30/11/2025

Services Trade Competitiveness Diagnostic Dashboard

A rapid assessment tool to help developing countries evaluate their services trade performance, identify policy gaps and priorities, and integrate services trade in development strategies

By the World Bank Group and WTO Secretariat in the context of the Trade in Services for Development (TS4D) Initiative [1]

This high-level and data-driven tool is intended to help scan performance, gaps, and opportunities in services trade. It is a strategic diagnostic tool designed to help map an economy's readiness to leverage trade in services for inclusive growth.

It provides a structure to analyze the performance and potential of the services sector and services trade along several dimensions and provides pointers for policy action. It offers government officials and users a set of tools and analytical metrics, both quantitative and qualitative, to assess an economy's competitive performance in services trade and to help make a case for service trade reforms to foster growth, job creation and enhanced trade performance.

By scanning key features of the services economy, services trade, and the related policy environment, it aims to help guide policymakers toward more competitive and development-aligned services trade ecosystems. The tool aims to help facilitate a diagnostic of competitive strengths and weaknesses in services production and trade. Such diagnostics can help to: (i) benchmark the overall competitiveness of economies relative to relevant peers with regard to key determinants of service sector performance and services trade; (ii) define the key strategic orientations and overarching objectives of national services trade policies; (iii) identify key interests that might best be pursued through deepened engagement in international trade negotiations or cooperation as complements to domestic (unilateral) reform efforts; and (iv) identify

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[1] An initial version of this tool, focusing on services-led development, was developed by the Investment Climate and Trade Team of the World Bank, drawing upon prior regional and global work. For the World Bank, the tool was developed by Elwyn Davies and Pierre Sauvé. Gerlin Catangui was a core team member. The wider team included Roberto Echandi, Zenaida Hernandez Uriz, Harald Jedlicka, Priyanka Kher, Silvia Muzi, and Deborah Winkler. For the WTO Secretariat, the efforts to develop the dashboard were led by Martin Roy and Bouraima Sawadogo. The wider team included Ishrat Hans and Ester Rubio. It benefited from comments from Laura Baiker, Barbara D'Andrea, Fabio Della Coletta, Joscelyn Magdeleine, Juan Marchetti, and Felipe Muñoz, as well as from IT support provided by András Bujna, Ahmet Örnek, and Stanislav Velev.

and prioritize development and technical assistance needs in relation to services trade, under the coordination of trade ministries.

The dashboard is a component of the joint WTO-WBG capacity-building work program under the Trade in Services for Development Initiative. It builds on the 2023 **Trade in Services for Development co-publication** by the WTO and WBG. It also draws on and serves as a complement to existing World Bank diagnostic tools, such as the Trade Competitiveness Diagnostic (TCD 2.0), the Investment Climate Assessment (ICA 2.0) tool and the Digital Trade Regulatory Readiness (DTRR) database. It also relies on the WBG-WTO Services Trade Restrictions Index (STRI) and its underlying depiction of applied regulatory measures, as reflected in the Services Trade Policy Database (**STPD**). In terms of services trade statistics, the dashboard draws from the different datasets made available through the WTO's **Global Services Trade Data Hub** and Statistics Portal, **WTO STATS**.

For the World Bank, the dashboard's aim is to generate empirical findings that can usefully inform and help deepen policy dialogue with client countries on the nature and possible sequencing of service sector reforms and associated supportive World Bank operations.

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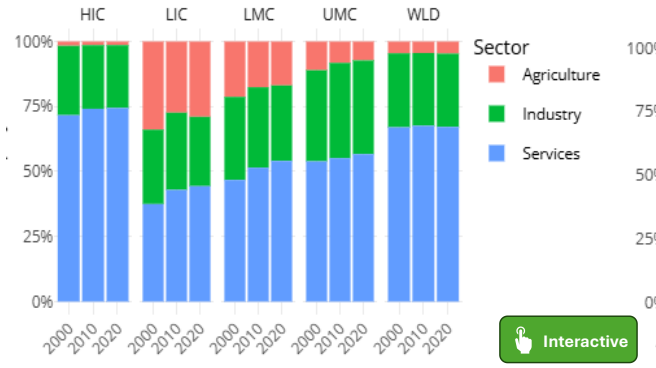
WHY A FOCUS ON SERVICES?

Services as a driving force for growth and jobs

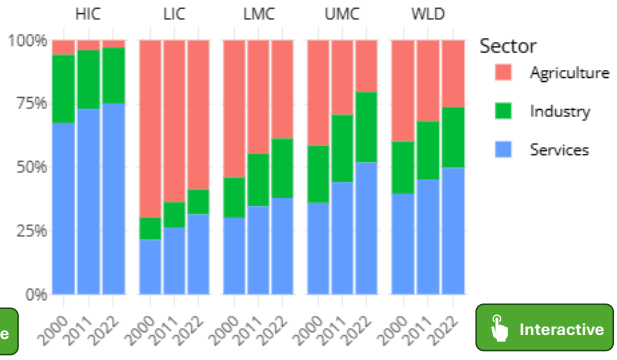
Services are emerging as a driving force shaping the economic landscape of economies at all levels of development. They account for the largest share of global economic activity by generating more than two-thirds of GDP - more than agriculture and industry combined (Figure 1). Services also employ the most workers (Figure 2) and are the source of most new job and firm creation, notably for female and young workers, entrepreneurs and smaller firms (e.g. MSMEs). At the same time, services trade has turned into a key element in economic growth strategies. Fuelled by rapidly accelerating technological change, services have become the most dynamic component of global trade and investment in recent years and the source of high value-adding jobs.

Figure 1. Services generate more than two-third of global value added…
Share of value added (%), by income grouping



Source: World Bank WDI based on national accounts data.

Figure 2. …and employ close to half of the global workforce
Share of employment (%), by income grouping



Source: World Bank WDI based on ILO-modelled estimates.

As drivers of structural transformation, services are central to the growth, poverty reduction, innovation and climate adaptation and mitigation agendas of countries. Services are important not only as a source of jobs, output, exports and FDI attraction in themselves. They also supply critically important inputs in the production of goods and other services in a world economy organized around cross-border production networks. Because of their central contribution to economy-wide performance, anchoring services more firmly within the development strategies of countries can yield important benefits. Yet doing so often proves challenging, including in more advanced economies, not least because of the sheer diversity of the service economy.

The diverse nature of the service economy implies that policies need to pay close attention to – and be informed by – differences in the nature and roles that various services play, the multiple ways they are traded across borders, the intensity of the regulatory scrutiny they command, the broad range of public policy aims their supply pursues and the political economy forces they put in play. Such differentiation explains why service sector governance rarely – if ever – proceeds on a one-size-fits-all basis. It further explains why domestic reforms anchored in trade agreements typically proceed in a progressive manner.

How to use this diagnostic dashboard

This tool aims to help policy makers diagnose the competitive strengths and weaknesses of countries' service sectors and identify the elements of a policy agenda to leverage services trade for development. It does so by identifying the key determinants of competitive service markets and by pointing to relevant performance metrics, both quantitative and qualitative in character. The scan can help countries benchmark their economy's performance by measuring the distance that separates them from relevant peers.

In assessing an economy's performance in services, it is useful to identify comparator economies to situate it relative to peers. Peers can be selected as individual economies or grouped into three distinct categories: *structural*, focusing on economies with similar economic characteristics and/or per capita income levels; *regional*, which draws attention to an economy's performance relative to that of neighboring countries; and *aspirational,* measuring country's distance from top performing (typically high income/frontier) economies.

Such diagnostic work may lay the basis for dialogue with development partners on deepened country engagement involving the supply of technical assistance, advice on policy reform design and implementation as well as lending operations (see Box 1).

This tool consists of four parts. The first part analyzes the role of services in the domestic economy, and the enabling role they play for other sectors in the economy. The second part focuses on the role of trade in the sector, and vice versa. The third part provides policy indicators and performance metrics to provide a benchmark of policy performance. The fourth part looks at the contribution of complementary policies. Each section contains a checklist with a set of metrics that can be used to analyze performance. Most of these metrics are available on the online dashboard.

Box 1: Trade is a key component of a policy agenda and reform path in services

Leveraging the increased potential of services requires policy action in the short-, medium- and long-run and strategies attuned to different types of services. For the World Bank, experience gained at the country level suggests that the reform path in services typically involves the need to:

- **Shift:** Encourage the growth of global innovator services (ICT, professional/technical, financial services) that are highly productive and knowledge intensive.
- **Link:** Strengthen linkages between the services sector and other parts of the economy. This requires strengthening the role of enabling services sectors, including low-skilled enabling services (transportation, logistics, administrative/support services) and global innovator services.
- **Trade and invest:** Increasing market access for services firms by generating new opportunities for trade and investment. This is not only important for global innovator services but also for lower-skilled tradable services (e.g., tourism, transportation, administrative/support services).
- Secure: In most economies, most employment is found in low-skilled domestic services (e.g., retail, personal services), often characterized by self-employment and informality. Increasing the

competitiveness of these sectors – for example by leveraging technologies – can help increase earnings of those who depend on supplying such services for their livelihoods.

For all the above pathways, it is important to boost the productivity of the services sector through technology adoption, strengthened competition and improvements in the business and regulatory environments. Just as important is the need to increase trade and investment by progressively removing, either unilaterally or via trade and investment agreements, restrictive measures that weigh on economy-wide performance, inflate trade costs and/or impede market entry and operation.

Source: Nayyar, G., M. Hallward-Driemeier, E. Davies (2021), At Your Service? The Promise of Services-Led Development, World Bank.

PART I: SCANNING THE ECONOMIC LANDSCAPE

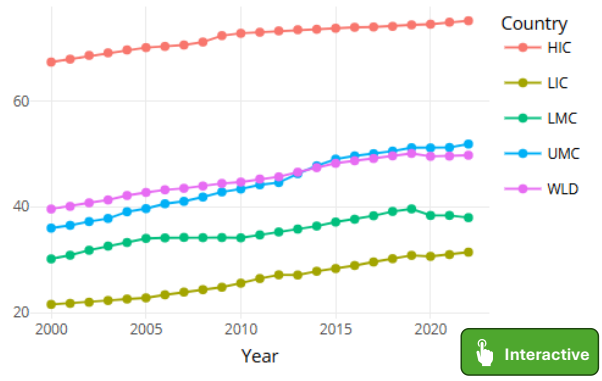
1. Services in the domestic economy

This section highlights different indicators that permit the contribution of services to the domestic economy.

1.1 Growth and jobs

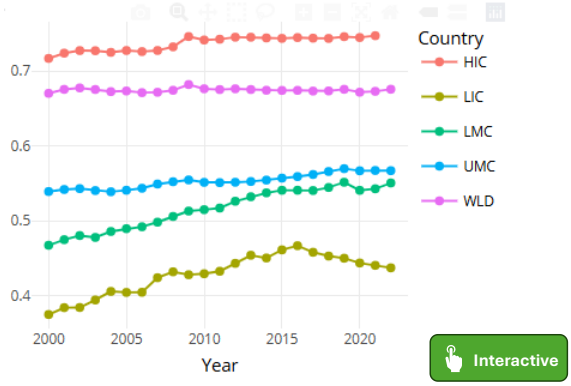
Across the globe and at all income levels, an increasing amount of employment and value added is being generated in service sectors. Even as the share of service sector employment is smallest in lower-income countries, the rate at which employment in services has risen in such economies exceeds that witnessed in most other income groups (Figure 3). The share of value added has also been growing, although with a slowdown over the last decade (Figure 4).

Figure 3. Across all income groups, the share of employment in services sectors is growing
Share of employment in services, by income group



Note: HIC = High-income, UMC = upper middle-income, LMC = lower middle-income, LIC = low income. Source: World Bank WDI, based on ILO modelled estimates.

Figure 4. The share of value added is growing as well, although at a slower pace
Share of value added in services sectors, by income group



Note: HIC = High-income, UMC = upper middle-income, LMC = lower middle-income, LIC = low income. Source: World Bank WDI, based on national accounts data.

Over the past three decades, the service sector has been absorbing much of the decline in the agricultural sector's employment share, while the share of employment in industrial sectors has remained close to constant globally (Figure 5). In most countries, the services sector now employs more than half of the working population and contributes similar shares of value added, shares that reach significantly higher levels in many developed and developing countries.

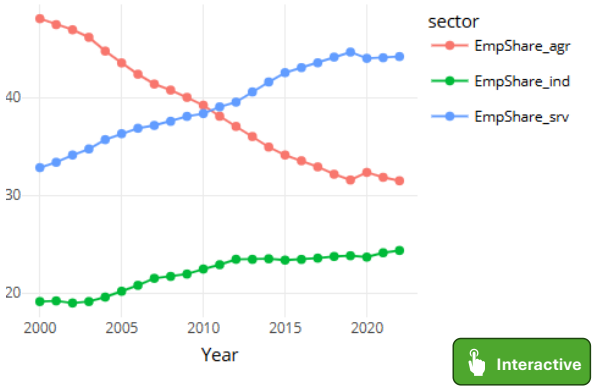
Metrics

- ✓ The starting point of assessing the contribution of services to structural transformation is to measure the proportion of value added and employment in agricultural, industrial and services activities and their evolution over time.

✓ Decomposing the growth of jobs and value-added and the contributions of industry, agriculture and services yield important insights on whether and how services are driving growth and job creation.

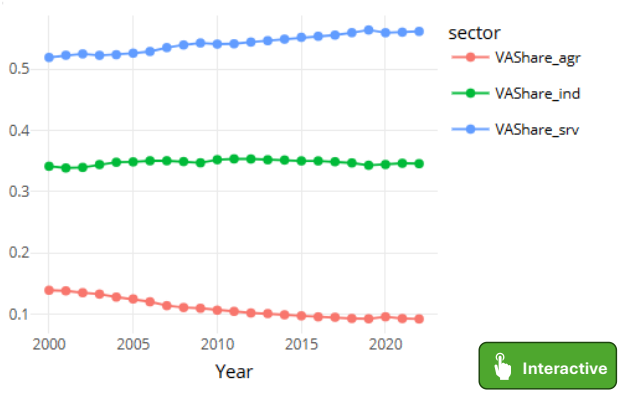
Relevant data sources include the World Bank's World Development Indicators (WDI), national accounts statistics and employment statistics, notably those produced by the International Labor Organization (ILO). Most of these indicators are available through the WDI at a high level of aggregation.

Figure 5. The services sector has absorbed most of employment from agricultural sectors
Share of employment in services, low- and middle-income countries (LMICs)



Source: World Bank WDI, based on ILO modelled estimates.

Figure 6. The contribution of services to value added is increasing
Share of value added in services sectors, low- and middle-income countries (LMICs)



Source: World Bank WDI, based on national accounts data.

1.2. Composition of the services sector

The service sector is not a monolith but rather features a highly diverse range of activities, with significant compositional variance across economies and development levels. Services differ in their skill intensity and tradability, in the enabling role they perform through linkages with other sectors, in the average size and capital intensity of the firms that produce and export them, as well as to the extent to which they are affected by innovation and R&D (Figure 7). For analytical and policy advisory purposes, the World Bank (Nayyar et al., 2021) has proposed a classification of services centered on the following groupings:

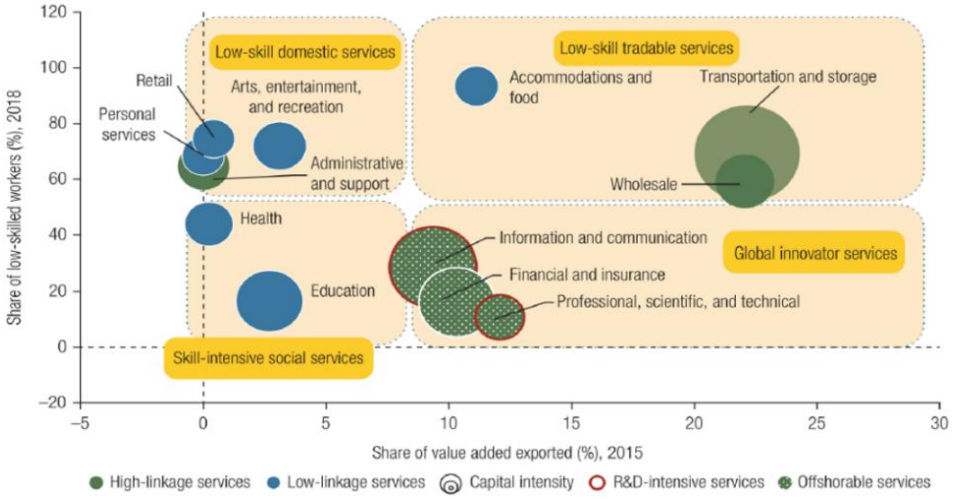
- **Global innovator services**, which include *information and communication technologies (ICT)*, *professional and technical services* and *financial and insurance services*. On average, these services tend to be knowledge-intensive (using high-skilled labor), are highly traded across borders (including via commercial presence) and provide key inputs to other sectors.

- **Lower-skilled services**, which include a variety of services that are less skill intensive than global innovator services, with varying degrees of cross-border tradability and different enabling roles for other sectors in the economy. This group of services includes transport, tourism, retail and wholesale trade, and recreational services.

- **Social services** (e.g., *health*, *education) that* tend to rely on medium- to high-level skills, and are often provided by the government, at least in part.

An alternative classification is based on linkages and distinguishes those services that are enablers to other sectors (e.g. transportation, administrative and support services and wholesale trade) from those that supply services directly to consumers (e.g. retail trade, personal services, arts and recreational services).

Figure 7. The services sector contains a wide range of activities, varying in their tradability, skill intensity, enabling role, capital intensity and innovation capacity
Share of value added and share of high-skilled workers, 2015-18, based on US/EU data.

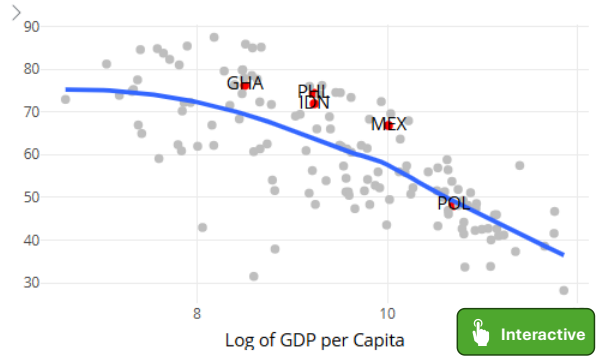


Note: Bubble size represents employment size. Averaged across the US and the EU.
Source: Nayyar, Hallward-Driemeier and Davies (2021), based on OECD data.

Interactive

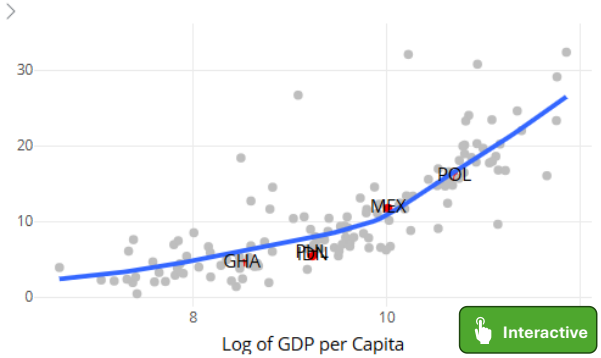
Cross-country differences in the composition of employment hold important implications for economic output. Employment in lower income countries is typically more concentrated in less skill-intensive service sectors, such as retail trade and the hospitality sector (Figure 8). Meanwhile, services with greater knowledge-intensity (e.g. global innovator services) represent a larger share of employment in higher-income countries (Figure 9).

Figure 8. Low-skilled services dominate in lower income economies…
Share of low-skilled services, by GDP, latest available year 2014-2022



Note: low-skilled services include retail, wholesale, transportation, hospitality, administrative/support, arts/recreation and "other" services (e.g., personal services).
Source: ILOSTAT based on labor force surveys, WDI national account statistics.

Figure 9. …while global innovator services are more prominent in higher income economies
Share of global innovator services, by GDP, latest available year 2014-2022

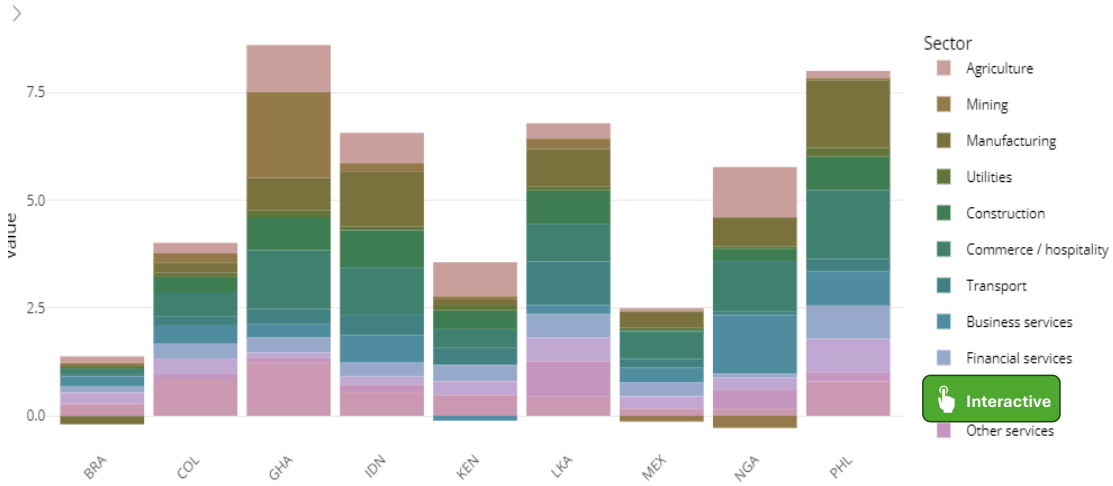


Note: global innovator services include ICT, professional/technical and financial services.
Source: ILOSTAT based on labor force surveys, WDI national account statistics.

Metrics

- ✓ A first overview of the composition of the services sector can be provided by considering the employment shares of different service groupings. Relevant data to be used include harmonized employment data collected by the ILO see Figures below) as well as data from national statistical agencies.
- ✓ Benchmarking the contribution of these services sectors based on the level of income can highlight whether a particular sector-grouping is larger or smaller than that prevailing in countries with similar income levels.
- ✓ Similar analysis can be done based on the level of value-added that each subsector produces. Unfortunately, harmonized global datasets on value-added tend to be less granular. Relevant datasets include the Economic Transformation Database (ETD) maintained by UNU-WIDER and GGDC.
- ✓ Using the sub-sectoral data to decompose the sources of growth in employment and value added can help provide a more granular view of which service groupings have driven growth (Figure 10).

Figure 10. In most economies, services across the spectrum have contributed to growth
Decomposition of annual average growth in value added, 2008-2018



Source: Decomposition based on UNU-WIDER/GGDC Economic Transformation Database.

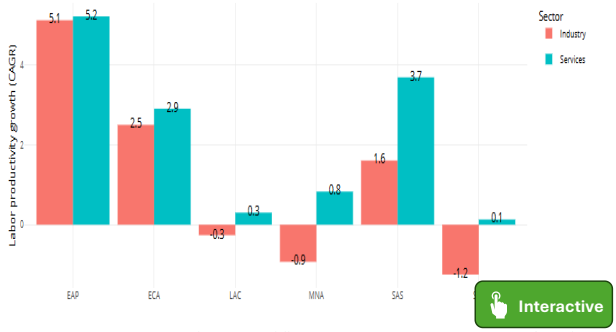
1.3 Productivity

Historically, services have been characterized by lower levels of output per worker (e.g. productivity) and productivity growth. But this gap has been narrowing. While certain sectors, such as personal care, food or hospitality services, may generally offer weaker scope for significant productivity growth, sustained technological advances have boosted both the tradability and productivity of many other services, allowing them to be supplied more efficiently on a larger scale. Labor productivity growth in services exceeded that of industry throughout the developing world over the 2006-22 period (Figure 11).

As with the composition of employment, significant differences in productivity levels are found across service sectors. Knowledge-intensive global innovator services (e.g., ICT, professional, and financial services) register productivity levels far above those in manufacturing, while value-added per worker in lower-skilled service sectors remains well below that found in manufacturing (Figure 12), reflecting the less skilled workforces such sectors employ and the generally weaker levels of technological adoption of firms operating in such market segments.

Figure 11. Labor productivity growth of services matched or exceeded that of manufacturing in many countries

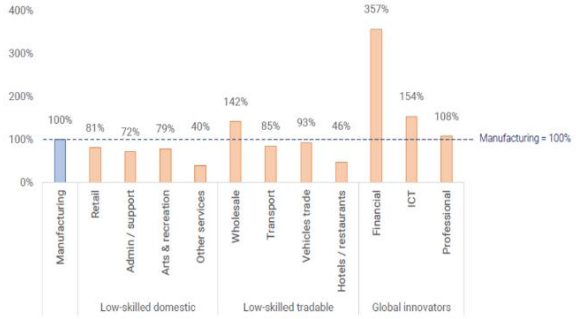
Cumulative annual growth rate (CAGR), 2006-2022of



Note: EAP = East Asia & Pacific; ECA = Europe & Central Asia, LAC = Latin America & Caribbean, MNA = Middle East & North Africa, SAS = South Asia, SSA = Sub-Saharan Africa. All regional estimates exclude high-income countries.
Source: WDI based on national accounts and ILO modelled estimates.

Figure 12. There are large differences between services sectors in their relative productivity

Labor productivity of services sectors, relative to manufacturing (100)



Source: Nayyar, Hallward-Driemeier & Davies (2021), based on OECD.

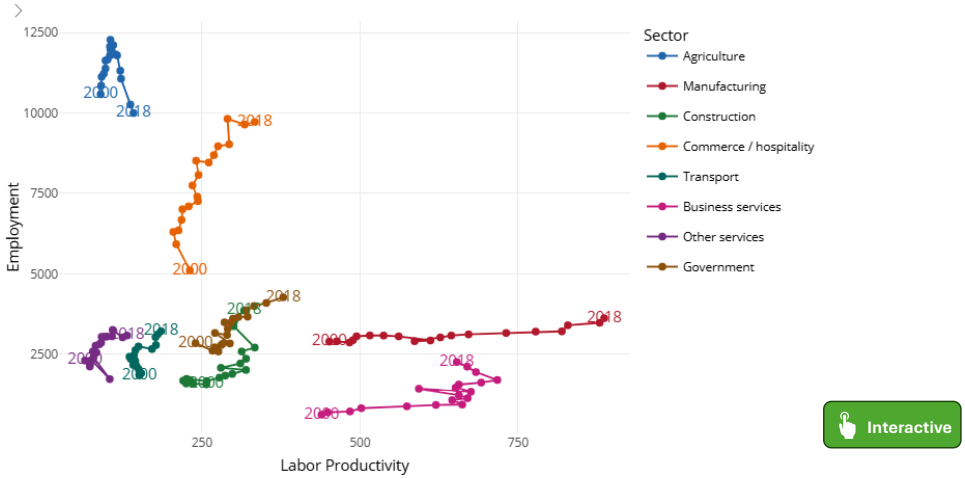
Metrics

A focus on the productivity of workers is key given the greater labor intensity and varying skill intensity of service sector activities. Metrics of relevance include:

- ✓ **Trends in average labor productivity growth** across sectors (i.e. agriculture, manufacturing and services or, where data is available, *within* services) measured as value-added per worker across different time periods.
- ✓ **A comparison of productivity and employment growth of selected service sectors.** Doing so offers an overview of whether productivity growth is associated with employment growth (Figure 13).
- ✓ The **McMillan-Rodrik decomposition of growth** provides an overview of whether productivity growth is driven by *within-sector* productivity growth or by *between-sector* structural change (McMillan (2011).

This analysis can be supplemented with detailed firm-level analysis to understand drivers of productivity growth.

Figure 13. In the Philippines, manufacturing became more productive but did not increase employment, while services sectors saw employment and productivity increases
Labor productivity and employment, 2000-2018

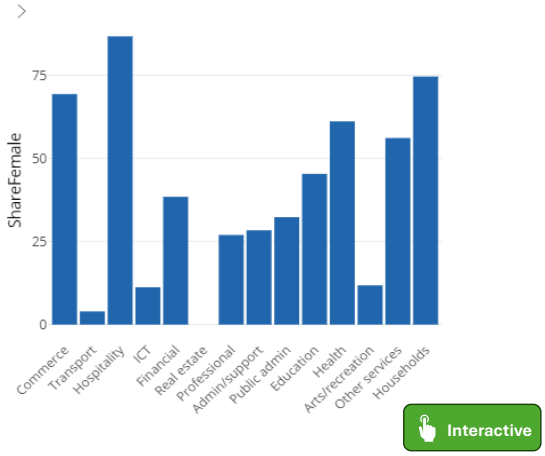


Note: Labor productivity is measured as value added per worker.
Source: Decomposition based on UNU-WIDER/GGDC Economic Transformation Database.

1.4 Inclusiveness

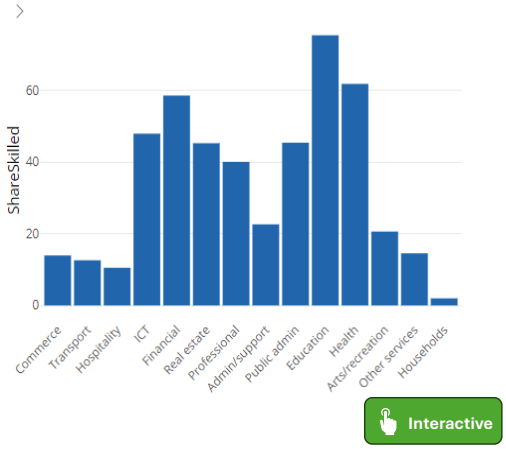
The pace at which economies affect a shift towards services tends to correlate strongly with more inclusive growth trajectories. In many countries, the share of workers that are female is higher in services than in industrial sectors (World Bank and WTO, 2020; Sauvé, 2020). The female employment share tends to be lower however in knowledge-intensive sectors and higher in sectors characterized by lesser levels of knowledge intensity. The pay gaps that ensue recall how increasing the earnings of female workers can be secured by encouraging their employment in more knowledge-intensive sectors, for example by increasing the share of female students in STEM programs and through upskilling programs for those already in the workforce alongside efforts at boosting the productivity of less skill-intensive sectors where many women are employed.

Figure 14. In Ghana, commerce and hospitality see mostly female workers, while ICT and transportation are male dominated
Female workers, percentage, Ghana 2017



Source: ILOSTAT based on household and labor force surveys.

Figure 15. In Mexico, global innovator services and social services depend on workers with higher skills
Workers with tertiary education, percentage, Mexico 2022



Source: ILOSTAT based on household and labor force surveys.

The service sector and services trade are also central to ensuring that economic growth and development benefits enterprises of all sizes, in particular smaller ones. The service sector accounts for the largest number of firms, particularly micro, small and medium-sized enterprises (MSMEs). The International Trade Centre (ITC, 2022) estimates that nine out of ten services enterprises globally employ fewer than 100 employees.

MSMEs play a key role in services trade and account for the greater share of total cross-border services exports, in contrast to goods exports, where larger firms play the predominant role. For a sample of developed and developing economies, the WTO and World Bank (2023) reported that MSMEs accounted, on average, for 60% of commercial services exports between 2008 and 2020, but only for 25% of goods exports. The gap in export propensity between small and large enterprises is also much less pronounced in services than in other sectors (ITC, 2022). Overall, this suggests that a rise in services trade is less likely to be biased towards larger firms than is observed for manufacturing trade.

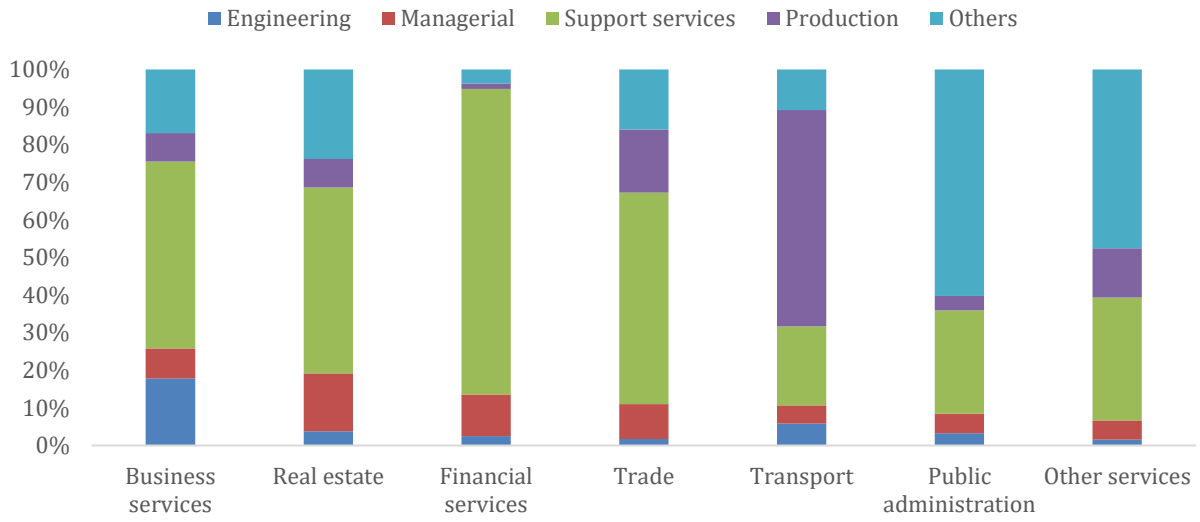
Metrics

The inclusiveness premium associated with services sector jobs suggests that policy makers need to focus on various gendered and youth employment metrics as well as on the steps needed to boost the productivity of MSMEs, where the bulk of service sector employment is generated. These include tracking changes over time in:

- ✓ The sectoral composition of employment of various worker categories by gender and skill intensity (male, female, young; skilled, unskilled), which can offer evidence of the nature and pace of structural change towards services. Different indicators for skill intensity are available: the share of workers with advanced (or intermediate) levels of education as well as the share of workers with skill-intensive occupations within that services sector.

✓ To gain a better sense of the type of occupations involved in services exports, the World Bank's **Activities in Exports** database provides estimates of the jobs and income contents in aggregate exports (including services) for 68 economies. Global innovator services tend to rely more on skill-intensive such as engineering and managerial tasks, while low-skilled services sectors rely mostly on support service workers, such as clerical and sales workers (Figure 16).

Figure 16. The composition of occupations within exporting sectors varies between sectors
Occupational distribution of employment involved in exports, based on 68 economies, 2018



Note: Occupations are based on the ISCO occupational classification of employment.
Source: World Bank Activities in Exports Database.

Data for the above metrics of structural change can be computed from national sources as well as from World Bank and UNCTAD sources. See the World Bank's World Development Indicators at **https://data.worldbank.org/** and UNCTAD data at **https://unctadstat.unctad.org.** A wide range of relevant employment metrics, including by sector, gender and age, are produced by the International Labor Organization and available at **https://ilostat.ilo.org/.**

1.5 Linkages

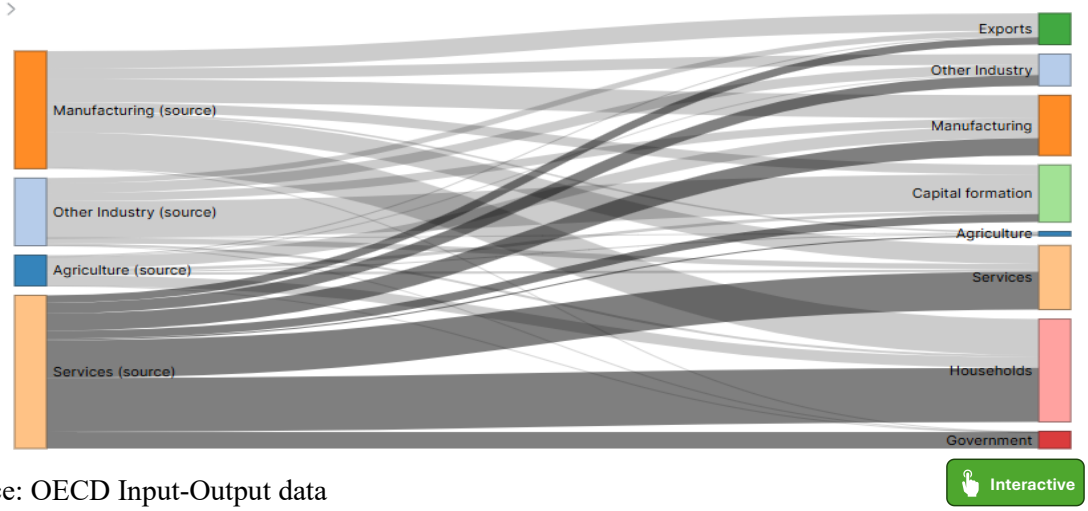
The competitive supply of services can play a strongly enabling and trade-facilitating role for industrial development and can boost productivity in agriculture and natural resource sectors. Frequently dubbed as the "glue" that enables cross-border production networks, services have played a critical role in enabling the emergence of global and regional value chains. The deployment of cross-border production networks has largely resulted from improvements in the efficiency, quality and costs of services that enable the coordination of geographically dispersed yet interlinked production processes – from transport and logistics to communication and business services.

Services can enable other sectors to increase their productivity. Using input-output data, Figure 17 illustrates the degree to which services enable production in other sectors in the Indonesian economy. A substantial body of empirical evidence shows that the services embodied into manufactured goods exert a

significant impact on manufacturing productivity (Arnold et al. 2016; Arnold et al. 2011; Bas and Causa 2013; François and Woerz 2008) and the ability to charge higher prices (Alfaro & Eslava 2020).

Figure 17. In Indonesia, roughly half of services output is consumed by households, while only a small share is exported or used as input in the manufacturing sector

Input-output linkages between services and other sectors, Indonesia, 2020



Source: OECD Input-Output data

In addition to linking different production stages across borders, services have also become important inputs at all stages in the production process of goods and other services. Services input, whether imported or locally produced by foreign or domestically owned enterprises, are increasingly used in the production of manufactured products.

Beyond their role as upstream enablers, services are also often "bundled" with manufactured goods as downstream complements. Such a process of 'servicification' has increased markedly in recent decades, a trend which sustained technological advancements is widely expected to accelerate in the coming years (Nayyar et al. 2021). The bundling of services and other sectors is not limited to high-income countries nor to a few large firms. In India, for example, the share of manufacturers offering services and their share of services revenue tripled over the decade from 1994 to 2013 (Grover and Mattoo, 2021).

Metrics

Linkages between services and the rest of the economy can be computed through national input-output data sources. At the international level, the OECD's Trade in Value Added (TiVA)[2] database measures the

[2] TiVA indicators are constructed using statistics compiled from national, regional and international sources according to the 2008 System of National Accounts (2008 SNA) and use an industry list based on the International Standard Industrial Classification Revision 4 (ISIC Rev.4). The 2023 edition of the TiVA dataset provides indicators for 76 economies (including all OECD, EU, G20 and ASEAN economies) over the period 1995-2020. The dataset provides data on 10 new countries: Bangladesh, Belarus, Cameroon, Côte d'Ivoire, Egypt, Jordan, Nigeria, Pakistan, Senegal and Ukraine.

value added by each economy in the production of goods and services that are consumed worldwide (Box 2).

- ✓ To understand **forward linkages** (sectors supplied by services), national input-output tables and TiVA can provide an overview of which other sectors use services as inputs. For example, manufacturing in higher-income countries tends to be more services-intensive than in low- and middle-income countries.
- ✓ Similarly, **backward linkages** (the sectors supplying to services) can provide an overview of what other sectors produce goods or services that are demanded by the services sector. Global evidence highlights that through these backward linkages, high-skilled global innovator services create jobs for less skilled workers (Nayyar et al 2021).

Relevant data sources include those mentioned as well as harmonized data sources of national input-output tables, such as the OECD Input-Output Database, GGDC's World Input-Output Database as well as Eora.

Box 2. Trade in Value Added (TiVA) data

The OECD's TiVA database measures the value added by each country in the production of goods and services that are traded internationally. Specifically, it captures the following:

- **Value Added by Economy:** The contribution of each economy to the value of a final product or service that is traded across borders. This includes the value added at each stage of production, from raw materials to final assembly.
- **Intermediate Goods and Services:** The value of intermediate goods and services that are used in the production of final goods and services. TiVA data tracks the flow of these intermediate inputs across countries.
- **Global Value Chains (GVCs):** The distribution of value added along global value chains, showing how different countries contribute to the production process of a single product or service.
- **Domestic vs. Foreign Value Added:** The distinction between domestic value added (value created within an economy) and foreign value added (value created in other countries) in the production of exported goods and services.
- **Sectoral Contributions:** The value added by different sectors of the economy (e.g., manufacturing, services, agriculture) in the production of traded goods and services.
- **Trade Balances:** The value-added trade balances, which provide a more accurate picture of trade balances by accounting for the value added by domestic industries in the production of exports.
- Overall, TiVA data provides a comprehensive view of the value added at each stage of production and the contributions of different countries and sectors to international trade. TiVA data can be used in trade negotiations to understand the implications of trade agreements in different sectors and countries. It helps negotiators identify areas of comparative advantage and potential gains from trade.

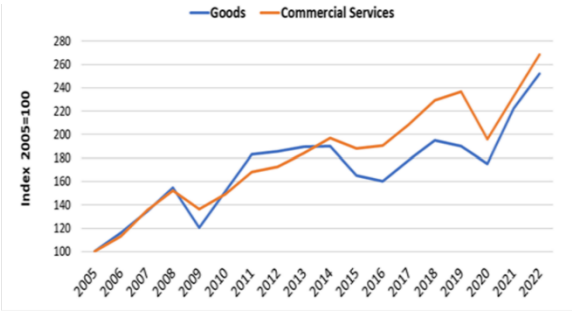
PART II: SCANNING THE TRADE LANDSCAPE

2.1 Trade in Commercial Services (balance-of-payments statistics): growth and composition

Trade in services has been increasing, outpacing the growth of trade in goods since 2005 (Figure 18). While services trade contracted markedly considering the restrictions on travel and face to face interaction brought about by the COVID-19 pandemic, its recovery since 2022 has outpaced that of goods trade.

Figure 18. At a global level, trade in commercial services has outpaced trade in goods

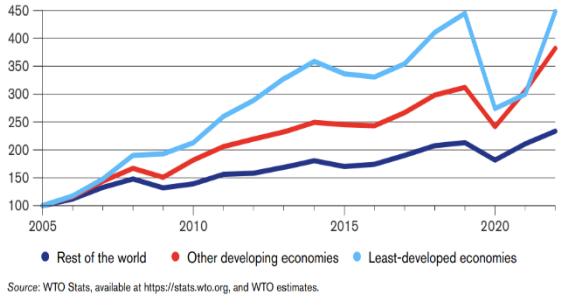
Trends in world trade in goods and services, 2005 = 100



Source: WTO Stats, and WTO estimates

Figure 19. Exports of commercial services have grown the fastest in the least-developed economies

Exports of commercial services, by groups of economies, 2005 = 100

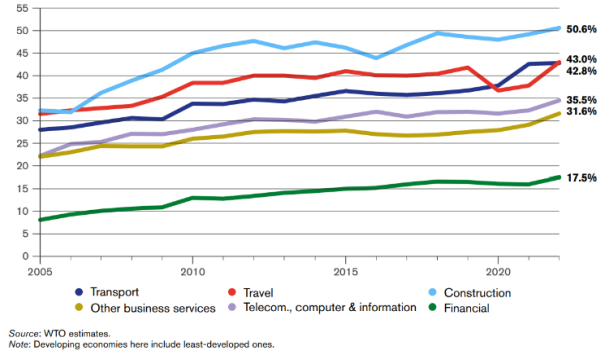


Source: WTO Stats, and WTO estimates

Even if starting from a low absolute level, services exports grew faster in the least developed countries than in other developing countries and the rest of the world over the 2005-22 period (Figure 19), belying the export pessimism that has often permeated discussions of deepening developing countries' engagement in the services trade. Developing economies have expanded their contribution to services exports across a wide range of sectors (Figure 20), attesting to significant efforts at diversification and sustained gains in competitiveness.

Figure 20. Developing economies' share of global commercial services exports, by selected main sectors, 2005-2022

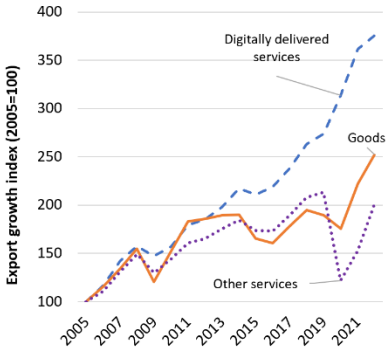
Exports by developing economies, as share of global exports, percent



Source: **WTO Stats**, and WTO estimates.

Figure 21. On the rise: trade in digital services has grown the fastest compared to goods and other services

Export growth index, 2005=100



Source: **WTO Stats**, and WTO estimates

Trade has grown more rapidly in less traditional sectors such as ICT services when compared to transport, travel and goods-related services. BOP statistics reveal that these 'other commercial services', which include business, finance, and computer services, have expanded at a much faster rate since 2005 than more traditional sectors such as transport and travel. Within 'other commercial services', telecommunications, computer and information services had the fastest annual growth since 2005.

The expansion of developing economy exports is increasingly tied to less traditional services that can be more readily supplied across borders through digital means. Export growth in less traditional services has helped to diversify the export baskets of many developing economies (WTO and WBG, 2023).

Over time, in view of different sectoral growth rates, the structure of trade in commercial services has changed significantly at the global level. The share of travel and transport services in world services trade has declined markedly, while that of 'other commercial services' has increased. For developing countries, this shift in the structure of their exports of commercial services has been even more pronounced. Not only do less traditional services account for a growing share of developing economies' services exports, but these economies also account for increasing shares of world exports in these sectors.

Metrics

Trade in commercial services statistics on a balance of payments basis are the most widely available, but they generally do not cover services supplied under mode 3, nor do they distinguish between modes 1, 2 and 4.

BOP statistics allow to assess the importance of one's services exports/imports in comparison with GDP or with total trade of goods and services, and to compare over time and with other economies. They also permit to compare the rate of growth of services exports and imports, and also to examine the composition of services trade in view of the different sub-categories of commercial services.

✓ The WTO's **STATS** Portal provides access to time series statistics on trade in services, and on merchandise trade on annual, quarterly and monthly basis. Subsequently, values data on services

(EBOPS) and merchandise trade used are subtracted from the WTO-UNCTAD data (WTO Stats portal), meanwhile data on indices and related are estimated.

✓ The WTO's **Global Services Trade Data Hub** offers a wealth of useful data on several key metrics of services trade. This includes data on digitally delivered services, trade in services by mode of supply (up to 2022), trade in commercial services, as well as the WTO-OECD Balanced Trade in Services (**BaTiS**) dataset tracking trends in bilateral services trade.

2.2 Digitally delivered services

Global services trade growth has been led by exports of digitally delivered services, such as computer, financial, business and insurance services (Figure 22). Digitization was given a major boost by the COVID pandemic and, more recently, by far-reaching advances in artificial intelligence.

Services are central to digital trade – not only because a broad range of services can now be supplied online, but also because they provide the basic enabling infrastructure for digital supply, digital transactions and e-commerce more generally (WTO and WBG, 2023).

Metrics

✓ The WTO dataset on digitally delivered services allows to analyze performance in this most dynamic segment of world trade. The dataset contains WTO estimates for services traded through computer networks, such as the Internet, apps, emails, voice and video calls, and digital intermediation platforms. It covers over 200 economies and regions and eight sub-sectors for the period 2005-24. It is available in the **Global Services Trade Data Hub**.

Figure 22. Trade in digitally delivered services (value, USD million)

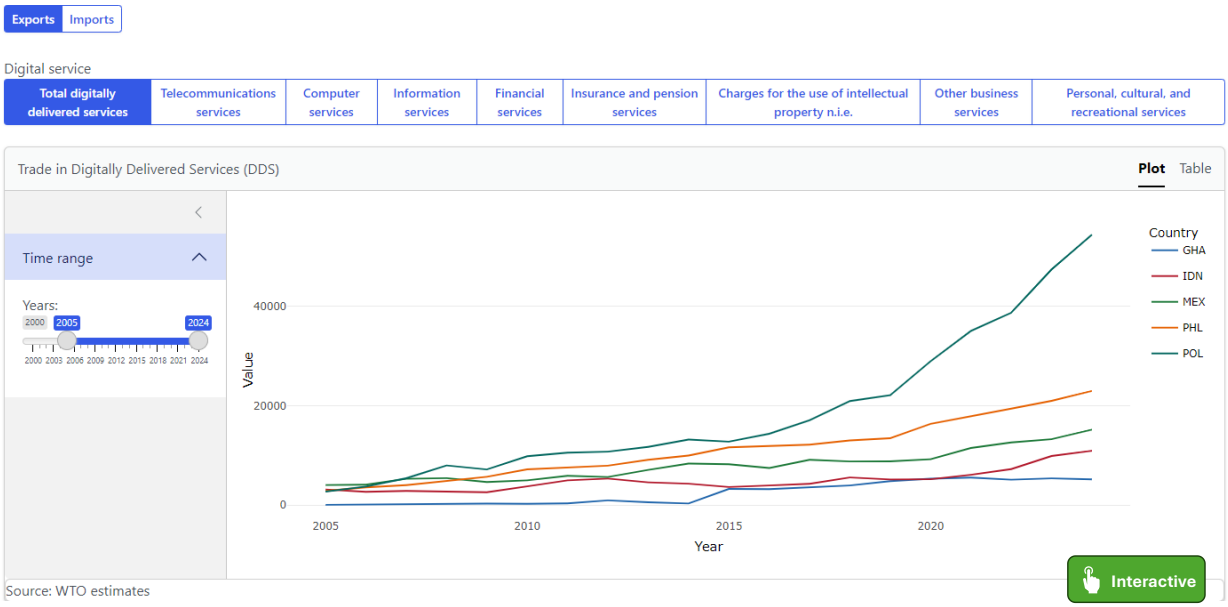
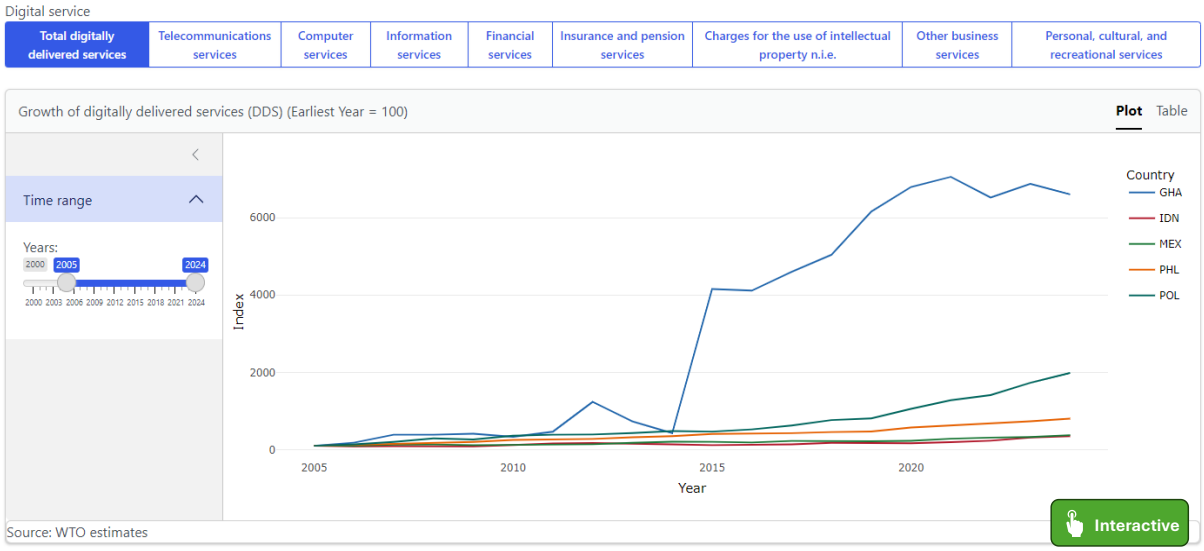


Figure 23. Growth of exports in digitally delivered services



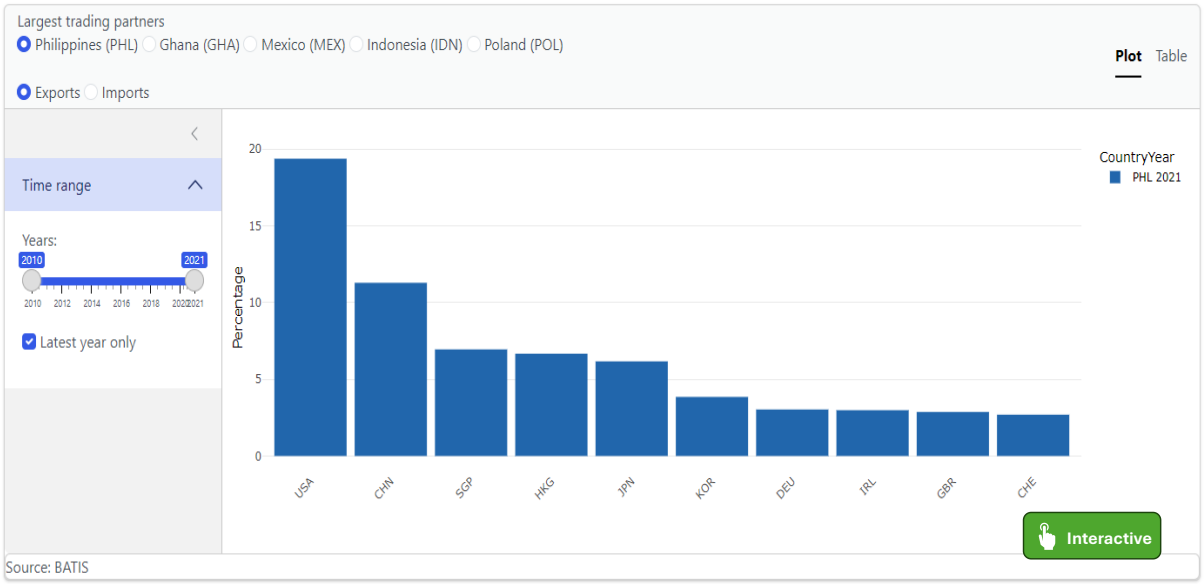
2.3. Bilateral trade flows

Driven by differing growth trajectories of economies around the world and the changing sectoral composition of services trade, the destinations of exports and the source of imports have evolved for particular economies. Understanding the profile and sectoral distribution of trading partners provides an overview of the directions of services trade (Figure 24).

Metrics

- ✓ The WTO-OECD Balanced Trade in Services (**BaTiS**) dataset provides estimates of bilateral trade in commercial services for over 200 reporting economies, filling a longstanding gap in services trade data due to missing mirror data. BaTiS data allows countries to have a much finer sense of the direction and shifting composition of their bilateral services trade flows and their evolution over time. The dataset is available through the **Global Services Trade Data Hub**.

Figure 24. Largest trading partners, by country (% share of exports/imports)



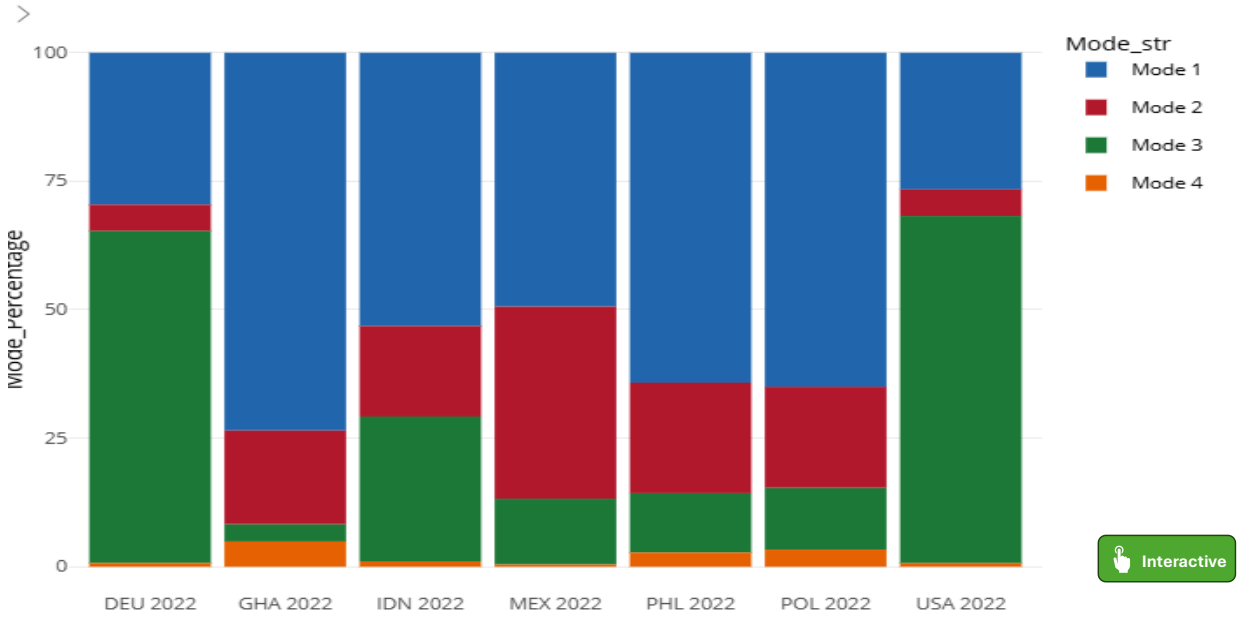
2.4. Trade in services by mode of supply

While balance-of-payments underscore the growing role of services in world trade and, in particular, in trade of developing countries, they still significantly underestimate global services trade as defined in GATS. Most notably, BOP statistics generally do not cover the supply of services by foreign-owned companies (mode 3), by far the most economically important mode of service supply.

When services sold through a foreign supplier's commercial presence are taken into account, the services share of world trade is around 20 percentage points higher than traditionally estimated, representing around 45% of total trade in goods and services.

Sales through the establishment of foreign- affiliates worldwide (mode 3) dwarf other modes, accounting for 56.1 per cent of global services exports (by 2022 estimates). This far exceeds the second most important mode – cross-border supply (mode 1, including through electronic means), which accounted for 34.7 per cent of the total services exports at latest count. The 1.2 per cent share of trade involving the temporary movement of service suppliers reflects the restrictive policy stance governing mode 4 trade.

Figure 185. Exports by mode of supply, percent, 2022.



Source: WTO Trade in Services by Mode of Supply (TiSMoS).

Metrics

- ✓ The WTO's Trade in Services by Mode of Supply **(TiSMoS)** dataset provides estimates of services trade for each of the four modes of supply covered by the General Agreement on Trade in Services (GATS). In so doing, it complements the balance-of-payment statistics (and datasets that build on it, such as BaTiS and data for digitally delivered services) by covering mode 3 and by allowing for cross-country comparisons of the modal composition of imports and exports by sector and over time.

Box 3. Modes of supply for trade in services

Services trade can happen through several modalities. The General Agreement on Trade in Services (GATS) defines services trade through four modes of supply:

- Mode 1 - cross-border supply: Services are supplied from the territory of one WTO member into the territory of any other member (e.g. through the Internet).
- Mode 2 - consumption abroad: Services are provided in the territory of one member to a consumer of any other member (e.g. tourism).
- Mode 3 - commercial presence: Services are delivered by a supplier of one member through its commercial presence in the territory of any other member (e.g. establishing a subsidiary abroad to serve the local market).
- Mode 4 - presence of natural persons: A supplier of one member provides services through the presence of natural persons in the territory of another member (e.g. consultants).

2.5. Services Value-Added in International Trade

The increasing role of services as key inputs in the production process of goods and services has meant that the role of services in world trade is far more significant than implied by gross flows. Indeed, measuring trade in value-added terms reveals that services (traded in their own right or as inputs into the production of goods traded) accounted for 56% of the value of world trade in goods and services in 2020, compared to 13% for agriculture and 31% for industry.

Services value-added content embodied in exported goods has grown in importance and represents an increasingly significant way for services firms in developing countries to join GVCs and reach international markets.

The critical role of services as inputs and in supply chains is reflected in the fact that over two-thirds of global services trade (on a BOP basis) consists of trade in intermediates, compared to trade in services for final consumption (WTO-WBG, 2023) (Figure 26).

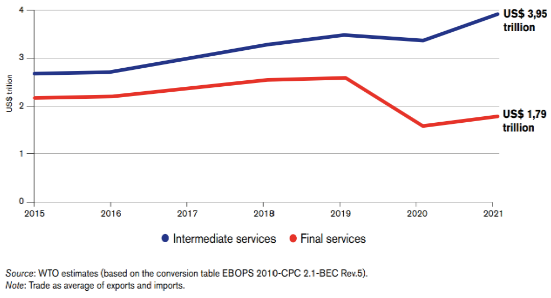
Services value-added accounts for a significant share of manufactured exports, at around 30% on average. This significant share underscores the importance of efficient and quality services for the productivity of manufacturing activities and their international competitiveness and export potential. The cost and quality of the underlying services affect the performance of the economy as a whole and are essential for connectivity and the competitiveness of goods exports.

For many economies, imported services value-added represents an important share of the services value-added embodied in exported products, underscoring the importance of access to quality and affordable services from abroad for one's own competitiveness.

Even in economies where services represent a small proportion of total exports in gross terms, services value-added often account for a significantly larger share of total exports (Figure 27). For example, while services accounted for 6 per cent of Mexico's total exports in gross terms in 2018, the proportion jumped to 45 per cent in value-added terms. Similarly for Argentina, where the share of services in total exports went from 20 per cent in gross terms to 48 per cent in value-added terms. Looking at trade in value-added terms shows that economies at different levels of development may enjoy comparative advantages in some services even if, in gross terms, they tend to export more goods than services.

Figure 26. Trade in intermediate services exceeds trade in final services

Trade in final and intermediate services, 2015-21

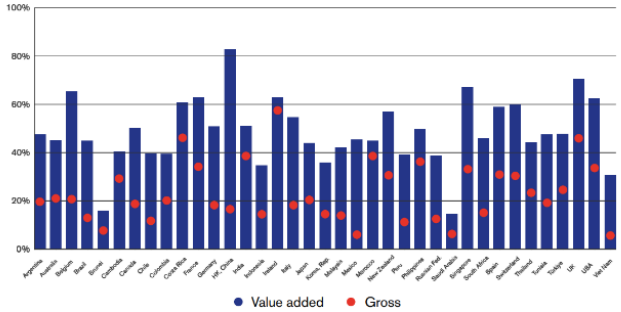


Source: WTO estimates (based on the conversion table EBOPS 2010-CPC 2.1-BEC Rev.5).
Note: Trade as average of exports and imports.

Source: WTO estimates

Figure 27. Services exports measured in value added terms often exceed that in gross terms

Share of services in total exports in gross and value-added terms, selected economies, 2018



Source: WTO-WBG (2023).

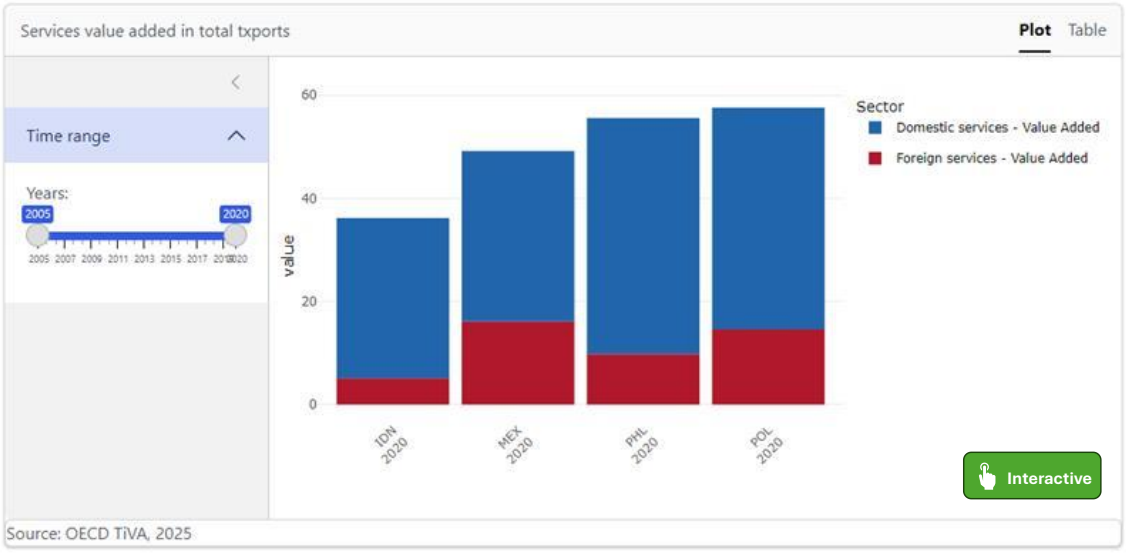
Metrics

The OECD's Trade in Value Added **(TiVA)** database allows to measure services value-added in total exports or, for example, in exports of manufactured products. It also permits analyzing the contribution of foreign (or imported) and domestic services value-added.

- ✓ The role of backward and forward linkages is especially important to understand **indirect forms of trade**. The OECD TiVA dataset provides an overview of how services are traded indirectly through exports of other sectors that receive input from services sectors.
- ✓ Data on forward and backward linkages, including for trade, can also be used to calculate the **number of jobs** that are involved in the direct provision of services and production that is enabled indirectly through services. These can be calculated from input-output tables and employment data or using databases such as the World Bank's Labor Contents of Exports (LACEX) **database**. The **OECD Trade in Employment** dataset provides estimates of the number of jobs involved in direct exports as well as in exports embodied in other exports.

Figure 28. Services value added in manufacturing exports

Figure 29. Services value added in total exports



2.6. Revealed comparative advantage

RCA for commercial services (BOP statistics)

A frequently used trade competitiveness indicator, including in services, consists of calculating an economy's revealed comparative advantage (RCA). Initially introduced by Balassa (1965), the RCA index is built by comparing an economy's services exports by sector as a share of its total exports with world exports in the sectors as a share of total world services exports. The higher the ratio, which can range from zero to infinity, the more competitive the economy is in the sector. A comparative advantage is 'revealed' if the RCA index is greater than one.

According to Balassa (1965), an economy's actual high specialization in an activity can be viewed as an evidential indication that it has a strong comparative advantage in that activity. RCA is a good proxy of comparative advantage under the hypothesis of absence of distortion in international trade in services. However, when regulations and trade obstacles disrupt trade, the RCA index can also reflect policy incidence.[3]

While its limitations need to be taken into account, the RCA is often used in assessments of services trade competitiveness, including by the World Bank (see Box 4 for an application to Morocco).[4]

[3] Hishamunda et al. (2009) argue also that high RCA indices may not be an economy's "true" comparative advantage but could be linked to policy or other distortions.

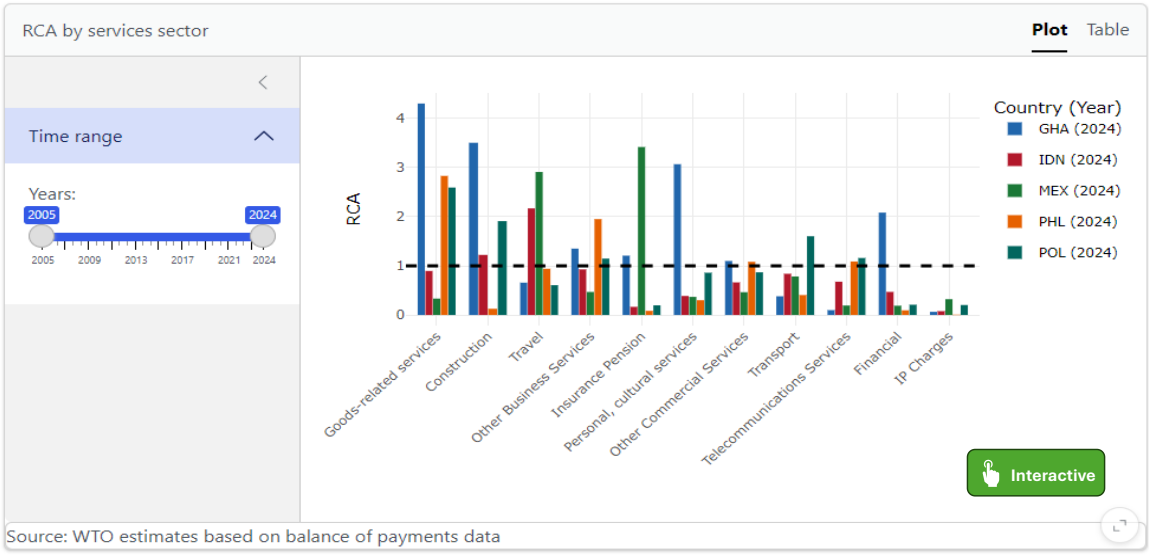
[4] Belay Seyoum (2007) uses RCA to measure developing countries' comparative advantages in selected services (business, financial, transport and travel services) for the period 1998 - 2003. The author finds that strong comparative advantages exist for many developing countries in transport and travel services and finds also that there is substantial room for improvement in financial and business services. Hisanaga (2008) studies the comparative advantage

Box 4. Recent trends in Morocco's Revealed Comparative Advantage in Services

A recent World Bank study (Bourhriba and Sauvé, 2023) showed that Morocco enjoys an RCA in goods-related services, travel, transport, and construction services. Morocco's comparative advantage in transport services is underpinned by its extensive road and rail networks, a leading port (Tanger-Med), and an air transportation ecosystem that connects Morocco to a large network of regional partners for both tourism and business purposes. Among the services for which Morocco is seen to possess an RCA, construction (fueled by a domestic real estate and infrastructure boom) and transportation registered the highest average annual growth rates in recent years. Travel and goods-related services, on the other hand, experienced lower growth rates as both sectors were strongly impacted by the COVID-19 pandemic.

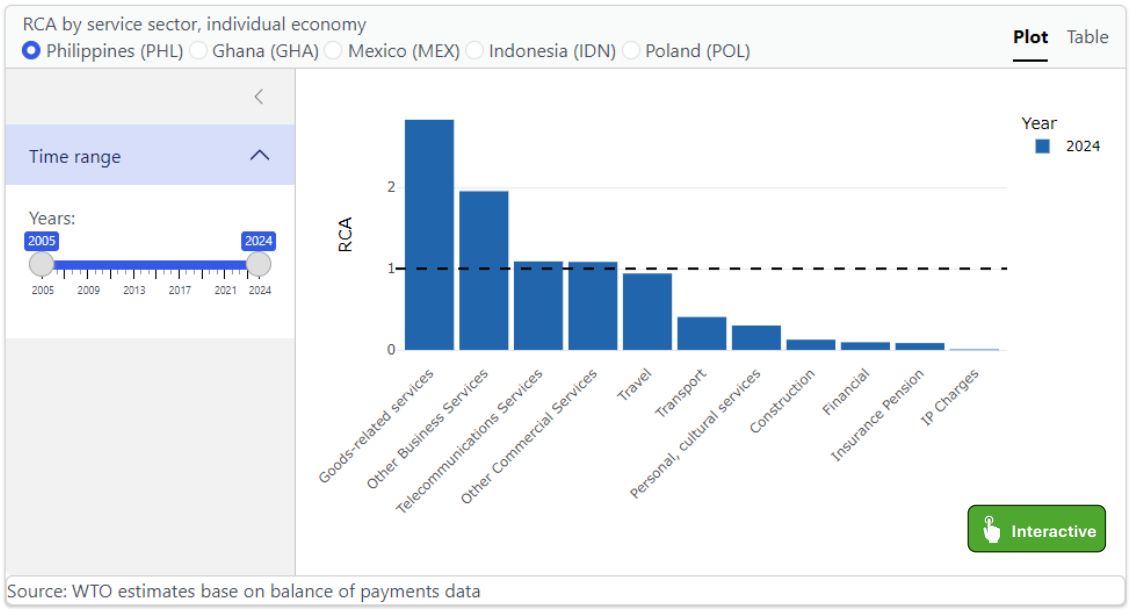
Still, Morocco's continued insertion into more technologically intensive manufacturing value chains generally bodes well for resumed export growth of goods-related services. Morocco's ICT services sector expanded significantly over the last decade, improving its RCA and increasing its share of total exports from 5.1% to 8.2% at latest count. The fact that Morocco's RCAs in ICT and financial services are low needs to be interpreted carefully to the extent that a significant share of Moroccan exports occurs not through the traditional cross-border means that RCA measures, but rather through the establishment of Moroccan operators in foreign markets via FDI (so-called Mode 3 trade). Similar considerations likely apply to Moroccan exports of professional and business services, many of which require proximity between service providers and end-consumers, prompting recourse to establishment-based trade (Mode 3 services trade).

Figure 30. Revealed comparative advantage by service sector



structure of United States international trade in services. By using the RCA approach, the authors finds that the United States has a strong comparative advantage in knowledge-based services.

Figure 31. Revealed comparative advantage by economy and service sector



Services RCA in Value-Added Terms (VA-RCA)

To take account of services value-added in any type of exports, including those embodied in manufacturing exports, a modified measure of revealed comparative advantage can be used.

Following the work of Miroudot and Cadestin (2017), the value-added RCA, rather than looking at the value of exports of commercial services in gross terms, is calculated in terms of the value-added originating in services sectors embodied in any type of export (goods or services). It is defined as the share of value-added originating from a given service sector in an economy's exports divided by the share of value-added originating from this service sector in world exports.

This alternative measure of RCA permits to take account of the role of services in global supply chains and to reflect services sectors where economies are relatively more successful in exporting services in value-added terms.

2.7. Services export diversification

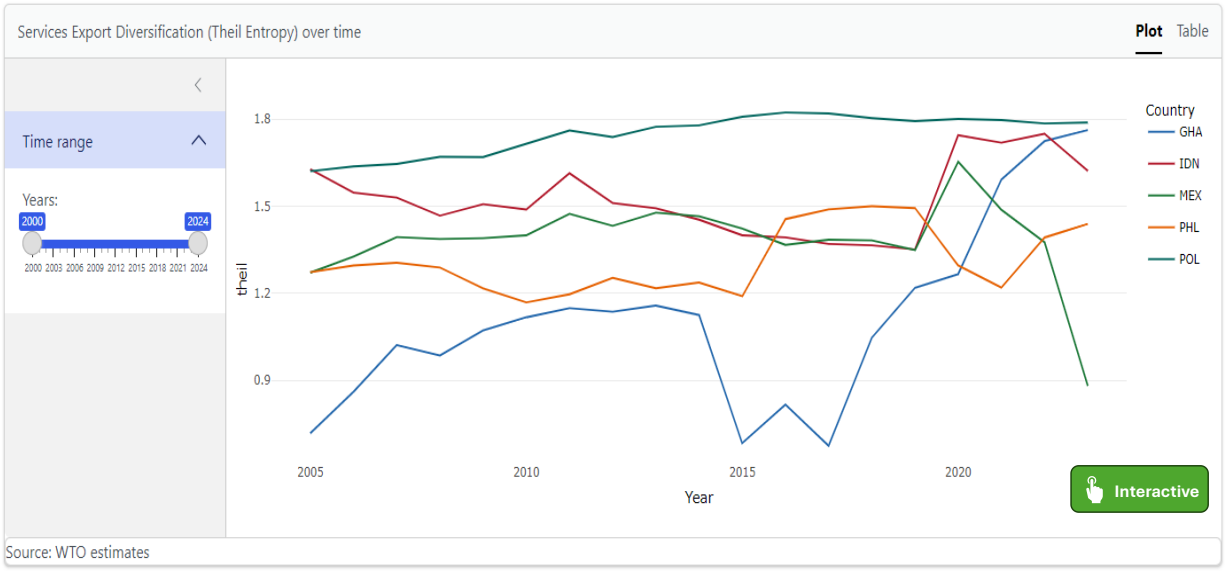
Export diversification has been used in the literature to express the ability of economies to expand the composition of their export baskets over time.

For goods, diversification is associated in the literature with economic growth as it mitigates the risks associated with commodity price volatility and macroeconomic shocks (Berthélemy, 2005; Sawadogo et al., 2024; UNCTAD, 2022). Services exports can help boost economies' overall trade diversification, but diversification within one's commercial services exports can also bring benefits as it avoids over-dependence on one sector (Sáez et al., 2014).

Metrics

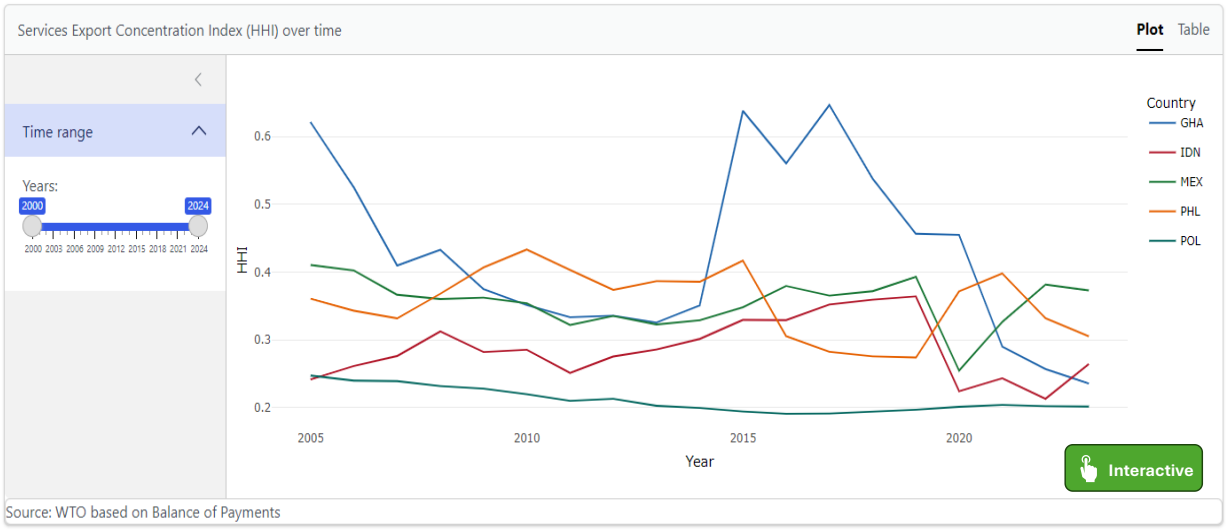
- ✓ Export diversification can be measured using export concentration indexes, such as the normalized Herfindahl-Hirschman Index and Theil Index. A number of studies have used these indices in their research on services trade.[5]
- ✓ The Herfindahl-Hirschman Index (HHI) ranges from 0 to 1, where values closer to 1 indicate a highly concentrated export basket, i.e., an economy commercial services exports (BOP basis) are dominated by a few sectors. It is calculated by summing the squares of the export shares (in percentage terms) of an economy's services sectors.
- ✓ The Theil Entropy Index measures diversification. It captures the distribution of export shares across services sectors and quantifies inequality in that distribution. Higher values imply a more diversified services export basket.
- ✓ While the two indices are used to measure export concentration or diversification, they differ in methodology, sensitivity, and interpretation. HHI focuses on concentration, while the Theil Entropy Index focuses on inequality in distribution.

Figure 32. Services export diversification over time, by individual economy (2005-2024)



[5] Bai, Z., Meng, S., Miao, Z., & Zhang, Y. (2019). Services liberalization and export diversity: Theory and evidence from chinese firms; Gnangnon, S.K. (2023), "The real exchange rate and services export diversification", Journal of Economic Studies, Vol. 50 No. 6, pp. 1105-1120; Sawadogo, B., Fouopi Djiogap, C., Ouedraogo, I. et al. (2024) "An empirical assessment of the role of trade in services in export product diversification in Sub-Saharan Africa", J Prod Anal 61, 229–257 (2024).

Figure 33. Services export concentration over time, by individual economy (2005-2024)



2.8 Services export sophistication

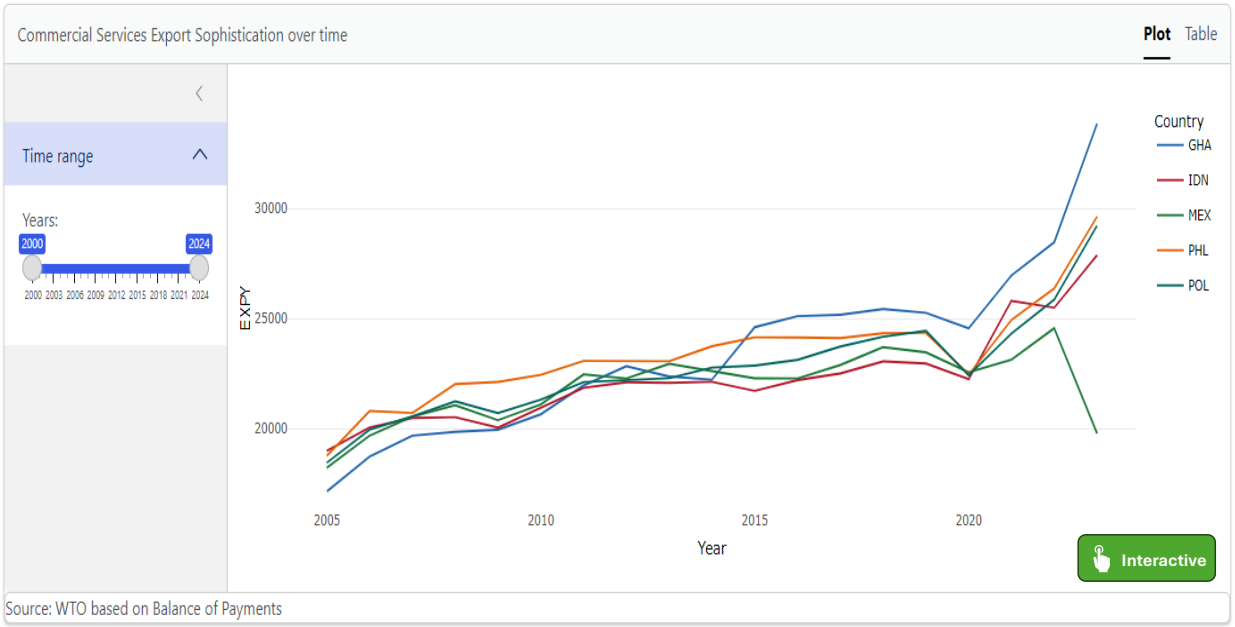
A key element in assessing services trade performance is to look at how advanced or technology-intensive an economy's exports are, based on global trade patterns.

The export sophistication index, expressed as EXPY, reflects the average productivity level or income level associated with the services that an economy exports. In other words, EXPY expresses the revealed income content of an economy's export basket.[6]

The EXPY is calculated by first computing PRODY coefficients that reflect the income/productivity level associated with each service, based on which economies export it: services mostly exported by rich countries get high PRODY scores, and vice versa. The EXPY is a weighted average of PRODY, with weights based on the share of each product in the economy's exports. The higher the value of EXPY, the higher the level of sophistication of exports.

[6] The EXPY has been used in the literature: Mishra et al. (2011); Hausmann, R., Hwang, J., & Rodrik, D. (2007). What you export matters. Journal of economic growth, 12, 1-25. It has been discussed in a services context in Sáez et al. (2014).

Figure 34. Commercial services export sophistication, by individual economy (2005-2024)



PART III: SCANNING THE POLICY LANDSCAPE - FORMULATING A POLICY AGENDA FOR SERVICES TRADE

3.1. Developing a policy agenda on services trade

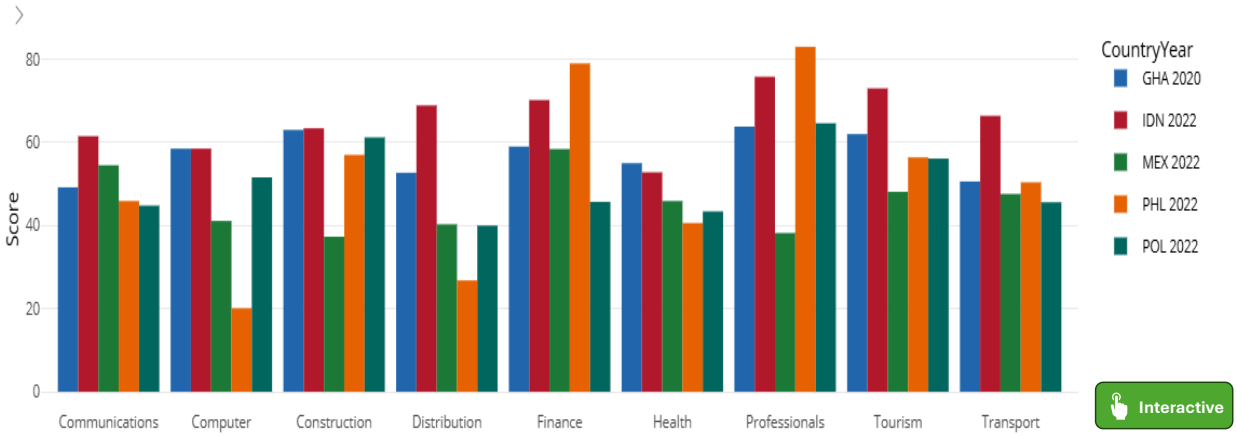
The following section leverages the various sources of empirical information discussed above to identify key policy areas that are relevant to defining a policy agenda in services, taking advantage of both trade and investment opportunities. This section provides a wide range of policy-related indicators that can be used to understand the trade policy and regulatory environment and provide benchmarking. This analysis can then be supplemented with in-depth regulatory assessments and review as well as the identification of key policy areas. Given the cross-cutting nature of the services sector, regulatory reforms aimed at increasing the sector's contestability and overall performance will generally need to be complemented by further policies, for example around the skills of workers and firms (capabilities).

Different services sectors face distinct policy priorities, depending on their characteristics, (e.g., tradability, linkages and skill-intensity), the most prevalent way in which they are traded, and the nature of the regulatory environment governing them. For example, for knowledge-intensive global innovator services (e.g., information technology), the ability to export services digitally across borders is often a key constraint that requires policies that facilitate such trade, while for many enabling services sectors (e.g., transportation), it is often domestic regulations that affect market contestability and investment in such sectors. The key focus of policy interventions will accordingly exhibit, typically, marked sectoral variance.

3.2 Trade policy

Despite sustained reform efforts around the globe, much of which has tended to be pursued unilaterally, barriers to trade and investment in services remain high overall, inflating trade costs with potentially damaging economy-wide consequences (Figure 35). Higher services trade restrictions are associated with lower shares of services value-added within global value chains (GVCs). Such restrictions can also adversely affect the productivity of manufactured, agricultural and natural resource exports, hindering efforts at moving up the value chain (see WTO-WBG, 2023).

Figure 35. STRI scores in selected countries, across 9 broad sectors



Note: The higher the STRI score, the higher the level of services trade restrictiveness. For more information on this index, see the note on the **STRI methodology**.
Source: World Bank-WTO Services Trade Restrictions Index at https://itip-services-worldbank.wto.org/.

Services trade barriers take multiple forms, ranging from explicitly discriminatory measures favoring domestic over foreign service suppliers, to measures that are needlessly burdensome and tantamount to a disguised restriction to trade or investment. Measures that constrain the quantity, nature or level of competition in services markets (i.e. measures that exert quota-like effects) can be equally problematic. While the latter measures are strictly prohibited by GATT disciplines governing trade in goods, they are not only pervasive in services trade but also permissible under trade rules governing the sector so long as governments make such measures transparent in scheduling commitments in sectors (or modes of supply) where quantitative restrictions are maintained. Examples of quota-like market access impediments to trade in services include limits placed on the number of suppliers, the value of transactions, the form of market entry, the extent of foreign ownership, as well as through economic needs tests conditioning various means of market entry.

The World Bank-WTO Services Trade Policy Database (STPD) can be leveraged to assess the degree to which applied trade- and investment-restrictive measures, both discriminatory and quota-like in character, affect sectoral, modal and economy-wide performance. Doing so can help governments identify and rank-order policy reform priorities to pursue, whether unilaterally or in the context of preferential or multilateral negotiations.

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 service 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.

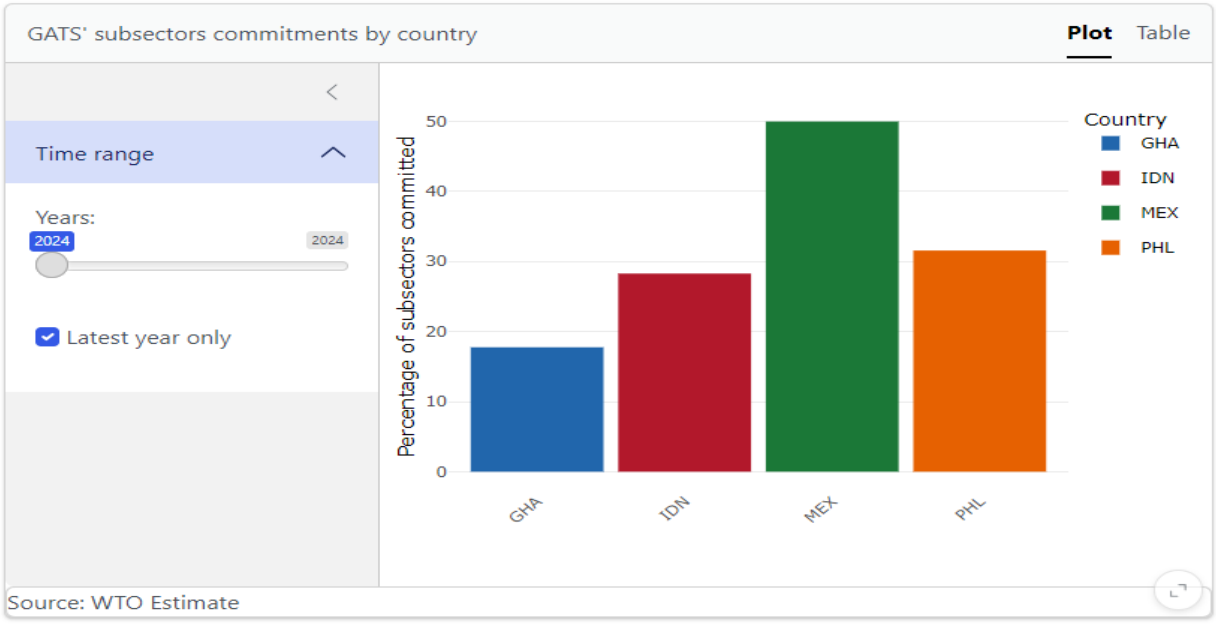
Domestic regulations in key network industries such as telecommunications, transportation, finance and business services tend to restrict competition more than in many goods-related sectors. Because of their economy-wide incidence, reforming such measures by lessening their trade- and investment-inhibiting effects needs to command close policy scrutiny. Recent research has shown that services trade restrictiveness negatively impacts the sophistication of manufacturing exports, suggesting that more open services markets can increase both the level and quality of an economy's goods export basket (World Bank and WTO, 2023).

Not only do services trade barriers impose significant costs, but also the uncertainty stemming from the absence or relative paucity of legally binding commitments scheduled under trade agreements. 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 to close the wide gap between *applied* (typically unilaterally decreed) regulatory measures governing services markets and the commitments undertaken by countries within the latest generation of regional trade agreements (RTAs). Such a gap is even wider when prevailing regulatory measures are compared to commitments scheduled under the WTO's General Agreement on Trade in Services (GATS) whose last negotiating round ended in 1997.

While restrictive regulatory policies hinder service delivery by substantially raising costs for firms to engage in cross-border trade, ultimately lowering their productivity, it bears recalling that many regulatory measures support trade in services and can help ensure that a host of legitimate public policy aims, both economic and social in nature, are met. Such measures will typically not hinder trade and investment in services, so long as they are not designed or act as disguised barriers nor impose undue compliance burdens. Sound domestic regulation may even enhance trade, such as when policies guarantee the quality of a service or increase trust in digital transactions by adequately protecting personal data.

While trade barriers impose costs, uncertainty stemming from the absence of, or relatively limited, multilateral commitments carries additional costs. Research underscores that the predictability of market access conditions underpinned by WTO commitments has commercial value in itself. Recent studies corroborate that commitments scheduled under the GATS and in regional trade agreements 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).

Figure 36. Proportion of Services Subsectors subject to Specific Commitments under the GATS, by Member



Metrics

- ✓ Metrics of **services trade restrictions** can be found in the World Bank's and World Trade Organization's Services Trade Restrictions Index (**STRI**), which provides a score between 0 and 100, where 0 indicates that none of the restrictions underlying the index are applied, and 100 means that the sector/mode is completely closed to foreign services and service suppliers. The STRI consists of 35 online questionnaires covering 34 sub-sectors. These are produced by national law firms and consultants and reviewed by a WTO-WB team. The Index primarily focuses on market entry and operational measures (with an identification of discriminatory treatment of foreign providers/services) and covers aspects of domestic regulation, data protection policies, and competition law. The STRI adopts the four modes of services supply and its Services Sectoral Classification List (MTN.GNS/W/120).

- ✓ More **granular data on *applied* services policies** is available through the WB-WTO **Services Trade Policy Database**, supplying data on a sample of over 130 economies. The data set forms the backbone to the WB-WTO STRI and can be used to understand precisely which policies and measures drive a low or a high score.

- ✓ Using a slightly different methodology, the OECD has developed its own services trade restrictiveness index (**STRI)** which analyzes services trade regulations across 22 sectors in 51 economies, 13 of which are non-OECD members, which collectively account for more than 80% of global services trade. The OECD also produces a **Digital Services Trade Restrictiveness Index** (DSTRI) covering the same sample of economies. DSTRI features indicators measuring cross-country performance on cross-border e-commerce, ICT goods and services trade, digitally deliverable services trade as well as digital-intensive services embedded in manufacturing exports, all of which are useful in assessing the policy measures underpinning countries' digital trade ecosystems.

- ✓ Participation in international trade agreements can help support an economy's integration into the world economy for services, including those that are digitally delivered. Market access commitments on services vary significantly across the WTO Membership. Information on Members' commitments under the GATS, including the breadth of their sectoral coverage, is available through the **I-TIP Services Database**. The World Bank research has found that deep preferential trade agreements (PTAs) exert greater impacts on reducing trade costs for firms (e.g., Mattoo et al., 2022), including in services (e.g., Borchert and Di Ubaldo, 2021). They are also found to increase trade in services and promote the greater insertion of countries and firms in regional and global value chains (World Bank, 2020) while also helping participating countries to diversify their services exports and improve domestic regulatory governance through enhanced Aid for Trade support (i.e. technical and financial assistance) (Roy and Sauvé, 2025). The World Bank's **Deep Trade Agreements (DTA) database** covers 64 services-related provisions, ranging from substantive market access provisions and transparency requirements to other domestic regulatory issues such as investment and competition policy.

- ✓ Once barriers to trade in services are properly documented and their magnitude measured, it is important to provide governments with elements of judgment on the sectoral and economy-wide costs flowing from restrictive measures and, consequently, the potential benefits of progressively or fully eliminating them. Using structural gravity models, STRI data can be used to produce such estimates

by computing ad-valorem (tariff) equivalents. Doing so allows reform efforts to be translated into monetary or growth (% of GDP) gains (see Box 5).

Box 5. Uzbekistan: documenting the gains from a sustained commitment to service sector reforms

A recent World Bank **report** analyzed Uzbekistan's service sector, highlighting the challenges and opportunities for its development and recommended reforms to modernize the sector, boost productivity, create jobs, and attract investment across its subsectors. The services sector is the country's key driver of growth. In 2023, it contributed 43.9% to GDP, surpassing industry (23.5%), agriculture (20.6%), and construction (7.1%). The sector has played a vital role Uzbekistan's structural transformation since independence, with employment in services rising from 37% in 1991 to 50% in 2022 — offsetting declines in agriculture. Despite important improvements, Uzbekistan's service sector continues to confront important challenges in connectivity, both physical and digital, contestability and capability/skill terms.

The report notes that reforms liberalizing the services sector could deliver substantial economic benefits for Uzbekistan. Regulatory reforms in services trade could boost the country's real GDP by up to 17% with full liberalization, with the key sectors of banking, telecommunications and insurance expanding by 23%, 39%, and 45% respectively. The report further finds that a commitment to deep reforms could generate real income gains of up to 16%, benefiting skilled and unskilled workers alike.

The report further recalls how Uzbekistan's ongoing quest to join the WTO represents a unique opportunity to align its services sector with global standards. Reforms implemented during the accession process can be expected to enhance connectivity and contestability, attract greater doses of foreign direct investment, foster innovation, and contribute to sustainable growth. The World Bank has been supporting some of these reforms through development policy lending, including the **Second Inclusive and Resilient Market Economy DPO (P501037)**.

3.3 Investment policies affecting services trade under mode 3 (commercial presence)

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 more likely to attract foreign investment in services than countries with more restrictive policy regimes. 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 restrictions in certain services sectors can not only prevent the possibility of expansion of that sector but also of the sectors to which the services sector supplies inputs.

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's Global Investment Competitiveness surveys have found 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). Given the importance of FDI as a means of international services delivery, policies that affect the ability of companies to invest in services activities in an economy can negatively affect an economy's ability to develop and diversify its services exports - in most countries services is a growing component of exports

- as well as its overall exports, as services play an important role in the competitiveness of sectors across the board.

The World Bank's Investment Climate Assessments can be used to guide policy prioritization efforts in services sectors and the accompanying ICA "2.0" Policy Manual can help operationalize the reform agenda. Becoming a competitive exporter of services, especially of global innovator services, requires an open regulatory environment, the attraction of FDI, high-quality infrastructure, and a skilled workforce. Encouraging investment in the services sectors can involve a wide range of policy instruments targeting each stage of the investment lifecycle. While some of these policies apply to both services and non-services firms, the nature of services can mean a differentiation in the importance and prioritization of certain policies. For example, certain restrictions on entry are more prevalent in services sectors, such as occupational licensing issues in professional services.

Countries often restrict entry in key services sectors to protect local businesses and employees from competition from foreign firms. Such restrictions can include foreign equity limitations, discriminatory screening or approval mechanisms as well as other regulations that prevent the creation of a level playing field for investment. Removing such entry restrictions can create jobs and promote growth while also generating additional exports. In addition to tackling FDI restrictions, policies creating transparent entry and establishment regimes, including the use of "negative lists" that clearly delineate restricted sectors, and that streamline procedures can help attract larger FDI volumes. In cases where national security concerns are used as a rationale for introducing or maintaining barriers, careful consideration should be applied to ensure that such a policy rationale is only used in exceptional circumstances. International investment agreements (IIAs) can provide a further impetus to encourage the opening of key sectors. Box 6 provides operational examples of FDI entry liberalization.

Box 6. Operational examples of FDI entry liberalization– Indonesia and The Philippines

In **Indonesia**, the government recently implemented its most ambitious investment reform since the 1980s by removing FDI restrictions in over 500 business activities – mostly in services – to encourage investment flows and the achievement of other development objectives. This included allowing full foreign ownership in telecommunications, e-commerce, hospitals, ports, airports and airport-related services, maritime cargo handling, and large trading houses, among others. This comprehensive reform was supported by a US$ 800 million World Bank loan (**Indonesia Investment and Trade Reforms DPL [P172439]**) to accelerate the country's economic recovery and transformation by opening more sectors to private investment, particularly FDI, and bringing more high-skilled professionals to the labor market. Before the reforms, Indonesia had the third most restrictive FDI regime among the high- and middle-income countries covered by the OECD's FDI Restrictiveness Index and was the second most restrictive East Asian economy next to the Philippines.[7] Such restrictions were found to limit Indonesia's attractiveness for export-oriented FDI, increase prices in the sectors in which restrictions applied[8] and weigh negatively on productivity levels.[9] A measure of the reform's tangible impact is that sectors that

[7] World Bank (2018). Indonesia Economic Quarterly, December 2018. World Bank.
[8] Ibid.
[9] Genthner, R. and K. Kis-Katos (2022). Foreign investment regulation and firm productivity: Granular evidence from Indonesia. Journal of Comparative Economics 50(3), 668‑687.

were liberalized registered FDI growth of 40 percent while FDI in non-liberalized sectors grew by only 6 percent between the pre- and post-reform period.[10]

In the **Philippines**, amendments to the Public Service Act (PSA) are boosting contestability in key enabling services sectors. Supported by US$ 1.5 billion of World Bank lending (**Philippines First Sustainable Recovery DPL** [P178634] and **Philippines Second Sustainable Recovery DPL** [P180336]), the reform allowed 100 percent foreign ownership in the transport and telecommunications services sectors. Like Indonesia, the Philippines was relatively closed to FDI prior to recent reforms, particularly in the services sector, with no substantive liberalization efforts undertaken since the Asian Financial Crisis in the late 1990's. The PSA amendment complements other recent market opening initiatives. This includes amendments to the Retail Trade Liberalization Amendment Act (December 2021) that lowered the investment threshold for foreign-owned retailers, as well as amendments to the Renewable Energy Act (November 2022) allowing 100 percent foreign ownership in the renewable energy sector. Reaping the full gains of PSA reforms requires that the implementing rules and regulations at the relevant sectoral levels are approved, that relevant regulatory agencies be strengthened to ensure that *de jure* liberalization aims translate into *de facto* liberalization outcomes, and that complementary reforms are undertaken, for example in maritime transport. The World Bank's budget support is complemented by technical assistance to support the adoption of secondary regulations and the development of a framework for performance audits, recalling the need for a comprehensive reform agenda to achieve service sector competitiveness.

Metrics

- ✓ The WTO-World Bank Services Trade Restrictions Index (STRI) captures restrictions on "Mode 3" services trade (i.e. commercial presence). The underlying Services Trade Policy Database includes more detailed information on sector and sub-sector specific restrictive measures.

[10] The reference periods are Q1/2019-Q1/2021 vs Q3/2021-Q3/2022. Angella Faith Lapukeni Montfaucon; Victor Kidake Senelwa; Aufa Doarest. 2023. Early Impacts of Indonesia's Investment Reforms: A Preliminary Analysis. Washington, D.C.: World Bank Group.

PART IV: COMPLEMENTARY POLICIES

Policies in relation to trade in services sectors form part of a wider set of policies enabling growth in the sector. This includes institutional performance and the quality of regulatory governance assume considerable importance in services markets given the intensity with which most service sectors are subject to domestic regulation. Strong domestic regulatory institutions and enforcement capabilities help to create competitive markets for services**.** The quality of regulatory governance is a key determinant of sectoral and economy-wide performance, FDI attractiveness, macro- and micro-stability, pro-competitive outcomes, consumer protection and proportionate responses to instances of market failure.

A second set of accompanying policies aims to prevent anti-competitive practices in domestic markets that are prone to exhibiting high levels of concentration that can be competition-impairing compared to other sectors. Many service sectors also display above average levels of state ownership. A third policy area is *connectivity*, understood in both its physical and digital dimensions, as services sectors both enable connectivity (e.g., transportation, telecommunications) as well as benefit from it (e.g., digital services). A fourth policy area is *capabilities*, which refers to both the skills of workers and the productive competencies of firms. The following section provides a short summary of key complementary policy areas.

4.1. Institutions and governance

Institutions and their performance are fundamental for development. Institutions establish and enforce the rule of law, which is essential for creating a predictable and stable environment in which economic activities can flourish. Effective institutions promote good governance and accountability. They ensure that public resources are managed efficiently, reduce rent-seeking and corrupt practices, and enhance transparency. Institutions regulate markets to ensure fair competition, curb anti-competitive conduct, and protect consumers. Effective regulation creates a level playing field for businesses, encourages innovation, and enhances market efficiency. Institutions are further responsible for providing essential public services such as education, healthcare, infrastructure, and social protection. A well-educated and healthy workforce is more productive, adaptable, and capable of driving economic development.

Institutional performance assumes considerable importance in services markets given the intensity with which most service sectors are subject to domestic regulation. Improved capacity to regulate services markets is therefore of critical importance for enhanced competitiveness. A sound domestic regulatory environment is essential to reaping the benefits of expanded services trade and investment. Measures taken to promote greater market contestability in services bring greater rewards when rooted in and accompanied by sound regulation and strengthened regulatory enforcement capacity.

Strong domestic regulatory institutions and enforcement capabilities help to create competitive markets for services. The quality of regulatory governance is a key determinant of sectoral and economy-wide performance, FDI attractiveness, macro- and micro-stability, pro-competitive outcomes, consumer protection and proportionate responses to instances of market failure. Creating competitive services markets requires reforms that are motivated by a mix of efficiency and equity, or so-called non-economic objectives. Competent regulatory bodies are more likely to pursue regulatory without undue administrative discretion and preventing recourse to covert forms of discrimination.

The establishment of an appropriate regulatory framework can enable an economy to take advantage of potential export opportunities by promoting the emergence of competitive domestic suppliers that meet

world standards of service provision. For example, by facilitating the development of a safe and reliable healthcare system, a sound regulatory framework can permit to exploit new opportunities to offer health and wellness-related tourism services. Similarly, adoption of high standards of online consumer protection can boost digital trade by increasing trust in remote cross-border transactions.

Disciplines on domestic regulation contained in trade agreements can play a significant role in promoting and consolidating domestic reform efforts in services markets and in ensuring that regulatory objectives pursuing key public policy objectives are achieved in an economically efficient manner. Such disciplines can also equip developing-economy exporters with the means to address regulatory barriers to their own exports in foreign markets.

Metrics

- ✓ The World Bank's **Worldwide Governance Indicators** (WGI) provide a wealth of **institutional and regulatory metrics** of relevance to the study of competitive service markets. The WGI document broad patterns in perceptions of the quality of governance across countries and over time. The data reflect the diverse views of tens of thousands of survey respondents and experts worldwide and are based on existing data sources produced by more than 30 think tanks, international organizations, non-governmental organizations and private firms around the world. The WGI combines these sources into aggregate indicators of six dimensions of governance for over 200 economies over the 1996–2023 period, facilitating peer comparisons and an assessment of the direction of change in the underlying institutional and regulatory performance of countries. WGI indicators cover: (i) voice and accountability; (ii) political stability and the absence of violence/terrorism; (iii) government effectiveness; (iv) regulatory quality; (v) rule of law and (vi) control of corruption.

- ✓ Further metrics of **institutional, regulatory and business environment metrics** are usefully aggregated by the World Intellectual Property Organization's (WIPO) annual **Global Innovation Index** (GII) reports, which draw on a range of sources, including the WGI. Since its inception in 2007, the GII has shaped the innovation measurement agenda, affording governments analytical insights and metrics with which to design policy responses to improve their innovation performance, including in services. The economy profiles found in the GII offer a snapshot and rank ordering along key institutional, regulatory and business environment metrics, at latest count for a sample of 133 economies. Such metrics include data on institutional stability for businesses, government effectiveness, regulatory quality, and adherence to the rule of law alongside other business environment indicators. The GII further provides a summary snapshot of key infrastructural metrics of relevance to services ecosystems, such as ICT access and use, online public service delivery, e-participation, general infrastructure and ecological sustainability. Further GII metrics of relevance to service sector performance cover human capital and research, business and market sophistication, as well as knowledge, technology and creative outputs.

- ✓ The World Bank's **Business Ready** (B READY) dataset provides granular comparative data on the business environment in which firms operate. The inaugural B-READY 2024 report covers 50 economies across various income levels and geographies; by 2026 the dataset is expected to cover 180 economies. Four indicators are especially relevant for services sectors:

- (i) *business entry and location*, which impact services provided through commercial presence and foreign direct investment ("mode 3" trade);
- (ii) *utility services*, which measure the effectiveness of regulatory frameworks, the quality of governance and transparency of service delivery mechanisms as well as the operational efficiency of internet services (together with electricity and water).
- (iii) *market competition*, which measures good practices related to the enforcement of competition policy, intellectual property rights and innovation policy, as well as regulations that focus on improving competition and innovation in markets where the government is a purchaser of services or goods (roughly half of non-defense state purchases tend to be services);
- (iv) *international trade*, which measures determinants of trade in services and digital trade across three different pillars: the first pillar covers the quality of regulations pertaining to international trade, covering de jure features of a regulatory framework that are necessary to establish a non-discriminatory, transparent, predictable, and safe environment to harness the potential of *international* trade; a second pillar assessing digital and physical infrastructure concerning international trade and the quality of border management, thus assessing de facto provision of public services for international trade facilitation; and a third pillar measuring the time and cost to comply with export and import requirements, participation in cross—border digital trade, as well as perceived major obstacles for international trade.

4.2 Competition

Barriers to competition remain prevalent in services and do not only affect foreign providers or investors, but also domestic ones. Competitive pressure plays an important role in favoring the emergence and growth of innovative and more productive firms, both domestic and foreign. Metrics of domestic barriers to competition, such as those provided by the OECD-World Bank Product Market Regulations (PMR) **dataset** suggest that such barriers are especially prevalent in network industries such as telecommunications, transportation, and professional services. These measures affect domestic firms, but can also impact trade and investment in services, as such "behind-the-border" measures can prevent or impede the entry and operation of foreign affiliates ("Mode 3") as well as cross-border service delivery ("Mode 1"). The World Bank's **Markets and Competition Policy Assessment Toolkit**, including its **Annexes**, provides further relevant guidance and analytics.

The service sector is also one where many businesses with state ownership operate, posing additional potential challenges to competition. State-owned enterprises (SOEs), typically defined as firms having 50 percent or more government ownership, as well as businesses with substantial government ownership (such as businesses with more than 10 percent state ownership labelled by the World Bank as a "**Business of the State**" [BOS]), remain present in many services sectors, including in sectors where private sector delivery is deemed viable (World Bank 2023). Rethinking the presence of the state in such sectors or reassessing the governance arrangements of businesses with state ownership can be important to ensure a level playing field.

Metrics

- ✓ Metrics of **restrictions to competition** are available through the **OECD-World Bank Product Market Regulation database**, which covers 70 countries (including 37 LMICs). The dataset features indicators covering three areas of regulation: (i) *state control* (including state ownership or price controls); (ii) barriers to entrepreneurship (complexity of regulatory procedures, administrative burdens on start-ups, and regulatory protection of incumbents); and (iii) *barriers to trade and investment*. The latter pillar overlaps with the World Bank-WTO Services Trade Restrictions Index (STRI). The PMR dataset also features indicators measuring the regulatory barriers to firm entry and competition at the level of individual service sectors, with a focus on network industries, professional services, and retail distribution.

- ✓ To understand the role of **businesses with state ownership**, the World Bank's **Business of the State** database provides an overview of the footprint of state-owned enterprises and other businesses with state ownership (above 10 percent) in different sectors. In many economies, there is a strong presence of such businesses, especially in services. The database also provides a sense of whether businesses with a state footprint operate in sectors where private sector provision would be feasible.

Such analysis can be complemented with firm-level analytics that study constraints to growth of productive businesses (e.g., lacking allocative efficiency) as well as high levels of market concentrations. The World Bank's **Markets and Competition Policy Assessment Toolkit**, including **Annexes**, provides further relevant analytics.

4.3. Physical and digital connectivity

The service sector is an important provider of connectivity – both physically and digitally – but the sector also benefits from enhanced connectivity. The service sector is a provider of connectivity through transportation and logistics services as well as through a host of communication services. International commerce depends on the ability to transport goods across borders. And tourism, the largest sector in the world economy, is critically dependent on transportation services, particularly air transport and cruise ships. Providers of connectivity services in turn depend on infrastructure and a regulatory framework that allows for reliable and cost-effective connectivity**.** Global evidence suggests that the level and quality of physical and digital connectivity is lower in many developing economies (see the World Bank's **Logistics Performance Index** and Box 7). Trading and transaction costs tend to be higher, while access to faster and cheaper internet services tends to be more limited. Trade policies that facilitate the supply of transport and telecommunication services are an important determinant of digital and physical connectivity (WTO-WBG, 2023), which in turn strongly correlate with improved service sector competitiveness.

Box 7. The World Bank's Logistics Performance Index (LPI)

The World Bank Logistics Performance Index (**LPI**) is an assessment tool designed to evaluate the logistics performance of countries worldwide. This methodology incorporates a mix of quantitative and qualitative data, gathering insights from logistics professionals and stakeholders through structured surveys. The LPI measures key dimensions of logistics performance, including customs efficiency, infrastructure quality, international shipment reliability, and logistics competence. Countries are ranked based on their performance across these dimensions, providing valuable insights into the efficiency of logistics systems and their impact on trade facilitation.

Digital connectivity is key in facilitating remotely supplied services and plays a central role in facilitating "Mode 1" (e.g. cross-border supply) services trade by allowing providers to reach customers remotely while also allowing the diffusion of digital technologies. However, fostering digital connectivity involves more than improving digital infrastructure, but also requires an sound policy environment. This involves limiting restrictions to trade and investment in digitally enabling sectors, such as telecommunication and computer services, but also good regulatory governance, e.g., on electronic transactions, access to payments systems, electronic signatures, data protection and cybersecurity, cross-border data flows, and platform regulation – all of which are relevant to digitally delivered services (see Box 8).

Box 8. The World Bank's Digital Trade Regulatory Readiness (DTRR) database

The DTRR database reflects countries' regulatory framework on specific matters directly relevant to digital trade. It is structured around nine "regulatory areas" distributed among three policy pillars. Altogether, DTRR offers over 13,000 datapoints relating to over 5,200 regulatory measures effectively in place. "Traceability", a central feature of the DTRR, ensures the quality of the information supplied, with each datapoint linked to the specific provision, paragraph, and/or section number that supports it.

By readily assessing progress on digital regulations, while also providing granular information on specific regulatory solutions (or the lack thereof) within an economy's legal framework, the DTRR can help policymakers, international experts, practitioners and academics identify regulatory priorities for strengthening regulation on digital trade. The database also provides a starting point for assessing compliance of a national regulatory framework with international obligations found in digital trade agreements, the digital trade chapters of preferential trade agreements and the draft plurilateral agreement on e-commerce being envisaged at the WTO.

Metrics on physical connectivity

- ✓ The World Bank Logistics Performance Index (**LPI**) is an assessment tool designed to evaluate the logistics performance of countries worldwide. This methodology incorporates a mix of quantitative and qualitative data, gathering insights from logistics professionals and stakeholders through structured

surveys. The LPI measures key dimensions of logistics performance, including customs efficiency, infrastructure quality, international shipment reliability, and logistics competence. Countries are ranked based on their performance across these dimensions, providing valuable insights into the efficiency of logistics systems and their impact on trade facilitation.

- ✓ Data on the movements of products from supply chain tracking data can provide further insights in logistics performance. The 2023 LPI report includes **several relevant indicators tracking supply chains**, including dwell times, connectivity and lead times within corridors based on shipping, cargo, postal and ports tracking data.
- ✓ Indices of services trade restrictions and product market regulations also include measures that relate to transportation sectors, including the degree of openness of a sector, whether cabotage is allowed, slot allocation systems and railway track access arrangements.

Metrics on digital connectivity

- ✓ Data on **access to and use of (high-speed) internet and mobile technologies** are available through the **International Telecommunications Union (ITU)**. This includes metrics on the availability of broadband internet as well as the adoption of faster mobile technologies, such as 3G and 4G/LTE. Further indicators of digital connectivity are available through the **World Bank's Digital Progress and Trends Report**.

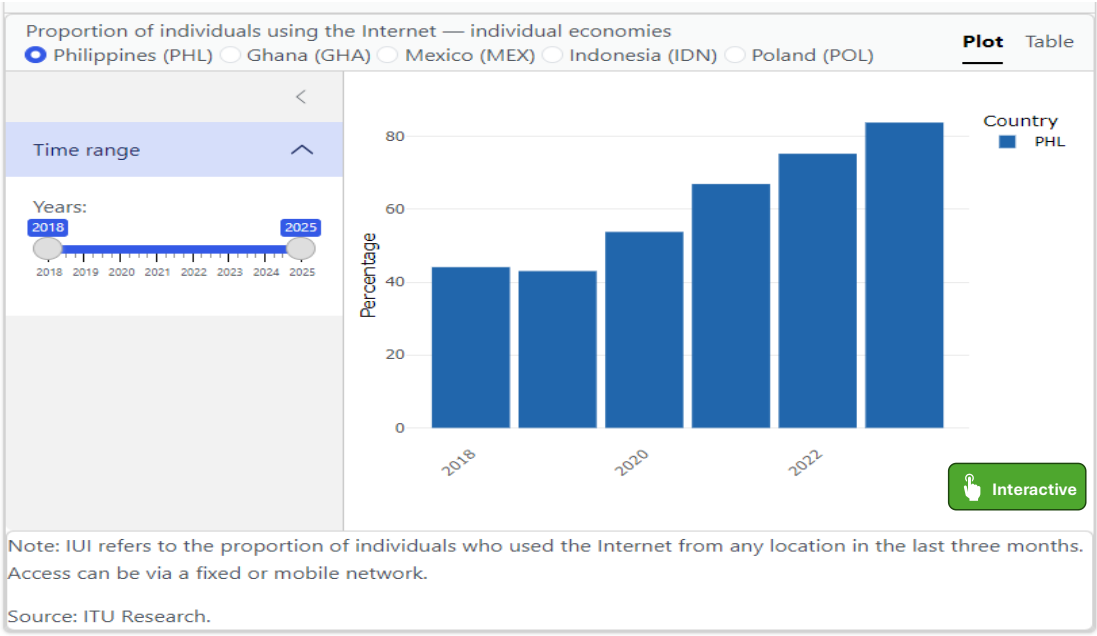
- ✓ The ITU also makes available its ICT Development Index, which assesses the extent to which an economy's connectivity is universal and meaningful. The Index is composed of ten indicators. The ITU's ICT Regulatory Tracker focuses on the policy environment, capturing trends and progress across different generations of regulation.

- ✓ Indices of **services trade restrictions** and **product market regulations** also include measures that relate to digital aspects. The **World Bank-WTO Services Trade Restrictions Index** captures trade restrictions affecting the supply of digitally enabling sectors, such as telecommunication and computer services. The **OECD Digital Services Trade Restrictiveness Index (DSTRI)** captures restrictions around 1) infrastructure and connectivity, 2) electronic transactions, 3) e-payment systems, 4) intellectual property rights and 5) other barriers to trade in digitally enabled services. Information on specific policies restricting digital trade can be found in the **ECIPE Digital Trade Estimates** database, which includes an index as well.

- ✓ The **World Bank's Digital Trade Regulatory Readiness (DTRR)** database offers novel information on laws and regulations governing digital trade for over 120 economies around the world (Box 8).

Further resources include **UNCTAD's eTrade Readiness Assessments**, which focus on e-commerce, ICT infrastructure, payment, legal frameworks, skills and finance, and are available for more than 30 economies. For sub-Saharan African countries, the World Bank has performed **Digital Economy for Africa (DE4A) Country Diagnostics** for most countries on the continent.

Figure 37: Proportion of individuals using the internet (2018-2024)



4.4. Capabilities

Worker skills as well as firm competencies are important determinants of service sector performance, especially for global innovator services. Many services depend on a wide spectrum of skills. While some service tasks are dependent on advanced skills (e.g., computer programming or legal expertise), there are many others that depend on mid-level skills that are within reach of more workers. The latter tasks often still require a more foundational level of skills, such as the ability to utilize email or word processing software, as well as various "soft skills", such as the ability to communicate well with customers. Although acquiring such skills demands training and experience, they are more attainable for a broader workforce. Improving skills across the board is therefore a key objective of increasing the productivity of services as well as in encouraging the desirable shift towards higher value-added and more readily offered services.

Firm capabilities – which capture technological absorption, innovation as well as managerial and organizational practices – are important drivers of the productivity of firms. Cross-country evidence points to large differences in firm capabilities, including in service sectors (Nayyar et al. 2021). In many cases, technology adoption – especially digital technologies – is the most relevant driver of innovation in developing economies (Cirera, Comin & Cruz 2022). Digitization allows for the automation or facilitation of certain tasks that were previously done manually, for example automated inventory management in sales

systems or software that helps engineers in their design process. They can also be used for reaching more customers located further away, for example, through online communication. Such digital technologies can not only transform global innovator services, but also lower-skilled services. For example, digital technologies can benefit retail firms by allowing for digital payment systems, managing inventory more accurately and allowing for remote sales. Tourism firms can more easily find customers through online platforms that allow for direct bookings.

Metrics in relation to skills

- ✓ The metrics on the **share of workers with advanced education** or with **higher-skilled occupations** (also highlighted as part of the "inclusiveness" dimension) provide an indication of which services sectors are more dependent on advanced worker skills.

- ✓ **Education statistics on enrollment and graduation rates** of relevant degrees (e.g., STEM) provide an indication of formal training provided.

- ✓ Firm surveys, including the **World Bank Enterprise Survey** (WBES) and the World Bank's **Skills Toward Employment and Productivity (STEP)**, can provide a further indication of **formal learning happening within firms**. To gain a better understanding of the degree to which **inadequate skills impede the performance of firms**, firm-level surveys like WBES and STEP present (self-reported) statistics on whether worker skills are considered an obstacle.

- ✓ The World Bank's **Human Capital Data Portal** provides global, regional, and economy-level data on key dimensions of human capital. The Portal provides information on a set of 130 human capital indicators, including education, health, social protection, labor and employment, many of which are relevant to a finer understanding of service sector performance. The Portal includes data from UNESCO, UNICEF, ILO, FAO, WHO and the World Bank. The site is managed by the World Bank's **Human Capital Project.**

- ✓ The Economy Profiles found in WIPO's yearly **Global Innovation Index** produced since 2007 provide a range of skills- and innovative firm-related metrics of relevance to assessing an economy's service sector performance and comparing it to relevant peers. These include metrics on general educational outcomes, as well as on tertiary education, research and development (R&D), the supply of knowledge workers, knowledge creation and absorption, exports of cultural and creative exports, as well as online creativity.

Metrics on technology and innovation

- ✓ The **share of firms adopting rudimentary digital technologies**, e.g. the use of a website or the use of email, is captured in the World Bank's Enterprise Survey, allowing for comparisons across countries.

- ✓ More granular information on the **adoption of specific technologies in the production process** can be found in the **World Bank's Firm-level Adoption of Technology (FAT)** survey, which has been implemented in over 15 countries. This survey also includes questions about sector-specific

technology adoption within services (services sectors covered include retail, banking and accommodation services).

- ✓ Other relevant measures of firm-capabilities include measures of the **adoption of structured management practices**. While the World Management Survey mainly focuses on manufacturing, the WBES contains 11 questions on the adoption of structured management questions, with questions derived from the Management and Organizational Practices Survey (MOPS) survey administered by the US Census Bureau. Due to the self-reported nature, cross-country comparisons can be challenging, although within countries these measures have been validated to commensurate with non-self-reported measures. For micro and informal businesses, surveys of more basic **business practices** (e.g., the use of bookkeeping practices) can function as an alternative (e.g., McKenzie & Woodruff 2016). The WBES informality module contains several relevant questions regarding the use of business practices by informal and micro firms.

- ✓ Measures of **innovation and R&D spending** by businesses as well as the **adoption of patents** can highlight the overall role of innovation beyond technology adoption and is especially relevant for upper middle income and high-income countries. Collected survey data such as the **Community Innovation Survey** (conducted by the European Union's Eurostat and cooperating third-country statistical agencies) provide indicators relevant to measuring innovation and R&D. The **Global Innovation Index**, maintained by the World Intellectual Property Organization (WIPO), provides a set of indicators around innovation and R&D compiled from different sources with global coverage.

In addition to the above-mentioned indicators, countries might have specific surveys available that capture relevant information on technology and innovation (e.g., the Community Innovation Survey conducted in many European countries). Relevant policy toolkits focusing on strengthening innovation and technology adoption include the World Bank's Public Expenditure Review (PER) of science, technology and innovation as well as the World Bank's Practitioner's Guide to Innovation Policy.

ANNEX 1. DATA SOURCES AND REPRODUCIBILITY

Data sources

The data visualizations offered on this dashboard are based on a variety of mostly publicly available data sources. Country and time coverage will depend on the data source.

Table. Data sources used, and latest available year for five comparator countries.

Description	Source	Latest available year				
		GHA	IDN	MEX	PHL	POL
Economic Transformation Database	UNU WIDER-GGDC	2018	2018	2018	2018	NA
Employment shares (ISIC division, 2-digit)	ILO (via ILOSTAT)	2017	2015	2022	2022	2022
Employment shares (ISIC section, 1-digit)	ILO (via ILOSTAT)	2017	2015	2022	2017	NA
Employment shares (broad categories)	ILO modelled estimates (via WDI)	2022	2022	2022	2022	2022
Input-Output Tables	OECD	NA	2020	2020	2020	2020
Logistics Performance Index (LPI)	World Bank	2022	2022	2022	2022	2022
Services Trade Restrictions Index (STRI)	World Bank/WTO	2020	2022	2022	2022	2022
Services trade (detailed by sector)	WTO	2023	2023	2023	2023	2023
Services trade (overall values)	WTO	2023	2023	2023	2023	2023
Trade in Services by Mode of Supply (TiSMoS)	WTO					
Value added (broad categories)	National accounts (via WDI)	2022	2022	2022	2022	2022

Reproducibility

A reproducibility package for this tool will be offered, allowing users to recreate the underlying charts and graphs and inspect the codes used to generate the key charts. The dashboard relies on R, Markdown, RShiny and Stata.

This tool relies on mostly publicly available datasets, collected by the World Bank, UNCTAD, OECD, ILO, among others. A few analyses rely on proprietary datasets, such as the fDi Markets dataset. Although reproducibility codes for these non-public datasets are provided, users will need to have obtain access to these datasets separately to run the reproducibility codes.

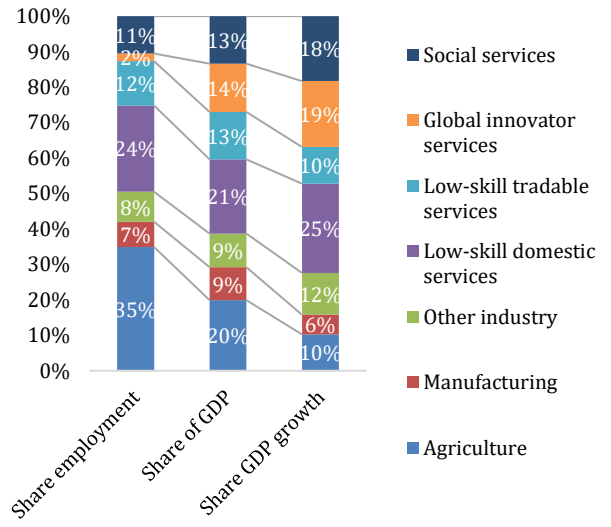
ANNEX 2. EXAMPLES OF NATIONAL APPLICATIONS BY THE WORLD BANK

The methodology described in this tool has been used in several countries to highlight the performance and potential of services sectors as well as to highlight areas for policy reform.

In **Kenya**, analysis highlighted the importance of growing skill-intensive services sectors, fostering linkages, boosting productivity, trade and investment, while also securing inclusion. The report **Seizing Kenya's Services Momentum** (2023 Country Economic Memorandum) focused on the question of how Kenya can find new growth opportunities in services sectors. The report recommends policies around upskilling workers to growth global innovator services – which contribute 19 percent of growth but only 2 percent of jobs (Figure 38) -, increasing linkages between services and manufacturing, boosting productivity through technology adoption and increasing competition as well as increasing trade and investment in services. Despite the country being an important regional hub, restrictions to services trade in Kenya remain higher than that of neighboring countries. At the same time, an important challenge for inclusion remains, as many people do not have the required skills to work in knowledge-intensive services. Encouraging the acquisition of more basic levels of digital skills as well as encouraging the adoption of technologies within lower-skilled (and often informal) economic activities can help foster the inclusiveness of the services sector.

Figure 38. In Kenya, global innovator services represent 19 percent of GDP growth, but only 2% of employment

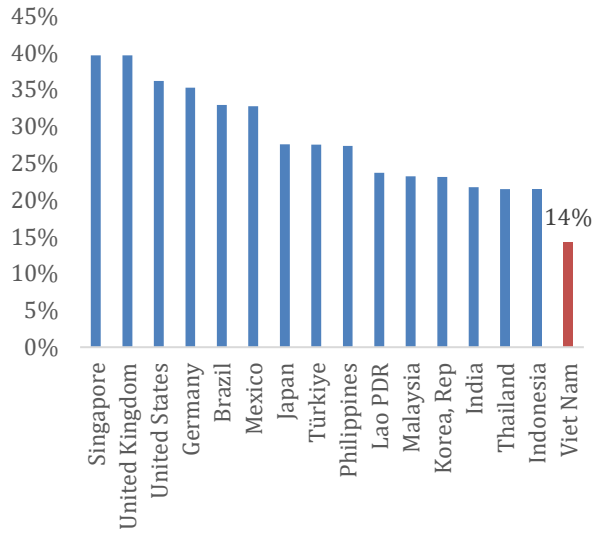
Share of employment, GDP and GDP growth, 2015–2021



Source: World Bank, Kenya CEM (2022).

Figure 39. There are limited linkages between services and manufacturing in Viet Nam

Services inputs into manufacturing, share of overall inputs, 2018.



Source: World Bank, Viet Nam Taking Stock (2023), based on OECD Input-Output Data.

In **Viet Nam**, strengthening linkages with the manufacturing sector was highlighted as a pathway to drive growth of both services and industrial sectors. Like other East Asian countries, Viet Nam has been successful in developing industrial sectors, based on a strategy of export-led growth. The **2023 Viet Nam Economic Update** focused on the question of how services can contribute to further growth and job creation. The analysis highlighted how despite growth of the industrial sector, linkages with the services sector remain low. Only 14 percent of inputs used in the manufacturing sector are provided by services, which ia two to three times lower than in high-income economies (Figure 39). Only 1.6 percent of inputs are formed by global innovator services. To increase the technological sophistication of the manufacturing process, stronger linkages between manufacturing and (especially) digital services are required. High services restrictions make it difficult for firms to obtain the necessary services from abroad when they cannot be sourced locally. Policies should focus on reducing such restrictions while also encouraging the adoption of more sophisticated (and often digital) technologies among both services and manufacturing firms.

In **China**, domestic services are increasingly becoming important for the export of manufacturing products. Analysis featured in the World Bank's **2021 China Economic Update** highlights the growing role of services that are embedded within manufacturing products. In addition, outward FDI from China to other countries has increasingly been driven by service sectors. Nevertheless, despite the growth, significant services trade restrictions remain, as measured by the Services Trade Restrictions Index. State-owned enterprises are more dominant in services compared to manufacturing sectors. Reform efforts in services that liberalize trade and investment can have significant benefits to further growth of the sector.

Example of World Bank policy recommendations

In **Uzbekistan**, improving contestability of the services sector is one of the main priorities in boosting the performance of the sector. Since 2017, a sustained program of market reforms has contributed to high levels of growth, but recently, structural transformation has slowed. The report **At Your Service? The Promise of Service-Led Growth in Uzbekistan** (2024) focuses on how the service sector can provide a new pathway to growth, using the contestability-connectivity-capabilities policy framework (see Table 2). A key constraint to growth remains contestability. Measures of services restrictions suggest that the country is closed to the cross-border delivery of services in 11 out of 13 subsectors and that state monopolies remain present in key network sectors, like telecommunications and transportation. Modelling suggests that reforming such constraints can yield estimated growth benefits of 17 percent. The pursuit of such reforms will also be an important step towards obtaining membership of the World Trade Organization (WTO).

Table 2: Example of policy recommendations around service sectors

Objective	Policy recommendations	Priority
Strengthen linkages between enabling services and other sectors **Key sectors:** ***Transportation and logistics, telecommunications*** **(See Chapter 3)**	**Capabilities** • Investments in secondary education to emphasize socioemotional and interpersonal skills in school curricula. • Vocational training for standard IT skills. • Align standards more closely with international standards to encourage more entry of foreign businesses outside the immediate region.	Medium
	Connectivity • Investments in infrastructure to bolster transportation and digital connectivity. • Regulatory reforms to improve customs procedures, the tracking and tracing of consignments, as well as the timeliness of shipments reaching their destination. Reforms that bolster private participation in transportation and telecommunication services can also improve connectivity.	High
	Contestability Telecom: • Remove the international gateway monopoly of Uztelecom; provide more competitive wholesale prices. • Establish an independent regulator. • Facilitate licensing arrangements for providers, including moving to a notification procedure rather than the current approval procedure. Transportation: • Air: Increase competition of routes through gradual liberalization of the sector; rethink privileges afforded to JSC Uzbekistan Airways. • Road: Re-assess quota system; facilitate operations of foreign transportation providers. • Rail: Complete the unbundling of track infrastructure and passenger and freight service provision; increase competition on freight markets, starting with reducing the influence of the "master" freight forwarders. • Warehousing: Expand opportunities for private sector firms to establish warehouses and logistics centers, including facilitating the establishment of warehouses near transportation hubs.	High
Expand the footprint of global innovator services **Key sectors:** ***IT, professional services, financial services*** **(See Chapter 4)**	**Capabilities** • Investments in higher education that increase tertiary enrolment rates can enable a sizable pool of skilled workers over the medium term. • Vocational training to accelerate the development of advanced ICT skills, such as through the Government of Uzbekistan's "One Million Uzbek Coders" training program. Fewer restrictions on work visas for highly skilled workers from abroad, such as in Tashkent's IT Park.	High
	Connectivity • Investments to improve the quality of broadband connectivity through more widespread coverage of faster forms of mobile internet, such as 4G/LTE.	High
	Contestability • Reduce restrictions on cross-border delivery through relaxing data localization requirements, while striking a balance with privacy considerations.	High
Increase the productivity of low-skilled services **Key sectors:** ***Retail, hospitality, personal services*** **(See Chapter 5)**	**Capabilities** • Investments in secondary education to emphasize socioemotional and interpersonal skills in school curricula. • Vocational training for standard IT skills.	Medium
	Connectivity • Investments to improve access to broadband connectivity in more remote areas.	High
	Contestability • Simplify the process to obtain land leases and reduce restrictions on land ownership.	Medium

BIBLIOGRAPHY

Alfaro, L., O. Becerra, and M. Eslava (2020), *EMEs and COVID-19: Shutting Down in a World of Informal and Tiny Firms* (No. 27360). National Bureau of Economic Research.

Arnold, C., D. Kiel, and K.I. Voigt (2016), "How the Industrial Internet of Things Changes Business Models in Different Manufacturing Industries", *International Journal of Innovation Management*, *20*(08).

Arnold, J. M., B. Brys, C. Heady, A. Johansson, C. Schwellnus and L. Vartia (2011), "Tax Policy for Economic Recovery and Growth", *The Economic Journal*, *121*(550), F59-F80.

Bai, Z., S. Meng, Z. Miao, and Y. Zhang (2019), "Services Liberalization and Export Diversity: Theory and Evidence from Chinese Firms", MPRA Paper 95803, University Library of Munich, Germany.

Balassa, B. (1965). "Trade Liberalisation and "Revealed" Comparative Advantage", *The Manchester School*, *33*(2), 99-123.

Bas, M. and O. Causa (2013), "Trade and Product Market Policies in Upstream Sectors and Productivity in Downstream Sectors: Firm-level Evidence from China", *Journal of Comparative Economics*, *41*(3), 843-862.

Berthélemy, J.C. (2005), "Commerce international et diversification économique", *Revue d'économie politique* 115(5): 591–611.

Cirera, X., D. Comin, and M. Cruz (2022), Bridging the Technological Divide: Technology Adoption by Firms in Developing Countries, World Bank Group, Washington DC.

Francois, J., and J. Woerz (2008), "Offshoring Services, Manufacturing Linkages, and the Structure of Trade and Industry", conference paper.

Genthner, R. and K. Kis-Katos (2022), "Foreign Investment Regulation and Firm Productivity: Granular Evidence from Indonesia", *Journal of Comparative Economics* 50(3), 668‑687.

Gnangnon, S.K. (2023), "The Real Exchange Rate and Services Export Diversification", *Journal of Economic Studies*, Vol. 50 No. 6, pp. 1105-1120.

Grover, A. G. and A. Mattoo (2021) "Why Do Manufacturing Firms Sell Services? Evidence from India", Policy Research Paper 9701, The World Bank.

Hausmann, R., J. Hwang, and D. Rodrik (2007), "What You Export Matters", *Journal of Economic Growth* 12, 1-25.

Hisanaga, M. (2008), "Revealed Specialization: Evidence on US International Services", *The International Trade Journal*, *22*(4), 378-414.

Hishamunda, N., J. Cai and P. Leung (2009), "Assessment of comparative advantage in aquaculture: framework and application on selected species in developing countries", FAO.

International Trade Centre (2022), SME Competitiveness Outlook 2022: Connected Services, Competitive Businesses, Geneva.

Lamprecht, P. and S. Miroudot (2020), "The Value of Market Access and National Treatment Commitments in Services Trade Agreements", *World Economy* 43(11), 2880-2904.

Lapukeni Montfaucon, A.F., V. Kidake Senelwa and A. Doarest (2023), Early Impacts of Indonesia's Investment Reforms: A Preliminary Analysis. Washington, D.C.: World Bank Group.

McKenzie, D. and C. Woodruff (2017), "Business Practices in Small Firms in Developing Countries", *Management Science* 63(9), 2967-2981.

McMillan, M. and D. Rodrik (2011), "Globalization, Structural Change, and Economic Growth" in M. Bachetta and M. Jansen, eds., Making Globalization Socially Sustainable, Geneva: International Labor Organization and World Trade Organization

Miroudot, S. and C. Cadestin (2017), "Services in Global Value Chains: From Inputs to Value-Creating Activities", OECD Trade Policy Papers, No. 197, OECD Publishing, Paris.

Miroudot, S. and C. Cadestin (2017), "Services in Global Value Chains: Trade Patterns and Gains from Specialization", OECD Trade Policy Papers, No. 208, OECD Publishing, Paris.

Nayyar, G., M. Hallward-Driemeier, and E. Davies (2021), At Your Service? The Promise of Services-Led Development, World Bank.

Roy, M. and P. Sauvé (2025), "Preferential Frontiers in Services Trade Governance", in Claussen K, M. Elsig and R. Polanco, eds., The Concept Design of a Twenty-First Century Preferential Trade Agreement: Trends and Future Innovations. Cambridge University Press.

Sáez, S., D. Taglioni, E. van der Marel, C. H. Hollweg, and V. Zavacka (2014), Valuing Services in Trade: A Toolkit for Competitiveness Diagnostics, World Bank Group, Washington, DC.

Sauvé, P. (2020), "Gendered Perspectives on Services Trade and Investment", *Journal of World Trade* 54(4): 481–502.

Sawadogo, B., C. Fouopi Djiogap, I. Ouedraogo, M. Mouzamilou Takpara (2024), "An Empirical Assessment of the Role of Trade in Services in Export Product Diversification in Sub-Saharan Africa", *Journal of Productivity Analysis* 61, 229–257 (2024)

Seyoum, B. (2007), "Revealed Comparative Advantage and Competitiveness in Services: A Study with Special Emphasis on Developing Countries", *Journal of Economic Studies*, *34*(5), 376-388.

UNCTAD (2022), Economic Development in Africa: Rethinking the Foundations of Export Diversification in Africa; the Catalytic Role of Business and Financial Services, Geneva.

World Bank (2021), "China Economic Update, June 2021: Beyond the Recovery - Charting a Green and Inclusive Growth Path", World Bank Group.

World Bank (2023), Kenya Country Economic Memorandum: Seizing Kenya's Services Momentum, World Bank Group, Washington DC.

World Bank (2023), Taking Stock: Vietnam Economic Update, March 2023, World Bank Group, Washington DC.

World Bank and WTO (2020), Women and Trade: The Role of Trade in Promoting Gender Equality, Geneva.

World Bank and WTO (2023), Trade in Services for Development, Geneva.