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2 The contribution of services trade policies

Key points

- The high degree of regulatory scrutiny attached to the supply of services, both within and across borders, focuses attention on how the policy choices of governments matter for services trade. Services facilitate market integration by supplying the basic infrastructure for trade. Despite continued efforts to reform, barriers to trade in services remain high overall, increasing trade costs with damaging economy-wide consequences.

- Higher services trade restrictions are associated with lower shares of services value-added within global value chains (GVCs). They can also adversely affect the productivity of manufactured exports, hindering efforts at moving up the value chain.

- Because services supplied through a commercial presence remain the most powerful driver of services sector internationalization, important signalling benefits can be associated to binding commitments and to steps taken to facilitate the entry and operation of foreign established services providers.

- Lowering barriers to trade and investment in services may strengthen resilience and promote adaptation to climate change, while reducing the cost of environmental protection measures. Doing so also promises important advances in inclusiveness, given the favourable impacts of trade in services for female and young workers and entrepreneurs, and micro, small and medium-sized enterprise (MSMEs).

- Not only do services trade barriers impose significant costs, uncertainty stemming from the absence or relative paucity of binding commitments also carries additional costs. Current international commitments on services, particularly at the WTO, provide for limited predictability and transparency and offer only partial protection against policy reversals.

- Considerable scope exists for closing the widening gap between commitments made under the latest generation of preferential trade agreements and those scheduled under the General Agreement on Trade in Services (GATS).

1. The multifaceted impact of services trade policies[1]

The increasing and complex role of services in economies and international trade has raised the significance of both national and international policy regimes governing trade in services. Recent research based on improved data on services trade and services policies sheds further light on their impact on sectoral and economy-wide performance (Roy, 2019; WTO, 2020a). How governments design and implement services trade policies is central to their development trajectories and to prospects for deepened integration.

(a) Effects on economic, trade and investment performance

Impact of services trade openness on economy-wide productivity and the performance of key services sectors

Impediments to trade and investment in services shield domestic suppliers from competition, leading to higher prices and reduced incentives to invest, innovate or otherwise improve services quality. Sectors facing lower trade costs – which are themselves generally associated with lower services restrictions – tend to be more productive and enjoy higher productivity growth than those with higher trade costs.[2]

In developed economies, services policies, particularly those restricting mode 3 trade, have been found to explain differences in total factor productivity, which in turn largely mirror differences in productivity growth.[3]

Services trade restrictions negatively affect performance in a number of important services sectors, as measured by comparable indicators across a broad range of countries. For example, countries that impose more trade-restrictive policies in commercial banking have less-developed credit markets.[4]

How trade-facilitating services policies impact physical connectivity and goods trade

Services impact physical connectivity and trade integration by providing the basic infrastructure that underpins trade in goods. Without efficient services, goods cannot be successfully traded, effectively taxing countries regardless of the source of their comparative advantages.

A wide basket of services comes in play in bringing final goods from their place of production to final consumers across borders, including transport services (maritime, air, road), logistics services (freight forwarders, customs brokers, storage, warehousing, metrology), express delivery services, advertising and distribution services (wholesale and retail).

A study by the International Trade Centre (ITC, 2022) based on enterprise surveys confirms that access to high-quality logistics and transport services is positively linked to competitiveness and to improved performance across a range of indicators. Firms making use of high-quality logistics services perform better in inventory management as well as in on-time delivery, two key elements of successful exporting.

In Chile, measures which began in the 20th century to increase competition in transport services have resulted in greater GVC participation and facilitated the country's goods exports in key sectors. The experience also underscores how a reduction of barriers to trade in goods and the expansion of goods exports creates a demand for services liberalization in order to maximize positive returns from liberalizing trade in goods (see Box 7).

Pro-competitive regulation can exert a strong influence on the efficiency of services markets. Services trade policies impact physical connectivity, as higher levels of services trade restrictiveness in logistics, maritime and road transport result in higher trade costs.[5] Focusing more specifically on the transport of containerized cargo on liner vessels, Bertho *et al.* (2016) find that government restrictions in the shipping sector, especially those limiting foreign direct investment (FDI), significantly inflate maritime transport costs, with adverse impacts on the flow of goods trade.[6]

Similar impacts have been shown for road transport. Reforms aimed at facilitating market entry in trucking in Rwanda resulted in nominal price declines of close to a third and were associated with an expansion of the domestic trucking fleet.[7]

This contrasts with the experience in other countries of Africa's Great Lakes region, where restrictive entry regulations, quotas and other measures have reduced competition, raising the costs of road transport services and negatively impacting agricultural exports.

Source: ITC (2022).

> Services provide the basic infrastructure that underpins trade in goods.

Box 7. Impact of liberalizing transport policies in Chile

Chile's experience not only highlights the strong impact that the liberalization of transport services can have on supply chains and goods exports, but also how lowering barriers to goods trade generates demand for services liberalization.

Efficient transport is one of the most important services required to compete in the global economy. Chile's challenging geography further underscores the essential role of transport services – domestic and international – in shaping the performance of global value chains (GVCs) and in exporting products to foreign markets.

From the late 1980s to the mid-1990s, Chile undertook significant steps to liberalize its transport sector:

- Authorities ended the state monopoly on harbour services and introduced concessions for port terminals by private companies.
- The government negotiated an increasing number of open skies' agreements, providing greater access to the sector for foreign services providers.
- The government attracted foreign direct investment through public-private partnerships to build and maintain the road network.
- Authorities opened the sector to foreign participation.

Overall, Chile's transport services is relatively low, as measured by the World Bank–WTO's Services Trade Restrictiveness Index (STRI).

Trade in value-added statistics showed that sectors such as the wood and wood products and the chemicals sectors are intensive users of transport services, absorbing high value-added from that sector in Chile. Transport services value-added is also integrated into exported goods. The country's agribusiness and printing industries are the leading sectors embodying transport services value-added in their exports.

> Competitive transport markets have been a significant factor in Chile's successful development of its agribusiness sector through GVCs.

Liberalization measures have significantly impacted Chile's agribusiness sector, with the country becoming one of the world's largest cherry exporters despite its distance from world markets and the perishable nature of its exports.

The industry exports 80 per cent of its production and offers a clear example of competitive agribusiness expansion. This trend has largely been made possible through expansion to overseas market opportunities enabled by export-oriented policies – a number of which are tied to Chile's extensive web of preferential trade ties with key partners.

High import and export volumes for goods, combined with a liberalized transportation sector, have fostered competition among logistics providers, which have helped to reduce costs.

The modernization of Chilean ports following their privatization significantly contributed to the extent exporters in Chile were able to take advantage of reduced tariffs abroad to export large quantities of products.

Reduced barriers in the transport sector have been associated with better value chain performance, as reflected in the significant increase in domestic value-added, after controlling for other factors. Competitive transport markets have been a significant factor in Chile's successful development of its agribusiness sectors through GVCs.

Source: See Bamber and Fernandez-Stark (2015) for a full account of the cherry industry in Chile and Shepherd and van der Marel (2016) for details on the liberalization of transport services.

Services policies as key determinants of foreign direct investment

Governments increasingly focus on attracting FDI to create quality local jobs, promote linkages with domestic suppliers and improve access to foreign markets. This motivation is linked to the productivity enhancing gains that FDI can produce by exposing local firms and workers to new technologies and know-how and to enhanced competition.

FDI, including in services, can also help domestic firms to participate in GVCs by becoming suppliers of foreign affiliates or by sourcing from them (Hoekman and Sanfilippo, 2022). Globally, the services sector attracts most FDI,[8] but it is also the sector where foreign investment remains most restricted when compared to manufacturing or the primary sector.[9]

Various studies have found that services trade restrictions are associated with both reduced foreign investment inflows and lower output of foreign affiliates. Countries with lower levels of FDI restrictiveness are significantly likelier to attract foreign investment in services than countries with more trade-restrictive policy regimes.[10]

Mistura and Roulet (2019) analyse 60 developed and developing countries between 1997 and 2016 and quantify the impacts that FDI liberalization could have on bilateral FDI stocks, taking into account factors such as market size and growth potential, factor endowments and levels of corporate taxation. They find the deterring effects of barriers to FDI to be larger in the services sector.

Key FDI restrictions that limit foreign investment include foreign equity limitations and discriminatory or unduly onerous screening mechanisms – limitations which often apply to the services sector.

FDI is not only affected by explicitly discriminatory measures but also by the predictability and transparency of the policy and regulatory environment. The World Bank (2020a), drawing on a dataset of over 14,000 parent companies investing in over 28,000 projects across 168 host countries, shows that investor confidence and FDI flows increased with reduced regulatory risk. The report finds that the impact of regulatory risk on FDI is sizable and comparable in magnitude to other economic and policy factors.

Such findings are of particular relevance for services, given that most subsectors are highly regulated (e.g. finance). The importance of regulatory transparency and predictability stands out in the World Bank's Global Investment Competitiveness surveys, which find that the legal and regulatory environment is one of the top three factors shaping investment entry decisions, along with political and macro-economic stability (World Bank, 2020a).

In addition, high-quality services, including in such infrastructure services as transport, logistics and telecommunications, is a key component of a conducive business environment and an important factor in FDI attractiveness in services and other sectors (OECD, 2023; Ta *et al.*, 2021).

> Greater services trade openness can increase both the level and quality of an economy's goods export basket.

Impact of openness in FDI and trade in services on manufacturing and GVC participation

Achieving a reduction in trade costs for goods greatly depends on improving the performance of the services used by goods-producing enterprises. Country-specific research demonstrates that openness in services trade increases the productivity of manufacturing industries.[11]

Research also underscores how lower services barriers are associated with greater manufacturing exports, given the key intermediation role of services inputs. Hoekman and Shepherd (2017) find that a 10 per cent increase in services trade restrictiveness levels results in a 5 per cent decrease in bilateral trade in manufactured products.

Trade and investment restrictions on transport and retailing services are seen to exert the largest impacts on merchandise exports. Wolfmayr (2012) finds that services inputs, in particular imported services, have a positive and significant effect on the manufacturing export shares of European countries.

Focusing on business and financial services, Liu *et al.* (2020) find that the level of development of these sectors enhances the revealed comparative advantage of manufacturing sectors that use these services intensively. Using a sample of 63 developed and developing economies, Díaz-Mora *et al.* (2018) find that a greater share of foreign services value-added in manufacturing exports contribute to more resilient and stable export relationships.

Recent research also find that services trade restrictiveness negatively impacts the sophistication of manufacturing exports, suggesting that greater services trade openness can increase both the level and quality of an economy's goods export basket.[12]

Other studies further emphasize that restrictions on inward FDI in services have a particularly strong negative impact on manufacturing exports.[13] This is consistent with earlier research suggesting that investment openness can be a more important determinant of a country's participation in GVCs than tariff barriers.[14]

"Reducing trade costs for goods greatly depends on improving the performance of the services used by goods-producing enterprises."

The experience of India highlights how reforms to facilitate FDI in services can ignite positive growth dynamics by boosting participation in foreign manufacturing value chains. In the 1990s, policy changes bringing about better regulation and greater openness to FDI in services provided manufacturing firms in India with access to better, more reliable and more diverse business services.

This allowed manufacturing firms to invest in new business opportunities and better technology to organize production more effectively and reap economies of scale, and to manage inventories and coordinate with consumers and suppliers more efficiently.

Empirical studies lend support to the positive impact of liberalizing services FDI on manufacturing value chains. In the Czech Republic, for example, services reforms generating greater FDI inflows were seen to result in productivity gains of domestic firms involved in downstream manufacturing.[15]

How restrictions limit cross-border trade in services

Policy restrictiveness in services trade raises costs for foreign exporters, thereby limiting cross-border trade in services – including for services supplied over digital networks. Such restrictions also limit the services exports of the country imposing the measures.[16]

By limiting competition, restrictive measures hinder the performance of domestic suppliers, reducing incentives to improve efficiency through innovation, financial investment and the adoption of new technologies. This in turn affects the capacity of domestic suppliers to compete in international markets.

Services firms, like producers of manufactured goods, use inputs from services subsectors, so raising the cost of imported inputs can make the firms less competitive and limit their export potential.[17]

Services trade restrictiveness and services value-added in exports

Higher services trade restrictions are associated with lower shares of services value-added within GVCs.[18] Trade barriers in both exporting and importing countries exert an overall negative impact on services value-added flows. Services barriers in exporting countries are seen to exert greater impacts, as they reduce competition in domestic services markets, leading to less efficiency and lower performance, thereby limiting the services value-added contribution to exports.

> Trade barriers in both exporting and importing countries exert an overall negative impact on services value-added flows.

(b) Services trade and efforts to bridge the digital divide and harness opportunities in digital trade

Services trade policies play a critical role in the development of the backbone infrastructure enabling digital trade. Sectors such as telecommunication and computer services in particular, but also financial and logistics services, are key enablers not only for the sale of goods online, but also for the digital supply of an increasingly wide range of services.

Telecommunication services, which encompass the Internet, mobile telephony and data transmission services, provide the basic infrastructure and transport capacity that allows a range of services to be supplied digitally, in addition to also permitting goods to be offered and purchased over business to business and business to consumer networks.

Indeed, the Internet is one of the most important business platforms for companies, domestically and internationally, and promotes efficiency by making transactions quicker, cheaper and more convenient to carry out.[19]

Suppliers of telecommunication and computer services (e.g. cloud computing and other data storage and processing services) also enable data flows across borders, which underpin the international operations of firms in different sectors. In addition, information and communications technology (ICT) services, combined with innovation and regulatory adaptation in the financial sector, have made significant advances in payment solutions possible, particularly with mobile devices.[20]

Over the past 25 years, a growing number of countries have moved from monopolistic market structures to pro-competitive regulatory environments. They have done so by reducing barriers to entry and often through privatization of state-owned incumbents.[21] These changes have enhanced the affordability, quality and diversity of telecommunication services.[22]

Countries that introduce effective pro-competition regulation have greater success in stimulating market growth and digital readiness (ITU, 2023, 2017). A study of mobile networks in 165 countries shows that mobile broadband penetration was 26.5 per cent higher in countries with competitive markets (ITU/UNESCO, 2013, 2019).

Higher levels of services trade restrictiveness in telecommunication services are associated with lower penetration rates for fixed, mobile and broadband Internet (Nordås and Rouzet, 2016; Borchert *et al.*, 2017). Studies have also found that markets characterized by more intense competition achieved greater price decreases and better services, and that liberalization of the telecommunications sector can lead to higher GDP growth and to sectoral and economy-wide productivity gains.[23]

Digital technologies are bringing down trade costs for services and, as noted in the preceding sections, are offering new trade opportunities. Digital technologies are also rejuvenating exports in traditional services sectors, such as tourism and agriculture.

The Organisation for Economic Co-operation and Development (OECD, 2022a) estimates that trade costs for financial, communication and business services fell by between 30 per cent and 70 per cent from 2000 to 2019. The greater ease of trading and reduced impact of geographical distance on cross-border services trade was driven, in large measure, by the adoption of ICT, which accounted for one quarter of the drop in trade costs in these sectors (OECD, 2022a).

A negative correlation has also been found between entry barriers and restrictive regulations on services and investment in digital technologies and ICT.[24] This suggests that barriers to entry and competition in services sectors reduce the incentive of suppliers to invest in digitalization (e.g. investment in the use of cloud facilities by transport companies, the supply of online services by professional services firms or the use of the Internet by retailers). The example of East Africa highlights how the policy framework is key to attracting investment in connectivity-boosting infrastructure (see Box 8).

Box 8. Digital integration in East Africa

The East Africa region is home to approximately 384 million people, of which over one third live below the poverty line, 72 per cent of the population live in rural areas and a third is under the age of 24. More than half of the countries in the region are considered fragile and affected by prolonged periods of civil war. These conditions have led to many refugees, internally displaced people and migration, especially in borderlands.

The adoption of digital technologies holds the potential to expand the services sector, boost services trade, and support regional and international integration in East Africa. Deepened regional integration within the East African Community could boost GDP in the region by up to US$ 2.6 billion and create up to 4.5 million new jobs. Countries in the region can also benefit from economies of scale and network effects created by a more extensive regional digital market.

However, investing in an integrated digital market requires building the foundations for a digital economy to flourish. This includes investments in digital physical and human capital, removal of cross-border barriers and efforts at regulatory harmonization at the regional level.

The East Africa region has significant disparities in connectivity levels that affect the development of a regional digital market. Diverse degrees of information and communications technology (ICT) infrastructure development among East African countries drive differences in price, performance and broadband penetration levels – which range from 5 per cent in South Sudan to 48 per cent in Kenya.

Rural areas are also underserved in terms of ICT infrastructure. For instance, Kenya has network coverage of about 94 per cent, but northern Kenya remains underserved. Access to ICT networks is essential, especially in border areas, where greater volumes of cross-border trade, including via e-commerce, occur.

Gender gaps in access to digital technology and skills are also common in many countries, such as Ethiopia, Somalia and South Sudan. Disparities in the development of the ICT regulatory frameworks in many East African countries also affect broadband market growth. For instance, Somalia, Ethiopia and Djibouti have only recently created an ICT industry regulator, while Kenya is much more advanced, having one since the 1990s.

There is also a need to both strengthen the current policy, legal and regulatory environments to enhance competition and create a level playing field throughout the region to attract greater investment in connectivity infrastructure and create a more integrated digital market. For instance, data must be able to move more freely and securely across borders to support digital trade.

Similarly, cybersecurity will be critical to boost cross-border trade in digital services. However, there are significant disparities in data governance regimes and in cybersecurity preparedness throughout the region. While Tanzania, Kenya and Rwanda stand above the global average in terms of cybersecurity preparedness, many other countries, such as Burundi, Djibouti, Eritrea and South Sudan, are still significantly below the global average.

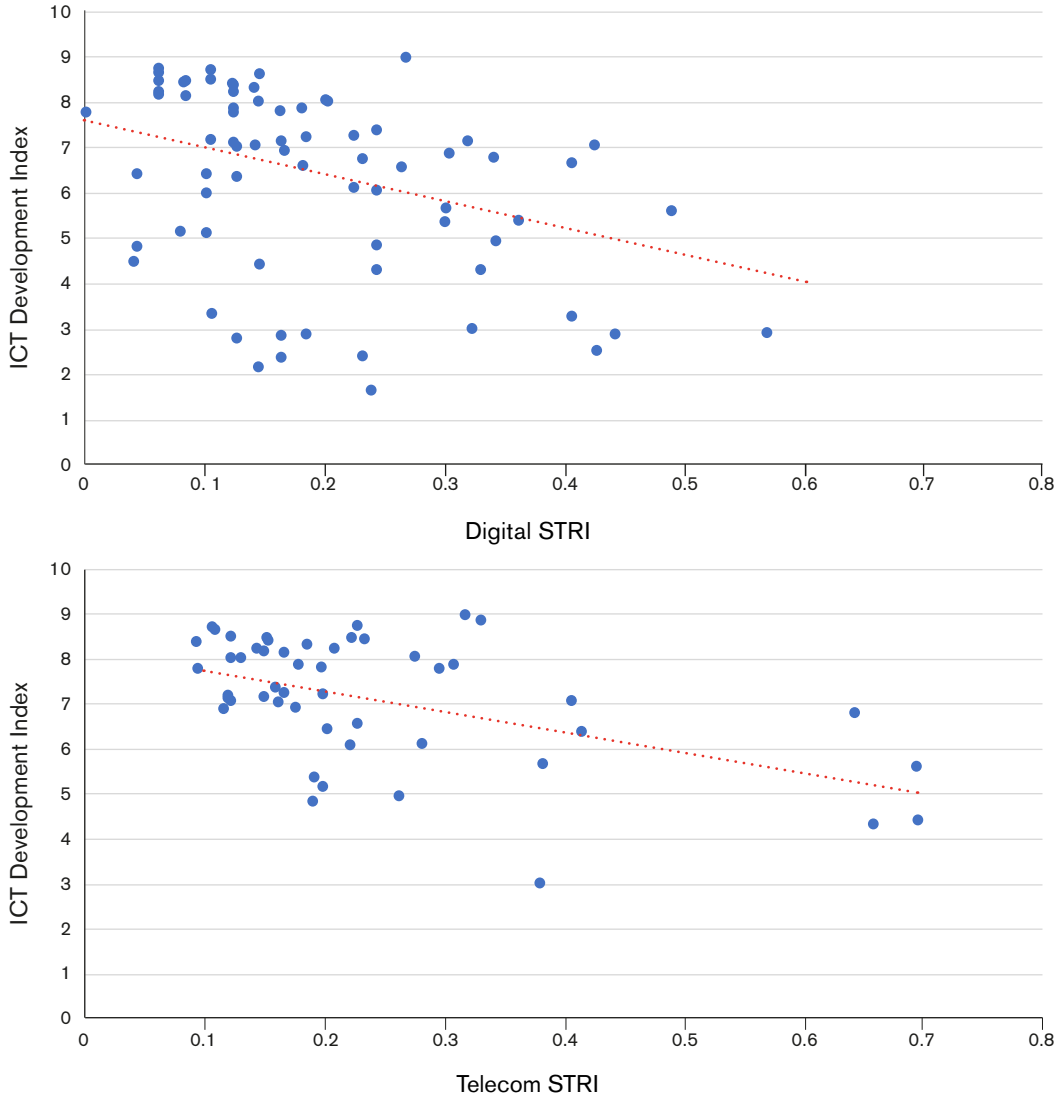
There are also disparities in the level of development of financial services, with both national and regional payment frameworks still underdeveloped and lacking in interconnectedness, further affecting trade in the region. Currently, e-commerce and intra-regional trade levels in East Africa are still relatively low.

Therefore, accelerating regional integration will necessitate a comprehensive approach towards digital development and require building key foundational blocks, such as data governance, financial services and digital capital to enable the digital economy to grow. This will also require efforts at policy and regulatory harmonization throughout the region.

Note: For further information, see the World Bank's Eastern Africa Regional Digital Integration Project, available at https://projects.worldbank.org/en/projects-operations/project-detail/P176181. East Africa includes Burundi, Comoros, Djibouti, Eritrea, Ethiopia, Kenya, Rwanda, Seychelles, Somalia, South Sudan, Sudan, Tanzania and Uganda. Further background information can be found in World Bank (2018).

Measures that restrict trade in services show a strong inverse correlation with different indicators of performance in the telecommunications sector. Services trade restrictiveness in telecommunications is associated with higher prices for broadband and lower subscriber density for broadband (adjusted for income per capita) (Nordås, 2020). Figure 22 shows the strong correlation between the services trade restrictiveness for digital services and telecommunication services with an economy's levels of ICT development.

Figure 22.
Relationship between services trade restrictiveness and ICT development



Source: ICT Development Index available at https://www.itu.int/en/ITU-D/Statistics/Pages/IDI/default.aspx; digital Services Trade Restrictiveness Index (STRI) available at https://goingdigital.oecd.org/en/indicator/73; telecommunications STRI available at http://i-tip.wto.org/services/default.aspx.
Note: Data for the ICT development index and the digital STRI are for 2017. Data for the telecommunications STRI are from 2016.

Data policies and trade in services

Greater adoption of digital technologies and the spread of ICT services like broadband Internet and cloud computing have boosted not only trade in digital services, but also cross-border data flows. This has brought closer scrutiny to bear on government measures that restrict data flows.

A recent study examining the level of restrictiveness of data policies across a sample of 64 economies finds that restrictive measures are significantly associated with lower imports of data-intensive services (van der Marel and Ferracane, 2021). Since data-intensive services serve as inputs to an increasing range of economic activities, reducing imports through restrictive data policies and localization requirements can negatively impact user industries and limit the productivity gains generally associated to digitalization.

(c) Services trade policies and women's economic empowerment

Since levels of female employment are significantly higher in services, women may be expected to benefit more from services than from manufacturing exports. A recent study on India suggests that opening up services has helped to close gender education gaps by raising education levels among women more than those among men (Nano *et al.*, 2021).

Boosting trade in areas such as tourism, education and distribution services has a positive impact on women's economic empowerment. Government policies that provide an enabling environment for these sectors to grow, including by freeing up mode 3 (commercial presence) trade, can generate considerable employment opportunities for female workers.[25]

(d) Services trade policies and climate change mitigation and adaptation

Trade in environmental services can play an essential role in helping economies transition to a low-carbon economy. Such services are often embodied in environmental goods, as they are typically integral to transferring and using low-carbon technologies. Examples of environmental services include: construction, operation and maintenance of renewable energy generation and distribution products; advisory services on reducing emissions from vehicles; application of clean technologies in manufacturing; advisory services on land-use management and agricultural practices; and services relating to the inspection, certification and testing of products and services produced with low-carbon technologies.

Most trade in environmental services occurs through mode 3, followed by mode 4 (temporary movement of services suppliers). As in all other sectors, technological advances are increasing the range of environmental services that can be supplied remotely via mode 1 (cross-border supply) trade (APEC, 2021).[26]

Despite its growing importance, restrictive measures still affect trade in environmental services, inflating the costs of environmental projects in which they are used. For example, restrictions on the provision of environmental services can affect engineering and consulting activities, which in turn affect several other environmental project components dependent on these types of services for their operations, such as renewable energy, smart agriculture and water treatment.

Additional restrictions on services supporting trade in environmental goods and services can also negatively affect access to such products. Enhanced access to ICT services can play an essential role in the transfer and implementation of new environmental technologies.

Services illustrate how trade can be both a contributing factor and potential solution to climate change. Nowhere is this more palpable than in the transport sector (see Box 9).

Climate change can affect trade by altering comparative advantages as a result of climate-induced productivity losses. The greater recurrence of extreme heat episodes has been found to reduce productivity levels to a lesser extent in services and manufacturing than in agriculture. As noted in WTO (2022b), a one degree rise in a country's temperature translates into reduced export growth for agriculture and light manufacturing.[27]

Climate change will increasingly entice countries faced with rising temperatures to shift resources towards activities with a lesser environmental or carbon footprint. Many such activities will be in the services sector. Actions taken to reduce services trade costs can facilitate more orderly and properly sequenced adjustments in production structures.

Lack of diversification and high commodity dependence can exacerbate vulnerabilities to climate change. Services offer important opportunities for diversification by being generally less sensitive to the impacts of climate change than, for example, sectors with a greater reliance on land use and other natural resources.

Agricultural yields in Sub-Saharan Africa and South Asia are expected to experience the most significant negative impacts from climate change, with far reaching impacts on employment, particularly of poorer workers and households (Brenton and Chemutai, 2021).

Countries with greater openness to trade are found to have greater capacity to adjust to climate-induced shocks to productive structures (WTO, 2022a).

Enhanced trade allows countries to access to the most efficient and highest quality environmental goods and services, thereby reducing the costs of environmental protection, while new investments help to upgrade infrastructure. Environmental services are *sine qua non* to the appropriate functioning of environmental goods. As such, taking measures to increase trade in them should happen in tandem.

Box 9. The challenge of decarbonizing transport services

The transportation of goods and people around the world using various modes of transport is responsible for an estimated 7 per cent of all CO_2 emissions. Although transportation is often the part of a good's supply chain that is less emission intensive, significant industry efforts are being directed to lowering the transport sector's carbon footprint.

Arguably the most climate friendly cargo transportation mode, the almost 1 billion tonnes of CO_2 emitted annually by the shipping industry is still significant and several initiatives are underway to make it less so – for instance by reducing vessel speeds and developing carbon-neutral fuels, among others.

Use of carbon-efficient fuels such as methanol are also under development. However, this raises the issue that the infrastructure needed to support a whole new shipping industry reliant on methanol will need to be built all over the world – an important infrastructural challenge that will require significant investment.

Aviation, for both freight and passengers, is also under pressure to reduce emissions, as illustrated by the "flight shame" consumer phenomenon and no-fly campaigns. The International Civil Aviation Organization has adopted a mitigation policy based on technological improvements, including setting emissions standards and introducing biofuels, supporting operational improvements through fuel efficiency monitoring and more direct flight paths, making airports more fuel-efficient and capping CO_2 emissions through the Carbon Offsetting and Reduction Scheme for International Aviation – CORSIA.

The costs of emerging mitigation measures in international transport are not easy to assess, as policy measures and new business models are still under discussion, new technologies still under development, and travel habits – particularly business travel – appear to have been durably altered in the pandemic's wake.

Source: Brenton and Chemutai (2021).

Meanwhile, foreign investment can help to support the diffusion of mitigation technologies, increase the availability and accessibility of related services globally, and help to scale activities and initiatives necessary for achieving climate goals. This is particularly important for developing economies confronted with technological and institutional capacity shortfalls in climate change mitigation. Box 10 illustrates Gabon's commitment to curbing carbon emissions and the role played by environmental services in this regard.

> Enhanced access to ICT services can play an essential role in the transfer and implementation of new environmental technologies.

Box 10. How can services trade help Gabon decarbonize and diversify its economy?

The economy of Gabon is still overly dependent on natural resources, such as oil, for growth, exports and fiscal revenue – all heavily reliant on extractive activities. However, lower oil prices and a drop in production have led to a gradual decline in the share of the oil sector.

As a result, the services sector has become one of the main drivers of the economy, accounting for a significant portion of aggregate output and employment. Nonetheless, services export levels remain very low, showing untapped potential to grow the sector.

Recent work by the World Bank has identified several services subsectors with the potential to help Gabon increase its services trade levels and diversify its economy, including ecotourism, environmental and information and communications technology (ICT) services.

Ecotourism

Gabon's forests are home to remarkable biodiversity, making Gabon a promising ecotourism destination. Gabon also has a large share of national parks and protected areas. In addition, before the COVID-19 pandemic, ecotourism already accounted for the second largest source of services trade receipts.

Yet, despite several subsidy programmes, the sector is still in its infancy, with a dearth of hotels that are inadequately serviced by transportation links and an underdeveloped road network.

As the pandemic progressively fades away, there is potential to revive the sector and invest in branding efforts to help Gabon be internationally recognized as a prime ecotourism destination. Developing the industry will also require improvements in adjacent services subsectors such as air transport services. One way that Gabon can improve transportation services is through greater air transport connections with airlines from leading source countries.

Environmental services

Gabon faces three challenges in its environmental trajectory: mitigating the adverse effects of climate change; decarbonizing its product and export basket; and utilizing the economic potential of its abundant natural resources, particularly its rainforests.

Gabon has demonstrated a firm commitment to protecting its forests and biodiversity, curbing carbon emissions and addressing climate risks. However, achieving such aims requires a sophisticated environmental services industry. Gabon is still highly dependent on the import of specialized environmental technical services. Therefore, there is potential for Gabon to develop its environmental services industry. This will help Gabon achieve its environmental commitments while also diversifying its export basket by developing a capacity to sell its expertise in the region.

ICT services

The *Plan Stratégique Gabon Émergent* and the *Plan Gabon Digital* state Gabon's commitment to investing in digital services.* Despite progress, however, there is still potential to further develop Gabon's digital economy and increase trade in ICT services. Developing the local digital industry could help to expand job opportunities, especially for the country's youth, contribute to economic and social recovery, and promote trade diversification. Increased participation in the African Continental Free Trade Area and WTO discussions on services and digital trade will be necessary for efforts in this direction.

In order to develop its services economy, Gabon will need to address several other constraints to the sector's growth. This includes improving transport services to boost connectivity via air, maritime and land. The country's weak transport infrastructure affects as well as trade in goods. In addition, poor logistics and trade facilities in Gabon limit the country's ability to export and import goods that are critical to those sectors, driving up trade costs in the process.

Source: World Bank (2022).
* See https://www.cafi.org/sites/default/files/2021-02/Gabon_2015_SM%20A_PlanStrategiqueGabonEmergent.pdf.

(e) Services trade linkages to agriculture

Access to efficient services, through trade and investment, increasingly matters for agriculture production and exports. A wide range of services intervene at all stages of the food value chain, from financial services, transport, distribution and logistics services to more specialized services and technologies (e.g. veterinary services, soil analysis, metrology).

Greenville *et al.* (2019) find that services sector inputs account for 30 per cent of the final value of agri-food products in high-income economies and 23 per cent in middle-income and low-income economies. In exports, they estimate that the share of services value-added amounts to 23 per cent of the average export value of food products and 14 per cent of the export value of agricultural products, although with significant cross-country differences.

The contribution of services to agricultural production and exports is increasingly linked to digital services that are making agriculture "smarter" (i.e. more productive and sustainable all at once). Agriculture is increasingly moving away from manual tools, animal traction and motorized mechanization to the expanding use of digital technologies.

"Agriculture is moving away from manual tools, animal traction and motorized mechanization to the expanding use of digital technologies.

For example, digital services include shared-asset services, which connect owners of technology (tractors, drones) with farmers in need of such equipment (FAO, 2022).[28] Many of these technologies rely on applications operated through a smartphone or via call messaging.

ICT services provide farmers access to better and more timely information on soil properties, temperature and weather conditions, crop growth, livestock feed levels and market conditions, thereby reducing information and coordination costs.[29] Equipment monitoring solutions offer another example of the rising digitalization of agriculture.

Such services can automate the operation of a range of equipment, such as irrigation pumps, or can be used to track the movement of equipment and animals. Technologies which improve productivity while reducing input use and maximizing resource management and environmental sustainability form part of what has come to be referred to as "precision agriculture".

Digital services are also reshaping downstream value chains, through transport, logistics, distribution and retail activities. These are producing lower costs, reduced delivery times and enhanced traceability of products along the whole value chain, thus better balancing supply and demand and contributing to improved food safety.

Efficient services markets can facilitate the adoption of better agricultural practices that contribute to productivity growth and help to build resilience and to improve product quality and the efficient use of resources (FAO, 2019). The adoption of digital technologies and related services depends in part on governments' agriculture policies and – at its core – an enabling environment that facilitates access to connected services (see also OECD, 2022b).

(f) The contribution of services trade policies to diversification efforts

Sustained diversification relies on the contribution of services to economy-wide gains in productivity and allocative efficiency. Sound services trade regimes are key components of a policy framework and business climate that facilitates competition and investment in new activities, boosts private sector expansion and speeds up the reallocation of resources towards higher productivity activities, resulting in a broader base of economic activities (World Bank, 2019).

Work by the United Nations Conference on Trade and Development (UNCTAD, 2022) underscores that leveraging digital, business and financial services is key to driving structural transformation and diversification in countries in Africa – many of whose economies remain unduly dependent on commodity exports, which is associated with low growth and economic vulnerability. The case of Gabon (see Box 10) highlights the role that services can play in diversifying economies dependent on extractive industries. Similarly, a recent report by the Asian Development Bank (ADB, 2021b) stresses the critical need for greater economic diversification in Central Asia, underscoring the importance of policies supportive of services trade in such efforts (see Box 11).

Tourism services, in addition to being the leading source of MSME exports and the largest employer of female workers (WTO, 2019), also offer important potential for export diversification. The case of Gabon also draws attention to the opportunities linked to new trends towards sustainable and green tourism.

Tourism value chains have strong backward and forward linkages with other services sectors (e.g. transport, retail, entertainment and cultural services, conference management, construction services, handicrafts), as well as with agribusiness and manufacturing, further contributing to economic diversification (UNCTAD, 2022).

Box 11. Harnessing services for economic diversification in Central Asia

Production and exports in many economies of the Central Asia Regional Economic Cooperation (CAREC) Program are dominated by resource intensive and primary commodities such as crude oil, metals and agricultural products. CAREC members* need economic diversification to grow faster, raise incomes, and increase productivity.

Services have made a significant contribution to the economic growth of CAREC members. The growth rate of gross value-added in the services sector is much faster than in agriculture in all CAREC members as well as in the manufacturing sector in most of them.

However, the services inputs needed to support economic diversification are lacking, and there remains a high concentration of natural resource-dependent manufacturing economies. CAREC members could further foster growth of their services sector, especially of services subsectors that are critical to economic diversification and sustainable development. These include:

- telecommunications and information services;
- financial services;
- education and R&D services;
- tourism services;
- freight transport and storage services;
- quality testing and certification services;
- other agriculture services.

Most of these services subsectors are producer services (i.e. they are inputs into other economic activities). The efficient functioning of these services subsectors is a precondition for the strong performance of the rest of the economy. The quality of the institutions that are the interface of the government and the economy is also a factor in how well – and to what extent – services promote a country's growth and advancement.

CAREC members need to adopt a coherent and comprehensive approach to the balanced development of interdependent services sectors. Establishing and maintaining favourable legal and regulatory frameworks will deliver the greatest net benefit.

Liberalizing trade in services – by lowering barriers to foreign direct investment, for example – is an effective way to enhance competition in services sectors. However, market opening needs to be carried out carefully to effectively manage adjustment costs. As countries liberalize their services trade regimes, they also need to strengthen labour market institutions and vocational training. Equally crucial is to build and upgrade the physical infrastructure required to nurture the development of the services sector.

Source: ADB (2021b).
* Afghanistan, Azerbaijan, China, Kazakhstan, Kyrgyz Republic, Mongolia, Pakistan, Tajikistan, Turkmenistan and Uzbekistan.

(g) The contribution of services trade to achieving the Sustainable Development Goals

Policies affecting trade in services offer important means of securing compliance with the United Nations Sustainable Development Goals (SDGs), several of which depend on improved services sector performance and scaled up trade and investment in a range of key sectors.

The role assigned to trade in implementing the 2030 Agenda for Sustainable Development (United Nations, 2015) is expressly articulated in SDG 17 and its call for increased exports by developing and least-developed countries. Services are key to achieving this objective given their growing presence in the export baskets of developing economies and in light of the potential they hold for future growth. This is particularly true for digitally delivered services because of the considerable scope that exists to lower currently high services trade barriers.

Beyond SDG 17, services trade matters to the achievement of several other SDGs because of their central contribution to economic growth, poverty alleviation and job creation. Services trade and investment also matter because of their impacts on women's economic empowerment

and the contribution of services to climate change mitigation and adaptation, as discussed above.

By enhancing overall allocative efficiency and sectoral performance, more open and well-regulated services markets can help to advance SDG aims by improving access to and use of services on which the achievement of many SDGs rests.

Indeed, many SDGs explicitly refer to, or involve, specific services sectors, including health, education, sanitation, water distribution, environmental, financial, ICT, transport, and energy services. This underscores how achieving the SDGs is – to a significant extent – a services agenda, such that boosting services capacity and the productivity of various services, and their increased tradability, assume considerable importance.

A prime example, much in evidence during the COVID-19 pandemic, concerns the strong growth in online education, including across borders. Such trade proved instrumental to sustaining access to education and strengthening human capital (SDG 4) (WTO, 2022c).

Fiorini and Hoekman (2018) empirically document how improved access to services that are relevant to the achievement of various SDGs, notably financial, ICT and transport services, are associated with less restrictive services trade policies. Policy initiatives taken to facilitate trade in services and reduce trade costs by tackling barriers to trade in services are key to improving the performance of, and access to, services that are central to achieving SDGs.

2. Raising the bar on services trade policy regimes

Despite the economic shift towards services and the growing role of services in world trade, greater policy attention needs to be paid to the sector – especially its trade and investment dimensions. Doing so could significantly heighten the contribution that services trade can make to development, overall productivity and trade performance, diversification and inclusiveness.

(a) Services trade barriers remain high

The services trade restrictions indices, developed by both the World Bank and the WTO Secretariat and also the OECD, suggest that, despite continued efforts at unilateral pro-competitive policy reforms in many countries, barriers to trade and investment in services trade remain high in overall terms, albeit with significant variations across sectors, modes of supply, regions and levels of development. Sectors such as professional and transport services, for example, tend to be more restricted than telecommunications or distribution services (see Figure 23). Economies of lower income levels have, on average, higher levels of restrictiveness in all sectors covered.

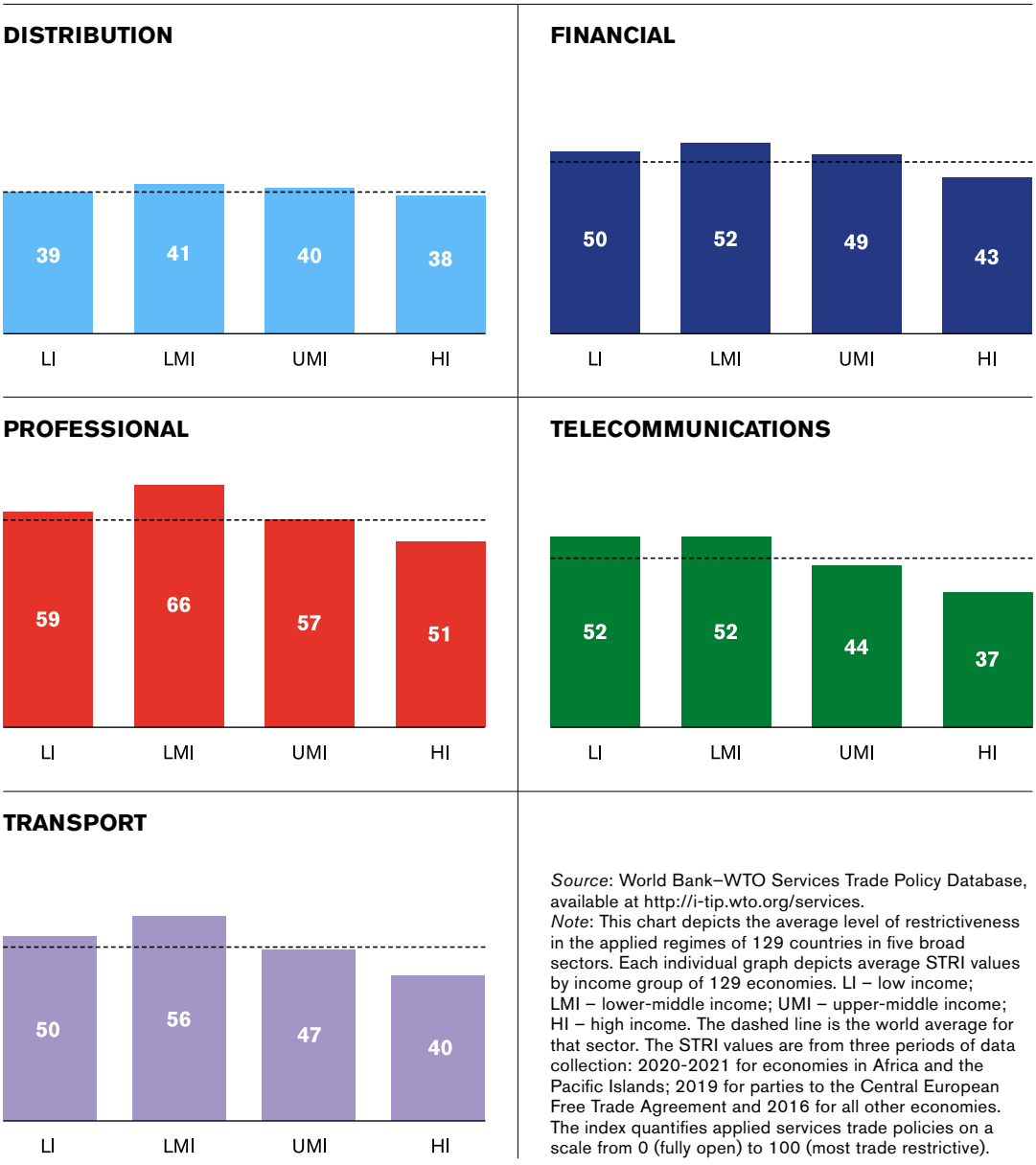
STRI data also show the extent to which services sectors particularly crucial to greater trade integration are subject to trade restrictions around the world. Sectors fundamental to the movement of goods within and across borders, such as transport services, face significant restrictions in a large number of economies.

Similarly, despite the role of telecommunications as a critical enabler of electronic supply of services and e-commerce more generally, a number of countries restrict the sector's trade via mode 3. Barriers to trade in services that are important sources of value-added in manufacturing exports, such as professional services, are also high.

Nevertheless, Borchert *et al.* (2020) show that the overall level of services trade restrictiveness had been decreasing globally between 2008 and 2016, albeit with different patterns across

sectors. Looking at more recent policy changes across 46 countries, the OECD (2022a) finds that services trade restrictiveness tightened during the pandemic, especially in sectors that enable digital trade, such as computer and telecommunications services, as well as a result of mounting restrictions affecting the supply of services through mode 3.

Figure 23.
Services trade restrictiveness levels, by sector and income levels
(STRI values)



Source: World Bank–WTO Services Trade Policy Database, available at http://i-tip.wto.org/services.
Note: This chart depicts the average level of restrictiveness in the applied regimes of 129 countries in five broad sectors. Each individual graph depicts average STRI values by income group of 129 economies. LI – low income; LMI – lower-middle income; UMI – upper-middle income; HI – high income. The dashed line is the world average for that sector. The STRI values are from three periods of data collection: 2020-2021 for economies in Africa and the Pacific Islands; 2019 for parties to the Central European Free Trade Agreement and 2016 for all other economies. The index quantifies applied services trade policies on a scale from 0 (fully open) to 100 (most trade restrictive).

(b) Limited multilateral commitments on trade in services

Barriers to trade in services are higher than for trade in goods and, at the multilateral level, market access commitments are also more limited than for goods, with many sectors left unbound (i.e. free to limit both market access or national treatment) by a number of WTO members – and especially by original WTO members.

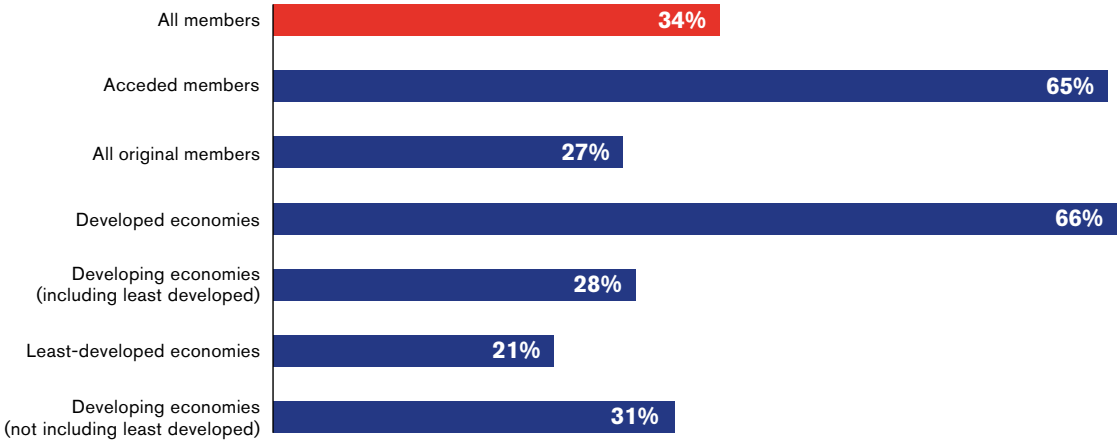
As a whole, WTO members have so far made limited use of GATS to encourage lower services trade restrictiveness or to guarantee existing levels of access so as to ensure greater policy predictability and to circumscribe recourse to trade- and investment-restrictive measures.

Since the conclusion of extended (i.e. post Uruguay Round) negotiations in telecommunications and financial services in 1997, WTO members have not collectively improved their market access commitments through negotiations. The only improvements that have been registered have resulted from the commitments scheduled by newly acceding members.

Most WTO members have not scheduled commitments in a majority of sectors covered by GATS. On average, schedules of WTO members have specific commitments in roughly a third of all services subsectors (see Figure 24). Sectoral coverage varies significantly across the membership, with developed economies having on average more commitments than developing economies (66 per cent compared to 31 per cent), which in turn have more than least-developed economies (21 per cent).

In sectors where market access commitments are scheduled, many remain unbound for certain modes of supply or allow for the continued use of existing restrictive measures (limitations). With the notable exception of members that acceded to the WTO after its creation, GATS commitments tend not to bind the existing level of openness. This implies that the level of policy restrictiveness allowed by the GATS far exceeds, on average, the restrictiveness of applied services trade policy regimes.[30]

Figure 24.
Average proportion of services subsectors subject to specific commitments under GATS, selected WTO member groupings



Source: WTO Secretariat.

(c) Preferential trade agreements secure deeper commitments, widening the gap with multilateral bindings

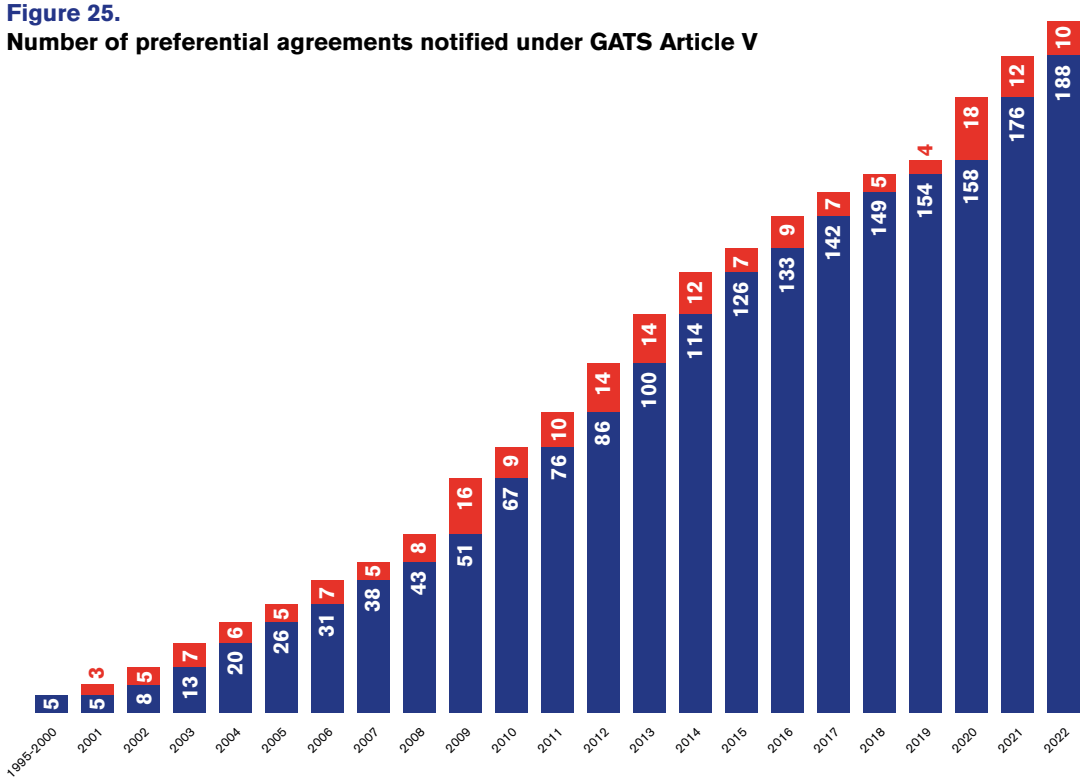
The scheduled commitments outlined above contrast with commitments undertaken in preferential trade agreements (PTAs) covering services, whose number has grown at a fast pace since the WTO was established (see Figure 25) and where parties have undertaken, on average, significantly higher levels of commitments than at the multilateral level (see Figure 26).[31]

While services PTAs, unlike goods agreements, typically result in marginal *de novo* liberalization in practice[32], most such agreements nonetheless manage to bind existing levels of discriminatory and market access impeding measures to a much greater extent than is the case under GATS.[33]

However, despite the substantial increase in the number of services PTAs since 2000, these agreements cover only part of all trading relationships among WTO members, and largely fail to include trade with and among its poorer members.

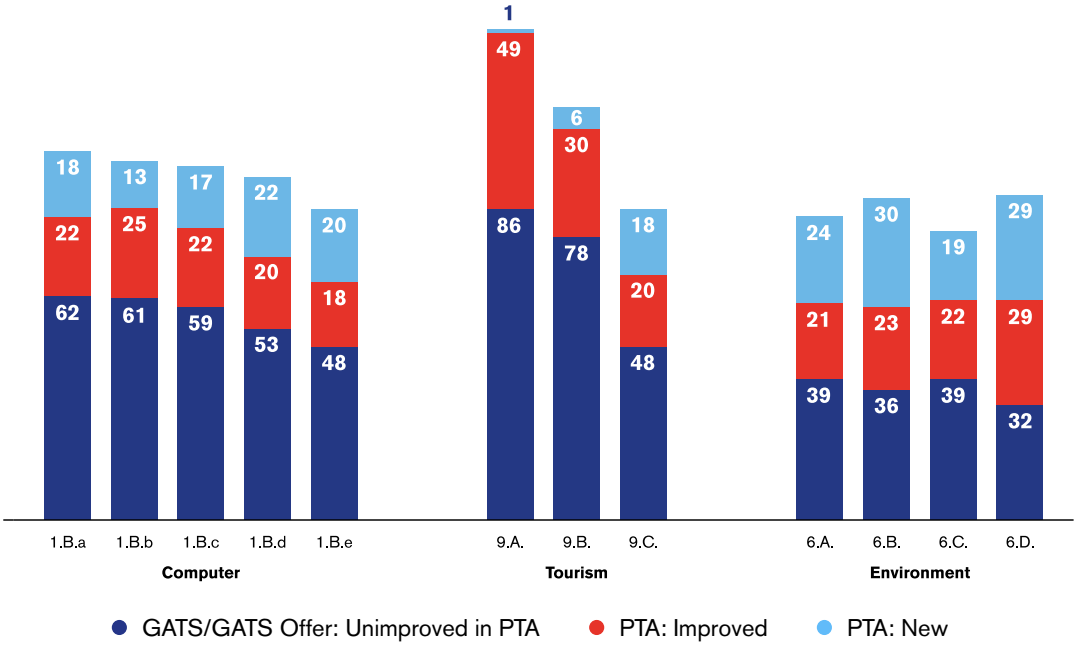
Research suggests that services PTAs promote GVC participation through both backward and forward linkages. Lee (2019) finds that services PTAs increase GVC-related exports in manufacturing from developing to developed countries, as well as between developing countries. The effect of services PTAs on gross exports is twice that of PTAs that cover only trade in goods. Díaz-Mora *et al.* (2022) show that services PTAs boost the services value-added from partner countries that is embodied in manufacturing exports, with larger impacts from deeper agreements covering a broader set of behind the border issues (such as investment and intellectual property-related matters).

Figure 25.
Number of preferential agreements notified under GATS Article V



Source: WTO Secretariat, computed from http://rtais.wto.org/UI/PublicMaintainRTAHome.aspx.
Note: New Article V agreements notified in each year are illustrated in orange, while those notified in previous years are in blue.

Figure 26.
GATS+ commitments in selected sectors in preferential trade agreements



Source: Roy and Sauvé (forthcoming).
Note: On the basis of 142 of the 193 regional trade agreements notified under GATS Article V as of 1 March 2023. Counting EU-25 as one. "GATS/GATS offer: Unimproved in PTA" means the number of members that have GATS commitments or that have made an offer in the WTO services negotiations in the relevant subsector, and that have not taken better commitments in RTAs. "PTA: Improved" means the number of members that have undertaken a commitment in RTAs that improve a GATS commitment or offer. "PTA: New" means the number of members that have undertaken a commitment in PTAs, where no commitment or offer had been made under the GATS. The subsector 1.B Computer and related services falls under the sector 1 Business Services, with the following categories: 1.B.a Consultancy services related to the installation of computer hardware; 1.B.b Software implementation services; 1.B.c Data processing services; 1.B.d Data base services; and 1.B.e Other computer services. The sector 6 Environmental services includes: 6.A Sewage services; 6.B Refuse disposal services; 6.C Sanitation and similar services; and 6.D Other environmental services. The sector 9. Tourism and travel related services includes: 9.A Hotels and restaurants; 9.B Travel agencies and tour operators services; and 9.C Tourist guides services.

(d) The value of binding existing levels of openness in services trade agreements

While trade barriers impose costs, uncertainty stemming from the absence of, or relatively limited, multilateral commitments carries additional costs. As in the case of FDI, research underscores that the predictability of market access conditions underpinned by WTO commitments has commercial value in itself. In the case of goods, trade policy uncertainty – measured as the gap between bound and applied tariffs (also known as "water" in the tariff) – is considered as a significant impediment to trade.[34]

Recent studies corroborate that commitments scheduled under the GATS and in PTAs also exert positive impacts on services trade and investment, even when controlling for applied levels of openness. Moreover, services commitments that bind the regulatory status quo have been found to generate more trade than commitments that have "water" in them (Ciuriak *et al.*, 2020; Lamprecht and Miroudot, 2018).

Endnotes

1 Because trade in services extends, for example, to the presence of foreign-owned suppliers or the movement of natural persons, services trade policies cover a wide range of government measures that have a deep impact on the functioning of services markets and, also, on domestic enterprises. Barriers to trade in services most typically involve government measures that discriminate between foreign and domestic services or suppliers in different modes of supply (GATS Article XVII: National Treatment). Services trade barriers can also take the form of discriminatory or non-discriminatory measures that limit the total number of services suppliers, operations, value of transactions, number of natural persons employed, or that limit foreign ownership, or restrict the type of legal entity through which a supplier may provide a service (as spelled out in GATS Article XVI: Market Access). Taken together, market access and national treatment measures largely determine the extent to which there is international contestability and competition in a country's services market.

2 See the methodology described in Miroudot *et al.* (2013).

3 For further information on what determines total factor productivity growth in services, see van der Marel (2012).

4 See Nordås and Rouzet (2016).

5 See Nordås and Rouzet (2016) and Raballand and Macchi (2009).

6 Restrictions were found to increase shipping costs by 26-68 per cent and to reduce trade flows by 48-77 per cent.

7 For a full account, see Teravaninthorn and Raballand (2009).

8 United Nations Conference on Trade and Development (UNCTAD) data on greenfield FDI projects shows that the services sector accounted for 60 per cent of the value of confirmed projects in 2020-2021, up from 42 per cent in 2003-2004. The services sector also hosts the largest value of greenfield FDI projects targeting developing countries (52 per cent in 2021, compared to just 25 per cent in 2003). And greenfield FDI that originates in developing countries also increasingly concerns the services sector (47 per cent in 2021).

9 For background information, see Thomsen and Mistura (2017) and UNCTAD (2006).

10 For further research in this area, see Andrenelli *et al.* (2018) and Rouzet *et al.* (2017).

11 See Arnold *et al.* (2008, 2011, 2016) and Duggan *et al.* (2013). The positive impact of services trade is also linked to the quality of institutions and regulatory frameworks. Beverelli *et al.* (2017) find that the impact of services trade openness on a country's manufacturing productivity is larger for countries with stronger institutions. Similarly, Fiorini and Hoekman (2020) find that the impact of openness to trade under mode 3 on manufacturing productivity is greater when accompanied by quality (pro-competitive) domestic economic regulation (see also Fiorini and Hoekman, 2018a).

12 Export sophistication captures the productivity level of a country's export basket. A country is considered a more sophisticated exporter if it exports more goods of higher productivity (Su et al., 2019). See also Hausman *et al.* (2007).

13 See Díaz-Mora *et al*. (2018), Liu *et al*. (2020) and Wolfmayr (2012). Further, the positive impact of services trade is linked to the quality of institutions and regulatory frameworks. Beverelli *et al.* (2017) find that the impact of services trade openness on a country's manufacturing productivity is larger for countries with stronger institutions. In a similar vein, Fiorini and Hoekman (2020) find that the impact of openness to trade under mode 3 on manufacturing productivity is greater when accompanied by quality (pro-competitive) domestic economic regulation. See also Fiorini and Hoekman (2018a).

14 This is consistent with earlier research in Kowalski *et al.* (2015) and OECD/WTO (2015).

15 For further information, see: Fernandes and Paunov (2012) for Chile; Arnold *et al.* (2011) for the Czech Republic; and Arnold *et al.* (2016), Francois and Hoekman (2010) and Heuser and Mattoo (2017) for India.

16 See Nordås and Rouzet (2016).

17 See the research by Nordås and Rouzet, (2016). The negative impact of higher levels of services trade restrictiveness on exports may be due, at least in part, to the fact that services trade barriers are not always discriminatory but rather include behind-the-border measures that impose costs on domestic suppliers as well.

18 For further information, see Miroudot and Cadestin (2017a).

19 For background information, see World Bank (2016) and OECD/WTO (2015).

20 Information on challenges in e-commerce and connectivity in the context of Aid for Trade can be found in Marchetti (2018) and Roy (2017), respectively.

21 For an account, see ITU (2016).

22 For further information on the liberalization of telecommunications, see Lestage *et al.* (2013).

22 See Borchert *et al.* (2017) and Nordås and Rouzet (2016).

23 For background information, see Balchin *et al.* (2016), Djiofack-Zebaze and Keck (2009), Eschenbach and Hoekman (2006), Mattoo *et al.* (2006) and Nordås (2020).

24 For background information, see World Bank (2016).

25 See Lan and Shepherd (2019) and Sauvé (2019).

26 See also *Trade in Services Related to the Environment,* OECD document COM/TAD/ENV/JWPTE(2015)61/FINAL, 27 March 2017.

27 Jones and Olken (2010) find that export growth of agricultural products and light manufacturing from least-developed countries decreases on average by 2-5.7 per cent in response to a rise in the country's temperature by 1°C (see also Dell *et al.*, 2012).

28 One such example is Hello Tractor, which operates in Bangladesh, India and Pakistan, as well as in seven African countries (FAO, 2022).

29 For background information on ICT in agriculture, see FAO (2017).

30 For background information on bound level of trade restrictiveness, see Miroudot and Pertel (2015).

31 For background information, see, for example, Roy (2014), Roy *et al.* (2007) and van der Marel and Miroudot (2014).

32 There are nevertheless some important exceptions (see Roy *et al.*, 2007).

33 While a number of PTAs following the GATS positive-list modality to schedule commitments have yielded greater commitments than at the multilateral level, PTAs have innovated by using negative-list modalities that, among other things, bind existing levels of trade openness across all sectors, unless provided otherwise. Such standstill provisions, which are used by an increasing number of countries in PTAs, aim to foster greater transparency and predictability, providing services suppliers with certainty on basic "rules of the game" allowing them to plan and develop business operations in the long term (Echandi, forthcoming). In contrast, in positive-list agreements, liberalization obligations only apply to sectors explicitly listed.

34 In a study covering 149 countries, Osnago *et al.* (2015) find that the elimination of "water" in tariffs (i.e. the difference between bound and applied tariffs) increased the probability of exporting by 12 per cent. A 1 per cent decrease in water increases export volumes by 1 per cent. The study also finds that, on average, trade policy uncertainty is equivalent to a level of tariffs between 1.7 per cent and 8.7 per cent.