TRADE IMPACT FOR GOOD



# BRICS Trade in Services Report 2022



© International Trade Centre 2022

The International Trade Centre (ITC) is the joint agency of the World Trade Organization and the United Nations.

Street address:	ITC 54-56, rue de Montbrillant 1202 Geneva, Switzerland			
Postal address:	ITC Palais des Nations 1211 Geneva 10, Switzerland			
Telephone:	+41-22 730 0111			
Fax:	+41-22 733 4439			
E-mail:	itcreg@intracen.org			
Internet:	http://www.intracen.org			

BRICS Trade in Services Report 2022

## About the paper

BRICS countries (Brazil, the Russian Federation, India, China and South Africa) have a fast-growing share in global services markets. Improving services regulations and reducing trade costs will help them tap into their potential, especially for high value-added services and digital trade.

With new data on sectors, mode of supply and intra-BRICS trade, the report updates ITC's 2017 report on *BRICS countries: Emerging players in global services trade*. This second edition provides inputs to 2022 BRICS trade policy meetings. It was prepared at the request of the Chinese presidency for these meetings.

Publisher: International Trade Centre
Title: BRICS Trade in Services Report 2022
Publication date and place: Geneva, June 2022
Page count: 78
ITC Document Number: TFPB-22-52.E

Citation: International Trade Centre (2022). BRICS Trade in Services Report 2022. ITC, Geneva.

Disclaimer: Views expressed may not necessarily reflect those of individual BRICS countries.

For more information, contact: Quan Zhao at zhao@intracen.org

ITC encourages the reprinting and translation of its publications to achieve wider dissemination. Short extracts of this paper may be freely reproduced, with due acknowledgement of the source. Permission should be requested for more extensive reproduction or translation. A copy of the reprinted or translated material should be sent to ITC.

Digital image(s) on the cover: © Shutterstock

© International Trade Centre (ITC)

ITC is the joint agency of the World Trade Organization and the United Nations.

## Foreword

Services trade is an important driver of economic growth, job creation and value chain participation. BRICS countries (Brazil, the Russian Federation, India, China and South Africa) are increasingly important players in global services trade. Competitiveness in services trade is key to their future growth.

This report collects the latest available data on services trade from various sources and presents a comprehensive review of services trade for BRICS countries. New datasets used for this report include the Balanced Trade in Services Statistics database produced by OECD and WTO, and WTO's Trade in Services data by Mode of Supply dataset.

The report shows how the COVID-19 pandemic has had a significant impact on global services trade: world exports of commercial services fell by 18.16% between 2019 and 2020. The impact on BRICS countries varies widely: China's and India's services trade declined only by 4% and 5%, respectively, whereas Brazil saw a fall of 16%, the Russian Federation saw a fall of 24% and South Africa witnessed a decline of nearly 46%. These decreases are largely due to the pattern of their services exports, such as the role of tourism and travel and engagement in digital trade.

The report is useful to analyse where BRICS stand in global services trade. It examines growth trends and trajectories; sector and mode of supply analysis for each individual BRICS country; and intra-BRICS trade. It takes a close look at the most dynamic segments in services trade, such as digital trade and investment in services, as well as key sectors such as travel and education. It shows which sectors, such as transport, travel and other business services, represent the largest shares in services exports and imports of BRICS countries. Most importantly, it demonstrates that services trade deficits are not necessarily a 'loss' to an economy, as imported services allow domestic companies to participate more efficiently in international value chains and generate important gains for consumers.

The report has important policy lessons as well. It suggests initiatives that BRICS countries could consider to enhance services trade – improving services statistics, implementing regulatory impact assessments, lowering services trade costs and leveraging regional initiatives on transport and connectivity to promote development of key backbone services, such as transport, logistics and telecommunications.

ITC supports developing countries with technical assistance on services trade. These range from supplying trade data and intelligence, developing national export strategies with services-specific strategies, building knowledge and capacity for policymakers, sector associations and alliances, to implementing targeted technical assistance projects for SMEs in key sectors such as tourism, IT services and e-commerce.

We stand ready to work with our partners to help SMEs around the world, including in BRICS countries, to engage and benefit from global services trade.

& fund

Pamela Coke-Hamilton Executive Director International Trade Centre

# Acknowledgements

This paper was prepared by Benjamin Shepherd, Principal, Developing Trade Consultants, under the supervision of Quan Zhao and Jean-Sébastien Roure from the International Trade Centre (ITC). The paper was produced under the overall supervision of Mohammad Saeed and Rajesh Aggarwal (both ITC).

ITC would also like to thank Natalie Domeisen and Anne Griffin (both ITC), who oversaw production and quality control, Janet Hill, who edited the report, Franco Iacovino (ITC) for graphic support, and Serge Adeagbo (ITC) for printing support.

Development of this edition received support from the Ministry of Commerce of the People's Republic of China.

# Contents

Foreword	
Acknowledgements	vi
Acronyms	xi
Executive summary	l
Chapter l	
Global Snapshot: Trade in Services	
Research challenges	6
Chapter 2	
BRICS countries: Integration into the global services economy	
BRICS in global services trade	9
Sector composition: BRICS services trade	13
Geographical patterns in BRICS services trade	
Embodied services trade	23
Chapter 3	
Digital Trade	
Trade in computer and information services	25
Digitally delivered services trade	25
Chapter 4	
Investment in services and sales by foreign affiliates	
Inbound FDI in services and Mode 3 imports	29
Outbound FDI in services and Mode 3 exports	29
Chapter 5	
People-to-people connections	
Travel and tourism	
Education	
Chapter 6	
Expanding in global markets and intra-BRICS collaboration	
Challenges	41
Recommendations	45
	10
References	

### Box

Box 1 Modes of supplying services internationally	Box 1	Modes of supplying services internationally .	6
---	-------	---	---

## Figures

Figure l	Services as a percentage of GDP, by country income group, 2000 and 2019	4
Figure 2	Services growth accompanies GDP per capita growth, 2019	4
Figure 3	World exports: Goods and services, 2000-2020	4
Figure 4	Services exports: Growth rates by developing region, 2002–2020	4
Figure 5	World services exports: Mode of supply, 2017	7
Figure 6	Services sector: Value added in GDP, 2019	10
Figure 7	Services trade relative to GDP: BRICS countries, 2000–2015	10
Figure 8	World services exports: Origin and mode of supply, 2017	10
Figure 9	Trade balance in commercial services: BRICS countries, 2015	10
Figure 10	Trade balance in commercial services: BRICS countries, 2012–2016	10
Figure 11	Brazil: Services exports by sector, 2019	12
Figure 12	Brazil: Services imports by sector, 2019	12
Figure 13	Russian Federation: Services exports by sector, 2019	14
Figure 14	Russian Federation: Services imports by sector, 2019	14
Figure 15	India: Services exports by sector, 2019	16
Figure 16	India: Services imports by sector, 2019	16
Figure 17	China: Services exports by sector, 2019	17
Figure 18	China: Services imports by sector, 2019	17
Figure 19	South Africa: Services exports by sector, 2019	
Figure 20	South Africa: Services imports by sector, 2019	
Figure 21	Brazil: Geographic breakdown of services exports, 2019	20
Figure 22	Brazil: Geographic breakdown of services imports, 2019	20
Figure 23	Russian Federation: Geographic breakdown of services exports, 2019	21
Figure 24	Russian Federation: Geographic breakdown of services imports, 2019	21
Figure 25	India: Geographic breakdown of services exports, 2019	21
Figure 26	India: Geographic breakdown of services imports, 2019	21
Figure 27	China: Geographic breakdown of services exports, 2019	22
Figure 28	China: Geographic breakdown of services imports, 2019	22
Figure 29	South Africa: Geographic breakdown of services exports, 2019	22
Figure 30	South Africa: Geographic breakdown of services imports, 2019	22
Figure 31	Gross exports, manufactured goods: Services value added by origin, 2018	23
Figure 32	Computer and information services exports: BRICS countries, 2005–2017	26
Figure 33	Computer and information services in manufactured goods exports: BRICS countries and comparators, 2018	26
Figure 34	Mode 1 services exports relative to total services exports: BRICS countries, 2005-2017	

Figure 35	Mode 1 services exports relative to total services exports, by sector: BRICS countries, 2017	28
Figure 36	FDI inward stocks: Selected countries, 2001–2020	30
Figure 37	Brazil and partners: FDI inward stock, 2017	30
Figure 38	FDI inward stock, 2017, Russia and partners	30
Figure 39	India and partners, FDI inward stock, 2017	31
Figure 40	China and partners: FDI inward stock, 2017	31
Figure 41	South Africa and partners: FDI inward stock, 2017	31
Figure 42	Mode 3 services imports relative to total services imports: BRICS countries, 2017	31
Figure 43	Selected countries: FDI outward stocks: 2001–2020	32
Figure 44	Brazil and partners: FDI outward stock, 2017	32
Figure 45	Russian Federation and partners: FDI outward stock, 2017	32
Figure 46	India and partners: FDI outward stock, 2017	34
Figure 47	China and partners: FDI outward stock, 2017	34
Figure 48	South Africa and partners: FDI outward stock, 2017	34
Figure 49	Mode 3 services exports relative to total services exports: BRICS countries, 2017	34
Figure 50	Tourist arrivals: BRICS, 2000–2019	38
Figure 51	Tourism receipts in total exports: BRICS countries, 2019	
Figure 52	Tourist departures: BRICS, 2011–2015	38
Figure 53	BRICS and rest of world: Education services imports, 2017	40
Figure 54	Mode 4, services exports by GATS: BRICS, 2017	40
Figure 55	BRICS countries and selected sectors: STRI, 2020	42
Figure 56	BRICS countries and selected sectors: STRI, 2020	42
Figure 57	BRICS countries and selected sectors: STRI, 2016	44
Figure 58	BRICS countries and selected sectors: STRI, 2016	44

### Tables

Table l	Tourism exports by purpose of visit: BRICS countries, 2017	39
Table 2	BRICS: Share in travel exports, 2019	39
Table 3	BRICS: Share in travel imports, 2019	39

# Acronyms

Unless otherwise specified, all references to dollars (\$) are to United States dollars, and all references to tons are to metric tons.

APEC	Asia-Pacific Economic Cooperation		
ASEAN	Association of Southeast Asian Nations		
BRICS	Brazil, Russian Federation, India, China and South Africa		
EBOPS	Extended Balance of Payments Services Classification		
EU	European Union		
FATS	Foreign affiliates statistics		
FDI	Foreign direct investment		
G20	Group of 20		
GATS	General Agreement on Trade and Services		
GATT	General Agreement on Tariffs and Trade		
GDP	Gross domestic product		
GVC	Global value chains		
ITC	International Trade Centre		
MFN	Most favoured nation		
OECD	Organisation for Economic Co-operation and Development		
SME	Small and medium-sized enterprise		
STRI	Services Trade Restrictiveness Index		
TISI	Trade and investment support institution		
TiVA	Trade in Value Added		
UNCTAD	United Nations Conference on Trade and Development		

WTO World Trade Organization





## Executive summary

The BRICS countries – Brazil, Russian Federation, India, China and South Africa – are emerging as significant players in global services trade. Over the past two decades, they have experienced rapid growth in services trade, which is contributing to the overall economic efficiency of BRICS countries. In 2020, services trade in all BRICS countries ranged from 5.5% (China, Brazil) to about 12% (India) relative to GDP. It is comparable to, if not a little above, that of the United States (5.6% in 2020). However, it is still considerably below that of the major European countries, France (18.7%) and Germany (16%).

BRICS countries started from a lower base and account for only a modest proportion of world services trade. According to World Bank data, the BRICS accounted in 2020 for 10% of global services exports and 13% of global services imports. China and India represent the bulk of this share, with the two countries together accounting for 8.7% and 10.5% of global services exports and imports, respectively. Except for India and, to some extent, China, BRICS' services trade tends to be concentrated in traditional sectors, such as transport and travel.

Between 2000 and 2020, based on the balance of payment data, India reinforced its position as a net services exporter. Negative trade balances decreased in Brazil and the Russian Federation, while South Africa's position remained approximately neutral. By contrast, China's negative trade balance in commercial services increased rapidly between 2010 and 2018, before recovering a little in 2019 and more substantially in 2020.

A negative balance should not be interpreted as a 'loss' to an economy – far from it. Services imports are particularly important, because a large proportion of global trade in services is in producer services, namely those that are used as inputs by other firms; services like engineering, transport and finance help produce other goods and services, including those that are exported.

The COVID-19 pandemic has had a devastating impact on services trade: world exports of commercial services fell by 18.16% between 2019 and 2020, whereas the comparable figure for goods was 7.36%. Among the BRICS, China and India saw smaller declines in services trade during the pandemic, of 4% and 5%, respectively, perhaps due to the mix of services they export, and the modes of supply on which they rely. By contrast, Brazil saw a fall of 16%, the Russian Federation saw a fall of 24% and South Africa witnessed a decline of nearly 46%.

Owing to data deficiencies, analysing BRICS countries' participation in services trade has been challenging, in particular the trade with each other. This report draws on a range of data sources to provide a fresh picture of the sectoral composition of BRICS countries' services trade and the importance of intra-BRICS trade.

Estimates based on the best available information show that intra-BRICS trade accounts for a relatively small share of services exports of each BRICS country (9% for Brazil, 13% for the Russian Federation, 6% for India, 4% for China and 12% for South Africa). In imports, BRICS as a group accounts for around 3% (Brazil and China) to 6% (India) and 9% (South Africa) of services imports of individual BRICS countries. Global patterns of comparative advantage tend to dictate a larger role for high-income economies in East Asia, Europe and North America.

# Dynamic sectors: Rapid productivity growth

Transport, travel and other business services represent the largest shares in services exports and imports of BRICS countries. Other sectors feature prominently in services exports of each country: construction for Brazil; financial services, telecom and intellectual property charges for the Russian Federation; telecom and ICT services for India; telecom, manufacturing-related services and construction for China; and financial services and telecom services for South Africa.

Dynamic services sectors, such as engineering and research and development, have seen rapid productivity growth globally in recent years. This has implications for policymakers, who need to have the right incentives to encourage high-productivity, growth-supporting services. It also means that the slowing growth of manufacturing in developing countries – including BRICS at lower levels as a percentage of GDP – is not necessarily negative for employment and development, provided countries generate competitive offerings in dynamic services.

One aspect of services trade that stands out for the BRICS countries is 'embodied' services trade – services used as inputs in the production of other tradable goods and services. BRICS' gross exports of manufactured goods incorporate between 25% and 35% of embodied services in value added terms, primarily from domestic sources but also from foreign suppliers, according to the Trade in Value Added (TiVA) data. Developing these services is important as a source of export earnings in a direct sense and for facilitating manufacturers' competitiveness in world markets.

Looking at individual modes of supply, the standout performers are China and India in Mode 3, with growth rates of 17.8% and 13.0% per annum between 2010 and 2017. Of the BRICS, those two countries grew faster than the rest of the world in terms of Mode 1 exports, at 6.3% and 7.0%, respectively.

Considering total export values in the WTO TiSMoS data, China and India are the two BRICS countries that have seen substantially faster export growth than the rest of the world (between 2010 and 2017), while the Russian Federation has seen slow growth, and Brazil and South Africa have seen small declines. While performance is mixed, for services trade involving the physical movement of people across borders – important factors make the BRICS countries key players in this type of services trade, primarily through Mode 2 trade, while Mode 4 is restricted in most of their export markets.

BRICS countries are also heavily involved in trade in educational services, primarily as sending economies, although this segment was particularly affected by the COVID-19 pandemic. Intra-BRICS exchanges are marginal except in the case of China.

Digital trade is rapidly developing across BRICS countries, with India, China and the Russian Federation leading in exports of IT services, e-commerce, algorithms and artificial intelligence (AI). It is a key sector

that will underpin the overall competitiveness of services exports in the coming decade. Digital economy will be discussed in further detail in the UNCTAD-ITC BRICS *Digital Economy Report 2022*.

## Productivity is the key

The key finding from this data-driven analysis is that, to fully realize the potential of their services economy, BRICS countries should focus on improving productivity in services sectors, which would benefit trade integration, consumer welfare and downstream productivity and competitiveness. Economic forces will continue to pull in that direction; rising incomes will shift consumption towards services and increasing use of global value chains (GVCs) as production platforms will increase demand for intermediate services.

Globally, trade costs are high in services trade, twice what is observed in goods, due in great part to policy barriers. Although there are no explicit border restrictions, such as tariffs, other policies – both horizontal and sector-specific – affect the ability of foreign service providers to contest local markets.

Policy restrictions in the BRICS are relatively high by the standards of the developed world, although they may in some cases be more liberal than in lower-income countries. Sectors that could benefit from further liberalization include rail freight and some logistics subsectors in the Russian Federation; rail freight and professional services in India; and courier services and some audio-visual services in China.

# Close the gap between aspiration and progress

To leverage the global services economy and upgrade productivity, BRICS need to close the gap between aspiration and progress. Some BRICS have taken steps to open services markets but there is scope to adjust policies to support more services trade integration.

In addition to supporting ongoing multilateral initiatives, incorporating learning from other frameworks could promote incremental change in services markets. Following the example of the Asia-Pacific Economic Cooperation's (APEC) experience with goods, BRICS could seek a trade facilitation agenda in services, developing proposals to improve domestic regulation, facilitate investment and focus actions on dynamic segments of services trade, such as e-commerce and digital trade.

## Recommendations

- 1. **Collect disaggregated data.** Collect fully disaggregated (by subsector and by partner) data on services trade in the sense of balance of payments.
- 2. **Track sales by foreign affiliates.** Tracking sales by foreign affiliates, both inward and outward, would provide information on GATS Mode 3 trade.
- 3. Support international data collection and estimation efforts. Consider participating more fully in the process supporting WTO's data collection and analysis efforts on services. This could include sharing national experiences on services data collection and implementing pilot surveys on trade in services by mode of supply, which would support the TiSMoS estimates.
- 4. **Implement regulatory impact assessment.** This assessment is a tool to promote effective and efficient regulation of services sectors and would improve transparency and efficiency through better domestic regulation and investment-facilitation measures.
- 5. Reduce services trade costs and facilitate services trade through BRICS, G20, WTO and other forums. Enhance domestic efforts to build conducive policy environment for services sectors; strengthen regulatory exchanges among BRICS' competent authorities in key services sectors to inform their counterparts about policy development, especially related to policy reforms and facilitating services trade; and use BRICS cooperation to build impetus in other international instances, such as in the context of the G20, WTO and other forums.
- Leverage regional initiatives on transport and connectivity, such as those sponsored by ASEAN, to promote liberalization of key backbone services like transport, logistics and telecommunications.

- 7. Strengthen private-sector cooperation on services trade. Mechanisms such as the BRICS Business Council or dedicated services trade networks could play a key role in supporting cooperation at the business level through exchange of information and business linkage facilitation.
- 8. Implement BRICS outcomes on services. Take measures to implement services-related outcomes in the context of the BRICS, such as the Implementation Roadmap on Trade and Investment aspects of the Strategy for BRICS Economic Partnership 2025, Framework for Cooperation in Trade in Professional Services, Framework for Ensuring Consumer Protection in E-Commerce and Framework on Strengthening the Economic and Technical Cooperation for BRICS Countries.

This report analyses BRICS countries' services trade in detail to identify underlying trends in competitiveness across sectors and modes of supply, examine market potential and regulatory issues and provide policy recommendations.

Chapter 2 looks at BRICS' services economies and services trade relations in a global context. It examines their trade relations with the world and, using newly prepared WTO data, among themselves.

Chapter 3 focuses on digital trade, an important mode of delivery for services. It is a complement to a separate report on the subject.

Chapter 4 considers investment as a major mode of entry in services sectors where geographical proximity between buyer and seller is necessary.

Chapter 5 looks at people-to-people connectivity in the scope of expanded services trade through the temporary movement of service providers, as well as movements of consumers in sectors, such as travel and tourism and education.

Chapter 6 presents key challenges and recommendations for enhancing cooperation in services trade among BRICS countries.



# Chapter 1 Global Snapshot: Trade in Services

The services economy has been undergoing major growth in many countries over a long period. Having started decades ago in the developed countries, with the peak of manufacturing as a proportion of the economy and employment, the movement is now spreading to the developing world.

However, the COVID-19 pandemic has posed major challenges to the global services economy. In-person contact is important for some kinds of services trade, such as tourism. Public health measures designed to curb the spread of the coronavirus have necessarily impinged on the ability of consumers and service providers to engage in these types of transactions. Simultaneously, online delivery of services, including through expanded work-from-home arrangements in many countries, has led to a shift in the way that some services are delivered.

Figure 1 shows that the services economy grew relative to manufacturing and agriculture in the middle- and high-income groups between 2000 and 2019, with the change most pronounced in the middle-income countries – including the BRICS countries that are the focus of this report. 2019 is the last year for which full data are available in the World Development Indicators, but it is prior to the outbreak of the pandemic. As such, there are likely to be changes in 2020, which the detailed sections below will analyse to the extent possible.

The COVID-19 pandemic posed challenges to the global services economy, especially in sectors where in-person contact is important, such as tourism. Simultaneously, online delivery of services has seen rapid growth.

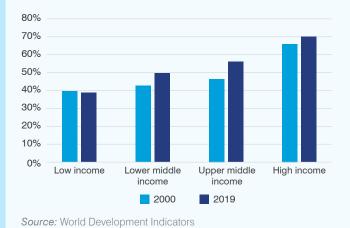
Many factors lie behind the general development in evidence over the past two decades, including shifting demand patterns. As per capita income rises, consumer demand tends to shift towards services in relative terms. At the same time, the rise of GVCs has given services a special role, 'embodied' within goods that are then exported. For instance, an imported mobile phone nominally originating in China is, in reality, a bundle of value-added components from all over the world, including parts like a solid-state hard drive or a screen, as well as services, which include research and development, design, transport and marketing. Modern production methods rely heavily on services, particularly within GVCs.

Although precise figures are difficult to obtain, Low and Pasadilla (2016) present firm-level case studies from the Asia-Pacific region showing that services input costs are often a significant proportion, even up to half, of the total costs for the manufacturer. Such considerations increase the relative demand for services over and above the final consumption effect.

Looking at the data on a cross-country basis, it is evident that the size of the services economy is directly related to higher per capita incomes. In Figure 2, the upward sloping line of best fit strongly suggests that richer countries tend to have a larger proportion of services in their GDP than do poorer countries. Although correlation is not causation, the economic history of the developed world, as well as some developing countries now, suggests that this relationship is robust – as per capita income increases, the services sector grows relative to the other parts of the economy.

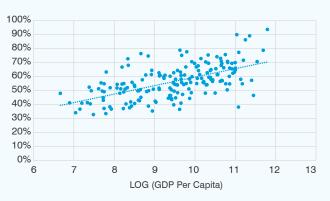
This dynamic is important as BRICS countries plan to go from middle- to high-income status. It is also important to recall arguments by some analysts that the services sector creates more jobs than manufacturing, and at an earlier level of development (Ghani and O'Connell, 2014).

Recent work by the Asian Development Bank (Helble and Shepherd, 2019) and World Bank (Nayyar et al., 2021) supports the growing importance of a services policy agenda as part of an overall development strategy. They emphasize that while manufacturing is critical to development prospects, it is also vital to look at services sector performance, not least because of the interlinkages between the two areas. It may be too early to talk of 'services-led development' but it is pertinent to speak about 'services facilitated development' or development that uses the services sector smartly to boost medium-term growth prospects.



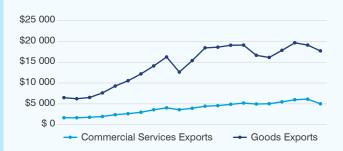
## Figure 1 Services as a percentage of GDP, by country income group, 2000 and 2019

## Figure 2 Services growth accompanies GDP per capita growth, 2019



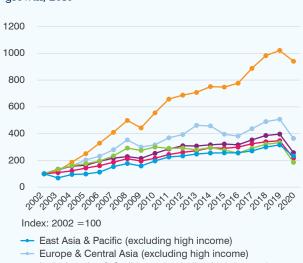
Source: World Development Indicators

#### Figure 3 World exports: Goods and services, 2000-2020



Note: Figures are in \$ billion

*Source:* World Development Indicators, based on the balance of payments concept of services trade



- Latin America & Caribbean (excluding high income)
- Middle East & North Africa (excluding high income)
- -- South Asia
- --- Sub-Saharan Africa (excluding high income)

Source: World Development Indicators; excludes high-income countries

Figure 4 Services growth accompanies GDP per capita growth, 2019

As the services economy has increased in importance relative to other sectors across the world, so too has the services trade. Measuring services trade is subject to difficulty. Although data availability has improved, there are still many holes in the data. This section looks at statistics on purely cross-border trade in services drawn from the balance of payments statistics; but later sections look at experimental WTO data on trade in services by mode of supply – a much broader concept (see below).

Figure 3 shows steady growth in commercial services trade in the 21st century. It is notable that the financial crisis of 2008–2009, although it originated in a services sector, affected goods trade to a much greater degree than did services trade. The average annualized growth rate of services exports between 2000 and 2020 was 5.67%, which is slightly faster than that observed for goods (5.15%), albeit that the latter has a much higher degree of variation.

Having said this, the effect of the COVID-19 pandemic is in evidence for both series, although the effect was much larger in relative terms for services: world exports of commercial services fell by 18.16% between 2019 and 2020, whereas the comparable figure for goods was 7.36%.

From the point of view of the BRICS countries, experiences differ widely. China and India saw far lower declines in services trade during the pandemic, of 4% and 5%, respectively, perhaps due to the mix of services they export, and the modes of supply on which they rely. By contrast, Brazil saw a fall of 16%, the Russian Federation saw a fall of 24% and South Africa witnessed a decline of nearly 46%. These larger figures are also due to the type of services exports, such as the role of tourism and travel in South Africa and the modes of supply.

Nonetheless, these basic data indicate that, in line with the growth of the services economy, world services exports have been steadily growing, which holds potential for developing countries looking to increase their degree of integration into world markets.

Figure 4 breaks the data out further by looking at regional patterns of services export growth, using 2002 as a base year (index set equal to 100), so that changes can be interpreted as percentages. In interpreting the figure, it is important to keep in mind that the use of an index obscures differences in the initial level of exports. For example, East Asia and Pacific, which has the highest value of services exports, sees a level of trade that is nearly eight times as high as the region with the lowest value of trade, sub-Saharan Africa. Subject to these caveats, the figure shows that all regions have seen steady growth in their services exports, which reflects the overall dynamic in Figure 2. But patterns differ significantly across regions in terms of the rapidity with which services exports have increased. South Asia – a region that includes India – has seen its services exports rise much more rapidly than other regions, which tend to be clustered together at a lower level of growth.

All regions saw a significant drop in activity between 2019 and 2020, likely due to the effects of the COVID-19 pandemic. However, in relative terms, the fall in South Asia is less than for other regions. One reason could be the types of services exports – as well as the modes of supply – relative to other countries.

The general global context for services trade, within which recent developments affecting the BRICS have taken place, is supportive of steady, sustained growth. The main factors support growth in services trade are the unbundling of production associated with the rise of GVCs, shifts in the demand patterns of final consumers and growth in destination markets.

Except for particular subsectors like computer services, there is little evidence that reductions in bilateral trade costs have played a significant role in boosting services exports around the world (Miroudot et al., 2013). The COVID-19 pandemic has had a significant negative effect on global services trade but it is too early to say whether or not that impact is passing or permanent.

Growth in the services economy and services trade provides important potential benefits for developing countries. From a sustainable development point of view, the ecological footprint of services is typically much less than that of manufacturing, particularly in the early stages of industrialization. The risk of injury to workers is also much lower. At the same time, services like education and healthcare directly promote sustainable development, while environmental services make it possible to mitigate the harm caused by other activities (Hoekman, 2016).

However, whereas manufacturing in many nowdeveloped countries was a broad-based entry point into the middle class, the situation with services is more complex. Productivity levels – which are related to salaries, although not perfectly – vary widely across services subsectors. Commentators in the developed world sometimes assimilate services with jobs that are low productivity and low potential, while their counterparts in developing countries use the example of personal services or recreational services.

In reality, in both groups of countries, services are heterogeneous in their underlying level of productivity, potential to produce future growth and spillovers to other sectors. For instance, dynamic services like engineering and research and development, which modern endogenous growth theories see as the motor of long-term growth and higher per capita incomes, have high levels of productivity and productivity growth.

Looking at the EU KLEMS database for data on the United States, for example, services like telecommunications and IT saw faster growth in total factor productivity than all but a small number of manufacturing subsectors, and substantially greater growth than for manufacturing as a whole. Helble and Shepherd (2019) and Nayyar et al. (2021) examine the evidence in detail and find that it complicates the traditional view in some areas that services are inherently low-productivity and low-growth activities.

This means the sectoral composition of services is very important, perhaps more than in manufacturing. Policymakers therefore need to get the incentives right so that high-productivity, growth-supporting services can attract significant numbers of workers.

#### **Research challenges**

For manufacturing, there are highly disaggregated data on input-output relations, production, productivity, cross-border trade and border policies affecting trade flows (tariffs). In services, however, the situation is vastly different.

Standard industrial classifications identify services subsectors at a far higher level of aggregation than for manufacturing. The problem is magnified in the case of trade, where services data distinguish among a handful of aggregate industries, whereas goods data identify thousands of individual products. More importantly, many countries do not record cross-border services trade with anything more than a few categories of services, and with no bilateral (partner country) disaggregation. Trade is recorded with the rest of the world only.

Techniques are available to try to fill gaps in the services data. For trade data, for example, mirroring can be applied by using import data reported by a destination country to proxy exports not reported with a bilateral or sectoral disaggregation by an origin country. This approach makes it possible to get a reasonably clear picture of trade patterns among developed countries, and between developed and developing countries.

#### BOX 1: Modes of supplying services internationally

Unlike goods trade, which consists of straightforward transactions in which goods are physically moved from one country to another, services trade is disembodied and frequently relies on different means of supporting international transactions. The standard approach to mapping international trade in services relies on the four modes of supply identified in the General Agreement on Trade in Services (GATS), part of the WTO legal system.

- Mode 1 is pure cross-border trade in services, where, for example, a Chinese firm delivers management consulting services to a client in South Africa long distance, using the internet and telephone.
- Mode 2 refers to to the situation where the consumer moves. For instance, when an Indian university student comes to the Russian Federation to study and pays fees at a Russian institution of higher education.
- Mode 3 captures the situation where a service provider establishes a local commercial presence to supply services. For instance, a Brazilian bank opens a subsidiary in India, which then sells services to Indian nationals.
- Mode 4 refers to to temporary movement of service providers, as when a Chinese engineering firm sends a group of specialists to work on an infrastructure project in South Africa.

Data on international trade in services are limited, even in developed countries. In general, there is reasonable direct availability in developed countries for **Mode 1** and some **Mode 2** trade through the balance of payments statistics.

Availability in developing countries, including the BRICS, is much more limited and frequently only identifies the world as a trading partner, rather than individual countries.

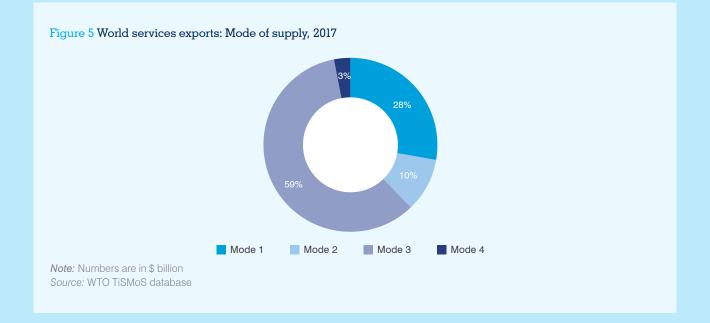
**Mode 3** data are only available for a few large, developed markets, such as the United States and the European Union.

Mode 4 trade is limited in terms of global data availability and is sometimes proxied using remittance data.

However, for South-South trade, including intra-BRICS trade, it is much harder to find reliable quantitative information (Dihel et al., 2006). The experimental Balanced Trade in Services Statistics (BaTIS) database, produced by OECD and WTO, uses mirroring and a variety of interpolation methods to produce estimates of bilateral services trade at a granular level for country coverage; however, sectoral coverage is relatively aggregate. While these data are the best available, and a vast improvement on what was available a few years ago, they are still far behind what is available routinely for goods trade.

Pure cross-border trade in services is one way in which services can be traded internationally. Box 1 provides a summary of the concepts underlying international trade in services as codified by the General Agreement on Trade in Services (GATS). In summary, data problems are far worse for other modes of supply than for Mode 1 but have recently been somewhat alleviated by an experimental WTO dataset, Trade in Services by Mode of Supply (TiSMoS). This dataset uses statistical techniques and selected survey data to develop estimates of trade in services by mode of supply at the sectoral level for individual countries; however, it is not disaggregated by partner country.

Recent work by WTO and its partners has loosened these data constraints by using statistical techniques to produce estimates of trade in services by GATS mode of supply. Their estimates suggest that traditional balance of payments data substantially underestimate the value of global services trade. Whereas the World Bank shows a value of world commercial services exports in 2017 of \$5.47 trillion, WTO estimates, which include all modes of supply, report \$13.42 trillion. Figure 5 shows that Mode 3 trade accounts for the lion's share of the difference and represents an important way in which service providers enter foreign markets.



6.7470	5.3230	▲ 6.806	6,806	68 7470	▼ 5.3230	6.806	6.7470
	6.3610	▲ 5.084	5.084	24 5740 171	0 10:3610 01	5.084	21/10101/
4.5740		- 5.670	5.670	47 5070		5.670	4.5740
2.3240	3.5710 7.5120	;5.454 ▲:0.650	5.454	85 0740 20 7540 VIC	3.5710 ▼7.5120	5.454 0.650	2.3240
4.4200	4.4200	6.350	1 8350C	87 6000	4.4200	6.350	4.4200
6.0340	6.0340	₹ 6.537	6.537	38 6580	6.0340	6.537	6.0340
6.0360	6.0360	15.476	5.476	70 6500	▼ 6.0360	5.476	6.0360
3.5030	3.5030	• 47.06	47.06		3.5030	47.06	3.5030
8.7340	8.7340 0.6830	4.708	4.708 6.068	75.7050	▼ 8.7340 ▲ 0.6830	4.708 6.068	8.7340 0.6830
0.0030	0.0030	0.000	< p.000	34.7050	A 0.0000	0.000	0.06.00
EJ+EO	EJ+EO	IDGH	DGH	LSM/VK	EJ+EO	- IDGI	EJ-E
186.560		0.650	0.650	24.7050	86.560	0.650	86.56
57.030	57.030	807.5	>14	47.0540	67.030	807.	57.03
5,7540		0.607	807.5	6760.70	A 5,7540	03.0	5.754
0.7540	-0.7540	1540.5	540 5	- 34 7080		- 540	
WEF	WEF			EWP	WEF	EFI	WE
2400	0.7040		405.4	16.0680	- b.7040	405	and the second se
9870		4364-8	- ank	- 20.6500		054	
6350 🦯	140.				₹ 7.5030		8.6
7880				1807 50			87
							N7
							017 G
er er e e f							
1							
1.11							
							Xala na
							home
-01			1.00	and a literation			
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			MAN	$\sim$			1 <u> </u>
~	M. 1	An 1			The second second		á e c
	W War						
							10000
	E E		5 = 1		ALC: NO.		
	and a					-	I CAN THE
	- 621		Pa		and the second		WE CON
- 123	ann an the	2	all a				
	415 B 49	TT D	A MARK	1			Sector 1
		100				-	K d
		See.		E.C.		The second s	i
	-== .				- L		
					<b>A</b> LL	AND T	
					LEURIL .	L. 19	
		00031			and a		Committee of the
14		1.610					
15		111	THE S	TOTAL STATE	C COR	1999	200
			Carles -	- INT	States and	100	8

# Chapter 2 BRICS countries: Integration into the global services economy

Although the services economy has been growing in BRICS countries, further trade integration, particularly among the BRICS, is needed. While some are standout performers, such as India and China, BRICS are emerging players in global services trade when measured using balance of payments data. Similarly, considerable scope exists to boost trade among the BRICS countries.

The pictures changes somewhat with services trade being complementary to merchandise trade – an area where BRICS have enjoyed considerable success. The data show that intra-BRICS services trade is most dynamic in sectors like transport that are related to patterns of goods trade. New data reveal that up to onethird of the value of BRICS' manufactured goods exports is in embodied services.

This finding represents an important bridge between the significance of services in GDP and the relatively limited amount of direct trade observed in the balance of payments statistics. Besides the relevance of their domestic markets, it suggests that a key way BRICS' services outputs are traded is through their embodiment in manufactured goods, as well as through GATS modes of supply that are not captured by the balance of payments, such as Mode 3 sales by foreign affiliates.

Nevertheless, there is considerable scope for greater integration of BRICS into the global services economy. As their per capita income increases, demand is likely to shift towards services, and the already significant proportion of services in GDP should increase.

Assuming policy barriers and other sources of trade costs can be addressed and private-sector development can be supported, services trade could undergo significant growth in the BRICS over the medium term.

### BRICS in global services trade

BRICS countries are no exception to the importance of services in the world economy (see Figure 6). South Africa shows the highest service share in GDP among BRICS at 64%, which is only a little lower than the EU. In keeping with its per capita income, India is the BRICS country with the lowest services share in GDP, which nevertheless represents just under 50% of GDP. The relevance of the services sector in the total economy is prominent in all BRICS countries, although at a lower level than in the developed countries.

Figure 7 shows that, in 2020, services trade in all BRICS countries except India ranged from 5.5% to about 7.5% relative to GDP. In India, the latest available figure is much higher, at around 12%, a figure that was relatively unaffected by the COVID-19 pandemic, which saw numbers fall in the other BRICS countries.

Different time trends are also evident. India's performance is fairly average for the group until the early 2000s, when it starts to grow rapidly. China, by contrast, has seen its percentage generally falling over time. Brazil's has grown slowly, as has South Africa's (with the exception of 2020).

The comparison with GDP is useful in interpreting time trends: an increasing ratio of services trade to GDP, as in India, indicates that services trade is growing more quickly than the overall economy, whereas the opposite has been true for China.

Although services trade has been growing impressively in some of the BRICS, this measure – which primarily captures GATS Mode 1 trade – is well below comparable figures for goods. Merchandise trade relative to GDP in 2015 ranged from 32% in India (more than double the figure for services) to 59% in South Africa (nearly 10 times the figure for services). The implication is clear: in the BRICS, as in many other countries, trade integration is substantially more limited in services markets than in goods markets. This conclusion is unsurprising in the light of research on trade costs in services, which finds that globally they are perhaps twice as high as for goods (Miroudot et al., 2013).

The reasons for this difference need clarification. The costs of cross-border services trade could be lower because there is no need for physical shipment – services can be delivered using online platforms, for example. However, other factors make it difficult for service suppliers, including in BRICS countries, to access foreign markets. These include differences in language, legal institutions, costs associated with currency fluctuations and the need to tailor services offerings to local conditions and tastes – an example of the broad category of information-related trade costs.

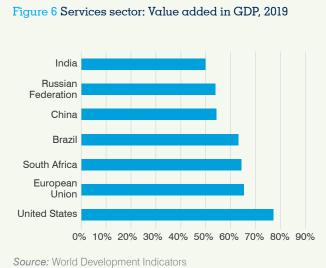
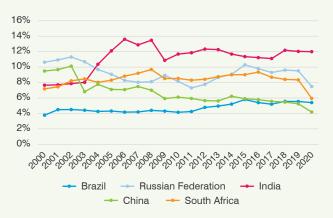


Figure 7 Services trade relative to GDP: BRICS countries, 2000-2015



Source: World Development Indicators

#### Figure 8 World services exports: Origin and mode of supply, 2017

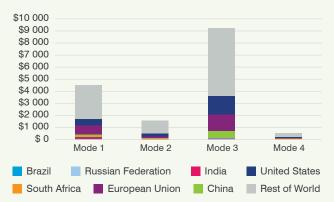
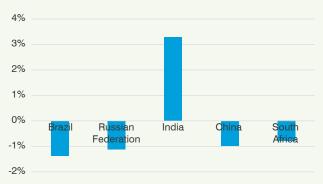


Figure 9 Trade balance in commercial services: BRICS countries, 2015



Source: World Development Indicators

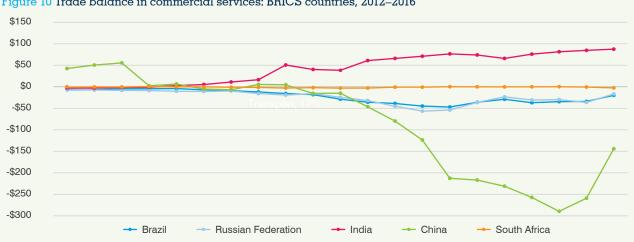


Figure 10 Trade balance in commercial services: BRICS countries, 2012–2016

*Note:* Numbers are in \$ billion Source: World Development Indicators

Note: Numbers are in \$ billion Source: WTO TiSMoS dataset Overcoming these barriers requires creative approaches on the part of policymakers, as they cannot usually be resolved through the request-offer negotiations that typically govern market access. They need a longterm commitment to building up supply-side capacity and attention to market failures – like information asymmetries – that can potentially be corrected with a relatively light regulatory touch.

In a global context, BRICS countries' level of services trade relative to GDP is not particularly high. It is comparable to, if not a little above, that of the United States (5.6% in 2020). However, it is considerably below that of the major European countries: 18.7% in France and 16.0% in Germany.

As per capita income increases, economic activity in the BRICS is likely to shift towards services, as has been observed in other countries. Provided that supportive policies are in place and overseas market access can be secured, the numbers in Figure 7 are likely to increase over the medium term.

Nevertheless, the size and dynamism of the BRICS economies mean that they are significant players in world services trade, in particular compared with other developing countries. According to World Bank data, BRICS accounted in 2020 for 10% of global services exports and 13% of global services imports. China and India represent the bulk of this share, with the two countries together accounting for 8.7% and 10.5% of global services exports and imports, respectively.

Different data sources give different figures for the importance of BRICS countries in global services trade, depending on factors like sectoral coverage (all services or commercial services), reporting practices and treatment of intra-EU flows (sometimes excluded from global trade). But the conclusion of all the sources is qualitatively identical: BRICS are significant players in world services trade, in particular compared with other middle-income countries.

However, these data only capture part of what is going on in the global services trading economy. A more complete picture comes from experimental WTO data on trade in services by mode of supply (see Figure 8). The BRICS' share in world services trade in this definition is relatively small in most cases. Only India and China stand out as having market shares in the single digits in Modes 1, 2 and 4 in both cases, while China is the only BRICS country that is a major sending economy for Mode 3 trade (foreign investment), with a global share of just over 6%.

The services sector holds great potential – a key policy question for BRICS over the medium term will be how to take advantage of it to increase their level of trade

integration and support sustainable development and rising incomes. But as Figure 8 shows, the countries, given their size, are still at a relatively early stage of integrating global export markets for services across the GATS modes of supply.

When analysing Figure 8, it is important to keep in mind that growth rates in BRICS' services exports have been very rapid, even though absolute levels are still smaller than those of the major developed markets. Looking at individual modes of supply, the standout performers are China and India in Mode 3, with growth rates of 17.8% and 13.0% per annum between 2010 and 2017. Of the BRICS, it is also those two countries that grew faster than the rest of the world in terms of Mode 1 exports, at 6.3% and 7.0%, respectively.

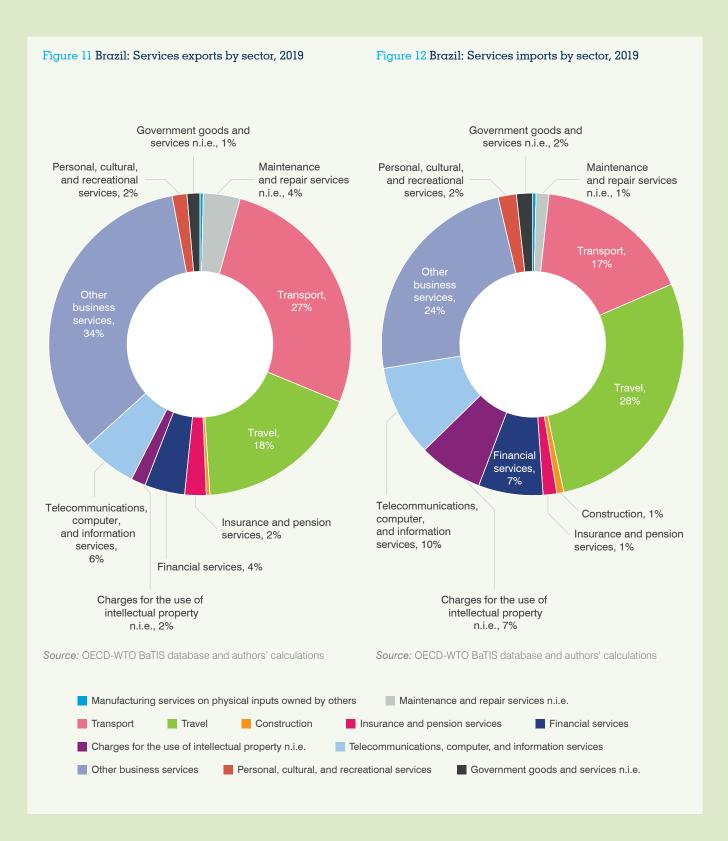
In Mode 4, only China saw faster growth than the rest of the world, at 7.5% per annum. Considering total export values in the WTO TiSMoS data, China and India have seen substantially faster export growth than the rest of the world, while the Russian Federation has seen slow growth, and Brazil and South Africa have seen small declines.

While performance is mixed, these figures – particularly for China and India – are testament to the rapid development and internationalization of the services sector in most of the BRICS countries and augur well for continued growth and development.

Economists usually do not attach great weight to the trade balance, which is largely determined by macroeconomic factors, specifically the difference between savings and investment. However, looking at the balance of trade for a single sector, like services, can give an indication of evolving trends in competitiveness. Of course, a negative balance should not be interpreted as a loss to an economy – far from it. Imports bring with them important gains for domestic consumers, including lower prices and greater variety.

In the case of services, imports are particularly important, because a large proportion of global trade in services is in producer services, namely those that are used as inputs by other firms. Services like engineering, transport and finance help produce other goods and services, including those that are exported. Hoekman and Shepherd (2017) show that liberalization in services markets has potential to support growth in manufacturing exports through this kind of input-output linkage.

Figure 9 presents trade balances in services as a percentage of GDP for the BRICS countries, based on balance of payments data (i.e. not covering all GATS modes of supply). India stands out in exporting significantly more than it imports – which lines up well



with its success stories in sectors like IT and customer services and business process outsourcing. The other countries run small and therefore manageable deficits in services.

Figure 10 shows the BRICS' evolution of trade balance in commercial services between 2000 and 2020, focusing on the balance of payment concept of services trade. While India reinforced its position as a net exporter over the years, negative trade balances also decreased in Brazil and the Russian Federation, while South Africa's position remained approximately neutral. By contrast, China's negative trade balance in commercial services increased rapidly between 2010 and 2018, before recovering a little in 2019 and more substantially in 2020.

Boosting trade integration is not just about increasing exports without paying attention to imports: the largest exporters are typically also the largest importers. Services imports have the potential to boost competitiveness in other sectors given the prevalence of services inputs across different activities. This may explain the case of China, where the rapid growth in services imports may be associated with the economic restructuring and growing exports in manufacturing products. In any case, the trade balance is not regarded by most economists as a meaningful measure of economic performance.

# Sector composition: BRICS services trade

The composition of a country's services sector has implications for its growth trajectory. So, too, does sectoral composition matter in the case of services trade.

In this section, experimental OECD-WTO BaTIS data are used to provide a sectoral breakdown of trade patterns for each of the BRICS countries. These data are based on observations wherever possible and statistical estimates wherever original data are not observed. They are balanced, in the sense that reported exports equal imports reported by partner countries. They are the best quality data available and have undergone substantial cleaning and pre-treatment relative to the raw data in UN Comtrade.

Although BaTIS data come from the balance of payments and do not cover all GATS modes of supply, they are useful in this section because later work will look at flows among BRICS that are unavailable in TiSMoS because it only records trade with an aggregate 'world' partner. Figure 11 presents a sectoral breakdown of Brazil's services exports for 2019. Given the way the data are constructed, they represent the best estimate of trade in services by sector. Compared with sources used in previous work, such as UN Comtrade, the numbers reported will be different because they include substantial statistical estimation to fill in missing observations and deal with inconsistencies. Differences with other data sources should not be seen as changes but as representing differences in collection and treatment practice.

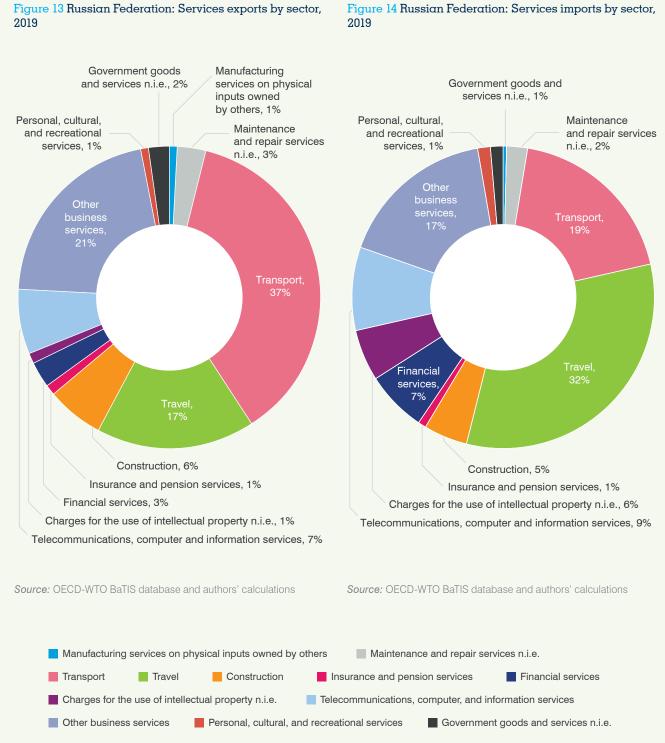
Three sectors stand out as making a major contribution: other business services, transport and travel. These three sectors have quite different characteristics. Transport is strongly related to goods trade: when goods travel internationally to or from Brazil using a Brazilian shipping company, the resulting payments are recorded as exports of services. Travel, by contrast, primarily captures Mode 2 trade, namely payments by tourists and business visitors from other countries when they come to Brazil.

'Other business services' is a broad category that fits best with the standard paradigm of cross-border trade. It includes subsectors such as professional services (law and accountancy) and technical services (engineering, and research and development). As this category is a major part of the modern services economy that can help generate growth, developing world-standard competitiveness here is an important policy goal.

Figure 12 takes the same approach to Brazil's imports of services in 2019. The same three sectors account for the major share: transport, travel and other business services. This finding is not surprising, as modern and modernizing economies often engage in substantial amounts of two-way trade, i.e. trade in differentiated goods or services within a sector, rather than between sectors.

Figure 13 provides a sectoral breakdown of the Russian Federation's services exports in 2019. The three main sectors are the same as for Brazil: transport, travel and other business services. Construction plays a much larger role than in Brazil, albeit secondary to these three sectors. Figure 14 shows that the same three sectors also dominate imports in the Russian Federation. However, financial services, telecom and intellectual property charges (royalties) also represent important imports.

From a competitiveness standpoint, this pattern is similar to the one in Brazil. The available data do not make it possible to go further into these sectoral aggregates to see which subsectors are most important in each country. It is possible that, given differences in per capita income, there are differences in economic structure at a fine level.



India's services exports (see Figure 15) differ radically from those of the countries previously examined. The second-largest subsector is telecommunications, which includes computer and information services – unsurprising in light of India's well-known success in IT services (Chanda, 2013). Other business services are also a substantial export earner, covering activities like business process outsourcing. Transport and travel are important, as in the other BRICS countries, but to a lesser degree. Of the BRICS countries examined so far, India has the strongest claim to development of highproductivity services exports as a core activity.

On the import side (see Figure 16), India's trade pattern is more similar to that of the other BRICS. The key sectors are other business services, transport and travel, with royalties playing a significant role. The importance of other business services on both export and import sides would suggest significant two-way trade in this subsector.

China's services exports (see Figure 17) display the pattern of significant proportions of travel, transport and other business services but there are some important differences. Construction accounts for around 7% of the total, while telecom services (including IT and computer services) account for 9%.

The category of manufacturing-related services captures assembly activity using imported intermediates. Given China's success in joining GVCs in manufacturing, it is no surprise that this sector accounts for a significant proportion of total services exports, at 7.9%. This pattern of performance suggests that China, like India, is laying the foundations for a high-productivity services sector and enjoys some degree of success in world markets.

As for the other BRICS countries, China's services imports (see Figure 18) are primarily accounted for by transport and travel, with a smaller proportion going to other business services. The lion's share of its services imports is in traditional sectors. Imports of transport services are largely linked to China's goods exports, and travel reflects the growing ability of Chinese people to travel abroad, given rising per capita income. Figure 19 shows that nearly half of South Africa's services exports are in the travel category, with 23% in transport (related to goods trade) and 17% in other business services. The other sectors are small in terms of total services exports. As is the case of most other BRICS countries, this sectoral distribution of services exports is quite traditional and leaves only a relatively restrained scope for the modern services sector, through other business services.

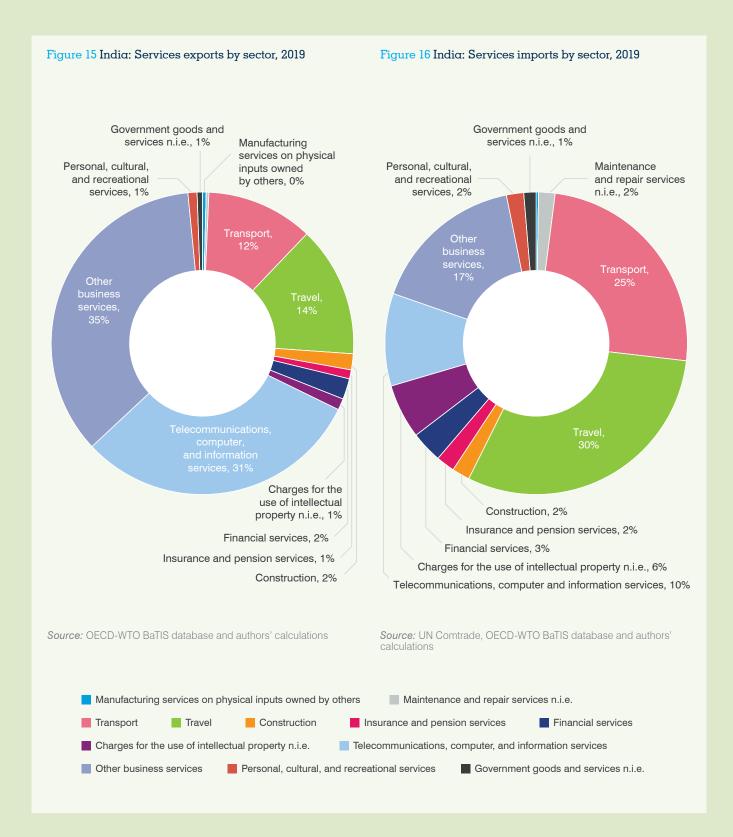
As with the other BRICS, South Africa's imports (see Figure 20) include a significant proportion of travel services, transport services (linked to goods trade) and other business services. Relative to the other countries in the group, imports of financial services and payments for the use of intellectual property are relatively significant.

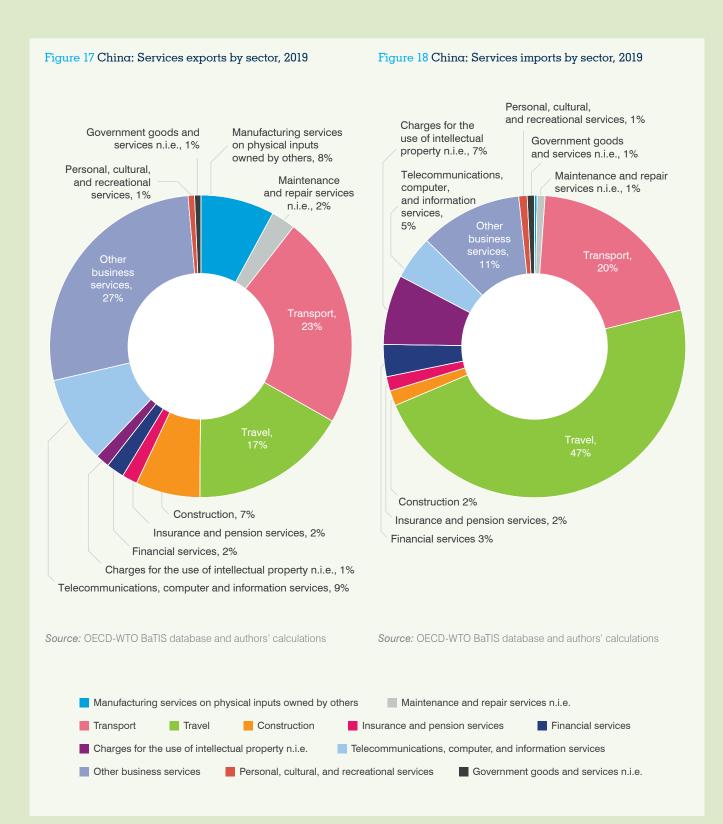
Licensing and use of foreign intellectual property is one way technology transfer can take place within manufacturing. However, it can also represent other types of payments, e.g. related to pharmaceutical products. A country-level analysis would go further into this category to establish why it is relatively high in proportional terms and what kinds of intellectual property are concerned.

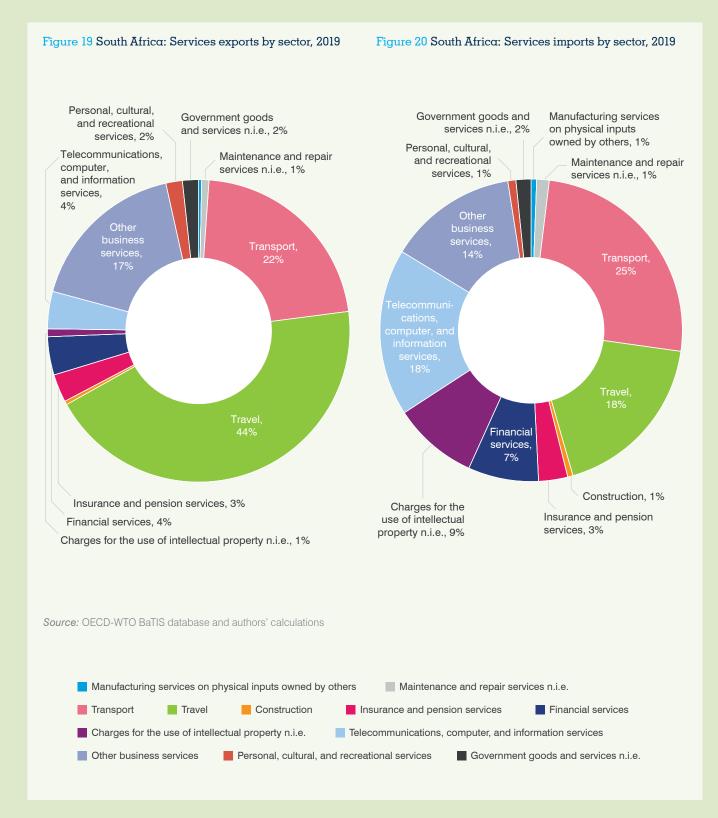
As with the other BRICS, South Africa's imports (see Figure 20) include a significant proportion of travel services, transport services (linked to goods trade) and other business services. Relative to the other countries in the group, imports of financial services and payments for the use of intellectual property are relatively significant.

Licensing and use of foreign intellectual property is one way technology transfer can take place within manufacturing. However, it can also represent other types of payments, e.g. related to pharmaceutical products. A country-level analysis would go further into this category to establish why it is relatively high in proportional terms and what kinds of intellectual property are concerned.









## Geographical patterns in BRICS services trade

BRICS countries' trade data provide some degree of disaggregation by sector. However, only some BRICS countries systematically report services exports and imports by partner country. The best option for understanding the geographical distribution of their services trade flows is therefore to use the OECD-WTO BaTIS dataset.

An important caveat is that, because of the limitations in collection practices, the information presented here is based on a considerable amount of statistical modelling by OECD and WTO experts. It represents the best and most recent data available. Geographical disaggregation uses World Bank regions and identifies intra-BRICS trade separately (e.g. exports to China are counted as intra-BRICS trade, not as exports to the East Asia and Pacific region).

Figure 21 shows that intra-BRICS trade accounts for only around 9% of Brazil's services exports. The main destinations quantitatively are North America, Europe and the country's own region (Latin America). The East Asia and Pacific region accounts for around 10% of Brazil's total services exports. These patterns can differ at the sectoral level but this broad analysis puts geographical connections and the importance of intra-BRICS services trade in context.

The situation for imports is even more stark (see Figure 22). They are dominated by Europe and North America, with intra-BRICS trade playing a relatively marginal role, at 3% of the total. East Asia and Pacific region accounts for 8% but Latin America supplies a lower proportion, at just 6%. This pattern of sourcing services imports likely reflects global patterns of comparative advantage, with services production and exports relatively concentrated in the high-income economies of Europe and North America.

Figure 23 breaks out the Russian Federation's services exports by destination. Intra-BRICS trade is relatively more important than for Brazil, at 13% of total exports. But the Russian Federation's services exports are concentrated on the Europe and Central Asia region, which accounts for almost two-thirds of the total. The East Asia and Pacific region comes in at 9% and is the only other region to be close to 10%, besides other BRICS countries.

The Russian Federation's imports (see Figure 24) are even more concentrated on its own region than its exports. Intra-BRICS import sourcing only accounts for around 5% of the total, and other geographical regions have relatively small shares: the largest is the East Asia and Pacific, with 8%. Intra-regional imports make up nearly three-quarters of the Russian Federation's total services imports. As in Brazil's case, this pattern of more concentrated import sourcing relative to export destinations is likely due to global patterns of comparative advantage in services trade, as well as geographical proximity to large European service providers.

Relative to Brazil and the Russian Federation, India (see Figure 25) has a more diversified export bundle in terms of destinations. While trade with its own region is marginal, likely due to political factors, it relies heavily on demand from East Asia and Pacific (23%), Europe and Central Asia (31%) and North America (23%). Exports to the other BRICS countries account for a modest 6% of total services exports.

Figure 26 shows that India's services imports are relatively diversified, although its own region plays a minor role, likely due to political issues. India imports a significant proportion of services from Europe, East Asia and North America. The proportion of other BRICS countries in total services imports is a modest 6%, comparable to the proportion for exports.

As for the other countries examined so far, the relative importance of Europe and North America reflects global patterns of comparative advantage. In the case of East Asia, there are countries with comparative advantage in services – typically the high-income countries in that region – and the added factor of relative geographical proximity.

Figure 27 looks at China's export side. Intra-BRICS trade is more marginal than for the countries examined previously, at only 4% of the total. China's main export destinations, however, are relatively diverse, spread across East Asia, Europe and North America.

An important driver of this pattern is likely the relatively important role played by manufacturing-related services: lead firms in GVCs are typically located in high-income East Asia, Europe or North America and send inputs for processing in China, which counts as services trade under current classification systems. This dynamic would explain the pattern of geographical diversification observed in China's services exports (see Figure 27).

On the import side (see Figure 28), there are more similarities between China's pattern of trade and what is seen in other BRICS countries. East Asia, Europe and North America are the predominant sources of China's services imports. The other BRICS countries only account for around 3%, and other regions have relatively marginal contributions to the total. This pattern of import sourcing is in line with global patterns of comparative advantage in services trade. Figure 29 presents export data for South Africa. Its own region accounts for a relatively small proportion of total services exports, likely due to low levels of per capita income. The main export destinations are Europe, East Asia and North America. Exports to other BRICS countries are also important in South Africa's total export bundle, accounting for 12% of the total.

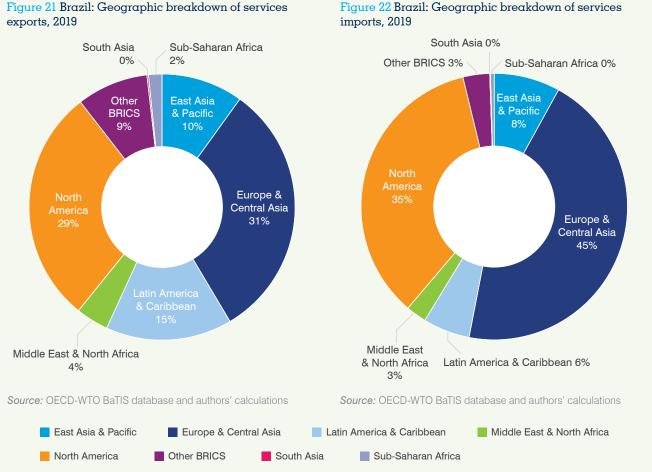
On the import side, South Africa relies heavily on Europe for sourcing, which accounts for over half of total imports. East Asia and North America also play important roles as sources of services imports. Other BRICS countries account for around 9% of the total, which is more than on the import side in the countries examined previously.

Broadly, South Africa's pattern of import sourcing seems driven by global patterns of comparative advantage in services trade. It is also driven to a lesser extent on geographical proximity, although the immediate region supplies relatively few services imports, likely due to its low level of per capita income and lack of comparative advantage in the sector.

The role of the BRICS as sources of export demand can be important for the countries in question, though they are typically far from the largest source of demand. On the import side, by contrast, global patterns of comparative advantage tend to dictate a larger role for high-income economies in East Asia, Europe and North America. Going back to the sectoral breakdowns discussed in the previous section, it is plausible that where intra-BRICS services trade is more substantial, it may be linked to tourism or goods trade - transport, and manufacturing-related services in the case of China.

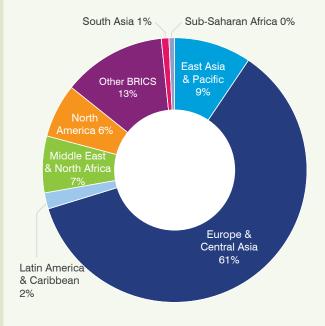
There is little evidence as yet of a vibrant, highproductivity, growth-promoting BRICS services economy based on intra-BRICS integration. Even in the case of India, which arguably has gone further in developing its services sector than its level of per capita income would suggest, the sources of demand for output tend to be the high-income economies. Although each of the BRICS countries has actual or potential competitiveness assets in services, their comparative advantage is mostly directing trade with the developed markets rather than with other BRICS.

The data indicate that intra-BRICS trade in services remains undeveloped. More analysis is required to understand why a successful high-productivity services exporter like India does very little business with the other BRICS, in favour of developed markets such as the United States and the European Union.

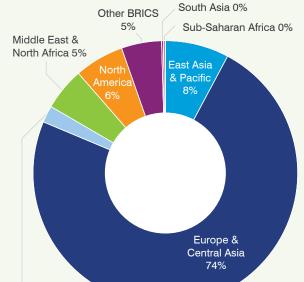


## Figure 21 Brazil: Geographic breakdown of services

#### Figure 23 Russian Federation: Geographic breakdown of services exports, 2019



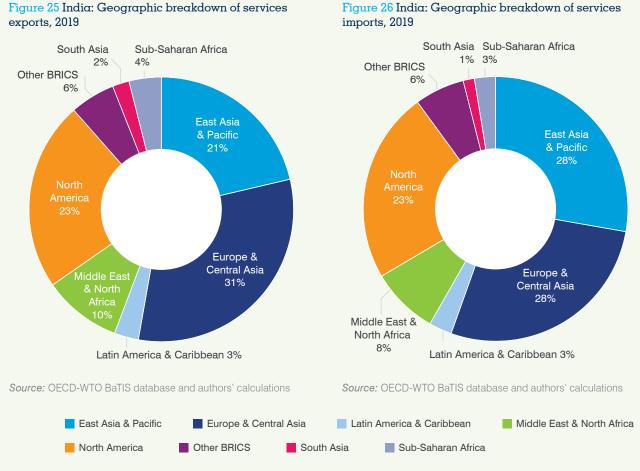
Source: OECD-WTO BaTIS database and authors' calculations



Latin America

& Caribbean 2%

Source: OECD-WTO BaTIS database and authors' calculations



## Figure 26 India: Geographic breakdown of services

#### Figure 24 Russian Federation: Geographic breakdown of services imports, 2019

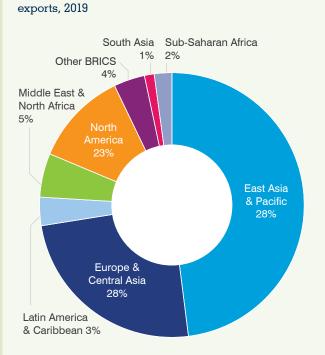
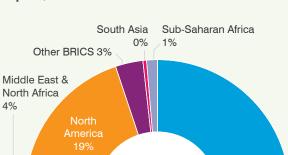


Figure 27 China: Geographic breakdown of services

Source: OECD-WTO BaTIS database and authors' calculations

Figure 29 South Africa: Geographic breakdown of

services exports, 2019



East Asia & Pacific

46%

Figure 28 China: Geographic breakdown of services imports, 2019

Source: OECD-WTO BaTIS database and authors' calculations

Europe &

Central Asia

24%

Latin America

& Caribbean 3%

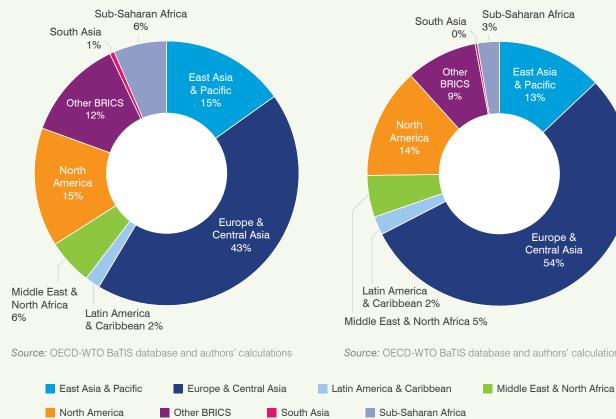
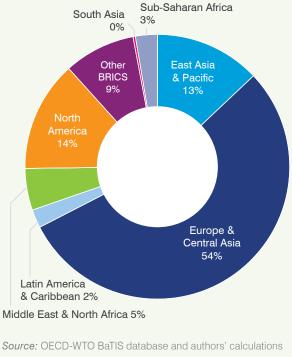


Figure 30 South Africa: Geographic breakdown of services imports, 2019



## Embodied services trade

Recent research reveals that many services are traded as 'embodied' in goods produced domestically and then shipped overseas. The reason is that services are widely used as inputs in the production of goods, particularly in the manufacturing sector.

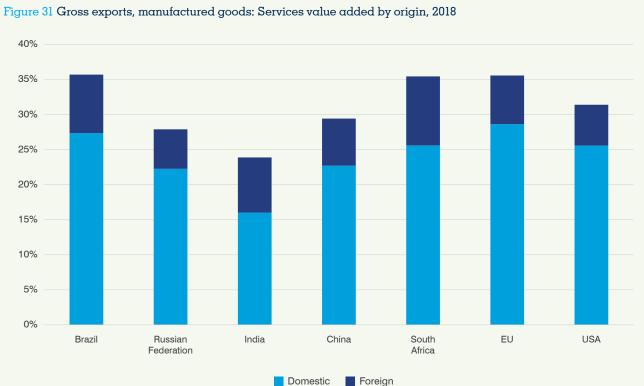
Modern products are in fact bundles of value added from different origins geographically (domestic and foreign) and by industry (goods and services). For instance, a mobile phone appears in goods trade statistics when it moves from the point of final assembly to the point of consumption. But the phone is not a pure good: in terms of the origin of its value added, there are components from primary industry (such as rare earth elements used in some components), inputs from manufacturing (such as the screen and solid-state hard drive) and services - most notably design, research and development, engineering and marketing, not to mention transport and logistics services that help the product get to its final destination.

The OECD-WTO TiVA database unravels these issues by tracing the origin of value added in exports. Of particular interest is the extent of embodied services trade by the BRICS, which is measured as the sum of domestic and foreign services value added incorporated into gross exports of manufactured goods.

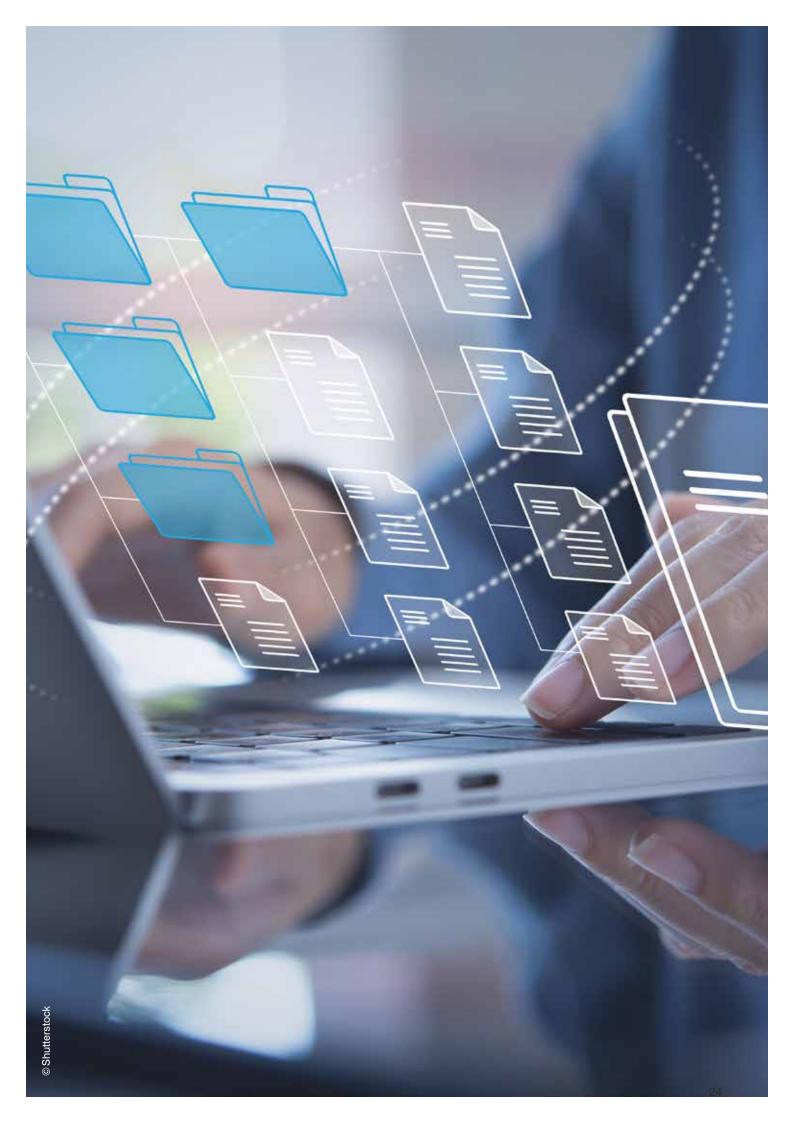
Figure 31 shows that 25%-35% of the value of gross manufactured goods exports originates in services sectors. But this embodied services trade - which is substantial – is not captured by the balance of payments or other statistics on trade in services.

Given that exports of manufactured goods are substantial in the BRICS, particularly China, it is important to recognize that around one-quarter to one-third of the value of those goods can be traced back to services. This suggests that, indirectly, services trade is much more significant than the raw cross-border figures would indicate.

This pattern of embodied services trade is reminiscent of what is seen in countries with higher income levels. The extent of embodied services trade in manufactured exports of the European Union and United States is very similar to what is seen in Brazil, China and South Africa. India has a lower level of services value added in its manufacturing output. This finding contrasts with India's relative success as an exporter of services, e.g. direct exports of computer and business services.



Source: OECD-WTO Trade in Value Added database, and authors' calculations



# Chapter 3 Digital Trade

The digital economy can significantly develop services trade. It has two dimensions: direct trade in computer and information services, and trade embodied or facilitated by ICT, i.e. digitally enabled trade. This chapter examines the development of services trade in the BRICS through the lens of digital trade and focuses exclusively on the trade dimension. It looks at the available data on trade in computer and information services, and the prevalence of GATS Mode 1 trade in other sectors, which is an indicator of the extent of digitalization because it is based on pure cross-border transactions typically facilitated by digital connectivity.

# Trade in computer and information services

Figure 32 presents data from the WTO TiSMoS database on the value of BRICS countries' exports of computer and information services over a 12-year period. The key finding is that India is far and away the leader among the BRICS in this sector.

However, China has been making rapid progress, particularly since 2009. Whereas India's computer and information services exports have been relatively flat over recent years or even slightly declined, China's have continued to grow. Values are much smaller in the remaining BRICS countries, which shows that their services exports are specialized in other sectors.

As noted, previously, services can be traded indirectly through embodiment in traded goods. For instance, if a car manufacturer purchases computer services from a consultant, the value of those services becomes part of the invoice price of the final vehicle if it is then exported to another country. The TiVA database makes it possible to quantify the extent to which the BRICS trade computer and information services indirectly in this way.

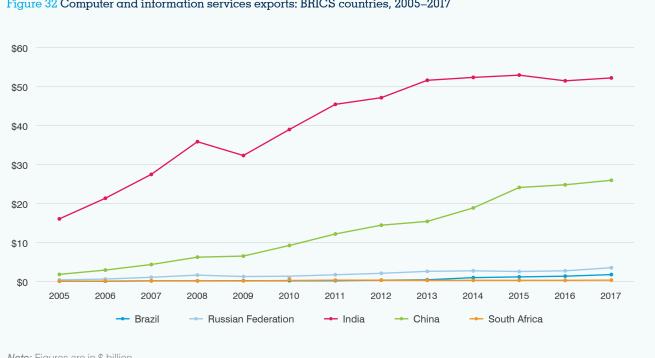
Figure 33 shows that computer services are relatively less used by BRICS manufactured goods exporters than in high-income economies like the United States or the European Union. The highest proportions are in Brazil and South Africa, followed by China. The Russian Federation and, in particular, India see significantly less use of these services through embodiment in manufacturing exports. The result for India stands out: the country enjoys considerable international success in the computer services sector, as Figure 32 suggests, but there appear to be difficulties locally in linking this growing sector to the more established manufacturing base.

## Digitally delivered services trade

International trade data do not specifically capture trade using digital connectivity. The limitations in balance of payments data on international services transactions have already been discussed. However, in the digital context, the difficulties inherent in the traditional approach to measuring trade in services are more apparent: the data presented above on computer and information services trade, for example, do not distinguish between services delivered digitally and those provided by moving qualified providers, such as engineers, temporarily between countries.

From the broader perspective of digital delivery, there is scope for much greater reliance by the BRICS on digital trade. This perspective includes not only computer and information services, but also trade in other sectors that takes place through digital means. For instance, if professional services are delivered through e-mail only, then they could reasonably be considered to be part of digital trade, under the heading of digitally delivered services.

The WTO TiSMoS database provides information that helps distinguish this mode of service delivery. The data identify trade using the four GATS modes of supply. In the modern economy, Mode 1 trade relies heavily on digital delivery. So the proportion of Mode 1 trade in total exports can be a proxy for a country's reliance on digitally delivered services. However, it is not a perfect measure because sectors like transport – which is not digital – can also be traded under GATS Mode 1. This measure complements the direct analysis above by taking the discussion beyond the computer and information sectors to consider the totality of a country's services trade.



#### Figure 32 Computer and information services exports: BRICS countries, 2005–2017

*Note:* Figures are in \$ billion Source: WTO TiSMoS database and authors' calculations

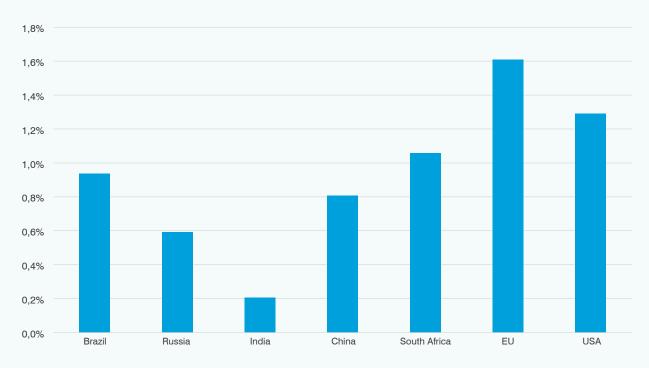


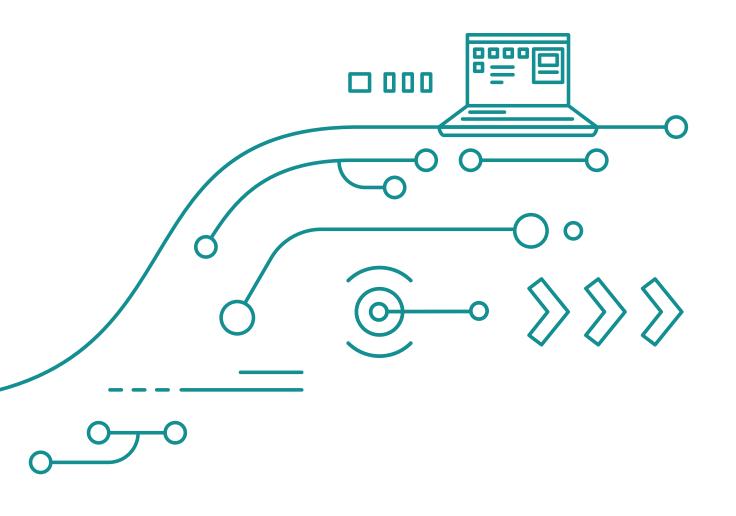
Figure 33 Computer and information services in manufactured goods exports: BRICS countries and comparators, 2018

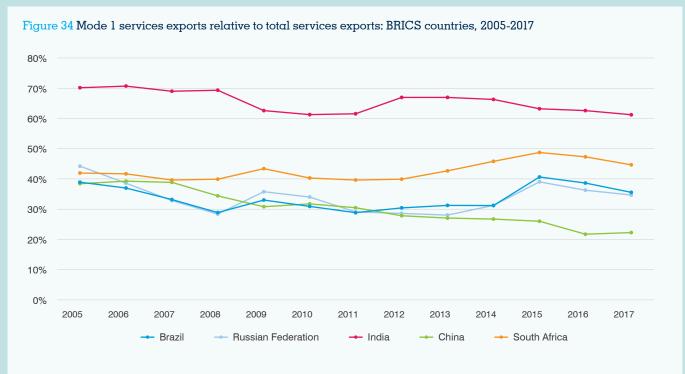
Source: OECD-WTO TiVA database and authors' calculations

Results of this analysis are in Figure 34. India stands out as being heavily reliant on Mode 1 services trade, which is consistent with a substantial proportion of digitally delivered services in its total services exports. The other countries are lower, with South Africa, Brazil and the Russian Federation clustered together, and China at a lower level. The overall pattern suggests that all BRICS countries rely significantly on digitally delivery within the context of their total services exports, although the degree of that reliance varies across countries.

With the exception of South Africa, the trend is downwards over time. But the reason is likely not that digital delivery is becoming less important in an absolute sense, but that other modes of supply are increasing in importance. China's case stands out: a probable reason for its declining share of GATS Mode 1 trade is that it has become an important source of outward FDI in services, which in turn increases the share of GATS Mode 3 exports in its total. So, digital delivery remains important but also has to be considered in the context of changes in the other modes of supply.

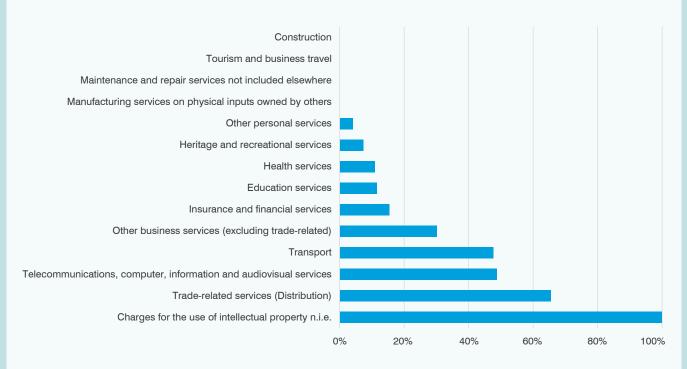
To see how the data break down by sector, Figure 35 presents data for total trade across all five BRICS countries for 2017. There is considerable variation in the proportion of Mode 1 trade, ranging from zero to 100%. The figure also makes clear that the proxy is an imperfect one for digitally delivered trade. For example, transport services can also be delivered via GATS Mode 1 but they are not traded digitally. Subject to this caveat, the data indicate that sectors such as telecom, other business services, intellectual property and distribution plausibly rely relatively heavily on digital delivery.





Source: WTO TiSMoS database and authors' calculations

#### Figure 35 Mode 1 services exports relative to total services exports, by sector: BRICS countries, 2017



Source: WTO TiSMoS database and authors' calculations

# Chapter 4 Investment in services and sales by foreign affiliates

FDI represents an important vehicle for services trade under GATS. Mode 3 trade takes place through foreign affiliates. For example, sales of affiliates of a Chinese firm in South Africa are recorded as exports from China to South Africa, while sales of United States affiliates in China are recorded as imports into China from the United States. In most sectors, the relevant statistical concept is total sales by the affiliate; but in distribution sectors (particularly retail), it is value added.

In many services sectors, proximity of buyer and seller is necessary for transactions to take place. This point remains true despite the rise of the digital economy. Mode 3 is still a crucial way foreign companies can contest local services markets.

This chapter looks at the links between FDI and GATS Mode 3 trade using two data sources. First, UNCTAD data show the importance of the BRICS in the global scheme of investment but they track total investment, typically not broken down by economic sector; so results need to be interpreted carefully because they cover goods sectors as well.

The second approach uses estimates from the WTO TiSMoS dataset to examine the extent to which the BRICS countries engage in Mode 3 services trade as exporters and importers. These data are not directly observed for the most part but rely on statistical estimation procedures. However, they represent the best available data on Mode 3 trade.

FDI data are well-known to be incomplete in important respects. Many countries do not report sectoral breakdowns or partner country disaggregation. As such, the main international data repositories are far more incomplete in terms of their coverage of FDI than they are when it comes to trade. The data presented here are therefore necessarily partial but represent the best information currently available.

# Inbound FDI in services and Mode 3 imports

First, the analysis looks at inward FDI and GATS Mode 3 imports. The reason for connecting these two measures is that Mode 3 imports by a country are capturing sales by foreign companies within that country, i.e. the outcome of inward investment decisions.

### Aggregate FDI data

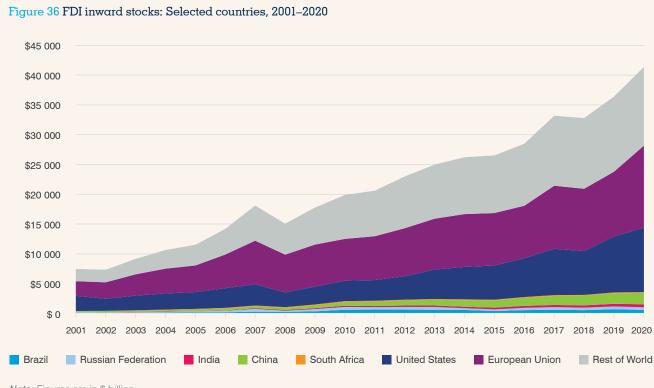
Figure 36 analyses FDI in the BRICS countries using aggregate UNCTAD data on FDI stocks, which are more stable year-over-year than comparable flow data. Although the BRICS as a group are present as a destination for other countries' outward investment, only China stands out as a major destination in its own right. Much of the cumulative investment tracked by these statistics would probably be in manufacturing rather than in services, but the trend is nonetheless indicative. China is an important market for inward FDI in global context, although destinations like the United States and European Union have much larger absolute shares.

As previously noted, the above data track FDI across all sectors, not just services. Not all BRICS countries report data that identify individual sectors. China, which is by far the largest BRICS destination for inward FDI, reports such data. ITC's Investment Map tool shows that, in 2018 (the latest year for which data are available), FDI in services accounted for around two-thirds of the total FDI inflow into China; stock data are not available by sector.

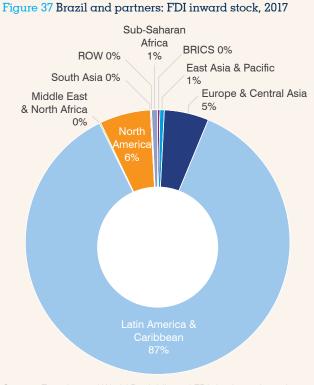
The available information suggests that, even in a manufacturing-driven economy like China, total FDI contains a significant proportion of services-driven FDI. In India, which is more of a services-driven economy on the trade side, the proportion (from the same source) is 79%, so inward FDI in India is overwhelmingly in services. Data for Brazil and South Africa are not available, and the Russian Federation reports a negative FDI flow for services in 2018, which makes the proportion of the total not meaningful. The key data points are therefore for China and India.

Analysing the country breakdown of inward FDI is not straightforward because many countries do not maintain such data. This section uses an experimental World Bank dataset on bilateral FDI, based on original data from UNCTAD, OECD and other sources. It uses mirroring in an effort to fill in missing data but should still be regarded as incomplete. It also contains observations that are difficult to explain, such as negative stocks.

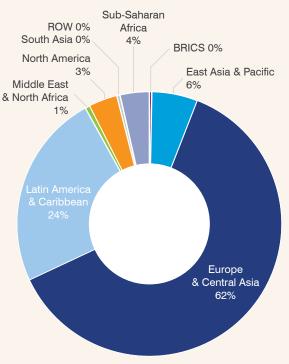
Subject to these caveats, Figure 37 presents data for Brazil. Each slice of the pie represents a given source region's proportion of Brazil's total inward FDI. The figure makes clear that most inward FDI into Brazil comes from its own region, followed by North America and East Asia.



*Note:* Figures are in \$ billion *Source:* UNCTAD and author's calculations



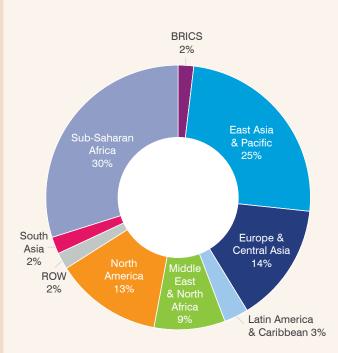
#### Figure 38 FDI inward stock, 2017, Russia and partners



*Source:* Experimental World Bank bilateral FDI database, based on various sources, and authors' calculations

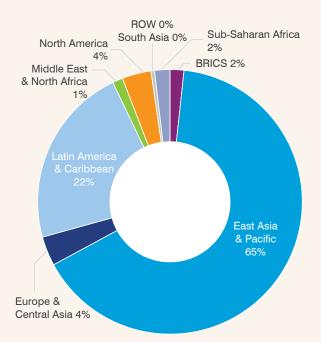
BRICS	East Asia & F	Pacific 📃 Europ	e & Central Asia	Latin A	merica & Caribbean
Middle East	t & North Africa	North America	ROW	South Asia	Sub-Saharan Africa

Figure 39 India and partners, FDI inward stock, 2017

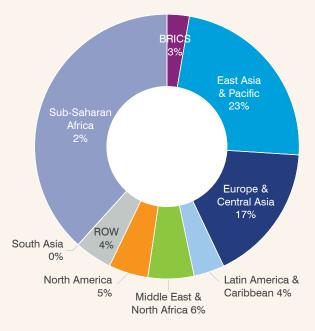


*Source:* Experimental World Bank bilateral FDI database, based on various sources, and authors' calculations

Figure 40 China and partners: FDI inward stock, 2017

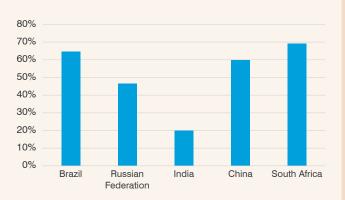


Source: Experimental World Bank bilateral FDI database, based on various sources, and authors' calculations



## Figure 41 South Africa and partners: FDI inward stock, 2017

Figure 42 Mode 3 services imports relative to total services imports: BRICS countries, 2017



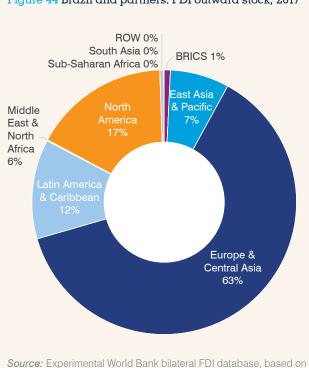
Source: WTO TiSMoS database, based on various sources, and authors' calculations





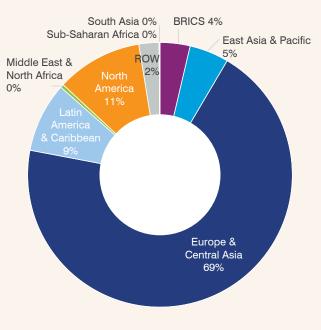
*Note:* Figures are in \$ billion *Source:* UNCTAD and author's calculations

various sources, and authors' calculations



#### Figure 44 Brazil and partners: FDI outward stock, 2017

## Figure 45 Russian Federation and partners: FDI outward stock, 2017





The other BRICS countries only account for 0.3% of the total so are marginal sources of inward FDI into Brazil.

Figure 38 shows similar information for the Russian Federation. Its own region is the predominant source of inward FDI but Latin America plays a substantial role, with other regions supplying much lower proportions. As is the case with Brazil, inward FDI from the other BRICS countries accounts for only 0.3% of the total.

The data for India (see Figure 39) are difficult to explain in some respects, which is likely indicative of data quality problems. The large share of East Asia is logical and in line with the results examined above. Similarly, the low share of India's own South Asian region is likely due to political issues.

Europe and North America both have important shares but it is the large share of Africa that stands out, at around 30%. This figure seems too high given the economic fundamentals in place and may be due to financial transactions that route investment through an African hub like Mauritius.<sup>1</sup> However, the other BRICS countries account for around 2% of the total, which is larger than in Brazil or the Russian Federation but still not significant in the total landscape of India's inward FDI.

The data for China (see Figure 40) display a more familiar pattern. Its own East Asia region is dominant as the origin of inward FDI, accounting for nearly two-thirds of the total. Latin America is the only other region with a major share, at 22%. The shares of North America and Europe are surprisingly low, which may be related to data quality issues. The share of the other BRICS is larger but rounds to around 2%, so their impact is relatively marginal in the scope of China's total inward FDI.

Figure 41 looks at the situation in South Africa. As for the other BRICS except India, the share of its own region is the largest in the total. Europe and East Asia also make significant contributions. The share of the other BRICS countries is larger than in any of the others but still just under 3% of the total.

#### Mode 3 trade data

From a services perspective, the trade concept involved with FDI is Mode 3, i.e. sales of foreign affiliates, not the value of the investment transaction itself. Directly collected data on this type of trade are not widely available but the WTO TiSMoS database uses statistical methods to provide the best available approximation. There is no bilateral disaggregation, so the database reports trade with an aggregate world partner only. Figure 42 shows the proportion of Mode 3 imports in total imports for the BRICS countries. In other words, it shows the relative importance of sales by foreign-owned services companies relative to pure cross-border services sales by foreigners and sales by foreigners involving movement of either the consumer or service provider.

There is considerable variation across countries, ranging from 20% in India to 60%-70% in China, Brazil and South Africa. To a large extent, this pattern is driven by sectoral specificities in trade composition across countries, as different sectors have different propensities to be traded by Mode 3 relative to other modes. Policy probably plays a role: a restrictive FDI policy is likely to be associated with lower sales by foreign affiliates relative to other modes of supply. From a trade perspective, GATS Mode 3 is an important way of importing services for the BRICS countries but one whose quantitative significance differs markedly across countries.

### Outbound FDI in services and Mode 3 exports

Next, the analysis looks at outward FDI and GATS Mode 3 exports. The reason for connecting these two measures is that Mode 3 exports by a country captures sales by its own companies that establish affiliates abroad, i.e. the outcome of outward investment decisions.

#### Aggregate FDI data

The analysis of aggregate FDI data relies on the same sources as above. The same limitations are inherent in the analysis, so it is important to keep in mind the various caveats referred to above.

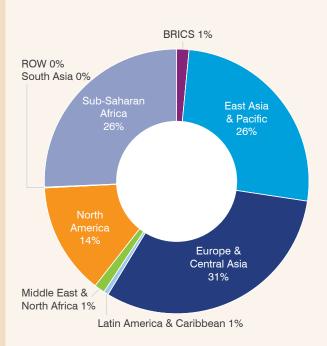
Figure 43 shows that the BRICS as a group is marginal as sources of outward FDI on a global level. China is the largest player but only accounts for 6% of the total; the other BRICS countries account for far less. The United States and European Union both account for larger shares of outward FDI than do BRICS countries as a group. While the importance of the BRICS as sources of FDI has been growing, they remain relatively small players in the global market for investment.

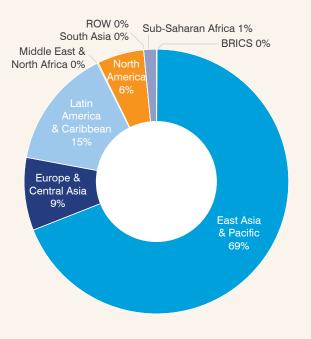
Moving to bilateral relationships, Figure 44 shows that, in the case of Brazil, the role of the BRICS as destinations of outward investment is, as in the case of inward investment, relatively small. They account for around 1% of the total. Europe, Latin America, North America and East Asia are much larger players in Brazil's outward FDI stock.

<sup>1</sup> https://www.ndtv.com/business/fdi-inflow-data-india-registered-its-highest-ever-fdi-inflow-of-81-97-billion-in-fiscal-2020-21-government-2655686





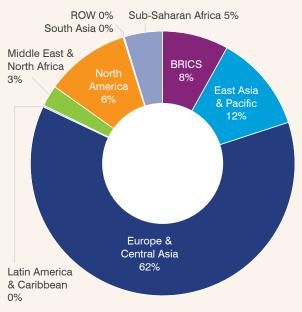




*Source:* Experimental World Bank bilateral FDI database, based on various sources, and authors' calculations

*Source:* Experimental World Bank bilateral FDI database, based on various sources, and authors' calculations

# Figure 48 South Africa and partners: FDI outward stock, 2017



## Figure 49 Mode 3 services exports relative to total services exports: BRICS countries, 2017



*Source:* WTO TiSMoS database, based on various sources, and authors' calculations.



Figure 45 shows the same breakdown for the Russian Federation. The role of BRICS as destinations of Russian outward FDI is much more important than for Brazil, at nearly 4% of the total. But the country's outward FDI pattern is dominated by its own region, with secondary roles played by North America, Latin America and East Asia.

As in the case of its inward FDI stock, India's outward stock (see Figure 46) sees relatively little going to the South Asia region, likely due to political factors. The major players are Europe, East Asia, North America and sub-Saharan Africa. While there may be quality issues with the data, the result for the BRICS is in line with what is seen for the other members of the group: they are not major destinations for outward FDI, accounting for less than 2% of the total.

China sends most of its outward FDI to its own region (see Figure 47). Europe, Latin America and North America also play important roles. By contrast with the other countries examined so far, the share of BRICS in China's outward FDI is negligible, less than 0.1%. So, intra-BRICS investment is marginal in China's overall outward FDI. This finding is important quantitatively for the group as a whole given that China is the only member of the group that has standing as a global player in outward FDI (see above).

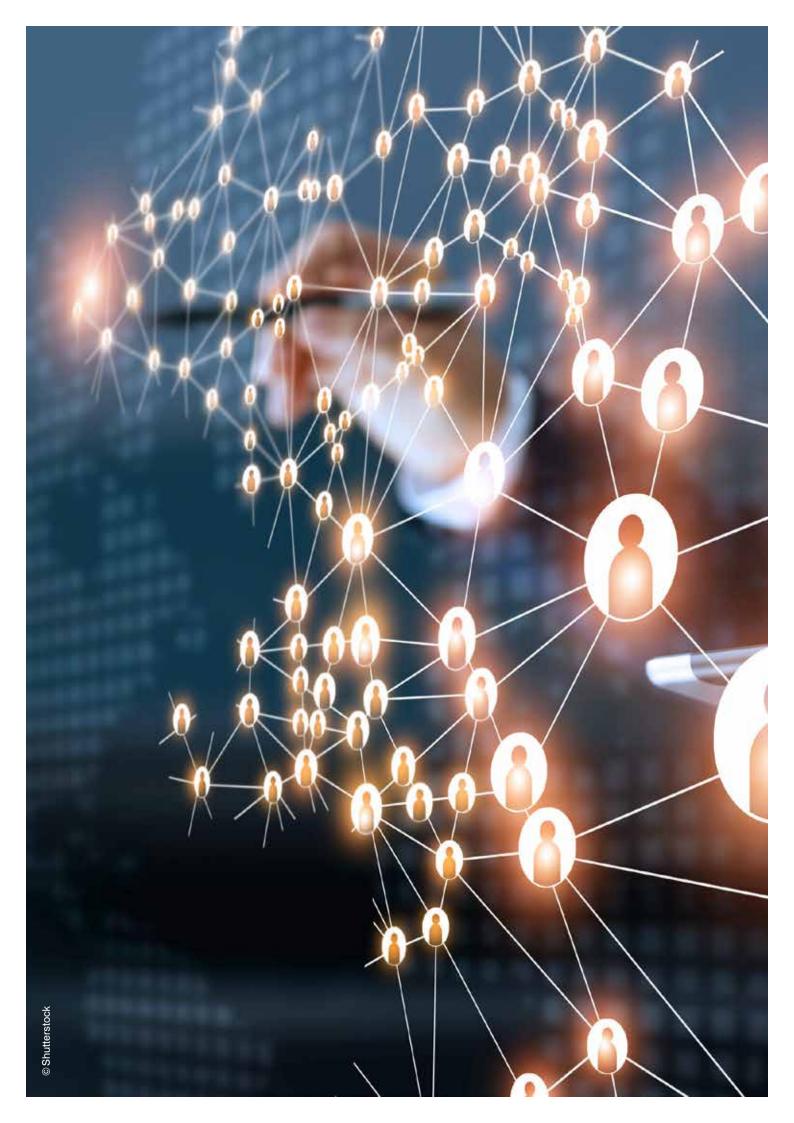
Figure 48 shows that, of the BRICS countries, South Africa has the highest proportion of intra-BRICS activity in its outward FDI: just over 8%, which is a significant proportion. However, larger shares go to Europe, North America and East Asia.



### Mode 3 trade data

As was the case for the import side, the export side of the BRICS' Mode 3 trade transactions display considerable variability, likely due to differences in sectoral patterns of specialization. China is the most reliant on Mode 3 for its services exports: they account for nearly 70% of total services exports, which is an important stylized fact.

The figures are lower for other countries but still highly significant for Brazil and the Russian Federation, which record proportions of nearly 50%. Levels are considerably lower in India and South Africa. From a trade standpoint, even though outward FDI by the BRICS only makes up a relatively small proportion of the world total, some of the countries rely on sales by foreign affiliates relatively heavily in terms of generating income from services exports.



# Chapter 5 **People-to-people connections**

Two modes of supply under GATS involve physical movement by people across borders. Mode 2 trade occurs when the consumer moves to the place where a service is produced to be able to consume it. Tourism is an example: when a Chinese tourist visits South Africa, there is an export of services via Mode 2 from South Africa to China. This transaction is recorded in the balance of payments and captured by the data examined in Chapter 2, as well as in WTO TiSMoS data used elsewhere for trade by mode of supply.

The other way individual people move to effect services trade is under Mode 4, which involves short-term movements by service providers. For example, when an Indian IT professional visits Brazil for a short stay to provide services to a local firm and then returns home, there is an export of Mode 4 services from India to Brazil. Data on these kinds of transactions is notoriously hard to track; these transactions are made all the more challenging by the significant policy barriers most countries erect to this kind of trade through the need to meet specific visa requirements.

While Mode 4 trade represents a market of great potential to countries with large labour forces, especially India, it is likely to be quite small owing to policy restrictions. This issue is one that can only be comprehensively investigated using the estimates in WTO's TiSMoS database.

This chapter looks at people-to-people connectivity. Specifically, it examines tourism and education – two important Mode 2 sectors – through the lens of the number of people who move across borders. The BRICS countries are playing increasingly important roles in both sectors, although they differ considerably in the two cases.

Movements of people in a global context are influenced by patterns of comparative advantage, which in turn are shaped by economic factors such as endowments of labour and capital (physical and human). In addition, the chapter looks at sectoral patterns in Mode 4 trade based on WTO TiSMoS data.

### Travel and tourism

The BRICS countries are becoming popular as tourist destinations. Figure 50 shows average annualized growth rates ranging from 0.8% per annum in the

Russian Federation to 10.6% in China, from 2000 to 2019, just before the COVID-19 pandemic. Growth is positive in all BRICS countries, and is robust in China, India and South Africa.

However, in absolute terms, China attracts by far the largest number of international tourists each year. Data are not yet available for 2020, but the COVID-19 pandemic likely caused a collapse in these figures across the board due to restrictions on international movements of people related to public health objectives.

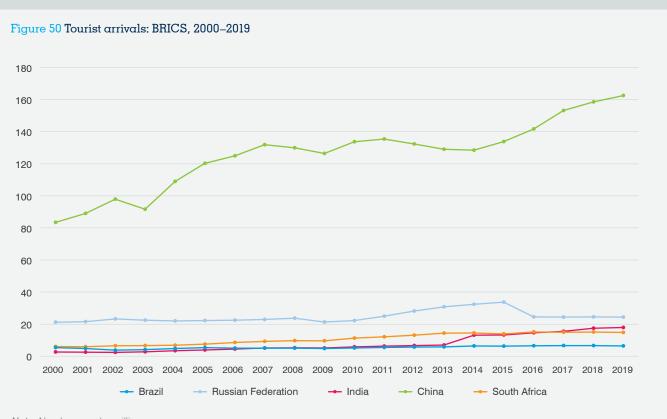
It is also important to look at the data on tourist arrivals from the perspective of the BRICS countries – specifically, at the tourism sector's contribution to total exports. Figure 51 shows that it is significant, bearing in mind that the denominator for the proportions is total exports of goods and services.

South Africa, which has considerable natural advantages as a tourist destination, stands out: tourism receipts account for nearly 10% of total export earnings. These figures include all purchases by tourists in the country, and capture activity in hotels and restaurants, as well as through tour operators. Tourism is important to a number of the BRICS economies as a source of relatively labourintensive economic activity, which can be accessed by low-skilled workers.

Although the BRICS have undeniable attractions as tourist destinations, it is in their opposite role – sources of tourists – that they have evolved most impressively over recent years. Figure 52 shows aggregate annualized growth in the BRICS countries' tourist departures, ranging from 4.9% in the Russian Federation to 15.2% in China, with all countries for which data are available recording strong growth in this sector.

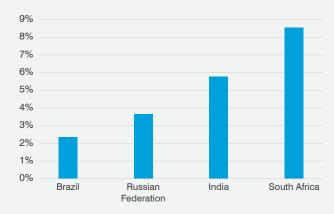
In absolute terms, China with 154 million tourist departures and the Russian Federation with 45 million led in outbound tourism in 2019. Whereas the BRICS accounted for 9.9% of tourist arrivals in 2019, they made up 11.8% of departures in 2018. Rapid income growth, as well as changing social preferences in relation to the work/leisure trade-off, are behind this changing dynamic. Again, these numbers may have collapsed in 2020 and 2021 due to international travel restrictions.

Many countries now actively court tourist arrivals from the BRICS, in particular from China. Given its large



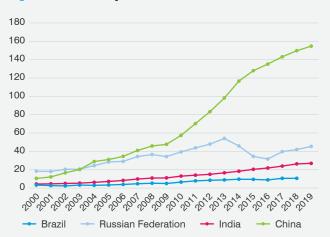
*Note:* Numbers are by million *Source:* World Development Indicators

# Figure 51 Tourism receipts in total exports: BRICS countries, 2019



*Source:* World Development Indicators and authors' calculations; note: data unavailable for China

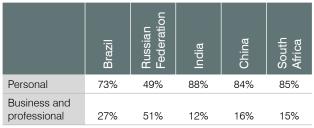
#### Figure 52 Tourist departures: BRICS, 2011–2015



population, the fact that a growing percentage of people can now afford – in terms of time and money – to travel overseas has had a major impact on the global tourist market.

WTO TiSMoS data can help break down inbound tourist expenditures by type, distinguishing between business and personal travel. The database records all tourism exports as occurring through GATS Mode 2. Across the BRICS, expenditure is predominantly for personal purposes in all countries except the Russian Federation, where business purposes predominate.

# Table 1Tourism exports by purpose of visit:BRICS countries, 2017



Source: OECD WTO BaTIS database

Tables 2 and 3 present the share of BRICS in each country's tourism exports and imports, showing the relative magnitude of intra-BRICS tourism. Within the group, South Africa and the Russian Federation are more dependent on the BRICS to export tourism-related services, with 6% and 5% of their total inbound tourist revenue coming from the group, respectively. However, these numbers are still relatively small in proportion to total exports of travel services, in particular for China, which is the largest host country in absolute numerical terms (see above).

Table 3 shows that only small proportions of the BRICS' outbound tourism expenditures go to other BRICS countries. Import shares are lower than export shares, which means that the BRICS are relatively more dependent on each other from an inbound perspective than an outbound one. But proportions from all countries are small relative to total imports of travel services

#### Table 2 BRICS: Share in travel exports, 2019

Destination	Share
Brazil	3.70%
Russian Federation	5.10%
India	4.76%
China	2.54%
South Africa	6.34%

Source: OECD-WTO BaTIS database

#### Table 3 BRICS: Share in travel imports, 2019

Share
1.14%
2.18%
2.26%
0.70%
4.87%

Source: OECD-WTO BaTIS database

### Education

Trade in higher education services has been growing rapidly over recent decades as students become more mobile across borders. The BRICS are primarily sending countries, i.e. they send students abroad to study, which means that they import education services from the receiving countries. The main recipients are the developed economies, particularly the United States, United Kingdom and the European Union.

The WTO TiSMoS database makes it possible to track exports and imports of education services, although not bilaterally. It helps show the importance of the BRICS as sending and receiving countries for international students relative to the rest of the world.

An interesting feature of the data is that trade in education services takes place across all modes of supply, even though it is most traditionally associated with Mode 2 (movement of students). Online courses – of particular importance during the COVID-19 pandemic – are an example of GATS Mode 1 exports of education services.

Similarly, foreign universities opening local affiliates, as some have done in Asia, is an example of Mode 3 trade. Movement of professors to teach specific courses and then return is an example of Mode 4 trade. The TiSMoS data make it possible to break down the importance of each mode for the BRICS.

Figure 53 shows the relative importance of BRICS countries as sources of educational services spending (i.e. GATS imports). There is considerable variability across modes. Mode 2 trade predominates; that is, that the primary mode of market entry involves the physical movement of students. In that mode, China and, to a lesser extent, India are important global sources of international students.

Numbers are smaller for the other BRICS due, in part, to their smaller populations. In other modes of supply, the role of the BRICS is relatively limited in proportional terms. However, spending on internationally traded education services is substantial, ranging from \$0.08 billion in South Africa to \$44.4 billion in China. From the opposite (export) perspective, data from the same source show that only China is a significant exporter of education services to other countries, primarily through Mode 2. That is, China welcomes a significant number of students from other countries. But, for the BRICS as a group, their exports are relatively marginal in the world market context, ranging from \$0.15 billion in Brazil to \$4.76 billion in China. China is the only BRICS country with a global market share of more than 1%; the others are significantly below that threshold.

#### GATS Mode 4 trade

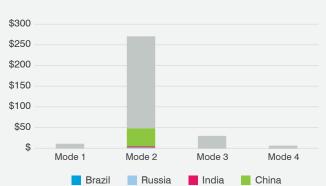
Another important aspect of people-to-people connections that was addressed in the context of education services above is GATS Mode 4 trade. This mode involves temporary movement of service providers. WTO TiSMoS data can give a rigorous perspective on the importance of this mode of supply for BRICS countries, albeit based on statistical estimates rather than directly observed data.

Figure 54 shows the extent to which the BRICS countries rely on temporary movement of service providers for their services exports, by recording the proportion of Mode 4 trade in total services exports. In India, the figure is over 7% but in the other countries it is in the range of 2%-4%.

While the BRICS countries are relatively populous and likely have comparative advantage in some sectors due to the availability of appropriate labour resources, the barriers to Mode 4 trade remain high around the world, largely due to visa restrictions and work permit limitations.

The proportions in Figure 54 are prior to the COVID-19 pandemic, which made person-to-person trade more difficult due to necessary public health measures, so it is likely that the recorded proportions have fallen significantly in recent years.

In part, the differences observed in Figure 54 are due to sectoral patterns of specialization. Not all services are extensively traded by Mode 4. The TiSMoS data show that, at a sectoral level, the highest proportions of Mode 4 exports are in sectors like waste treatment, health and education services, professional services and computer services. Relative specialization in these sectors is a major determinant of the above results, as evidenced, for example, by the large share of computer services exports in India's total.



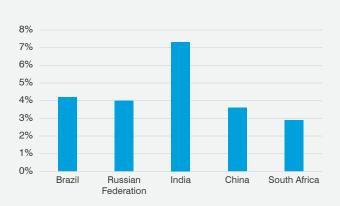
Best of World

South Africa

# Figure 53 BRICS and rest of world: Education services imports, 2017

*Note:* Numbers are in \$ billion. *Source:* WTO TiSMoS database





Source: WTO TiSMoS database

# Chapter 6 Expanding in global markets and intra-BRICS collaboration

The analysis has shown that the services economy is increasingly important to BRICS countries in terms of direct trade relations and in facilitating movement of goods and other services through embodied services trade.

In terms of pure cross-border trade, the numbers involved are significant because of the size of the countries' economies. BRICS as a group are emerging players in the global services economy. They have seen rapid growth in trade volumes but they started from low baselines relative to developed countries.

Intra-BRICS trade is underdeveloped, as most countries rely heavily on developed countries and regional markets as sources of demand for their exports and as sources for their imports. In large part, this dynamic is a function of comparative advantage. Factors such as capital endowments and institutional strength matter to bilateral services trade. Services trade for the BRICS is largely complementary and based on deep economic differences rather than being two-way in similar items, as is the case for most trade in manufactured goods.

The picture changes somewhat when we look at trade through commercial presence (Mode 3). Despite data being scarce, we find evidence that some BRICS countries, such as China and India, are major destinations for global FDI, including in services. Although the main global services trade flows are between the developed markets of Europe and North America, evidence shows increasing investment in at least some of the BRICS.

Intra-BRICS services trade remains underdeveloped. BRICS countries largely rely on developed and regional market demand.

BRICS countries can leverage new opportunities, including in rapidly growing digital trade and intra-BRICS investments, to enhance BRICS cooperation on services trade. The picture for people-to-people connections (Modes 2 and 4) is somewhat similar. The BRICS countries, particularly India and China, are major sources of students attending programmes abroad and, increasingly of tourists. Intra-BRICS movements are limited. Since Modes 2 and 4 have been heavily impacted by the COVID-19 pandemic, it is difficult to assess the growth potential of intra-BRICS trade in these areas.

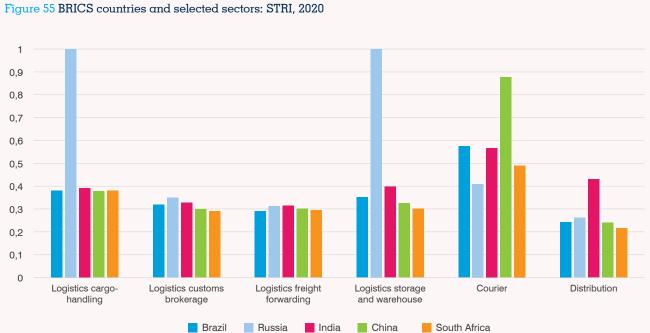
The key finding from this data-driven analysis is that, to fully realize the potential of their services economy, BRICS countries should focus on improving productivity in services sectors, which would benefit trade integration, consumer welfare and downstream productivity and competitiveness. Economic forces will continue to pull in that direction; rising incomes will shift consumption towards services and increasing use of GVCs as production platforms will increase demand for intermediate services.

Services hold potential for the BRICS: India already enjoys notable success in sectors like IT and business process outsourcing. However, it will be important for the BRICS to address ongoing challenges that, to some extent, may hold back their integration into global services markets. We address those challenges in the next subsection, before presenting our recommendations.

### Challenges

Given that the BRICS have relatively large economies, with often robust growth rates over recent years, what can be done to increase their involvement in the global services economy? They have large services sectors but the data suggest that only a small proportion of their output is exported, and a similarly small proportion of consumption is imported.

A key reason could be that trade costs in services markets are high – globally and in the BRICS countries – and not always trending downwards. Using data from Miroudot et al. (2013), we can see that trade costs in services for Brazil fell 5.5% between 2000 and 2004, in ad valorem equivalent terms. In India, trade costs in services fell by around 5% and, in China, they fell by 8%. By comparison, goods trade costs in Brazil fell by nearly 7% over the same period.



Source: Organisation for Economic Co-operation and Development

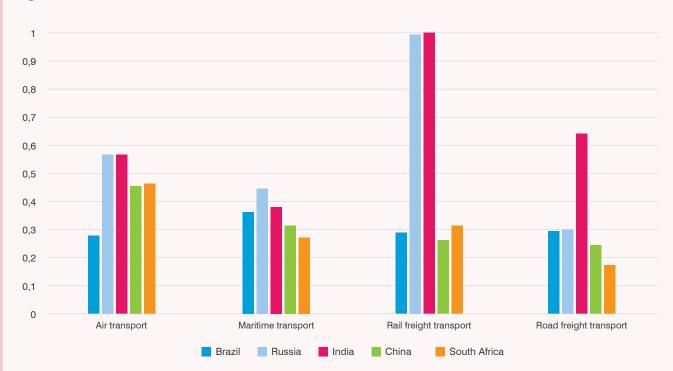


Figure 56 BRICS countries and selected sectors: STRI, 2020

Source: Organisation for Economic Co-operation and Development

These changes are not particularly large given the high initial levels. But they are more than changes in worldwide trade costs, which, according to Miroudot et al. (2013), remained relatively flat in services while they declined sharply for goods. The key insight is that trade integration in services markets has been proceeding significantly more slowly than in goods markets, in the BRICS as well as in their major markets and import sources, the developed economies.

In this analysis, trade costs capture all factors that drive a wedge between producer prices in the exporting country and consumer prices in the importing country. They include not only traditional trade policy measures, but also factors like institutional and legal environment, as well as the business environment, which can make it easier or harder to trade services across borders.

The precise division of services trade costs into policyand non-policy-related factors is not apparent from the literature, but one thing is clear: lowering trade costs has important benefits for the domestic economy by encouraging productivity upgrading through enhanced competitive pressure (Miroudot et al., 2012). To the extent that policy measures keep trade costs unnecessarily high, they could be contributing to a lack of competitiveness in services, which is reflected in less trade integration.

#### Reducing services trade costs

OECD provides quantitative summaries of countries' applied services trade policies in its Services Trade Restrictiveness Index (STRI) project, which covers the BRICS countries in addition to OECD members. Each index summarizes policy restrictions in a given sector, and ranges between zero (completely open) and one (completely closed). Comparing restrictiveness across sectors is not free from difficulties but, across countries within a sector, it is quite consistent. It should be noted though, that some BRICS countries have had concerns on the conceptual and methodological issues with the STRI estimation process, and have argued that the estimates for the BRICS countries may not necessarily accurately reflect the restrictiveness of services trade.

Figures 55–58 reproduce the BRICS' STRI scores for all sectors for which data are available, grouping them into related clusters. Restrictions are generally fairly moderate, but certain highly restricted sectors (meaning high trade costs) stand out, such as some logistics subsectors in the Russian Federation, rail freight in India and the Russian Federation, courier services in China, professional services in India and some audio-visual services in China. Comparing results for the BRICS to the cross-country average shows that, on average, BRICS are more restrictive than the average of OECD countries. Services policies in the BRICS are relatively restrictive by the standards of the developed world; however, the fact that almost all BRICS countries are net importers of services while many of the OECD countries are net exporters in services needs to be taken into account.

In terms of leveraging the global services economy to promote productivity upgrading, there is a clear gap between aspiration and progress. Although some BRICS countries, such as China, have taken important steps to open previously closed markets, there is significant scope to adjust policies to support more services trade integration.

#### Domestic policy reforms are key

Most policy reform in services has been unilateral rather than regional or multilateral. Important exceptions exist, such as China's accession to WTO, which resulted in significant modifications to applied policies. Typically, however, countries have moved forward on liberalizing services because they have recognized that it is in their own interest to do so.

A 2013 study shows that 60% of the overall gains deriving from structural reform in the services sectors of various Asia-Pacific Economic Cooperation (APEC) economies would come from reforms at home rather than in other countries. Thus, national governments have a strong incentive for unilateral action to reform their service sectors, even when participating in regional agreements or initiatives.

The traditional reciprocity of request-and-offer negotiations has proved to be ill-suited to services trade liberalization, as evidenced by the lack of progress on services under the WTO negotiations.

This highlights an important issue about reforming services' policies, where liberalization is politically more challenging than in goods. Many services need strong regulatory frameworks to promote the public interest, but public debate can confuse reforms designed to reduce the costs of restrictive policies with decisions to no longer regulate in the public interest. The two things are quite different, as liberalization does not prevent countries from regulating and even introducing new regulations in service sectors; but there have been significant difficulties in informing the public about reforms designed to bring about effective and efficient regulation of services markets.

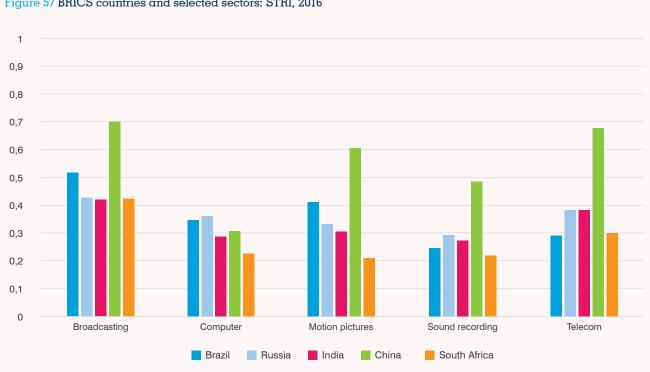


Figure 57 BRICS countries and selected sectors: STRI, 2016

Source: Organisation for Economic Co-operation and Development

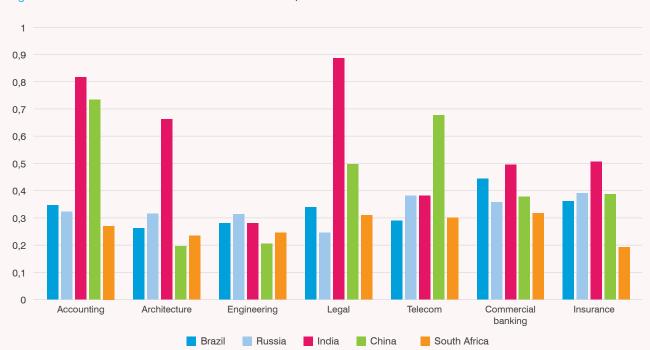


Figure 58 BRICS countries and selected sectors: STRI, 2016

Source: Organisation for Economic Co-operation and Development

Effective regulation means that measures achieve important public policy goals; efficient regulation means that they do so at minimum economic cost. Is regional integration a middle ground that could help promote services trade liberalization, including among the BRICS? Evidence indicates that regional integration in services acts more as an external anchor for unilateral most-favoured-nation (MFN) reforms than as a vehicle for preferential trade (Miroudot and Shepherd, 2014).

# Strengthening intra-BRICS integration in services trade

Intra-BRICS integration in services faces significant stumbling blocks. Services trade is driven by factors such as market size and trade costs, and both create more favourable conditions for trade between the BRICS and developed countries than for trade among the BRICS.

Patterns of comparative advantage are also an issue. The evidence suggests that differences in factor endowments are an important driver of trade and the BRICS are relatively abundant in low-skilled labour and relatively lacking in human and financial capital. Prospects for service trade integration in the short term, therefore, seem stronger between the BRICS and developed countries than among the BRICS. However, that does not mean that BRICS cannot cooperate to achieve meaningful improvement in the global services economy.

### Recommendations

#### Prioritize data collection

The first issue that BRICS countries need to address in working towards a more productive and globally engaged services sector is data. Although international sources make it possible to compile a reasonable picture of their services trade using computed estimates, there are considerable holes in the data, particularly for South-South trade.

A priority therefore should be to collect services trade data through the balance of payments that are fully disaggregated by partner country and by extended balance of payments services classification (EBOPS) subsector. Not all BRICS countries do this consistently. Without these basic data, it is difficult to undertake detailed analysis of the BRICS countries' services trade relations, particularly with each other.

A second aspect of data collection that is salient for the BRICS is GATS Mode 3. Very few countries collect data on the sales of foreign affiliates within their territory (inward FATS) or sales by affiliates abroad (outward FATS). However, entry by local establishment is a key means of contesting services markets.

As the BRICS grow and develop their services sectors, they will likely increasingly engage in FDI activities in services sectors. A second priority should be to rectify the lack of data by systematically collecting information on the activities of foreign affiliates in services sectors.

Related to this is the need to support international data collection and treatment efforts, such as WTO's pioneering work on its TiSMoS and BaTIS datasets. Deploying surveys on trade by mode of supply in the BRICS could help refine the estimates in TiSMoS, which largely rely on information from high-income countries for construction of global estimates.

#### Commit to effective and efficient regulation

Reducing trade costs in services sectors increases competitive pressure from the world market on the domestic suppliers, but also sparks productivity upgrading and enables growth through competition and cooperation. The BRICS need to give full scope to this process and promote productivity growth and higher quality in their services sectors. But they also need to ensure – and be seen by their populations to ensure – that regulation in the public interest, in areas such as environmental protection and consumer health and safety, is not compromised.

Given that most services policy reforms take place unilaterally, BRICS countries should consider committing to pursuing effective and efficient regulation of their own services sectors; in other words, ensuring that public policy objectives are met with minimum economic cost, including in terms of disruption to trade.

Addressing these complex questions requires technical processes in addition to political ones. Many highincome countries have found it useful to have some form of regulatory impact assessment in which public-sector bodies – preferably with some independence – calculate the economic costs and benefits of various regulatory options.

The Australian Productivity Commission is a goodpractice example. It is independent of the federal government, technically highly proficient and conducts analysis that takes full account of general equilibrium effects – in other words, the effects that services regulations have on other parts of the economy, not just the sector in question. More broadly, adoption of the APEC-PECD principles on Good Regulatory Practice could go a long way towards improving the basis for effective and efficient regulation in BRICS countries.

#### Alternative models

What role can international cooperation play in achieving these objectives? As international organizations have established expertise in data collection, BRICS can draw on their large pool to build domestic statistical capacity.

For the institutional change needed to promote effective and efficient regulation of services sectors, each economy needs to look for inspiration from solutions around the world but, ultimately, design a programme and body that fits with its own legal and institutional structures. Indeed, at WTO, the experience of trade negotiators in exchanging market access 'concessions' has not necessarily been most helpful in moving forward on trade-enhancing services reforms.

Notwithstanding these difficulties, negotiators from 67 countries recently concluded a *Reference Paper on Services Domestic Regulation*, which is the first major step in the GATS legal framework since WTO's establishment in 1995. BRICS other than India and South Africa have joined the initiative. It will help the signatory countries to cut the red tape costs associated with entering services markets.

An alternative model is to work within international bodies to promote an agenda for trade facilitation in services. India has already made moves in this direction through the WTO negotiating process but it is not yet clear that a legally binding agreement is foreseeable. An alternative model is APEC, was not prescriptive in terms of the measures economies took to facilitate trade. Instead, there was a collective commitment to reduce trade costs in goods by 5% in five years, which was renewed once. Individual economies were left to choose the highest impact measures to take with the aim of achieving the goal, within their own political economy constraints.

In keeping with the APEC structure and history, no binding instrument was adopted. Although experiences varied, some member economies were successful in reducing trade costs during the period of the two Trade Facilitation Action Plans (Shepherd, 2016).

Given that services policies are typically de facto MFN, it makes sense to move forward on trade facilitation in services through a flexible multilateral framework, i.e. one that does not necessarily include legally binding bargaining commitments.

### BRICS, G20, WTO and other approaches

There is scope for BRICS countries to cooperate with each other towards facilitating trade in services. The idea would be to commit to joint action to reduce trade costs. Conducting this work within the BRICS would have the advantage of involving only a relatively small number of countries for coordination purposes. If successful, these steps could provide the impetus to work towards similar goals in the G20, WTO and elsewhere.

The G20 also represents a good option for future collaboration, as it brings the BRICS together with the major developed markets, which represent their strongest trade connections in services.<sup>2</sup> Committing to joint action to facilitate services trade would send a strong signal to the global economy at a time when protectionist pressures in goods markets are on the rise in some important economies.

The G20 would provide a framework for a joint commitment and, at the same time, reassure the BRICS that they would not be giving up import access without gaining export access in return. While imports of services are economically beneficial, in the political economy of trade, import penetration is often seen and experienced negatively.

A variety of regional initiatives are taking place that explicitly or implicitly require effective liberalization of services policies. For instance, ASEAN takes an alternative approach by setting liberalization targets for specific service sectors under the ASEAN Framework Agreement on Services. Negotiations every two years focus on setting the liberalization targets and on deciding on the pace of compliance. Thus, ASEAN members negotiate to add a number of sectors at each round following the ASEAN Economic Community blueprint, including in transport, logistics and telecommunications, which are key sectors for the ASEAN Master Plan on Connectivity.

There are also multilateral initiatives to be aware of. Advancing WTO negotiations in services would help the BRICS facilitate their own services trade by lowering barriers all around the world. There is no inconsistency in working towards services trade facilitation in all of these forums simultaneously.

<sup>2</sup> The G20 is composed of: Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Republic of Korea, Russian Federation, Saudi Arabia, South Africa, Turkey, United Kingdom, United States, and European Union.

To recapitulate, a review of the data and issues suggests the following recommendations:

- 1. **Collect disaggregated data.** Collect fully disaggregated (by subsector and by partner) data on services trade in the sense of balance of payments.
- 2. **Track sales by foreign affiliates.** Tracking sales by foreign affiliates, both inward and outward, would provide information on GATS Mode 3 trade.
- 3. Support international data collection and estimation efforts. Consider participating more fully in the process supporting WTO's data collection and analysis efforts on services. This could include sharing national experiences on services data collection and implementing pilot surveys on trade in services by mode of supply, which would support the TiSMoS estimates.
- 4. **Implement regulatory impact assessment.** The assessment is a tool to promote effective and efficient regulation of services sectors and would improve transparency and efficiency through better domestic regulation and investment-facilitation measures.
- 5. Reduce services trade costs and facilitate services trade through the BRICS, G20, WTO and other forums. Enhance domestic efforts to build conducive policy environment for services sectors; strengthen regulatory exchanges among BRICS' competent authorities in key services sectors to inform their counterparts about policy development, especially related to policy reforms and facilitating services trade; and use BRICS cooperation to build impetus in other international instances, such as in the context of the G20, WTO and other forums.

- 6. Leverage regional initiatives on transport and connectivity, such as those sponsored by ASEAN, to promote liberalization of key backbone services like transport, logistics and telecommunications.
- 7. Strengthen private-sector cooperation on services trade. Mechanisms such as the BRICS Business Council or dedicated services trade networks could play a key role in supporting cooperation at the business level through exchange of information and business linkage facilitation.
- 8. Implement BRICS outcomes on services. Take measures to implement services-related outcomes in the context of the BRICS, such as the Implementation Roadmap on Trade and Investment aspects of the Strategy for BRICS Economic Partnership 2025, Framework for Cooperation in Trade in Professional Services, Framework for Ensuring Consumer Protection in E-Commerce and Framework on Strengthening the Economic and Technical Cooperation for BRICS Countries.

Bringing together actions in these areas will help set the BRICS countries on a course whereby their growing service economies can interface more effectively with global markets. This process is beneficial not only for services, by lowering prices and increasing variety and quality, but also for industries that use services, which include many export manufacturing subsectors.



# Références

Chanda, R. (2013). Deepening Cooperation in Services among BRICS Members. In S. Mathur & M. Dasgupta (Eds.), BRICS: Trade Policies, Institutions, and Areas for Deepening Cooperation. Delhi: IIFT.

Dee, P. 2011. 'Modelling the Benefits of Structural Reforms in APEC Economies', Chapter 2 in Asia-Pacific Economic Cooperation Policy Support Unit, The Impacts and Benefits of Structural Reforms in the Transport, Energy and Telecommunications Sectors in APEC Economies, 2011, https://www.apec.org/docs/default-source/Publications/2011/1/The-Impacts-and-Benefits-of-Structural-Reforms-in-Transport-Energy-and-Telecommunications-Sectors/TOC/Contents-and-Executive-Summary.pdf

Dihel, N., F. Eschenbach and B. Shepherd, 2006. 'South-South Services Trade'. Trade Policy Paper No. 39, OECD. Eurostat, http://ec.europa.eu/eurostat/en https://doi.org/10.1787/18166873

Ghani, E. and S. O'Connell, 2014. 'Can Service be a Growth Escalator in Low-Income Countries?'. Policy Research Working Paper No. 6971, World Bank, https://doi.org/10.1596/1813-9450-6971

Helble, M., & Shepherd, B. (Eds.). (2019). Leveraging Services for Development: Policies and Prospects. Manila: Asian Development Bank.

Hoekman, B., 2016. 'Services and Sustainable Development: A Conceptual Approach'. Paper prepared for the ICTSD.

Hoekman, B., & Shepherd, B. (2017). 'Services Productivity, Trade Policy, and Manufacturing Exports'. [International Telecommunication Union data, www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx]. World Economy, 40(3), 499–516. https://doi.org/10.1111/twec.12333

International Trade Centre, ITC Trade Map, www.trademap.org/Index.aspx

Internet and Mobile Association of India, 2016. IMAI. Internet in India.

Philippa Dee, 2011. 'Modelling the Benefits of Structural Reforms in APEC Economies', Chapter 2 in Asia-Pacific Economic Cooperation Policy Support Unit, The Impacts and Benefits of Structural Reforms in the Transport, Energy and Telecommunications Sectors in APEC Economies, 2011, https://www.apec.org/docs/default-source/Publications/2011/1/The-Impacts-and-Benefits-of-Structural-Reforms-in-Transport-Energy-and-Telecommunications-Sectors/TOC/Contents-and-Executive-Summary.pdf

Low, P., & Pasadilla, G. (2016). Services in Global Value Chains: Manufacturing Related Services. Singapore: World Scientific; https://doi.org/10.1142/10073

McAfee and the Center for Strategic and International Studies, 2014. Net Losses: Estimating the Global Cost of Cybercrime, www.mcafee.com/de/resources/reports/rp-economic-impact-cybercrime2.pdf

Miroudot, S., Sauvage, J., & Shepherd, B. (2012). Trade Costs and Productivity in Services Sectors. *Economics Letters*, 114(1), 36–38. https://doi.org/10.1016/j.econlet.2011.09.005

Miroudot, S., Sauvage, J., & Shepherd, B. (2013). Measuring the Costs of International Trade in Services. *World Trade Review, 12*(4), 719–735. https://doi.org/10.1017/S1474745613000049

Miroudot, S., & Shepherd, B. (2014). The Paradox of 'Preferences': Regional Trade Agreements and Trade Costs in Services. *World Economy*, 37(12), 1751–1772. https://doi.org/10.1111/twec.12178

Nayyar, G., Hallward-Driemeir, M., & Davies, E. (2021). At Your Service? The Promise of Services-Led Development. Washington, D.C.: World Bank. https://doi.org/10.1596/978-1-4648-1671-0

OECD, Foreign Direct Investment Statistics: Data, Analysis and Forecasts, www.oecd.org/corporate/mne/statistics.htm

OECD Services Trade Restrictiveness Index, www.oecd.org/tad/services-trade/services-trade-restrictiveness-index.htm

OECD-WTO Trade in Value Added Database, www.oecd.org/industry/ind/measuringtradeinvalue-addedanoecd-wtojointinitiative.htm

Statista, http://de.statista.com/

Shepherd, B. (2016). 'Did APEC's Trade Facilitation Action Plans Deliver the Goods?'. *Journal of Asian Economics*, 43(C), 1–11. https://doi.org/10.1016/j.asieco.2016.01.003

Time (2014). The world's top 5 cybercrime hotspots, http://time.com/3087768/the-worlds-5-cybercrime-hotspots/

UN Comtrade Database, https://comtrade.un.org/

UNCTAD FDI/TNC Database, http://unctad.org/en/Pages/DIAE/FDI%20Statistics/FDI-Statistics.aspx

UNCTAD's Global Cyberlaw Tracker, http://unctad.org/en/Pages/DTL/STI\_and\_ICTs/ICT4D-Legislation/eCom-Cybercrime-Laws.aspx

UNESCO UIS Statistics, http://data.uis.unesco.org

World Bank, Enterprise Surveys, www.enterprisesurveys.org/

World Bank, Global Findex, www.worldbank.org/en/programs/globalfindex

World Bank, World Development Indicators, http://data.worldbank.org/data-catalog/world-development-indicators

World Tourism Organization. (2016). Yearbook of Tourism Statistics dataset [Electronic]. Madrid: UNWTO.

World Tourism Organization. (2016). Compendium of Tourism Statistics dataset [Electronic]. Madrid: UNWTO.

World Trade Organization, Measuring GATS Mode 4 Trade Flows, 2008, www.wto.org/English/res\_e/reser\_e/ersd200805\_e.pdf

World Trade Organization, World Trade Statistical Review 2016, 2016, www.wto.org/english/res\_e/statis\_e/wts2016\_e/wts16\_toc\_e.htm

Printed by ITC Digital Printing Service.

A free pdf is available on ITC's website at: www.intracen.org/publications





