 4.

3.1. Challenges resulting from NTMs for women-led e-commerce firms

Inequalities in e-commerce participation result from pre-existing inequalities along various dimensions such as gender, age, education, income, rural-urban divide, etc. and go beyond e-commerce itself. These conditions may manifest themselves in the form of low connectivity, a lack of digital skills, low levels of trust or a lack of viable payment options in the context of e-commerce (OECD, 2019; UNCTAD, 2023b). Therefore, we first discuss the overall gender implications of NTMs common to both offline and online trade and then discuss issues peculiar to e-commerce.

Women-owned businesses engaged in e-commerce, especially smaller and less digitally capable ones, face higher regulatory compliance burdens than men-owned businesses, particularly in sectors with prevalent NTMs like agriculture and textiles





Table 4
Overview of gender issues related to NTMs affecting e-commerce exports

Causes of higher NTM compliance costs on women-led firms	Firm capacities
	<ul style="list-style-type: none"> • Reduced capacities due to smaller firm size and time and mobility constraints • Skill gaps
	Sector concentration
Potential sources of positive impacts on women-led firms	<ul style="list-style-type: none"> • Heightened exposure to NTMs • Greater time sensitivity in delivery
	Access to support
	<ul style="list-style-type: none"> • Less access to information and assistance • Lower rates of using major platforms
Potential sources of positive impacts on women-led firms	Sector concentration
	<ul style="list-style-type: none"> • Trade-enhancing effects of NTMs in some sectors
	Digital governance
Potential sources of positive impacts on women-led firms	<ul style="list-style-type: none"> • Cross-border effects of online protections against violence and harassment
	Digital trade administration
Potential sources of positive impacts on women-led firms	<ul style="list-style-type: none"> • Reduced exposure to discrimination and harassment

Source: UNCTAD's summary based on the analysis in the following sections.



Deeply entrenched gendered social structures specific to countries and sectors may result in higher trade compliance costs and barriers for women-led e-commerce firms.

There are high trade costs resulting from NTMs across several areas, which are experienced more severely by women-led businesses than men-led ones due to gendered supply-side constraints (UNCTAD, 2022c): i) information costs (accessing information and finding out the requirements for compliance); ii) compliance costs (meeting product requirements); iii) costs to demonstrate compliance (e.g. certification); and iv) indirect time costs (e.g. delays at borders). Women entrepreneurs may lack to a greater extent than men the necessary education and skills to learn about and fully understand the compliance requirements for their products. Even when requirements are understood, women may lack the necessary technical, productive, and financial resources needed for meeting product requirements and certification.

The burden of NTMs on firms engaging in international trade in general, is often related to procedures rather than regulations themselves. According to ITC Business

Surveys on NTMs, women-owned exporting firms report a higher share of procedural obstacles than men-owned firms, especially in information and transparency issues. For example, women can be discriminated against while applying for an export licence, resulting in the payment of a bribe or a delay in processing an export application (ITC, 2016b). A study of 33 large economies shows that export costs for women-led firms were on average 13 percent higher than for men-led firms (World Bank & WTO, 2020). A firm level analysis of 80 developing and transition countries shows that female-led exporters among MSMEs have a higher exporter productivity premium than male-led ones, pointing at greater export barriers for women, including those related to NTMs (Davies & Mazhikayev, 2021).

As discussed in section 2.1, small firms face higher barriers to exporting due to NTMs compared to large firms. This is mainly because compliance with NTMs lead to high fixed costs and MSMEs tend to trade

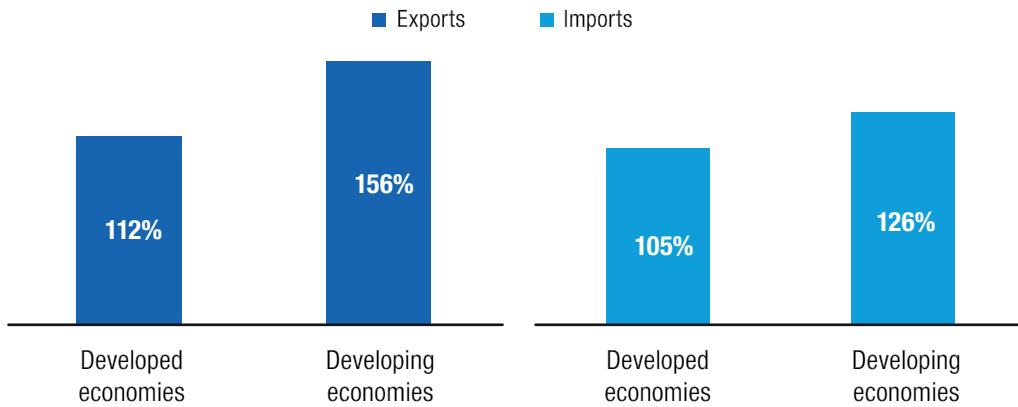




Figure 7

Women spend more time than their male counterparts clearing customs

Female-to-male ratio for the time spent by firms to clear customs for their exports and imports in the country of origin (percent)



Notes: Country group averages were calculated using data (where available) from the 35 developed economies and 30 developing economies for which surveys were available in one or more years during the 2018-22 period, weighted by their respective shares of their group's GDP in 2020. The samples include only firms that export directly and have their own website. Women-owned firms are defined as businesses with more than fifty percent female ownership. Country development levels were defined in accordance with UNCTADstat's country classification.

Source: UNCTAD's calculations, using World Bank (n.d.) Enterprise Surveys. World Bank. Washington, D.C. <https://www.enterprisesurveys.org>.

in small quantities resulting in a higher share of unit cost resulting from NTMs. Given that women-owned businesses tend to be smaller, these businesses tend to suffer from NTMs to a greater extent than men (ITC, 2015; ITC, 2019). Because of their size, the fixed costs of administrative processes and rules on cross-border data flows have a greater impact on smaller businesses (ITC, 2016a; UNCTAD, 2021b). As a result, smaller women-owned firms are likely to encounter more difficulties in complying with mandatory market access rules when they export (UNCTAD, 2023a).

This applies in advanced economies as well, where women are more prevalent in small businesses that tend to struggle in complying with NTMs because of procedural obstacles, fees, administrative burdens, and information and transparency issues (ITC, 2019). There is evidence that gender differences in the relationship between regulatory burdens and e-commerce firms' export performance become insignificant after controlling for firm size.

This points at the role of firm size as the primary channel through which women-led businesses face disadvantages in e-commerce (Suominen, 2018).

On the other hand, data from the World Bank Enterprise Survey, a major source of comparable firm-level micro data around the world, suggests that the burden of complying with regulations may affect women-led businesses to a greater extent than men-led businesses. The World Bank Enterprise Survey does not specifically ask firms about market access issues and compliance with product and process requirements and other trade rules in destination markets. However, it has questions about the difficulties faced in complying with firms' own countries' rules and procedures. For example, the time that women-owned businesses with websites spend for customs clearance is about 1,5 times that of men-owned businesses after arriving at their main point of exit from their country of origin. Similarly, the inputs imported by women-owned businesses

The time that women-owned businesses spend for customs clearance is about 1,5 times that of men-owned businesses.





Figure 8

Women are underrepresented among producers with internationally recognised quality certifications

The female-to-male ratio for the number of firms with internationally recognised quality certifications (percent)



Notes: Country group averages were calculated using data (where available) from the 35 developed economies and 30 developing economies for which surveys were available in one or more years during the 2018-22 period, weighted by their respective shares of their group's GDP in 2020. The samples include only firms that export directly and have their own website. Women-owned firms are defined as businesses with more than fifty percent female ownership. Country development levels were defined in accordance with UNCTADstat's country classification.

Source: UNCTAD's calculations, using World Bank (n.d.) Enterprise Surveys. World Bank. Washington, D.C. <https://www.enterprisesurveys.org>.

with websites take 126.6 percent of the average time of their male peers to clear customs (figure 7). Even when considering the size of the firm, women overall appear to be spending more time than their male counterparts to clear customs.

While customs delays result mainly from institutional factors related to customs processes, differences in firm capacities play an important role in explaining the observed gender gaps in customs clearance durations. There is evidence that the adverse effects of burdensome customs procedures can be greater on MSMEs than large firms, constraining or even preventing their involvement in international trade (WTO, World Trade Report 2016: Levelling the trading field for SMEs, 2016).

Women-led e-commerce firms lack skilled staff and managerial skills – a situation closely related to their small firm size – which limit their ability to deal with NTMs in export markets. This is because smaller firms are less able to hire specialised staff, invest in training, or purchase services from external sources. In addition to scale-based skills and expertise issues, girls and women's poorer access to education and training –

particularly in developing countries – can prevent them from following complex NTMs. For example, the literacy rate among women over 25 years old in least developed countries (LDCs) was just 59.2 percent in 2020, compared with 72.4 percent among men according to World Bank's World Development Indicators database.

Compliance with voluntary standards, which may offer higher prices for firm output or may be required by buyers, is challenging for the same reasons. Indeed, women are underrepresented among producers with voluntary standard certifications such as Fairtrade.¹⁰ Among exporters with websites, the number of women-owned firms that hold internationally recognised quality certifications is 93.3 percent that of men-owned firms in developing countries (figure 8).

The sectoral structure of exports has gender implications as the burden of NTMs differs by sector and gender segregation is prevalent in labour markets. Agriculture, food, textiles, and footwear are among the major sectors in which women entrepreneurs concentrate. The prevalence of NTMs is the highest in female-intensive

¹⁰ Fairtrade International (n.d.). Gender Equality. Fairtrade International. Bonn. <https://www.fairtrade.net/issue/gender-equality>.



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sectors, such as food, footwear, and vegetables, and the lowest in male-intensive sectors, such as machinery, minerals and fuel, and transportation. Hence, the burden of compliance with NTMs increases for women entrepreneurs simply by the virtue of the sectors they concentrate in. For example, the average number of NTMs applied per product is the highest in the food sector – a major sector for women entrepreneurs (UNCTAD, 2022c).

As highlighted in section 2.2, the *ad valorem* equivalent of NTMs is the highest in agriculture followed by apparel products in manufacturing. In Africa, for example, women-led e-commerce firms dominate the fashion category even though they start to enter higher value segments of e-commerce over time such as the electronics goods category (IFC, 2021). Women's strong presence in the online trading of apparel products implies that they have a higher burden of NTMs compared to men in the case of Africa. There is also evidence showing that the

incidence of NTMs is higher for products produced by poorer workers, among which women are overrepresented than men (UNCTAD, 2022c). Furthermore, the tendency for women-led firms to operate in consumer sectors may leave them more exposed to the challenges of e-commerce firms in navigating demand and customer expectations as discussed in section 2.2 (Alliance for eTrade Development, 2021).

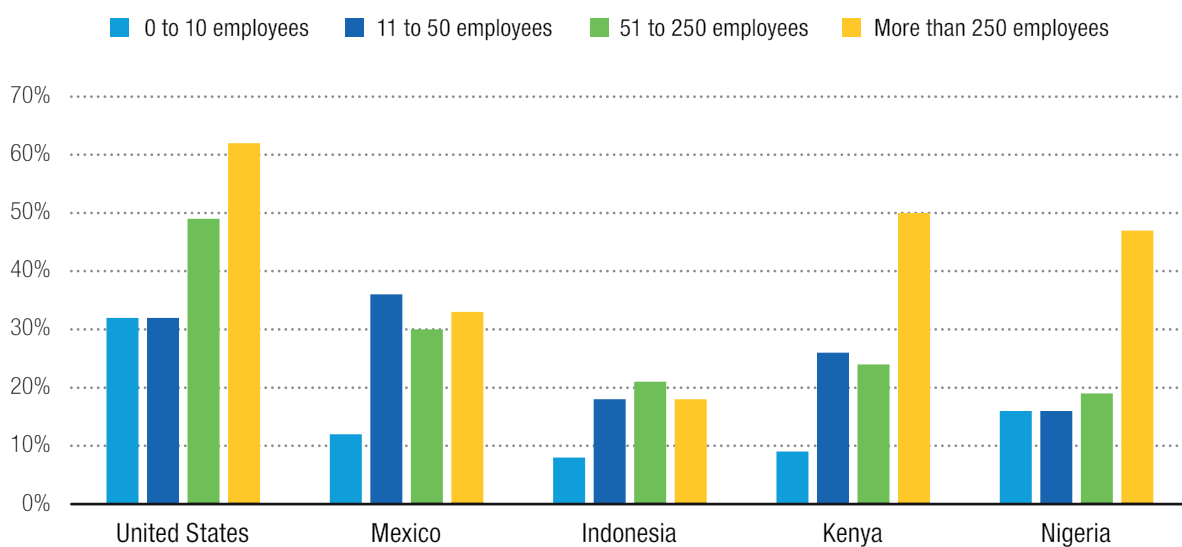
Gender gaps in access to support services to overcome the burden of NTMs (e.g. information sources) worsen women-owned e-commerce firms' disadvantageous position in the e-commerce sector. For example, according to a survey of Ugandan ICT firms, women-led firms cited male-oriented business culture and a lack of institutional support for women among the top explanations for the greater export obstacles they face (ITC & UEPB, 2019). Although e-commerce firms have improved access to information because of their digital capabilities, female entrepreneurs typically need to manage operating



Figure 9

Smaller women-led businesses are less likely to sell on global e-commerce platforms

Percentage of women-led e-commerce firms selling on global marketplaces in selected countries by size



Source: Alliance for eTrade Development (2021). Roadmap for Empowering Women-led Firms in Ecommerce and the Digital Economy. Alliance for eTrade Development. https://www.allianceforetradedevelopment.org/_files/ugd/478c1a_5df4888ac626485fb1b16f3cee8972c0.pdf.



difficulties in participating in trainings and less common membership in and contact with business support organisations as a result of time and mobility constraints and other factors (ITC, 2015; UNCTAD, 2022c).

Major e-commerce platforms provide e-commerce businesses with market information, payment systems and other tools that facilitate exporting as noted in section 2.3. Women-led e-commerce firms – especially less digitally capable businesses at an early stage of development – may find it harder to access major e-commerce platforms. They instead rely on social media or smaller-scale platforms, which have lower barriers to entry or require fewer digital skills and resources for membership (Alliance for eTrade Development, 2021). Indeed, across the five economies listed in figure 9, micro-sized firms had the lowest incidence of selling on global marketplaces among all women-led e-commerce firms.

3.2. Positive impacts of NTMs on women's e-commerce businesses

While most of the exposure to and additional burdens of non-tariff measures on women-led e-commerce firms can be assumed to negatively impact these businesses, it is possible that some sectors where women are concentrated benefit from NTMs. For example, in agriculture and food sectors, where many women work, NTMs may even foster trade (FAO, 2023). Sanitary and phytosanitary (SPS) and technical barriers to trade (TBT) can improve consumer confidence in foreign products. Labelling and packaging requirements – which have relatively low costs – have been shown to have trade enhancing effects (Gourdon, Stone, & van Tongeren, 2020). Therefore, the ultimate impact of NTMs on female exporters and workers concentrated in sectors highly exposed to NTMs can therefore be not definite.

Closely related to NTMs, the cross-border impacts of domestic rules on

online activities may also benefit female exporters by enhancing their safety through protections against gender-based harassment. Women commonly experience violence and harassment online, which has serious implications for their use of the Internet and involvement in the online economy (Broadband Commission, 2015). While distinct from typical NTMs, the cross-border effects of legislation and regulation protecting women online may help to support women's involvement in e-commerce. Even aspects of digital governance not directly concerned with trade can have international influence, including through the compliance required of platforms and websites and imitation in other jurisdictions (Lee-Makiyama, 2018; UNCTAD, 2021b).

The adoption of digital tools in managing customs and trade procedures and the distance afforded by online trade can mitigate some of the gendered challenges to exporting for digitally literate exporters. In bypassing some of the in-person interactions involved in traditional trade that expose female traders to malpractice, the digitalisation of trade and trade facilitation may make exporting easier and safer. Women and women-led firms experience higher rates of sexual harassment, demands for informal payments, and confiscation of goods from customs officials and others involved in cross-border trade (ITC, 2016). Women engaged in informal cross-border trade – which is predominantly female – are often left in even more vulnerable positions (UNCTAD, 2019c). E-commerce and digitalised interactions with officials limit the need for face-to-face interactions and can, in some cases, reduce exposure to bias by anonymising participants (ITC, 2016; World Bank, 2012). Poor access to information, however, may prevent women from taking advantage of these opportunities when new trade facilitation initiatives are introduced (Higgins, 2012). Women may also gain a comparative advantage through their social skills as the digital economy requires interacting with others online (ITC, 2023).





4. Gender considerations in ongoing initiatives and negotiations on cross-border e-commerce

While gradual progress is being made separately on gender and e-commerce in multilateral¹¹ and regional trade agreements (RTAs), discussion on the gendered aspects of cross-border e-commerce trade has been limited. The main exceptions to this are a few limited measures included in recent bilateral agreements.

Some progress has been made on addressing gender issues in trade at the World Trade Organization. The Buenos Aires Declaration on Women and Trade that was endorsed by 127 WTO members and observers at the 11th Ministerial Conference in 2017 included calls for the identification of barriers to women's

participation in trade to address knowledge gaps (WTO, 2017). The report produced by the Declaration's proponents does note the potential of e-commerce as a driver of inclusive trade, but does not address how NTMs affect women-led firms (ITC, 2020). Regional trade agreements, by contrast, allow for like-minded countries to agree to new trade rules, which provides space for addressing common issues. Despite this, the intersection of these topics has not been covered in many RTAs (Thystrup, 2018). Gender is addressed directly – albeit in different ways – in a limited but growing number of regional trade agreements, whereas e-commerce and

Progress is being made in addressing gender issues in trade policymaking. Still few agreements address gender issues within digital trade.

¹¹ At the multilateral level, the General Agreement on Trade in Services (GATS) includes some obligations on the governance of cross-border data flows. The Work Programme on Electronic Commerce was adopted by the General Council of the WTO in 1998. In 2017, the Joint Statement on E-Commerce was issued by 71 countries, outlining plans to work toward WTO negotiations on trade-related aspects of e-commerce (WTO, n.d.).



cross-border data flows are addressed in a number of “next generation” agreements dealing with the role of technology in trade (Monteiro, 2018; Pasadilla, Duval, & Anukoonwattaka, 2020; Mark, 2017).

However, the few agreements that address gender issues within digital trade and e-commerce tend to do so without making very strong commitments (Table 5).



Table 5
RTAs with gender references in digital trade and e-commerce chapters

Agreement	Summary
Free Trade Agreement (FTA) between the United Kingdom of Great Britain and Northern Ireland and Australia	In the chapter on digital trade, article 14.21 on cooperation states that the parties to the agreement will “endeavour” to facilitate women's participation in digital trade. Notably, this includes an acknowledgement of the objectives established in the agreement's chapter on trade and gender equity, which includes recognition of the importance of women's participation in cooperation activities on the exchanges of information and experience on gender-inclusive trade and data collection and analysis. The trade and gender chapter also contains an agreement on establishing a dialogue on trade and gender equity.
Free Trade Agreement between the United Kingdom of Great Britain and Northern Ireland and New Zealand	In the chapter on digital trade, article 15.2 on objectives outlines the parties' recognition of the importance of digital inclusion to digital trade, referring to the participation of Māori women in particular. In the same chapter, article 15.20 on digital inclusion calls for cooperation on inclusion relating to the participation of women and others through enhanced cultural and people-to-people links, identifying and addressing barriers to digital trade, skill development, and improved monitoring of inclusion. This article also commits the parties to fostering SME cooperation, linking small businesses to international partners, and sharing best practices to benefit SMEs led by women and others. Potential cooperation on women's involvement is also noted in the agreement's chapter on trade and gender equality.
Chile – Paraguay Free Trade Agreement	In the chapter on e-commerce, article 7.22 on digital inclusion includes a statement of the parties' recognition of the importance of improving access to the digital economy for women. It commits the parties to cooperate through the exchange of best practices, promotion of inclusive and sustainable growth, addressing barriers to participation in the digital economy, developing supportive programmes, and sharing methods for data collection and analysis, among other forms of cooperation.
Economic complementation Agreement No.75 between the Republic of Chile and the Republic of Ecuador	In the chapter on e-commerce, article 10.14 on cooperation states that the parties to the agreement will “endeavour” to work together on incorporating women into online commerce. The goal of this cooperation is to define best practices to enhance capacities for conducting business, collaboration, and technical cooperation.
Free Trade Agreement between Brazil and Chile	In the chapter on e-commerce, article 10.15 on cooperation states that the parties will “endeavour” to cooperate on incorporating women into e-commerce. The article also outlines cooperation on the sharing of information and experiences, participation in multilateral forums on the development of e-commerce, and encouragement for private sector self-regulation.



Gender issues are addressed directly in a limited but growing number of regional trade agreements.

Source: UNCTAD's compilation, using WTO (n.d.). Database on Gender Provisions in RTAs. WTO. Geneva. https://www.wto.org/english/tratop_e/womenandtrade_e/gender_responsive_trade_agreement_db_e.htm.





5. Conclusions

E-commerce is increasingly shaping global trade and holds promise to create economic opportunities for women, especially in developing countries, and support women’s economic empowerment and gender equality. Therefore, a better understanding of the gendered barriers to cross-border e-commerce transactions is important for the design of effective strategies for women-led firms to succeed in international markets.

The benefits of e-commerce for entrepreneurs include lower investment requirement to begin operations, easier reach to distant markets, lower market entry barriers – specially through the services provided by e-commerce platforms (e.g. marketing tools, payment services and logistics), and time flexibility. These benefits are more important for smaller firms, among which women entrepreneurs concentrate, than large firms as summarized in this paper. At the same time, women entrepreneurs face more challenges than men entrepreneurs due to gendered supply-side constraints (e.g. women’s limited access to finance and productive

resources, low levels of education and skills, time poverty, limited business networks). As a factor critical for e-commerce, the digital gender divides, more severe in the LDCs, create an additional challenge for women entrepreneurs while participating in e-commerce.

NTMs aim to protect public health, consumer safety, and the environment, and are needed for ensuring product safety and quality for consumers. At the same time, they impose high trade costs for trading firms due to the costs related to getting information about, implementing, and complying with NTMs. While NTMs in



general distort trade, certain types of NTMs, such as SPS and TBT, might promote trade if they help reduce information asymmetries between producers and consumers and increase customer confidence in the quality and safety of imported products.

The gendered implications of NTMs mainly stem from the unequal distribution of high trade costs from NTMs and the differences in a firm's exposure to NTMs by firm size and sector. First, women-led e-commerce businesses experience the high trade costs from NTMs more severely than men-led businesses due to gendered supply-side constraints. Women entrepreneurs may have difficulties with understanding the compliance requirements for their products fully due to a lack of necessary education and skills, especially in lesser developed countries. They may lack the required technical capacity and resources for meeting these requirements and certifying them even when they have the capacity to fully understand these requirements. Women's unpaid work burden further limits their capacity to participate in and benefit from e-commerce due to the greater time poverty they experience.

Second, firm size plays a major role in explaining the level of NTM-related trade costs mainly because there are high fixed costs of complying with NTMs compared to the small quantities that MSMEs tend to trade. Given the greater concentration of women among MSMEs, women e-commerce firms are more likely to suffer from NTM-related trade costs than men. NTMs are also more prevalent in female-intensive sectors such as agriculture, food products, and apparel, adding further challenges for women e-commerce entrepreneurs as some of these goods such as fashion products dominate women's e-commerce activities, for example in Africa.

At the same time, certain NTMs such as SPS and TBT can support the growth

of women e-commerce businesses by improving consumer confidence in foreign products through labelling and packaging requirements which are relatively less costly. Hence, the ultimate impact of NTMs on female-intensive sectors may not be definite. Women hold a comparative advantage relative to men through their social skills that are valued in the e-commerce environment. E-commerce may also benefit women traders by enhancing their safety through domestic rules imposed on online activities.

Women-led e-commerce firms can better manage the challenges of NTMs with domestic policy reforms supporting the inclusive development of e-commerce, complementary initiatives pursued through international cooperation, and the reform of international trade rules through coordinated efforts to streamline administrative and other costs to trade.

A major issue regarding women e-commerce entrepreneurs' greater exposure to NTMs is about their lack of necessary education and skills needed for recognizing and complying with NTMs, as discussed in this paper. Therefore, closing the gender gap in education and skill development is an area that request a closer look at. Similarly, closing the digital gender divide as well as ensuring a conducive business environment for women e-commerce entrepreneurs in terms of easing gendered supply-side constraints is critical for ensuring equal participation of men and women in the digital economy. International cooperation measures call for a closer look at in order to support domestic policies that reduce the trade costs associated with NTMs for women e-commerce entrepreneurs, especially in LDCs. Finally, trade agreements can be designed in a way to make e-commerce conducive for women entrepreneurs and this way to reduce the trade costs to women entrepreneurs associated with NTMs.



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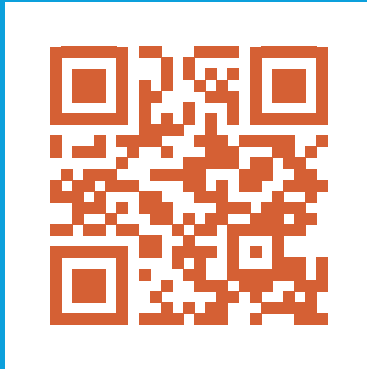
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