

White Paper

Delivering the Goods: E-commerce Logistics Transformation

October 2018



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Introduction

E-commerce has the potential to offer micro-, small- and medium-sized enterprises (MSMEs) almost instant access to the global market like never before. Small businesses can trade with a higher number of customers and partners than might otherwise walk past their door. In turn, a number of important enablers play a role in moving the e-commerce environment forward. Among these, logistics and delivery services are critical for ensuring goods ordered online physically reach the consumer, and are returned when something is not right.

This paper focuses on global logistics systems, both in terms of the industry evolution in response to e-commerce as well as specific challenges that need to be overcome to ensure that the benefits of global e-commerce are widely spread. The substantive focus is on issues relating to the physical delivery of goods bought online and leaves aside any discussion of the digital delivery of e-commerce services. The paper does not seek to prescribe a specific path forward for countries' trade policies or logistics environment. Instead, it aims to serve, under the responsibility of the World Economic Forum and with input from experts, as a conversation starter within the context of the Enabling E-commerce public-private dialogue initiative.

The e-commerce game changer

E-commerce has transformed the retail sector over the past two decades. Well-known players have faced restructuring, or even bankruptcy, amid fierce competition from emergent online platforms. The latter developed innovative business models based on the spread of the internet and other technologies – stores open 24/7 via a laptop or mobile device, the ability to compare products and prices, and delivery to the consumer's door or even their fridge. Last year, Walmart started piloting a service that would allow its delivery drivers entry to consumers' homes via a passcode and a "smart lock". Amazon is also testing a similar service.

The new retail environment has led to shifts in the associated logistics and transport sector. Companies agile enough to embrace changing distribution channels with a host of new services have prospered. Not least among these have been stakeholders responsible for last-mile business-to-consumer (B2C) and consumer-to-consumer (C2C) deliveries. New logistics service providers large and small have been born. The postal sector has also changed dramatically in the past two decades, with some previously nationalized postal operators transformed into commercial independent actors, and some postal operations riding the e-commerce wave offering services akin to couriers.

At the outset, it was far from certain that many of the major express players, such as UPS, FedEx or DHL, would embrace home delivery due to the higher costs involved in the number of undelivered parcels caused by absent end-recipients. E-commerce also required logistics companies to work with smaller businesses less used to shipping locally, much less globally. Yet today it is hard to convey the extent of the change in management sentiment as well as operational and technological focus, with B2C now an important part of the major players' thinking and revenues. Several smaller new logistics players have also emerged, aiming to capture a share of the growing small-package trade in specifically targeting the needs of small businesses on fulfilment, warehousing and logistics services. Examples include wnDirect and ILG.

Looking to the future, delivery times are getting ever shorter, with the number of same-day and one- or two-hour delivery services rising. The result is a knock-on effect on customer expectations. End-recipients are demanding greater flexibility as well as more delivery options, fitting around their lifestyles, rather than around the operational processes of parcel delivery companies. Technology is being harnessed to bridge the gap – leading to more responsive customer service and convenience for both shippers and end-recipients. Technology solutions are, however, more frequently applied by large firms due to the high costs involved.

Alternative delivery solutions are being developed. Lockers, in-car and pick-up/drop-off networks are growing in popularity as retailers face rising cost pressures to ensure

e-commerce orders are delivered first time. Many logistics providers have tailored value-added solutions for transport, fulfilment and returns.

Cross-border e-commerce is growing in popularity thanks to the borderless potential of the digital economy. Consultancy firm Forrester forecasts annual global e-commerce growth of 17% between 2017 and 2022, compared with 12% for overall e-commerce (cross-border and domestic, B2B and B2C).¹ A report by DHL suggests that cross-border e-commerce already accounts for 15% of total e-commerce sales and will expand to 22% by 2020.² One signal, however imprecise, of cross-border B2C e-commerce expansion can be seen in the uptick of international parcel shipments. According to the Universal Postal Union (UPU), these increased by 73% between 2011 and 2015.

The scope of what is sold globally online is also changing. Fashion and electronics have long been cross-border top sellers, but consumers are now branching out further to produce categories including beauty and cosmetics, pet care, food and beverage items, pharmaceuticals, home decor and sporting goods. An increase in e-commerce on perishable goods or medicine refills undoubtedly requires rapid and efficient cross-border delivery logistics.

Despite significant opportunities, however, the support systems for cross-border e-commerce may not always be up to scratch. Small businesses, in particular, which are less able to shoulder frictional costs, point to trade challenges related to customs clearance and advanced knowledge of duties or taxes. Often, cross-border e-commerce operations rely on establishing separate warehouses or central locations in different countries, as a way of minimizing border hassle, shipping costs and other challenges related to global logistics. Although a workaround for some, the associated costs and inconvenience underscore the importance of examining logistics and delivery as a vital enabler of more inclusive global e-commerce.

Mapping logistics players

The logistics environment and its interaction with e-commerce is complex, with different types of providers and services, competing and cooperating – Figure 1 offers a snapshot. The various actors can simplify by categorizing into e-fulfilment providers; consolidators; last-mile delivery operators; cross-border delivery; and reverse logistics (also known as returns).

E-fulfilment providers

The fulfilment of orders placed online by a customer can either be undertaken by the retailer (“in-house”) or by a third-party logistics company (3PL) (“out-sourced”). Some large e-retailers, such as Zulily (a home decor and fashion company), will undertake the order processing, picking, packing, labelling and dispatch themselves in order to have a greater level of control over the process, whereas smaller e-retailers or omni-channel outfits may opt to use 3PLs in order to benefit from their investment in technology systems and operational know-how.

The market has become blurred in recent years as Amazon, a multinational e-commerce marketplace, has also provided logistics services to other retailers. “Fulfillment by Amazon”, as its offering is known, allows MSMEs to store their products in Amazon warehouses in various locations around the world. The company will then take care of the whole order process and distribution, and will manage the last-mile delivery. The move has brought Amazon into direct competition with many 3PLs, although, for the time being, some have entered into what has been termed “co-opetition” – with Amazon not only being a competitor but also a major customer to 3PLs. Incumbent logistics service providers (LSPs) – such as UPS and FedEx – have also started to provide e-fulfilment services to MSMEs.

Figure 1: Logistics e-commerce arena

Major online retailers (largest global e-fulfilment providers)



Other major online or multi-channel retailers



Logistics service providers



Major last-mile players that could scale up to e-fulfilment rapidly



Start-ups



Others



Source: www.ti-insight.com

Consolidators

In view of the exponential growth of small-parcel shipment – which by default tend to be single-item shipments – from B2C and C2C, there is an increasing need for two logistics solutions, notably consolidation and a “pipeline approach” combined with local distribution centres.

First, with countless small parcels travelling together over parts of the total journey, the classical role of the freight forwarder to consolidate and deconsolidate the parcels becomes increasingly important. Reducing handling at different trans-shipment locations by combining parcels in larger units/containers will reduce costs.

Second, for goods that are identical or can be substituted, there is a need to make larger use of regional or local distribution centres. If a customer orders a book, a part, or a banana online, the original product may come from abroad and from a considerable distance, yet quick delivery is made possible if the same item is stored closer to home. Once ordered, it will be delivered from the closer location; however, a replacement is then delivered to the local distribution centre through the “pipeline”. The pipeline does not need to be that fast, nor does the item need to be in a small parcel, and it can even make use of slower modes of transport such as sea or rail freight. These two concepts are nothing new, but will become increasingly important in the context of the exponential growth of small-parcel trade. Such solutions can be helped by both increased digitalization and the exchange of data among carriers, ports and other logistics centres, and shippers. However, although technological solutions often exist, many stakeholders are not yet equipped for, or have sufficient trust in, data-sharing systems.³

Last-mile delivery operators

Performing the last-mile delivery has become increasingly critical as more e-commerce end-recipients look for quick, low-cost, convenient and high-quality delivery, requiring providers to reshape the way goods are moved through the final stage of their journey.⁴ Operational differences from traditional trade, particularly in B2C contexts, include more stops per route; greater spread of delivery locations; and a higher number of unsuccessful deliveries. A failure to successfully deliver goods the first time round means the last-mile provider usually incurs the expense of any subsequent delivery attempt.

Higher last-mile delivery costs inherent in some residential destinations have created new players, including domestic regional carriers, local couriers and crowd-sourced independent contractors. Some e-commerce platforms are now using technology advances to deploy in-house last-mile delivery solutions.⁵

Postal operators are a major last-mile delivery service provider. In many countries, these are required to serve all citizens and villages without price discrimination through Universal Service Obligations (USOs) – in other words, the

price to deliver to a farmer on a mountaintop must be the same as the price to deliver to an apartment in the city. More remote and expensive delivery destinations can be offset by operations in urban centres.

One challenge for policy-makers is to encourage private-sector investment and innovation around logistics, while avoiding both monopolies and market inefficiencies. This sector may be prone to these inequalities due to the economies of scale and differential treatment between postal operators and private express carriers or other entities when it comes to customs declarations, liability and so on.

Cross-border delivery

Historically, the cross-border delivery market was relatively concentrated, particularly at the one- to three-day premium end, with household names such as DHL, FedEx and UPS leading the pack. New technologies and services offered by retailers and e-commerce platforms such as Alibaba, Amazon or Walmart are pushing into the field, too.

Recipients may also be willing to accept a three- to six-day wait time for delivery at low, if not free, shipping prices. The lower end of the market is more diverse, with post offices playing a more significant role alongside other market service providers. In Europe, for example, where cross-border delivery services by road are significant, in addition to the three aforementioned integrators (DHL, FedEx and UPS) and postal operators, DPD (a subsidiary of the French post office La Poste) and GLS (a subsidiary of the British postal service Royal Mail) have also developed pan-European networks to participate in Europe’s growing e-commerce delivery market.

Reverse logistics

Along with increased online purchases, so too come more returns. Returns may be shipped back to retailers or taken to physical locations, such as the retailer storefront, carrier retailer outlets or other acceptance locations. In an effort to improve the online customer buying experience, retailers have adopted solutions that facilitate smooth and efficient returns services, including:

- Pre-printed returns labels and re-sealable packaging included in parcels
- An automated refund process with simple instructions and clear procedures
- An option to return merchandise to a physical location – either a bricks-and-mortar outlet, a post office or a location in an alternative delivery network, such as a parcel store or locker.

In many scenarios, though, the introduction of such services means that the retailer is dependent on the last-mile provider to facilitate the returns process. The trend can have an impact throughout the delivery service network,

not least in terms of the volume it generates, and the cost implications, which exert downward pressure on already thin margins. Logistics solutions involve the gathering of returned items, determining if the items can be resold or disposed of and then submitting the items into the proper channel of distribution. Due to varying individual country laws and regulations, much of this handling is done in the country in which the returns occur. Last-mile providers have invested in supporting returns operations and niche-market entrants have developed. Perhaps the most notable example is FedEx's acquisition in 2015 of reverse logistics specialist Genco Distribution Systems for \$1.4 billion.

National post offices have also increased returns offerings, either paid for or not by the seller. In either case, postal networks provide low-cost options and typically have a wide range of geographic locations to accept package returns.

Associated e-commerce challenges

As has been described, e-commerce sales require logistics systems that are often more complex than storefront sales. The following section takes a closer look at a few of the operational, regulatory and social challenges in this new landscape.

Sustainable transport

Cities across the world, in both developed markets and also emerging economies, are experiencing rapid increases in their population, as well as suffering from unacceptably high vehicle emissions.⁶ The trend has a knock-on impact on the movement of parcels into, and around, these large population conurbations. Many cities have implemented strategies to combat both congestion and pollution. Some cities are going further and have proposed the outright banning of diesel and, in some instances, petrol vehicles from city centres within a very short time frame. The impact of these moves on last-mile deliveries is yet to be fully understood. Aware of the trends, however, many parcel companies and national post operators are investing heavily in vehicles powered by electricity as well as alternative fuels.⁷

The 'gig economy'

Volatility in the e-commerce logistics market, characterized by frequent peaks and troughs of demand, has meant that the vast majority of last-mile delivery companies have adopted an outsourced model. Subcontractors bear not only the cost of investment in transport assets, but also carry the risk of revenues by being paid "by the drop" or by the mile. The e-commerce market is such that so-called "free shipping" is a major selling point for many companies.⁸ The costs of this marketing device are often shared by the carrier, resulting in ultra-low rates of remuneration. The low barriers to market entry and a plentiful supply of people willing to take on a low-skilled job have meant that the amount paid by some carriers is barely enough to cover the cost of running a vehicle. Some governments are concerned that the outsourced model has resulted in tax or social benefits avoidance by some workers and employers with informal work contracts or new types of employer-employee relationships. Increased regulation of gig-economy labour markets could transform the cost base of the sector and affect its ability to balance supply with the peaks and troughs of demand. This would have implications for carriers, e-commerce companies and consumers.

Handling payments

Many emerging economies still have consumers with a high preference for cash.⁹ In particular, in sub-Saharan Africa, only 34% of residents over the age of 15 have a bank account, and 50% of e-commerce transactions are paid by "cash on delivery" (COD).¹⁰ Handing cash over to the delivery driver incurs a very high return rate, especially on cross-border transactions where the transit time is far longer. Sometimes during the time that it takes to deliver the goods, the consumer has found a similar product locally. As there is no penalty, or need to request a refund, the purchaser simply refuses to accept the item. The result is additional cost for the e-commerce seller. Even when purchases are completed, the last-mile operator must transport the cash payment back to a secure facility, with corresponding steps thereafter for it reach the merchant. Some companies use the services of local retail outlets that offer cash-collection services to reduce the risk. The funds are then sent electronically back to the merchant. In some instances, retailers will offer the option for customers to pay cash for items purchased online, which can reduce the burden on the delivery-service portion of the e-commerce supply chain.

Managing returns

Following on from the above, how retailers deal with returns is among the most pressing issues facing the industry. The Colography Group Inc., a market research company that solely studies the package shipping market, has found the rate of online returns can average anywhere between 25% and 60% depending on the country and the type of goods being returned.¹¹ In the USA alone, one specialist tech company, Optoro, puts the value of 2017 holiday returns at \$90 billion and a staggering \$260 billion across the year as a whole. Up to 30% of e-retail consumers will return gifts, with jewellery, electronics, fashion and household goods among the most frequent items. On 3 January 2018, dubbed "National Returns Day" by UPS, the express provider expected 1.4 million items to be returned – an 8% increase on the previous year.¹²

UPS estimates that the costs associated with returns it processes range from 20% to 65% of the total value of the goods sold, depending on the commodity involved.¹³ US-based technology provider Datex estimates that returning a shop-bought good costs the retailer on average \$3 and it is usually back on the shelf by the next day. However, a return can cost an online retailer \$6 and, due to the complexity of the process, take at least four days before it becomes available for resale.¹⁴ Another consultancy, Clear Returns, estimates that £600 million (\$785 million) of stock in the UK bought over the Black Friday weekend in November was on average still tied up in the return loop in mid-December.¹⁵

Cross-border conundrums

Some of the challenges mentioned above are compounded when sellers and customers interact overseas. For a start, customs authorities and other regulators have to deal with:

- Increased volumes of small-parcel and low-value shipments that require different handling capacities
- Traders that may not be well versed on the rules and documentation required to move goods internationally
- Traders who have little or no understanding of tax and duties payable on their consignments

From a business perspective, cross-border returns are more expensive. Some have adopted different strategies to cope. For example, when UK-based e-retailer ASOS started to serve US customers, it did so from its UK stockholding. To reduce returns outlays – which can be as high as 50–60% in the fashion sector – ASOS directed all US returns to a US distribution centre, the intention being not just to avoid double duties, transport and other costs, but to also build up some inventory in the country.

It should be noted that consumers, too, can face significant challenges trying to return goods purchased internationally – particularly when sellers have not put in place adequate processes or may be fraudulent. There is no international “consumer protection agency”, and the means for settling disputes with a merchant in another country are patchy. The topic of online consumer protection and e-commerce is gaining increasing importance in various international policy forums, and is the subject of a forthcoming World Economic Forum white paper.

Roadblocks for small business

Although MSMEs know of global e-commerce opportunities, many may still be unsure how best to navigate difficult waters when it comes to cross-border exports or unable to sink the costs. Logistics challenges seen from the perspective of small businesses include:

- Pricing: some MSMEs complain that the rates charged by large express companies for individual B2C packages are not competitive for their business model. But although postal operators offer better prices, these lack a range of important services such as traceability and support for customs clearance.
- Traceability: though often cheaper, postal operators lack the end-to-end visibility provided by express carriers. One small business commentator described the process of transition from one postal operator's network to another's as a "black hole". There may be several hours or even days during which the parcel cannot be tracked and there is little accountability.
- Customs duties and tax: many businesses and online platforms struggle with calculating tax and duties payable on cross-border shipments, especially when using national postal systems. Sending a retrospective bill to the end-recipient will put many consumers off buying goods from foreign traders. This will consequently impact negatively on MSMEs whose invaluable online trust ratings may be affected.
- Returns: MSMEs lack the resources to establish robust and cost-effective returns procedures on an international basis. This is especially the case for low-value shipments. Consumers tend to be discouraged from making an initial purchase if they know that they will have to pay the shipping costs if they return a product.
- Last-mile delivery services: whereas large shippers of higher value items have access to a full range of last-mile service offers from express and courier companies, MSMEs shipping low-value goods do not benefit to the same extent. This puts them at a competitive disadvantage, especially against market leaders such as Amazon who own and manage their own logistics. Although some companies are developing specific logistics services (both upstream and down) for MSMEs, many existing solutions were never established with smaller e-retailers in mind.

To illustrate this: according to a MSME study by Agility's online freight service, Shipa Freight, 89% of respondents said their export revenue will grow over the next three years, but 94% also indicated they have faced difficulties when shipping internationally.¹⁶ Top challenges ranked by small businesses in the research were: costs being too high or not having an accurate picture of a final landed cost (42% of respondents); the struggle to find the right logistics partner

(40%); difficulty understanding documentation requirements (40%); logistics providers being slow to respond to their needs (39%); cargo being stopped in customs (39%); goods being lost or untraceable (27%); and suppliers letting them down (26%).

According to MSME respondents to the 2017 International Trade Centre (ITC) competitiveness survey, high costs in postal and courier delivery were the top bottleneck for the cross-border delivery of e-commerce goods, followed by finding warehouses and delivery at destination, customs procedures and duties, limited access to delivery with tracking ability, anticipating payable duties, data localization and preparing documentation.¹⁷ The study also noted that the share of logistics costs within final price tended to be nearly double for small businesses in developing countries compared with developed countries. This could be the result either of lower-value e-commerce shipments or the higher costs of logistics services in the former. Unpacking the particular needs of MSMEs in developing countries will be important to ensure new e-commerce trends work for development – Figure 2 offers a snapshot comparison.

Many MSMEs view technology as the answer to overcoming these issues, with 86% of Shipa Freight survey respondents believing that it will "level the playing field" for them to operate globally. One example would be a technology-driven solution that lowers transaction costs and increases transparency throughout the shipping process. Shipa Freight allows users to get rate quotes and book, pay and track ocean and air shipments around the world. The eBay Global Shipping Programme combines software displaying full landing costs to customers with a series of national logistics hubs to simplify sales in over 50 countries for users of its marketplace. Some experts consider that latest technological developments, such as around distributed ledger technology (DLT) and blockchain, will help lead to more improvements still for small business trade (see Box 1).

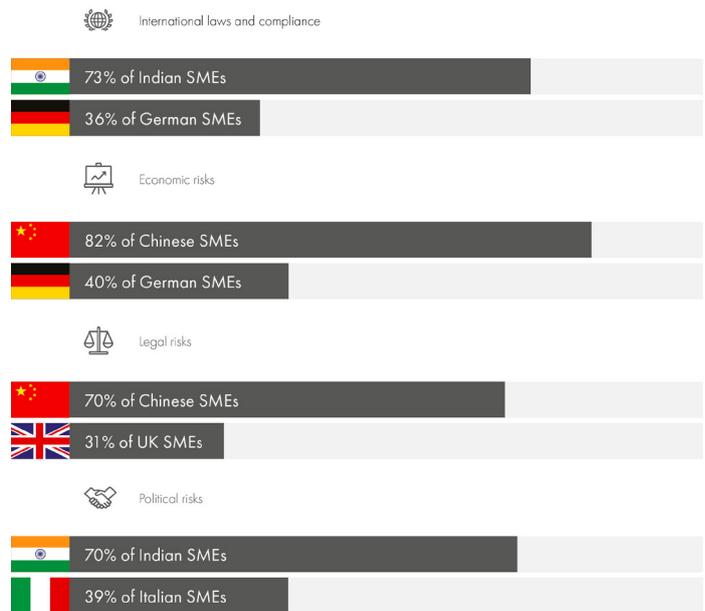
Box 1: The latest buzz

If it becomes more mainstream, DLT and the use of blockchain could offer another useful tool for small businesses grappling with export-related logistics challenges. DLT systems can provide a secure way of exchanging value or information between multiple actors without relying on a third party to mediate the transaction. In theory, the application of DLT systems to trade processes could increase efficiency and transparency, and some initial ventures are being rolled out. The IBM and Maersk-led “TradeLens” uses a blockchain component as part of a broader service that allows users to share relevant trade processing documents. The service is fee paying, however, and mainly for full-container freight – meaning e-commerce users may need to maintain other IT systems for airfreight or less-than-container loads more common to the industry’s logistics demands.¹⁸

Other stakeholders are exploring the application of DLT solutions to government-led foreign-trade single windows for the submission of required trade documentation or to better manage port logistics. For example, Wave offers a blockchain application aimed at digitizing the Bill of Lading, a legal document between a shipper and carrier outlining the nature and destination of goods in shipment. Skuchain, supported by several international banks, uses a blockchain solution to eliminate Letters of Credit, creating a more readily accessible global commercial trust environment. The development of these tools, however, is not without operational, interoperability and regulatory challenges that need to be further unpacked for this technology to become a truly go-to tool for MSMEs.¹⁹

Source: World Economic Forum E-commerce Expert Group

Figure 2: The proportion of SME leaders who say the following issues are challenging



Source: Shipa Freight, Ship for Success: SMEs and International Trade, 2018

Emerging economies

China is expected to drive a significant volume of cross-border e-commerce due to a large and growing middle-class hunger for foreign products. The scale of Chinese e-commerce is already significant, with the country being home to approximately 20,000 delivery companies, more than 400 of which operate across borders according to the Chinese State Postal Bureau.²⁰ It is estimated that around 130 million e-commerce parcels are delivered per day in the country. This has placed extreme pressure not only on the country's existing transport infrastructure, but also on the market structures and mechanics needed to keep pace with the growth. To fill the void, major e-commerce platforms, such as Alibaba and JD.com, have invested many billions of dollars in building out logistics and last-mile delivery networks as well as the technologies necessary to provide supply-chain visibility.

Panning out to a look at South-East Asia, the e-commerce market is expected to grow with a compound annual growth rate of 32% over the next five years.²¹ The region is home to some 600 million consumers, 260 million of whom are already online. Several major e-commerce platforms have increased their interest in the wider region – but small businesses may not always be able to exploit this trend. In Asia-Pacific more broadly, for example, a FedEx study found that, while 65% of MSME respondents “have the ambition to grow their business internationally”,²² the potential costs of exporting were problematic (34% of respondents).

India's e-commerce market, meanwhile, is predicted to grow by a spectacular 1,200% to \$200 billion by 2026, up from \$15 billion in 2016, according to Morgan Stanley. However, in 2017, only around 14% of India's internet users shopped online, compared with almost 64% in China.²³ A major barrier to e-commerce uptake involves last-mile delivery to consumers outside of the major urban areas. Developing nationwide parcels networks to include smaller towns and cities, let alone rural areas, has been problematic. Handling cash on delivery (particularly popular in India) and returns over such long distances are additional challenges that need to be addressed if online shopping is to gain mainstream adoption.

In the Middle East, the regional e-commerce market is projected to reach \$69 billion by 2020, more than double its 2016 value.²⁴ Around 71% of the regional market monetary worth will be isolated to two countries, Saudi Arabia and the United Arab Emirates (UAE), with respective values of \$22 billion and \$27 billion. Approximately 29% of consumers in the Middle East make online purchases as of 2017. However, despite an overall sentiment of readiness to embrace e-commerce, last-mile delivery outside of major urban areas also remains a challenge.

A fast-growing middle class in Latin America bodes well for e-commerce. But reliability of delivery, and security, as well as monetary and time costs for customs procedures remain major concerns that have contributed to reduced take-up. Only a handful of Latin America countries are active e-commerce players, with the top three accounting for around 70% of all regional transactions by value – including Brazil, Mexico and Argentina. The last-mile sector does not have the range of delivery options and speed of delivery available in many other parts of the world, while border efficiency remains low in some countries. According to a survey of firms using the Inter-American Development Bank (IDB) ConnectAmericas platform, some 35% said that poor logistics were the most serious obstacle to cross-border e-commerce, while just over 30% pointed to burdensome customs regulations.²⁵ High demand for foreign goods in the region, meanwhile, especially from the US, Chinese, Japanese, South Korean and German markets, has been offset by shifting fiscal policies designed to protect domestic markets and prevent the outflow of currencies. This has often frustrated efforts by the major international express parcels operators to invest in sustainable e-commerce logistics services.

Although internet usage rates in Africa increased by more than 20% in 2017,²⁶ the development of e-commerce in many countries has been constrained by limited physical connectivity, including poor supply and quality of hard transport infrastructure – even in urban areas – inefficient or uncompetitive logistics services markets, lengthy regulatory and customs processes, corruption and delays.²⁷ The result is that small businesses will pay more for e-commerce logistics than their counterparts in developed countries. According to the United Nations Conference on Trade and Development (UNCTAD), African countries currently have the highest freight costs as a percentage of imports, swiftly followed by developing economies in Oceania.²⁸ Africa is also home to many landlocked developing countries (LLDCs) whose trade costs depend as much on the efficiency of their neighbours' transport services and customs processes as their own. But integration between countries is still somewhat limited in many instances. Not only is this regional environment costly for small businesses to navigate, but trust along the logistics supply chain is in short supply – affecting the behaviour of both businesses and consumers.

Logistics and trade policy

As described, the challenges around e-commerce and logistics are varied and specific to local, national and regional markets. For many countries, overly bureaucratic trade processes stifle opportunities for cross-border e-commerce. For others, the most problematic issues are last-mile delivery or returns, even simply within a domestic context. Whatever the issue, trade policy has a role to play in addressing some of these concerns, facilitating faster and more frictionless trade, as well as helping drive international investment in local markets and infrastructure.

The following sections look at a few important areas that trade policy-makers wishing to address e-commerce logistics concerns may want to consider. Insights on postal modernization are also provided – given the important roles these actors play in the system.

Trade facilitation: what's relevant?

The World Trade Organization (WTO) Trade Facilitation Agreement (TFA), which came into force in February 2017, offers one powerful tool for supporting fast and reliable international deliveries.²⁹ The deal's overarching goal is to remove burdensome red tape at country borders in order to facilitate greater levels of cross-border trade. It does so by outlining specific measures on expediting the movement, release and clearance of goods that countries must work towards implementing. The TFA is not an e-commerce treaty *per se*, but it does not discriminate between the types of trade to which it can be applied, whether goods purchased online or through traditional means.

Border facilitation measures are a boon for those selling significant amounts of low-value packages globally via e-commerce since margins for absorbing the associated costs in this type of trade are typically lower. Reduced border complications can also help promote small e-business entry into export markets and value chains. According to some estimates, full implementation of the TFA could lead to a 60–80% increase in cross-border MSME sales in some economies.³⁰

Some of the TFA's provisions may be more relevant for e-commerce delivery needs. A selection are summarized in Table 1 (below), although others could also be considered. These include measures on transparency and accessibility of information for import and export found in Article 1. E-traders need to accurately communicate final landing costs to customers – and accessing this information digitally is important in a cross-border e-commerce context to avoid misunderstandings and loss of trust. The measures outlined in Article 10 to simplify trade documentation are equally valuable to help more players navigate customs clearance. The commitment not to hold goods longer than is needed is beneficial to the demands of speedy deliveries. Cooperation among customs and other agencies as encouraged in Article 8 further contribute to a more functional environment. Simple steps such as coordinating working hours and inspections can help agencies work more efficiently.

The combination of measures outlined in Article 7 form the basis for integrators to have goods released rapidly by customs on or even prior to arrival. Under these conditions, better delivery date estimates can be given, and the system is better adapted for a growing volume of small shipments. The risk-management provision provides the regulatory foundations to reduce and remove the number of inspections at the border. Adapted risk-management systems are vital to deal with large volumes of packages.

The ability to pay duties electronically, as well as the electronic acceptance of trade documents (Article 10), can help improve customs efficiency insofar as these provisions relate to the automation of customs procedures.³¹ Both elements also support the establishment of electronic single windows. These are usually a single interface for submitting

trade documents for import, export and transit-related regulatory requirements. Electronic single windows have been found to contribute to an easier trade environment. In Senegal, for example, the implementation of the electronic single window reduced the border pre-clearance and processing time by 90%, from an average of two weeks to just one day. The cost of border processes has decreased by 60%.³²

Table 1: TFA provisions relevant to e-commerce

Article	Provision summary
<i>Article 1.1 – Publication and Availability of Information</i>	WTO members to publish information on import and export procedures, applicable duties and taxes and so on, in a non-discriminatory and easily accessible manner for governments, traders and other interested parties.
<i>Article 1.2 – Information Available Through Internet</i>	WTO members to make import, export and transport requirements available online to the best possible and practical extent.
<i>Article 7.1 – Release and Clearance of Goods</i>	WTO members to have in place procedures that allow relevant import documents to be submitted ahead of the arrival of goods in order to expedite release on arrival.
<i>Article 7.2 – Electronic Payment</i>	WTO members to allow the option of electronic payment for duties, taxes, fees and charges collected by customs. This provision is useful to accelerate paperless trade.
<i>Article 7.4 – Risk Management</i>	WTO members to maintain a risk-management system for customs control, applied in a manner that avoids arbitrary or unjustifiable discrimination, or a disguised restriction on international trade. To the extent possible, members' customs controls should be concentrated on high-risk consignments while low-risk consignments may be expedited.
<i>Article 7.7 – Trade Facilitation for Authorized Operators</i>	WTO members to provide additional trade facilitation measures – such as deferred payment of duties, low inspection rates, low document or data requirements – to authorized operators.
<i>Article 7.8 – Expedited Shipments</i>	WTO members to maintain procedures for expedited release of at least those goods entering through air cargo facilities to persons applying for such treatment, subject to a list of published criteria and guidelines.
<i>Article 8 – Border Agency Cooperation</i>	WTO members' border authorities to cooperate on mutually agreed terms where a common border is shared.
<i>Article 10.1 – Formalities and Documentation Requirements</i>	A series of principles are outlined to simplify trade documentation. These include: ensuring these requirements are applied with a view to rapid release and clearance; an aim to reduce the time and cost of compliance for traders and operators; ensuring they are the least trade restrictive option, and are not maintained when no longer needed. Through a TFA committee, WTO members can share the best practices in this area.
<i>Article 10.2 – Acceptance of Copies</i>	WTO members shall endeavour to accept paper or electronic copies of import, export or transit documents.
<i>Article 10.4 – Single Window</i>	WTO members will endeavour to establish or maintain a single window, in other words, a single entry point for traders to submit required import, export or transit documents.

Source: World Economic Forum E-commerce Expert Group

Ambitious implementation of the provisions in Table 1 could be a useful step for countries looking to facilitate e-commerce logistics. Doing so as part of a regional effort could be one way to help small e-businesses in developing countries find export markets and gain trade experience – since distance, culture and language remain relatively important trade factors, even in digital contexts. Intra-regional cross-border parcel flows are already growing fast, significantly so in the Association of Southeast Asian Nations (ASEAN) and the Pacific Alliance.³³ Indeed, many governments have included e-commerce provisions in regional and preferential trade agreements, including those relevant to border clearance and delivery. Some of these include similar measures as found in the TFA. While countries can unilaterally choose to make their import and export procedures easier, international cooperation can forge common approaches on processes that work for governments, small business and future trade growth.

Policy-makers looking to further support e-commerce could consider undertaking five “TFA-plus” steps. These would build on the TFA to better target the rapidly moving, small, low-value and returns-heavy nature of e-commerce goods trade as well as B2C needs.

Box 2: What are e-transaction rules?

Agreeing to a transaction in an analogue world may require proof of consent achieved through documentation or a signature. Replicating these procedures in a digital context can pose challenges linked to identify, validity, data confidentiality and verification. Many countries have e-transaction laws in place, outlining requirements for the validity of an e-signature, or stipulating where authentication processes are required. The United Nations Commission on International Trade Law (UNCITRAL) has outlined model laws to help guide countries’ implementation of e-transaction, e-signature and digital authentication regulatory approaches. The principles of functional equivalence, non-discrimination and technology neutrality are part of these model laws.

Source: World Economic Forum, Making Deals in Cyberspace: What’s the Problem? 2017

First, governments could commit to refraining from erecting new barriers on e-commerce shipments that are discriminatory or arbitrary. Examples to avoid include increasing small-parcel inspection rates or requiring additional documentation.

Second, countries could apply a principle of functional equivalence, non-discrimination and technology neutrality between the use of electronic communications and paper copies for trade documentation, building on TFA Article 10.2. The latter encourages the move towards a paperless trade environment and would be further underscored by this approach.³⁴

Third, countries could apply these same three principles to their e-transaction, e-signature and authentication laws (see Box 2). They are the foundational governance architecture for a digital commercial environment, providing the parameters for contracts, deals or important documents to be agreed by parties online and be legally admissible. Laws aligned with this approach are part of the regulatory environment needed for modern-trade facilitation, such as submitting required trade-administration documents digitally, risk management and procedures for pre-arrival processing or using e-payments for duties.

The TFA addresses several of these areas, though implementation of the relevant provisions is patchy, particularly in relation to best-endeavour efforts. For example, according to the OECD’s Trade Facilitation Indicators (TFIs) in 2017, only around half of middle-income countries had systems in place for e-payment of duties, as well as for processing digital certificates and signatures in association with automated declaration and cargo-processing systems. The results were lesser in lower-income countries.³⁵

A number of bilateral and regional trade agreements (RTAs) do include the types of provisions listed in steps two and three above. The Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) compels parties to accept trade administration documents submitted electronically, requires parties to maintain domestic legal frameworks consistent with relevant UNCITRAL e-transaction model laws, and stipulates that a document signature’s legal validity cannot be denied simply because it is in electronic form. Other examples could be cited – research by the WTO finds that of the RTAs notified in its database, provisions on the legal equivalence of electronic trade administration documents were the most common measures put forward on paperless trading, while 48 RTAs explicitly addressed electronic authentication and signatures. There is, however, a good deal of heterogeneity between these related to the language and scope.³⁶

Fourth, the express industry group has suggested that benchmarks for simplified entry could be agreed upon for goods imports, in line with the World Customs Organization (WCO) Immediate Release Guidelines (IRG).³⁷ To date, an estimated 50 countries have implemented simplified goods entry thresholds, with varying requirements and ranges from \$14 to \$11,000.³⁸ A common approach drawing on the

IRG could include the following categories: correspondence and documents; consignments below a duty or tax de minimis threshold (discussed in further detail below); and consignments below a formal declaration. For the first category, release could be granted upon provision of the total weight of the correspondence and documents arriving in the same consignment. In the second category, it is suggested a consolidated declaration would be sufficient, and that information for duty assessment such as HS numbers, importer registration and power of attorney could be avoided. In the third category, a simplified goods declaration could be required, while the option of duty and tax collection periodically on an account basis would speed up the clearance process.³⁹

For some industry experts, another innovative approach to facilitate duty payment and customs clearance is Canada's Generic Harmonized System (GHS). This automated system divides personal shipments of up to CA\$500 into three tariff "buckets" – generic Most-Favoured-Nation (MFN) rates of 0%, 8% or 20% based on the good's description – providing predictability of cost for shippers and reducing administrative expenses for the customs agency.

Fifth, returned packages could be released without a formal declaration requirement, provided the reference to outbound shipment and declaration is given in order to reconcile both shipments. Further work on facilitating returns is critical given the significant number of returned packages in e-commerce.

Overall implementation of the TFA by WTO members stands at 60.4%.⁴⁰ Global average implementation of WCO Immediate Release Guidelines is around 47%.⁴¹ Does this mean that international frameworks on trade facilitation are not working or are not useful? Not necessarily. It must be borne in mind that while national laws can be aligned to international standards on paper almost overnight, the transition from commitment to practice is much more difficult. The implementation of innovative customs procedures and processes faces a number of difficulties such as resource restraints, cultural differences and user capacities. Total alignment is a long-term process, while the frameworks provide invaluable markers for countries to work towards. The "marker" aspect may be useful for countries thinking about new forms of cooperation to support more e-commerce trade opportunities.

Much has also been written on the structure of the TFA and economic development. The agreement provides developing and less developed countries with the space to determine when they will implement individual provisions and identify where trade-related technical assistance is required to do so. Many technical assistance organizations and partners are already working on capacity building on TFA areas relevant to e-commerce. It could be helpful for these to produce a joint publication tracking such initiatives specifically, as well as the impact on e-traders. Other examples of ongoing relevant work include a joint "Global Trade Helpdesk" maintained by ITC, WTO and UNCTAD designed to make it easier for MSMEs and policy-makers to access trade data and practical information on targeted markets. This information can be invaluable for e-commerce sellers planning the delivery of a product in another country.

The private sector can play a role in capacity building on e-commerce border-related issues. For example, DHL has participated in a number of capacity-building projects across the Balkan region and in Africa, with countries such as Rwanda, to support the implementation of pre-arrival processes to better manage small package trade. The Global Alliance for Trade Facilitation offers an instance of a public-private initiative plugging business expertise into border clearance reform in developing countries – linked to TFA implementation. Identifying Global Alliance projects that help fully implement e-commerce-relevant TFA provisions could be a forward-looking approach

Scaling logistics and delivery services

Generally speaking, a country's export competitiveness is significantly shaped by the environment for bringing goods to market, at lowest possible costs and in accordance with customer needs.⁴² Correspondingly, low-quality or expensive transport service options – such as trucks, airplanes and trains – can affect the cost and speed of delivery of goods bought and sold online, whether export or import. However, indicators for transport and logistics services do not seem to be going in the right direction for e-commerce. The World Economic Forum Enabling Trade Index (ETI) found that availability and quality of transport infrastructure averaged globally scored among the lowest of seven pillars critical for boosting trade in 2016. The availability and quality of transport services, meanwhile, decreased between the 2014 and 2016 ETI assessments.⁴³ A Logistics Performance Index (LPI) benchmarking countries' efficiency in connecting firms to markets, meanwhile, finds that the top 15 best-performing countries have not significantly changed over the past decade and are mainly advanced economies. In the most recent LPI, high-income countries on average surpassed low-income countries' scores by 48%.⁴⁴ Although more work is needed to improve the performance of low-income and developing countries, some, such as China, Thailand, South Africa, India, Indonesia and Vietnam, have made recent advances.

In order to meet the delivery demands of global e-commerce, sellers and delivery partners need functional and extensive infrastructure, as well as transport and logistics networks that combine new technologies, multimodal transport operations and compliance with trade rules. Barriers to the provision of international transport and logistics services do remain. These relate both to market access – including limitations on operating in a country; the requirement to partner with a domestic supplier; restrictions related to foreign equity in transport services; restrictions on cabotage operations; domestic monopolies – and to the domestic regulatory environment. The latter can involve, for example, time-consuming operating licence procedures; government-supported monopolies such as in the area of cargo handling; discriminatory treatment around establishment location or size; difficulty in securing air traffic access for freight flights or around landings and take-off slots. The OECD Services Trade Restrictiveness Index (STRI) suggests that service trade barriers related to air transport services remain high, as is the case in some aspects of maritime service trade. For logistics services, cargo handling and customs brokerage have the highest level of restrictiveness, while distribution services in both wholesale and retail are found to be relatively more open.⁴⁵

A more open environment could improve efficient access to global networks for home-grown small businesses. Competition between service suppliers can reduce prices and raise the quality of services offered. Investment liberalization can also encourage capital flows into relevant infrastructure and new technologies that are critical for

running delivery businesses across borders. A facilitative regulatory environment can accelerate these trends and makes the business case for operating in smaller or more remote markets that much more appealing.⁴⁶

While the focus of this paper is on how international investment and service trade can be facilitated, it is clear that domestic investment also plays a critical role in the development of infrastructure and systems. Many studies have shown that appropriate investment in transport infrastructure can result in increased competitiveness and productivity; market efficiencies; better connectivity and consequently increased economic growth. China has for many decades spent well over the international average on transport infrastructure. Despite some debate over this investment's value for money, there is no doubt that it has been a major factor in the country's economic development.⁴⁷

Trade-related issues for logistics and services fall within the scope of the WTO General Agreement on Trade in Services (GATS). Making new commitments relevant to e-commerce logistics nonetheless touches on certain challenges (see Box 3). Existing commitments in relevant sectors also appear variable. Addressing impediments to the supply of services that support transport is a case in point. According to UNCTAD, a review of some 40 WTO member schedules found that about two-thirds had made no relevant commitments at all, while half of those that had done so covered only a small portion of significant sub-sectors, with exceptions included in certain cases.⁴⁸ A total of 54 WTO members have made commitments on postal and/or courier services.⁴⁹ However, many countries do allow foreign express delivery providers to operate, without necessarily entering these commitments into GATS schedules. The discrepancy likely links back to a lack of sectoral scheduling specificity, together with the increased emphasis on international transport links as an important competitiveness factor.

Box 3: GATS context

The GATS outlines general obligations for WTO members' trade in services and provides a framework for governments to open their markets to international service suppliers and investors if they wish to do so. Market access and national treatment commitments are made in four services trade modes: cross-border (mode 1); consumption abroad (mode 2); commercial presence, including the supply of services to local consumers by a foreign provider investing in a local presence (mode 3); and temporary movement of natural persons (mode 4). The GATS can apply to all service sectors, except for those used "in the exercise of governmental authority" and most services in the air-transport sector.

The WTO services sectoral classification list (W/120) and associated UN Provisional Central Product Classification (CPC) – which are used to help countries understand and align with each other's commitments – does not provide for a specific category for logistics and delivery services. Elements relevant to the supply of these services are instead captured under different sectors and sub-sectors such as freight transportation, storage and warehousing services, as well as inventory management and so on. Over the years, some stakeholders have argued this lack of specificity has held back new targeted market-opening commitments, or led to inconsistencies in market treatment. The "postal and courier" sub-sector highly relevant to e-commerce today, for example, leaves uncertainty on how to distinguish between courier services and those provided by postal authorities on a competitive basis. There is also no separate distinction for express delivery services. The topic has previously been debated by WTO Members.⁶¹

Source: Author's analysis

WTO negotiating proposals related to logistics, transport and delivery-service trade were made throughout multilateral services talks in the 2000s – though were not e-commerce specific. The proposals, among other things, related to increased market access and national treatment commitments, or sought to clarify classification issues, and in some cases suggested addressing regulatory friction. These talks stalled as part of broader multilateral negotiating challenges under the WTO Doha Round.

An initiative by 23 WTO Members (counting the EU 28 as one) from 2013 onwards to negotiate a new services deal, the Trade in Services Agreement (TiSA), included relevant sections. While each TiSA party would individually decide market access and national treatment commitments, the agreement also planned for a series of common rules on cross-cutting services areas. Annexes were on the table in areas such as e-commerce, maritime, road, air transport and delivery services. Aspects of most interest to e-commerce logistics would likely have been in the last four mentioned, with the e-commerce annex more focused on other issues. Indeed, the broad nature of TiSA's scope meant that it covered a range of areas useful to, but not exclusive to, e-commerce, and provided a workable setting

for countries to trade off over some tough negotiating issues. Although the talks made good progress, TiSA discussions have been frozen since the final months of 2016. More recently, some WTO members have raised the subject of market opening in e-commerce-related sectors of trade in goods and services in the context of discussions by a group of just under 100 countries on possible future negotiations.⁵⁰

At the regional level, the Trans-Pacific Partnership (TPP) negotiated among 12 Asia-Pacific economies did break new ground in some logistics services areas relevant to e-commerce. As well as adopting an ambitious approach to services liberalization more generally,⁵¹ the cross-border trade in services chapter included an annex outlining rules to be applied to express delivery services. These included a common definition of express delivery services, a means for each party to define the scope of their national postal monopoly and a prohibition on the latter cross-subsidizing competitive services with revenues generated from the monopoly postal services. It would also have prohibited parties requiring express delivery companies from supplying a basic universal postal service as a condition of entry or using fees levied on these to fund another type of delivery service. Existing market openness for delivery service providers would be maintained. A US decision to withdraw from the TPP, however, led to its transformation into the CPTPP by the remaining 11 parties. Certain TPP articles were suspended in the process, including those on postal monopoly cross-subsidization, as well as limiting the abuse of postal monopolies. The CPTPP does carry over an e-commerce chapter focused more broadly on rules relevant for online goods and services trade.

What lessons can policy-makers take from past experiences moving forward? Countries with ambition may wish to revisit advances made in TiSA, but they need to recognize that these were part of a wider deal. Another option could be to review approaches made in past WTO talks, such as the use of a "checklist" for liberalization commitments. A series of core logistics, transport and other supporting services sub-sectors that enable e-commerce logistics could be identified and used as a basis for negotiations.⁵² Agreeing on these would nonetheless require navigating historically challenging and complex areas that are not always e-commerce specific or exclusive.

An angle countries may wish to explore is the common guidelines for domestic rules that affect the international supply of logistics and delivery services. At the global level, WTO members can take on "additional commitments" within the GATS, which help improve the market environment and promote competition. One instance where this has been done is the WTO Basic Telecommunications Reference Paper, designed to promote pro-competitive governance processes widely recognized as the best methodology for the industry.⁵³ In previous WTO service negotiations, some members have suggested considering additional commitments in the area of logistics services, including the acceptance of electronic versions of trade administration documents, licensing requirements, technical standards and anti-competitive practices.⁵⁴

The concept could be revisited in a more targeted manner for e-commerce. Although the parameters would need to be discussed in detail by interested policy-makers, some general suggestions could serve as a starting point:

- Encouragement for regulators to pursue technology-neutral approaches recognizing the continued fast-paced change in the logistics industry to meet global e-commerce dynamics. Requirements to use a specific IT system, for example, can slow innovation and deter investment.
- Provisions on transparency of regulation such as around obtaining logistics services operating licences. Access to licences should be based on clearly outlined and objective criteria, and should not be administered in a manner that would constitute a means of arbitrary or unjustifiable restriction or a disguised restriction on trade.
- The right for countries to safeguard services designed to meet a universal services obligation, provided these are administered in a transparent, non-discriminatory and competitively neutral manner.
- Clarifications on the types of commitments and exceptions to notify.
- Addressing anti-competitive practices that could result from cross-subsidization by postal monopoly to a competitive market segment.
- A commitment to the independence of the regulatory authority from any market participant. This would help both to encourage investment as well as flag any competition issues related to market dominance that may lead to increased costs for sellers and buyers.

It is increasingly evident today that trade liberalization must be accompanied by an approach that balances reduced regulatory friction with the achievement of other public policy objectives. Additional commitments could be one way for governments to collectively define these regulatory guardrails while pursuing openness to global e-commerce.

Handling tax

Navigating diverse import duty and VAT administration rules is often cited as a cumbersome process by large and small businesses engaging in the physical delivery of goods bought online. Collection and compliance can be costly, while transparency can sometimes be an issue. It may not always be clear what steps a foreign business should take when selling to a foreign market via e-commerce – for instance, VAT registration requirements or where VAT should be accounted.⁵⁵ Further headaches arise when e-commerce sellers need to pay import duties in their home country for returned products. Doing so is a particular nuisance when customers shopping online buy and return a product multiple times in order to get the right size or fit. In some countries, it is possible to claim a refund for import duties and VAT for returned and re-exported goods, but sellers must be equipped with the know-how to do this. According to survey data from ITC, duties on returned products represented 20% of the bottlenecks perceived by small e-commerce businesses in the aftersales phase of the e-commerce process chain.⁵⁶

This topic affects the logistics and delivery-services arena in two general ways: first, the difficulties of ensuring compliance for low-value packages, which may outweigh the benefits of pursuing cross-border e-commerce; and second, carriers' obligations to enforce duty and tax collection.

De minimis threshold (DMT) valuation ceilings, levels set by a government below which imported goods are not charged duties and/or tax, have long been the subject of debate in trade circles. For some experts, these should be set at a level where the cost of collection is not greater than the income gained, and also with a view to encouraging trade in low-value items or inputs for a value chain. In the context of e-commerce, a high DMT could address administrative costs borne by delivery service providers that are passed on to e-commerce sellers or consumers. For other stakeholders, the collection of duties and taxes at the border is perceived as a critical contribution to public-sector finances that can be difficult, in a political sense, to justify cutting.

DMT levels vary greatly between countries – though they tend towards the lower end – as do the criteria for exemptions. The highest sit around \$800–\$1,000, while several are set at just a few dollars or zero. Some de minimis ceilings are specific to personal shipments, samples and gifts, while others are for postal shipments only.⁵⁷ The WTO TFA encourages countries to provide a de minimis on duties for expediting air cargo shipments through customs – though the value is not prescribed and companies seeking to benefit may be subject to a list of logistical and handling criteria.⁵⁸ The provision explicitly covers customs duties and not internal taxes, such as valued added or excise taxes.

Stakeholders favouring a revisiting of the de minimis subject as an e-commerce enabler have suggested different options. As part of the TFA-plus simplified entry approach discussed above, the Global Express Association recommends setting a de minimis threshold at no less than \$200, based on invoice value and not including transport costs. For items above that threshold, the implementation of smarter duty and tax collection models could help ease compliance, including moving away from duty and tax collection at the border to allow periodic payments. Different options include vendor, intermediary, transporter-based, purchaser, financial intermediary or hybrid collection – each with pros and cons. In a vendor collection model, non-resident vendors or sellers with gross sales above a certain limit would be required to register in the importing country and make duty or tax payments. Making the registration process digital, simple and transparent would make the process easier, as would focusing liability on duties and VAT/GST alone, an explicit carve-out for other tax liabilities, and not requiring permanent establishment onshore. If multiple countries allow intermediaries to complete the formalities on behalf of e-commerce sellers, these could, in turn, serve as a “one-stop shop” for MSME e-commerce exporters. However, limiting periodic duty and tax collection to intermediaries alone could contribute to market concentration, or render small businesses reliant exclusively on larger players to export and further cement the latter as de facto tax collectors.

Other experts have proposed pursuing a “plurilateral agreement” on de minimis. Some suggest that “trusted trader” and “authorized economic operator” programmes implemented by some countries to accelerate low-risk companies' trade are still too challenging for small businesses to navigate. Suominen (2017) has instead proposed that a group of countries gradually raise de minimis levels in concert. The effort should cover both customs and GST/VAT de minimis levels – even where these are separated – with the aim of reaching a threshold of \$1,000. Participants could pursue different implementation schedules, potentially governed by minimum percentage rises per annum. The deal could be implemented within a regional trade agreement or pursued through the WTO – though a “closed” plurilateral agreement would be a political non-starter, and create a headache for customs to determine package origin, while done on an MFN basis it could raise concerns about free-riders.⁵⁹ Still other experts suggest that a commonly agreed DMT is likely to be relatively low when more countries are involved, and as such could inadvertently result in a race to the bottom since those with a higher level could lower theirs in response.

In some countries, e-commerce has sparked debates on equitable tax treatment between domestic and foreign sellers and retailers (see Box 4). The WTO GATT Article III(2) requires that imported products are not subject to higher internal taxes than those applied to similar domestic

products. In the long term, technological solutions need and will be found to collect duties and taxes in an easier manner, thanks to customs automation and the digitization of trade and logistics. Whether governments choose to implement these, and how, are different questions. One insight from the recent shifts in various countries is the importance of government transparency in regards to the development of new tax regimes. Increased visibility and clarity on expected changes, with advance notice, can help industry efficiently manage compliance and make the landscape easier for small businesses to navigate.

Box 4: E-commerce tax changes

The Australian Parliament recently legislated to apply a Goods and Services (GST) tax of 10% on the sale of all low-value imported goods to consumers starting 1 July 2018 using a new approach to collection. International vendors or suppliers (merchants, re-deliverers or online marketplaces) with annual sales over AU\$75,000 must register with the Australian Taxation Office and collect GST.⁶² Sales from foreign vendors below this threshold if made through e-commerce platforms or re-deliveries must also pay GST. A de minimis threshold of AU\$1000 will remain for customs duties and reporting at the border. Goods and consignments over that threshold will continue to pay duties and GST through a border assessment model. Some stakeholders have criticized the move, noting it relies on voluntary compliance and have complained that it is burdensome. The shift is being monitored by the government. An evaluation by the Australian Government Productivity Commission suggests that the revenue collected will be modest, while foreign suppliers will incur significant compliance costs, and consumers will face higher prices, but it is useful test pilot to achieve the policy objective set.⁶³

Thailand, Singapore and Malaysia are among others examining lowering VAT de minimis thresholds to better capture international e-commerce sales.⁶⁴ The US Supreme Court also ruled in June 2018 that states could compel retailers to collect sales taxes even when they are not physically present in the market – a move with implications for domestic and international platforms alike.

The EU, meanwhile, is moving ahead with a new VAT e-commerce package to enter into force between 2019 and 2021. Starting in 2003, non-EU taxable persons selling electronic services to customers could register on an EU-wide portal, paying VAT in a single quarterly return. The portal redistributes the VAT to relevant EU member states in which the e-service was consumed. The system, or “VAT One-Stop Shop” (OSS), will now be extended to cover low-value goods imports – with VAT applied based on the destination of the goods with consumer and de minimis exemptions removed.⁶⁵ Non-EU taxable persons should designate an intermediary or “fiscal representative” to settle the VAT. Exceptions to the latter are possible if certain criteria are met. In total, the European

Commission estimates the portal could result in €2.3 billion in savings for businesses, and a €7 billion increase in EU member state VAT revenues annually.⁶⁶ Some experts have suggested that the new rules are highly burdensome for small business, add challenges for the transport sector, and increase concerns over compliance effectiveness due to the high risks of fraudulent value declaration.⁶⁷

In China, a new cross-border tax system was initiated from 8 April 2016. Goods purchased online from overseas where the electronic information is accessible by Chinese customs will now be required to pay import tariffs, VAT and consumption tax as applicable. The move represented a shift from a previous regime where international e-commerce purchases for personal use were treated as parcels subject to a tax rate of 10, 20, 30 or 50% depending on the type of goods. Under the new system, single transactions under roughly \$300 and annual transactions under \$3,000 will be subject to a temporary tariff exemption and VAT and consumption rates at 70% of the normal rate. When customs cannot access the relevant electronic information, goods will be subject to a new parcel tax scale. The tax shift was also accompanied by a “positive list” of goods that can be sold via cross-border e-commerce, while restricting the sale of all others through this channel. A series of customs clearance and quarantine requirements were also added for certain products. Subsequent delays and shifts in implementation, however, have led to confusion among e-commerce retailers and logistics services providers alike – the latter at the front line of navigating customs.⁶⁸

In the Canary Islands, the de minimis on local sales tax and customs paperwork was raised from €22 to €150 in June 2017 with an explicit aim of facilitating online commerce, while reducing costs for consumers and business imports. Research by eBay found that implementation imports with a transaction value below the de minimis increased by 6% per month on average, while equivalent exports increased by around 8% per month on average.⁶⁹

Source: World Economic Forum E-commerce Expert Group

Postal modernization

Some postal operators are transforming to meet the needs of the e-commerce market. The Universal Postal Union (UPU), a specialized agency of the United Nations, offers one forum for intergovernmental cooperation in this area. A guiding UPU obligation includes ensuring the universal postal service and guaranteeing the free circulation of postal items over a single postal territory composed of more than 200 interconnected networks. The UPU works with governments on policy implementation, provides legal, regulatory and technical support, and sets the global postal strategy, regulations and standards. It is undertaking several steps to ensure the postal network is fit for purpose to handle the shift from letters to parcels and packages fuelled by e-commerce.

First, a new integrated global framework of activities to coordinate and accelerate e-commerce development in the postal sector to facilitate cross-border trade has been created with UPU membership, known as “ECOMRPO”. This is a category of parcel under UPU regulations specifically designed with features that meet the needs of e-commerce customers. Since 2016, 50 UPU member countries have implemented this parcel category.⁶⁰

Second, one of the top priorities identified by the UPU is ensuring member countries are in a position to comply with emerging supply chain requirements, including the provision of electronic advance data (EAD). In 2014, the UPU created a legal basis for the provision of EAD by amending Article 8 (Postal Security) of the Universal Postal Convention. In 2017, the Regulations to the Convention were changed to stipulate that items containing goods may be subject to specific import customs- and security-based requirements for providing EAD, and therefore must be accompanied by the appropriate UPU customs declaration form and bear a unique item identifier. In 2018, the UPU Acts were amended to make the application of a unique item identifier (barcode) mandatory for all items containing goods.

Third, and related, it is working on improved data sharing with other actors involved in cross-border e-commerce delivery. For example, efforts are also underway with the International Air Transport Association (IATA) and the International Civil Aviation Organization (ICAO) to develop a postal data model that provides EAD for security purposes to appropriate stakeholders.

Technical assistance is a priority to help achieve global postal universal services objectives. UPU technical assistance covers the provision of methodological, logistical, advisory and capacity-building activities (regional workshops, training), and administrative and equipment purchase support. It also includes developing and translating project materials into local languages, distributing and analysing questionnaires, conducting field visits and site missions to appraise relevant projects. Projects have been launched with national postal operators in over 100

countries since 2016 to improve their operational readiness for e-commerce. The activities have so far resulted in country roadmaps and action plans to address the gaps in terms of operational readiness for e-commerce for 36 countries in Africa, 18 countries in the Arab region, 23 countries in Asia Pacific, 21 countries in the Caribbean region and 15 countries in Latin America.

Measurement can help to accelerate change. The UPU has developed an Integrated Index for Postal Development, dubbed “2IPD”, to assess the reliability and quality of countries’ postal services. It is composite index, with inputs drawn from: UPU data, including postal big data (over 3 billion tracking records checked and analysed), official UPU postal statistics database (more than 100 indicators available in 2015), and important UPU surveys (2016). Countries are given a score ranging from 0 to 100 along the following four vital dimensions of postal development:

- **Reliability (measures the level of postal efficiency):** Quality of service performance, including predictability, across all categories of postal delivery services, with a focus on the domestic and inbound components of the postal-delivery process and operations.
- **Reach (measures the level of internationalization of postal services):** Global postal connectedness performance, at the international level, across all categories of international postal delivery services.
- **Relevance (measures the level of competitiveness in all main markets):** Intensity of demand for the full portfolio of postal services in each postal segment, including mail, logistics and financial services.
- **Resilience (measures the level of adaptability of business models):** Capacity to innovate, deliver inclusive postal services and integrate sustainable development targets in postal business models.

Policy-makers can draw on the results to develop strategies to enhance the contribution of postal services to the economic and social infrastructure of their countries. Regulators can better identify the development challenges that postal services are facing and benefit from meaningful international comparisons. Post operators can benchmark relative operational and business model strengths and weaknesses across different levels of economic development and geographies, so as to improve performance.

Next steps

Today, we are just starting to see e-commerce link some MSMEs to international markets, working through language barriers, currency differences and shipping hurdles. Not all of these barriers are easily surmounted, nor will the benefits of global e-commerce be automatic. To realize e-commerce opportunities across the world for players of all sizes, a series of e-commerce-enabling pillars need to be put in place or strengthened. These pillars include, among other things, logistics and delivery services, online payment systems, connectivity and the ability to move information across borders. More work is needed to understand countries' performance in these areas in relation to global e-commerce and actions to improve outcomes, as well as unpacking the positive or negative causalities between these.

The paper did not go into detail on the topic of cross-border data flows, as it requires more comprehensive discussion of the types of regulatory approaches that can best balance information movement with fulfilling other policy objectives such as in relation to privacy, financial system security and so on. It is nonetheless essential for functional and efficient global logistics systems. Many of the steps described above rely on cross-border data flows – from digital customs to international services trade.

Following consultation with e-commerce actors, the paper did touch on some issues countries could take forward unilaterally – such as on transport, logistics and delivery services regulation, infrastructure investment or postal modernization. In other cases, important domestic discussions will be had on the right balance for tax treatment of foreign and domestic retailers, both physical and digital.

It also highlighted how trade negotiations can offer one way for governments to collaborate on issues that cause friction in the area of international deliveries. Trade frameworks can create a more interoperable working environment for the digital economy – which is, by its nature and in terms of the opportunities it offers, borderless. In some cases, countries already have useful commitments in place in RTAs, such as around TFA-plus border clearance. Full implementation of these measures could be examined, and public-private dialogue with industry undertaken to assess if efforts are sufficient or relevant to the landscape at hand. Countries could assess how to move forward, multilaterally or plurilaterally, as part of any future talks in relation to e-commerce, whether new needs are identified or in regards to each of the items already mentioned. Missing the physical goods delivery aspect of e-commerce would omit a major factor in the enabling environment.

Acknowledgements

This White Paper was edited by John Manners Bell, Chief Executive Officer, Transport Intelligence, with the support of Kimberley Botwright, Community Lead, Trade and Investment, World Economic Forum.

Special thanks and recognition are extended to the following individuals for contributions and discussion: Jim Cox, Vice President, Corporate Communications, Agility; Sean Doherty, Head of International Trade and Investment System Initiative, World Economic Forum; Paul Donohoe, Manager, Digital Economy, E-commerce and Trade Programme, Universal Postal Union; Rupa Ganguli, Founder and CEO, Inclusive Trade; Carlos Grau Tanner, Director General, Global Express Association; Adam Hemphill, Director, Global Government Affairs; Nadia Hewett, Project Lead, Blockchain and Distributed Ledger Technology, World Economic Forum; Jan Hoffman, Chief, Trade Logistics Branch, UNCTAD; Philippe Isler, Director, Global Alliance for Trade Facilitation; Hanne Melin, Director, Global Public Policy, eBay; Sushant Palakurthi Rao, Head of Global Partnerships, Agility; Steven Pope, Vice President, Customs & Regulatory Affairs, DHL Express Europe; Barbara Ramos, Knowledge Lead, Global Alliance for Trade Facilitation; Amgad Shehata, Senior Vice President, International Public Affairs, UPS; Sarah Thorn, Senior Director, Global Government Affairs, Walmart; Mark Wu, Henry L. Stimson Professor, Harvard Law School

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