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**SERIES** 

# **INTERNATIONAL TRADE** 175

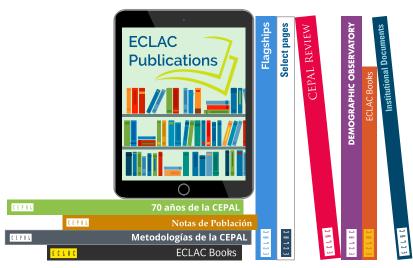
Bilateral modern services trade between India and Latin America and the Caribbean in the context of the COVID-19 pandemic

Prachi Agarwal





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SERIES

# INTERNATIONAL TRADE 175

# Bilateral modern services trade between India and Latin America and the Caribbean in the context of the COVID-19 pandemic

Prachi Agarwal



This document was prepared by Prachi Agarwal, consultant in the International Trade Unit of the Division of International Trade and Integration of the Economic Commission for Latin America and the Caribbean (ECLAC). The author is grateful for comments by Nanno Mulder, Chief of the same Unit.

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## List of acronyms

ASSOCHAM	Associated Chambers of Commerce of India
BaTiS	Balanced Trade in Services Database
BPM	Business Process Management
BPO	Business Process Outsourcing
CII	Confederation of Indian Industry
CRM	Customer Relations Management
DANE	National Administrative Department of Statistics (Colombia)
DIPP	Department of Industrial Policy and Promotion (India)
DSTRI	Digital Services Trade Restrictions Index
ERP	Enterprise Resource Planning
EXIM	Export-Import
FDI	Foreign Direct Investment
FICCI	Federation of Indian Chambers of Commerce and Industry
FY	Fiscal Year
GFC	Global Financial Crisis
IDB	Inter-American Development Bank
ICT	Information and Communication Technologies
IT	Information Technology
LAC	Latin America and the Caribbean
NASSCOM	National Association of Software and Service Companies (India)
OECD	Organization for Economic Co-operation and Development
RBI	Reserve Bank of India
STEM	Science, Technology, Engineering and Mathematics
STRI	Services Trade Restrictions Index
TCS	Tata Consultancy Services
UNCTAD	United Nations Conference on Trade and Development
WDI	World Development Indicators
WFH	Work-from-home
WFA	Work-from-anywhere
WTO	World Trade Organization

### Summary

The Information Technology enabled Services sector (also referred to as modern services) has been one of the fastest growing segments of India's exports to and foreign direct investment in Latin America and the Caribbean (LAC) over the past decade. This sector also showed significant resilience during the COVID-19 pandemic, as many Indian firms were able to reinforce their digital transformation, which strengthened their growth and export potential. India's main comparative and competitive advantages are its large educated workforce, a developed Information and communication technologies (ICT) related infrastructure, and strong innovation performance in this sector. However, imports in this sector remain more restricted both in India and LAC than those in other sectors due to various regulations. There is also scope to increase access and use of modern services by businesses and individuals alike in India and LAC.

### Introduction

Latin American and the Caribbean (LAC)'s trade and foreign direct investment (FDI) in goods and services with India has grown manifold over the last decade, with IT and IT enabled services (also referred to as modern services) being one of the most dynamic segments.<sup>1</sup> India's expansion of modern services exports was facilitated by a large educated workforce, well developed ICT infrastructure, and fast technological progress. For their part, several LAC countries (including Brazil, Chile, Colombia, Mexico, and Uruguay) have become attractive destinations to produce and export IT based solutions on a best shore basis, having complementary time zones that allow Indian firms to meet demand mainly in the Americas. This is evidenced by the fact that multiple Indian IT firms (such as Wipro, Tata Consultancy Services, Evalueserve, Tech Mahindra, and Tec.know Services) established offices and fulfillment centers in these countries.

The modern services sector in India and LAC has proven resilient to the recent COVID-19 pandemic. The pandemic, lockdowns and social-distancing measures have disrupted services trade via three out of four modes of supply. However, those modern services transacted online (Mode 1) have expanded most during the pandemic. Most small and large businesses in this sector emerged stronger having adopted the workplace of the future with digital transformation at its core. This process results in a permanent shift to remote-working, increased demand for innovative technological solutions and digital upskilling to ensure its supply and finally, diversification by firms into the new-age IT verticals including e-health, e-education, fintech and e-commerce platforms. The future also holds the possibility of greater collaboration between the two regions to shape the global modern services industry in the post-pandemic era on the principles of growth and sustainability.

This report examines trends and challenges for the modern services sector in the post-pandemic economy in India and LAC, as well as future opportunities for bilateral trade and FDI in this sector. This analysis is based on multiple sources for trade and FDI data for India and LAC countries. These include

<sup>&</sup>lt;sup>1</sup> Modern services are intensive users of ICT and include the following categories (taken from the 6th Balance of Payments Manual): telecommunications, computing and information, financial, insurance and pension services, charges for the use of intellectual property and other business services (Alvarez et al., 2021).

statistics from international organizations such as the United Nations Conference on Trade and Development (UNCTAD) and World Trade Organization (WTO). National sources include data from India (the Reserve Bank of India (RBI), Export-Import (EXIM) Bank, the Department of Industrial Policy and Promotion (DIPP) and National Association of Software and Service Companies (NASSCOM)), Brazil (Ministry of Economy), and Colombia (National Administrative Department of Statistics (DANE), and Banco de la República). In addition, estimated bilateral trade data was obtained from the WTO's Balanced Trade in Services Database (BaTIS) due to the lack of official data on bilateral trade in services between India and LAC.

Services trade remains more restricted than trade in goods in India and LAC. These restrictions to imports of modern services are compared using data on trade restrictions from the Organization for Economic Cooperation and Development (OECD)'s Services Trade Restrictions (STRI) and Digital STRI database. The development of the respective industries depends in part on ICT readiness across both the regions. Data from World Bank's World Development Indicators (WDI), UNCTAD's e-commerce index and World Economic Forum's Network Readiness Index for 2020 were used to compare infrastructural development to increase access and use of ICT-enabled services by businesses and individuals alike.

To complement the previous analysis, interviews were conducted with representatives from Indian modern services companies in LAC and LAC companies in India including the Mexican IT giant Softtek. These conversations revealed the impact of the COVID-19 pandemic on the sector, highlighted the issues faced by the companies in conducting business in the other region and shed light on the future of the sector that can benefit from greater bilateral investment and trade.

The rest of this paper is organized as follows: Section I provides a snapshot of the modern services sectors and trade in India and LAC. Section II highlights trends in bilateral trade and FDI between the two regions. Section 3 compares trade restrictions, ICT readiness across India and LAC and other factors driving (bilateral) services trade. The paper concludes with some policy recommendations for improving the modern services sectors in both the regions through greater interregional collaboration.

# I. Modern services sectors and trade in India and Latin America and the Caribbean

#### A. India

India is one of the forerunners in the global modern services sector, pioneering in software, business processing, financial technology, e-commerce, and online health services. Its share in GDP grew from 15% in 2007 to 21% in 2019. GDP data reveal the seasonality of the sector (see Figure 1).<sup>2</sup> The expected rise in value added after Q1 in 2020 was dampened by the adverse impact of the pandemic, although the Finance, insurance and business services industry grew 12.2% between Q1-2020 and Q3-2020. As compared to Q3-2019, the sector witnessed a 10.9% (y-0-y) decline during the third quarter of 2020.

The manufacturing and travel and transport sectors witnessed one of the largest year-on-year declines (44% and 52% in Q2-2020, respectively) as a result of the pandemic that began in Q1-2020. Agriculture GDP remained steady. On a positive note, both manufacturing and travel and transport sectors recovered between Q2 and Q3-2020. For its part, the modern services sector remained rather insulated from the pandemic despite global lockdowns and the virulence of the disease. In fact, their share in total value added rose from 21.1% in 2019 to 23.1% in 2020.

<sup>&</sup>lt;sup>2</sup> For example, value added in Finance, insurance and business services industry rose between Q1-Q3, dropped briefly between Q3- Q4, and then picked up in the subsequent Q1 period. This cycle has been prevalent since Q1-2011.

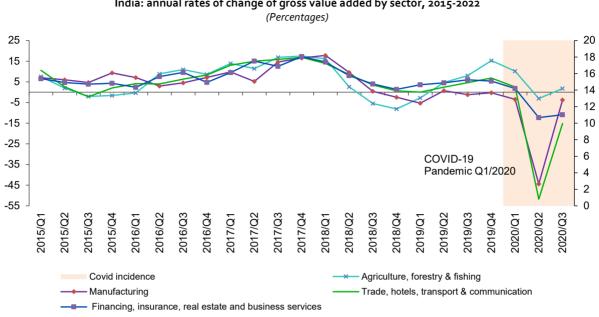
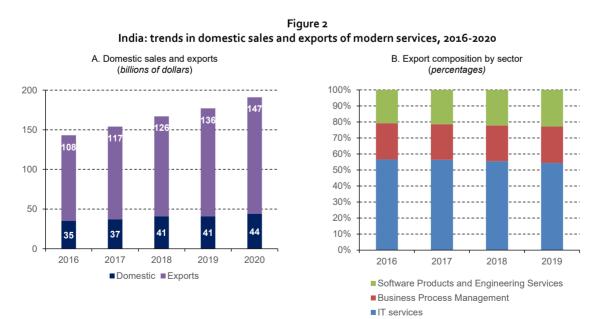


Figure 1 India: annual rates of change of gross value added by sector, 2015-2022

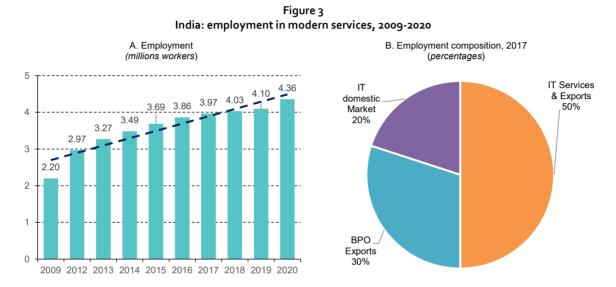
Source: Elaboration by the author based on data from the Reserve Bank of India.

The modern services sector in India was valued at 191 billions of dollars in Fiscal Year (FY) 2020, recording an average annual growth rate of 7.5% between FY2016 and FY 2020 (see figure 2A). Illustratively, this sector exported almost 77% of its output in FY2020, valued at 147 billions of dollars. Within exported output, IT services represented 54%, followed by Business Process Management (BPM) and Software Products and Engineering Services with each about 23% (see figure 2B). Despite the negative impact of the pandemic, experts remain positive about the future of the sector as they expect it to grow at over 7% per annum up to 2025 (The Hindu Business Line Bureau, 2020).



Source: Elaboration by the author based on NASSCOM, 2020.

Employment in the modern services sector grew from just 2.2 million in FY2009 to 4.4 million in FY2020 (see figure 3A), which represents an average annual growth rate of 6.4%. In 2019-2020 alone, this sector added 138,000 employees. About 80% of this workforce contributed directly to exports, while 20% catered to the domestic market (see figure 3B). The eleven largest players in the market (including Tata Consultancy Services (TCS), Infosys, HCL Technologies and Wipro) employed about 38% of the total employees in the sector in 2019 and represented almost 50% of total export revenue of the sector (IBEF, 2021). TCS was the largest employer, with close to 400,000 employees (Bist, 2020). On an aggregate level, the services sector employed 32.3% of the total workforce in 2019, absorbing an additional 6% from other sectors since 2009 (World Bank, 2020).



Source: Elaboration by the author based on NASSCOM, 2020.

From January to March 2021, services exports expanded 1.8% vis-à-vis the same period in 2020 despite the pandemic, contributing 61.3% to total exports of goods and services (Ministry of Commerce and Industry). However, services imports fell in the same period (y-o-y) 2.7%. Overall, India registered a positive trade balance in services of 21.8 billions of dollars in the same period (Press Information Bureau, 2021). Data from the Reserve Bank of India for May (2021) also suggest a y-o-y growth of 10.7% in exports and 14.8% in imports of services vis-à-vis May 2020 (RBI, 2021).

According to WTO data, modern services represented 73% of total services exports in 2019, which is slightly more than its level in 2005. However, the value of these exports grew by an average rate of 10.8% per annum on average between 2005 and 2019. On the other hand, the share of the same sector in total imports grew from 33.4% in 2005 to 44.9% in 2019 (see figure 4).

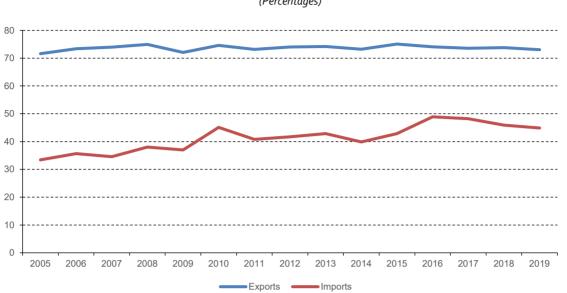


Figure 4 India: participation of modern services in total services exports and imports, 2005-2019 (Percentages)

Source: Elaboration by the author based on WTO, WTOStats, 2020.

Exports and imports of modern services were stagnant throughout 2019, but witnessed positive growth from April to June in 2020 despite the pandemic, according to the Reserve Bank of India's Quarterly Balance of Payment data (figure 5A). This points towards the resilience by the sector during a crisis and also confirms anecdotal evidence of greater adoption of digitization tools by firms around the world that increased the demand for Indian services. Exports and imports of modern services rose by 9.5% and 11.1% respectively, in January-March 2020 compared to the same period in 2019, while they fell by 1.1% and 1.2%, respectively, in April-June 2020 as a result of the pandemic. From July to September 2020, trade in modern services recovered swiftly, with imports and exports increasing by 13.1% and 7.5%, respectively, compared to the same period in 2019. This trend continued in the fourth quarter October-December 2020 as exports and imports grew at 7.2% and 5.4%, respectively, vis-à-vis the same period in 2019 (figure 5B).

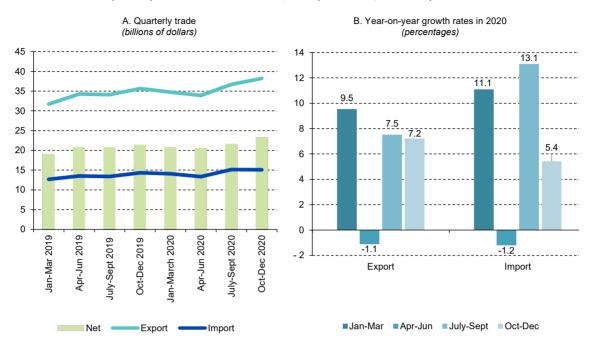


Figure 5 India: quarterly trade in modern services, first quarter 2019 — fourth quarter 2020

Source: Elaboration by the author based on Reserve Bank of India, 2020.

Business Process Outsourcing (BPO) services represented 77.6% of total modern services exports in 2019-20. Of them, other business services comprised 65.5%, followed by finance and accounting services (17.2%), and business consulting services (12.9%). Engineering services made up the remainder share of modern services exports (22.4%) (figure 6). Almost half of engineering service exports was concentrated in other Engineering services (48.9%), followed by product design services (37.5%) and embedded solutions (10.4%). Interestingly, the BPO and engineering services shares in total modern services exports remained unchanged after 2017-18.

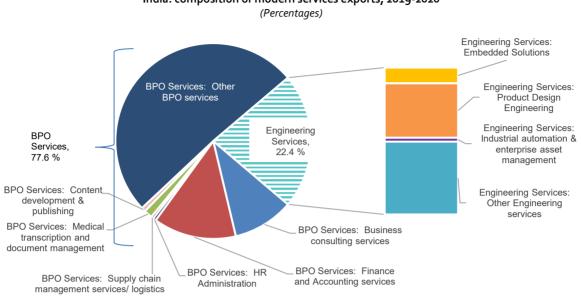


Figure 6 India: composition of modern services exports, 2019-2020 (Percentages)

Source: Elaboration by the author based on Reserve Bank of India, 2020.

#### B. Latin America and the Caribbean

Latin America and the Caribbean is a small player in global services trade. The region accounted for only 2.1% of global services exports in 2020. It represented 4.4% of global tourism exports and only 1.5% of global modern services exports. These shares have remained fairly constant after 2005, with a slight rise immediately after the global financial crisis in 2010 (Figure 7-A). Within modern services exports, LAC represented 2.2% of global other business services exports in 2019, down from its peak share of 3.7% in 2012. The region represented 2.0% of global insurance and pension services exports, which was double their share in 2005. The regional shares in global exports of IT services, audio-visual services and financial services hovered around 1-2% in the period 2005-2020, while its share in global charges for use of intellectual property was around 0.3% throughout the same period (figure 7B).

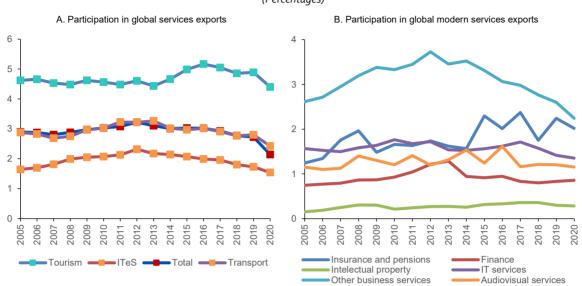
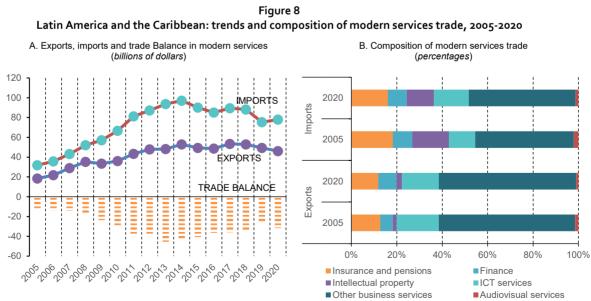


Figure 7 Latin America and the Caribbean: participation in world exports of services, 2005-2020 (Percentages)

Source: Elaboration by the author based on WTO, 2021.

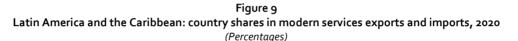
The value of LAC trade in modern services grew fast after 2005, notwithstanding the adverse impact of the global financial crisis in 2009. Both services exports and imports peaked in 2013-2014, but fell thereafter (figure 8A). Imports grew at an average annual rate of 13.2% between 2005 and 2014, while exports grew at a slightly slower pace (12.4%). As imports grew faster than exports, the region's trade deficit widened until 2013-2014. From 2014 until 2019, the trade deficit shrunk as imports fell at an average annual rate of 4.9%. The composition of LAC modern services exports and imports remained constant from 2005 to 2020. For example, Other business services accounted for 60.2% and to 45.3%, respectively, of modern services export and imports on average during the period (figure 8B).

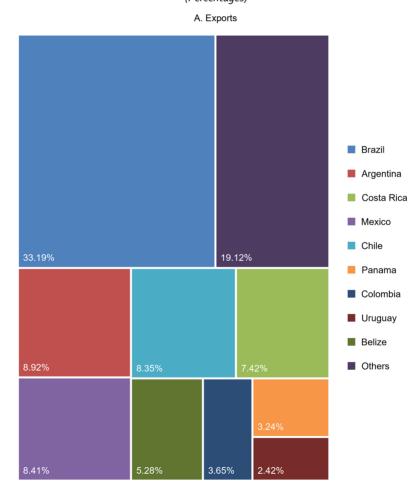


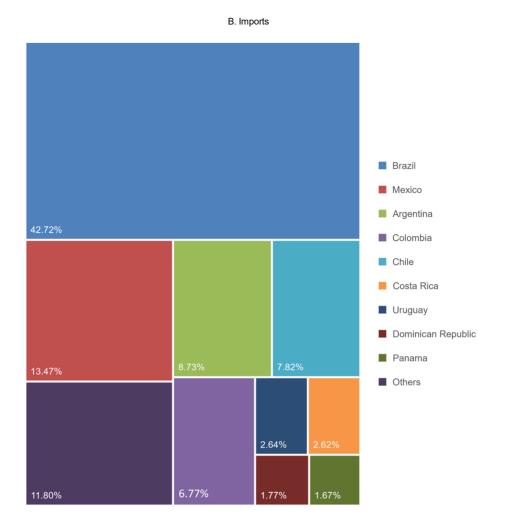
Source: Elaboration by the author based on WTO, WTOStats 2021.

Brazil, Argentina, Costa Rica, Mexico and Chile were the five leading LAC exporters of modern services in 2020 (figure 9A). Brazil accounted for 33.2% of total regional modern services exports in 2020 (versus 36.4% in 2005). Argentina's share was 8.9% in 2020 (down from 11.4% in 2005). Both countries were the region's major exporters from 2005 to 2020. Costa Rica's share in regional modern services exports more than doubled from 3% in 2005 to 7.4% in 2020. This expansion can be attributed in part by the successful attraction of foreign modern services firms that use Costa Rica as an export base. Panama also increased its share in regional modern services exports from 2.8% in 2005 to 3.4% in 2020. In 2020, Uruguay and Belize replaced Peru and the Bahamas from the top ten ranking in 2005 in terms of modern services exports.

Brazil and Mexico are the region's predominant modern services importers. Their combined share grew from 62% in 2005 to 66% in 2019, primarily due to growth in Brazil's share in modern services imports from the region. Brazil accounted for the lion's share in regional imports (42.7%) in 2020. Mexico's share was 13.5%. The next three largest importers were Argentina, Colombia and Chile. In 2020, Costa Rica, Uruguay, Dominican Republic and Panama replaced Venezuela (B.R. of), Peru, Jamaica and Ecuador in the top ten ranking in 2005.







Source: Elaboration by the author based on WTO, WTOStats 2021.

# II. Bilateral modern services trade and foreign direct investment

#### A. Bilateral services trade

Bilateral services trade between India and LAC is analyzed using an experimental database called Balanced Trade in Services (BaTIS) developed by the World Trade Organization. This is due to the lack of official data on bilateral trade in modern services by either India or LAC countries, with the exception of Brazil and Colombia. The Organization for Economic Cooperation and Development (OECD) also provides some bilateral services trade data for seven LAC countries in 2016.

Total Indian goods and services imports from LAC grew faster than its exports to the region from 2005 to 2019. The value of the country's imports from LAC grew 15.4% per annum on average, whereas its goods and services exports to LAC recorded an average annual growth rate of 11.8% (figures 10A and 10B). As a result, the trade balance of India with LAC in goods and services worsened from 2005 to 2019 (figure 10C).

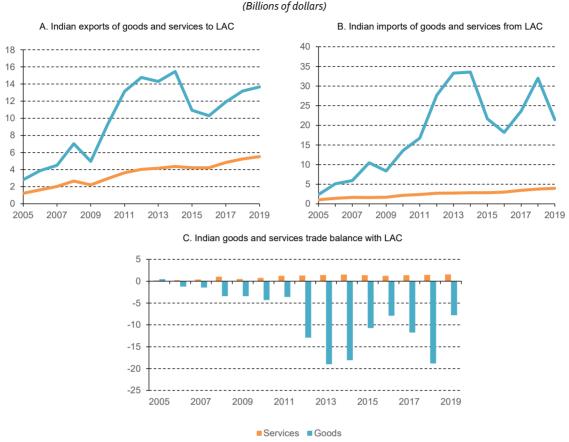


Figure 10 Goods and services trade between India and LAC, 2005-2019

India-LAC goods and services trade shows contrasting levels and trends. On the one hand, Indias's goods imports from LAC exceeded and grew faster than its goods exports to the region, resulting in a growing bilateral goods trade deficit from 2006 to 2019. One the other hand, India's services exports to LAC outpaced its imports from the region resulting in a growing bilateral services trade surplus.

Indian service exports to LAC were higher in 2019 (5.5 billions of dollars) compared to its imports from the region (3.9 billions of dollars). Also, the former grew faster (10.5% annually on average) than the latter (9.2%) from 2005 to 2019. As a result, India's trade surplus with LAC grew from 178 millions of dollars in 2005 to 1.5 billions of dollars in 2014, after which it declined slightly but peaked to 1.6 billions of dollars in 2019 (figure 10C). Brazil, Mexico, Colombia, Argentina and Chile are the main markets for Indian services exports to LAC.

From 2005 to 2019, Indian modern services exports to LAC outperformed those of traditional services. An opposite trend can be observed for India's modern and traditional imports from LAC (figure 11A and 11B). The India-LAC trade balance was in favor of India for modern services, whereas it was in favor of LAC for traditional services (figure 11C).

Source: Elaboration by the author based on UN COMTRADE and WTO's BaTIS database, 2019.

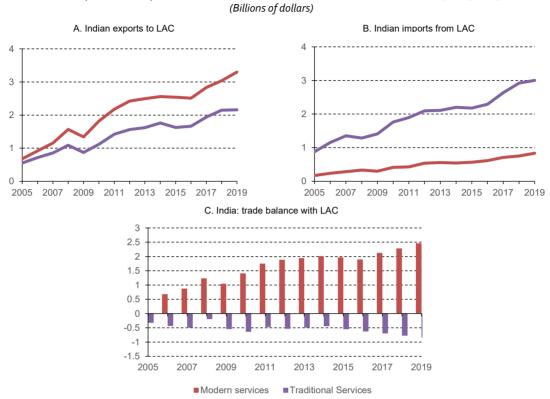


Figure 11 India: exports and imports of modern and traditional services to and from LAC, 2005-2019

Source: Elaboration by the author based on WTO's BaTIS database, 2019.

In 2019, India exported 3.3 billions of dollars of modern services to LAC region, of which 41.3% to Mercosur, and 24.8% to Mexico and Central America. Exports to Mercosur grew 11% per year on average from 2005 to 2019. India's modern services imports from LAC were 835.4 millions of dollars in 2019, up from 173.2 millions of dollars in 2005. Mercosur was the largest subregional exporter to India, followed by Mexico and Central America (figures 12 and 13).

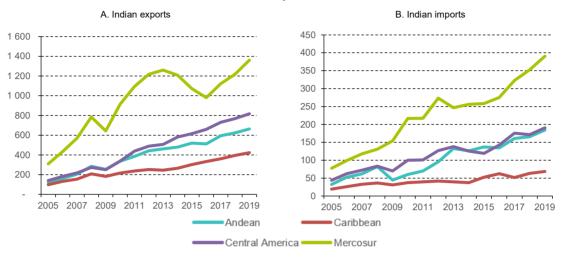
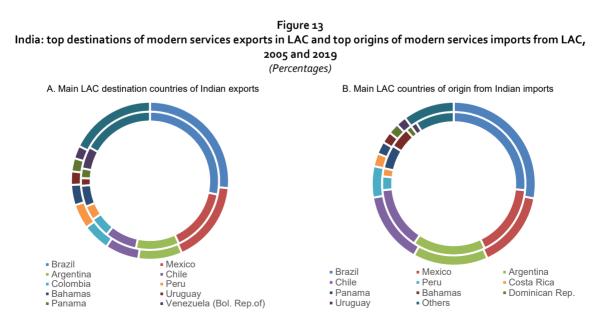


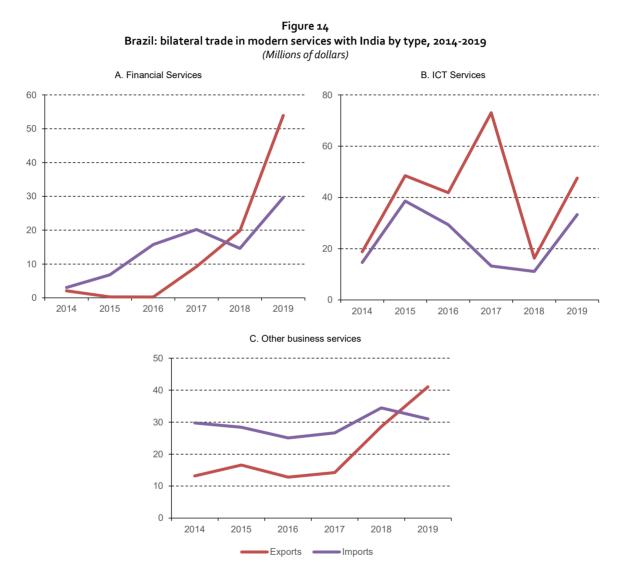
Figure 12 India: trade in modern services by main subregions within LAC, 2005-2019 (*Millions of dollars*)

Source: Elaboration by the author based on WTO's BaTIS database, 2019.

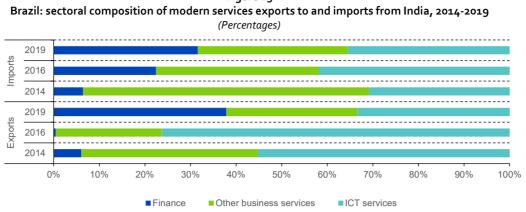
Brazil, Mexico, Argentina and Chile were the India's largest modern services trading partners in LAC in 2005 and 2019. This is shown in panels A and B of figure 13 for 2005 (inner circle) and 2019 (outer circle). Their combined share dropped from 61% in 2005 to 60% in 2019 as top destinations for modern services exports from India; while their combined share as top sources for modern services imports remained at 72% in 2005 and 2019. Thus, the composition of trade partners has remained fairly unchanged in the last fifteen years, thus reflecting positively on the nature of trade relations developed by India in the LAC region. Notably, the combined exports from Brazil and Mexico, ranked first and second respectively in terms of exports as well as imports of ICT services, have more than quadrupled from 74.2 millions of dollars in 2005 to 361.4 millions of dollars in 2019, recording an impressive growth rate of 11.9% annually that far exceeded the growth of total service exports from the region to India in the same period.

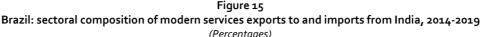


Source: Elaboration by the author based on WTO's BaTIS database, 2019. Note: The inner circle refers to 2005 and the outer circle to 2019. Bilateral trade between Brazil and India in modern services grew rapidly between 2014 and 2019, with Brazilian exports to India growing faster than the country's imports from India (figure 14). In 2016, ICT services accounted for over 70% of Brazilian modern services exports to India. Thereafter, financial services exports grew faster than those of ICT services, resulting the former share to reach 40% of Brazilian modern services exports to India in 2019. A similar trend emerged for modern services imports from India: finance, ICT services and other business services each representing similar shares in total imports in 2019, marked by the rising significance of financial services after 2016 (figure 15).



Source: Elaboration by the author based on SISCOSERV database, Ministry of Economy, Government of Brazil, 2019.





Source: Elaboration by the author based on the Brazilian Ministry of Economy's SISCOSERV database, 2019.

Colombian modern services exports to India were concentrated in architectural, accounting, business consulting, IT and marketing services, according to data from the guarterly Survey on Trade in Services of the country's Statistical Office (DANE) (figures 16A and 16B). This composition remained mostly constant over the years 2014-2019. However, the value of IT services peaked in 2017 at 24.3 millions of dollars, as did the level of architectural services at 3.1 millions of dollars. Colombian imports from India of IT services plummeted by 75% in 2018 to just over 6 millions of dollars.

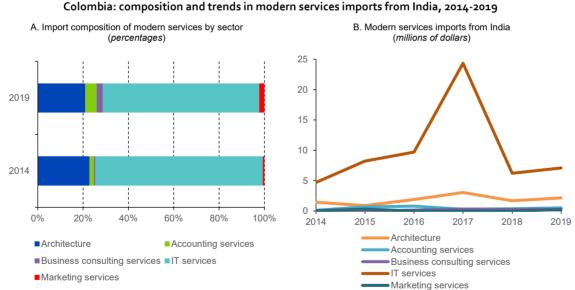


Figure 16

Source: Elaboration by the author based on National Administrative Department of Statictics (DANE), Government of Colombia, 2019.

#### **Bilateral foreign direct investment** Β.

Indian FDI to LAC fell since 2010, according to guarterly data from the Reserve Bank of India (2021) (figure 17). This downward trend continued between Quarter 1 of 2019 and 2020, as FDI dropped by 72%, from 63.5 millions of dollars to just 17.8 millions of dollars in Q1-2020 due to the pandemic that disrupted overall economic activity. Afterwards, FDI in Quarter 3 of 2020 increased by 21.3% over the same quarter in 2019- signaling a bounce-back in economic activity after the bad first half of 2020.

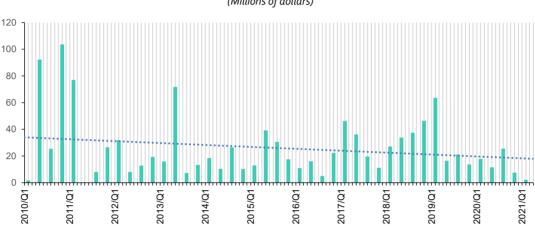


Figure 17 India: outward FDI to selected LAC countries (Brazil, Chile, Guatemala, Mexico, and Panama), 2010-2020 (Millions of dollars)

Source: Elaboration by the author based on Reserve Bank of India, 2021.

Brazil, the Bahamas, Panama, Colombia and Mexico are the top destinations for Indian FDI in LAC (figure 18A), representing 88.7% of all Indian FDI in the region from 2008 to 2018. On a sectoral level, Finance, Insurance and Business services was the third highest sector (overall) and the second-largest services sector that attracted 14.9% of all FDI in the ten-year period (figure 18B). In fact, a report on India-LAC relations highlights that most Indian investment in LAC is concentrated in the modern services sector that benefits from the presence of a local talent, has created numerous jobs, invested in innovative solutions and caters to Spanish and Portuguese-speaking markets around the world (FICCI, 2020).

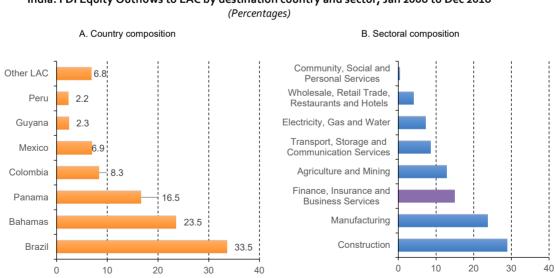


Figure 18 India: FDI Equity Outflows to LAC by destination country and sector, Jan 2008 to Dec 2018 (Percentages)

Source: Elaboration by the author based on EXIM Bank and IDB, 2018.

The largest Indian investments (exceeding one million of dollars) made in the modern services sector from 2015 to 2020 were in Brazil, Chile and Mexico by IT-giant Infosys Limited, food and beverage e-commerce business Zomato Media Pvt. Ltd and fintech leader in India Paytm E-commerce Pvt. Ltd. This result is shown by a monthly dataset published by the Reserve Bank of India. Overall, the most successful companies in the region so far have been (alphabetically) Evalueserve, Infosys, Tata Consultancy Services (TCS), Tech Mahindra, and Wipro among others. TCS alone had a turnover of 800 millions of dollars in 2019 in Latin America and helped create over seventeen thousand jobs in the region-making it the largest and most successful employers in the region for the past five years (Tata Consultancy Services, 2020). Moreover, it is estimated that the annual turnover of the dozen Indian IT, BPO and KPO firms in the region was 1.5 billions of dollars in the same year (Viswanathan, 2020).

India reported 11.9 billions of dollars worth of cumulative inward investment from LAC over the last twenty-year period, of which 86.9% originated in the Cayman Islands, 1.8% in Mexico, followed by Chile (1.3%), the Bahamas (0.4%), Panama (0.4%) and Brazil (0.3%) (table 1).

Source	Cumulative FDI (millions of dollars)	Share in total LAC FDI to India (percentages)		
Cayman Islands	10 334.9	86.9		
Mexico	213.2	1.8		
Chile	151.9	1.3		
Bahamas	51.7	0.4		
Panama	46.3	0.4		
Brazil	32.2	0.3		
Colombia	11.1	0.1		
Barbados	10.7	0.1		
Argentina	10.3	0.1		
Uruguay	5.3	0.04		
Peru	3.1	0.03		
Others	1 029.2	8.7		

#### Table 1 FDI Equity Inflows from LAC (Cumulated flows from April 2000 to March 2021)

Source: Elaboration by the author based on Reserve Bank of India, 2021.

LAC countries FDI in India show heterogeneous trends (table 2). For example, Mexican investment reached 41 millions of dollars in 2015-2016, but dipped to nearly 3 millions of dollars in 2017, only to increase again in 2018-2019 to 39 millions of dollars. Brazilian investment also spiked in 2018-2019 reaching 7.2 millions of dollars. Specific data on investment in the computer software and hardware shows the largest investment came from Colombia (3.9 millions of dollars), followed by Panama, Chile and Mexico (figure 19).

Table 2      India: annual inward FDI from LAC countries, 2015-2020      (Millions of dollars)						
	2015	2016	2017	2018	2019	2020
Argentina		0.01	0.03	0.1	0.04	
Bermuda	17.5	333.3				49.7
Brazil	1.6	0.5	0.06	5.2	2.0	
British Virginia	67.1			61.7	221.4	126.6
Cayman Islands	237.9	328.0	984.4	871.7	2 724.0	3 901.0
Chile		0.3	0.01	1.4		
Colombia		1.7		0.1ª	2.92	3.0ª
Mexico	21.7	19.5	3.3	11.1	27.5	0.5
Panama	2.7	0.5	0.03	0.7	0.3	0.3
Peru	0.01		0.04	0.3	2.6	
Uruguay	0.5	0.4	0.4			

Source: Elaboration by the author based on Department of Industrial Policy and Promotion, Government of India, 2021. <sup>a</sup>Banco de la República- Colombia, Balanza de Pagos, 2021.

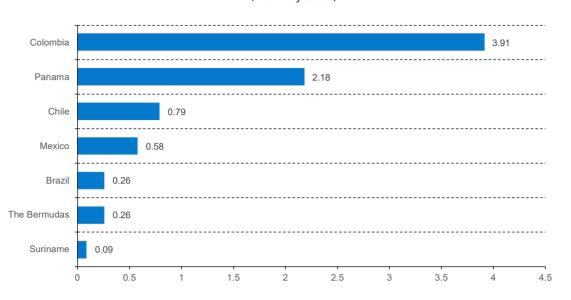


Figure 19 India: cumulative inward FDI from LAC in computer hardware and software, 2010-2020 (Millions of dollars)

Source: Elaboration by the author based on Reserve Bank of India, 2020.

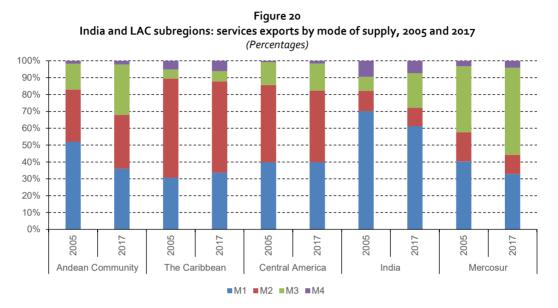
Although India attracted less than 1% of total FDI outflows from LAC (Giordano et al., 2019), it does represent important destination due to its large consumer market and vibrant services sector that offers a gamut of services across intense competition from both local and foreign players (Seshasayee, 2021). Some of the largest modern services providers in Latin America have found their way to India, including Globant and Techint from Argentina, Stefanini and SalaryFits from Brazil, and Softtek from Mexico. In fact, Softtek's CEO agreed that their expansion in India would help service the entire Asian market and the company hoped to benefit from India's gigantic offshore industry (Giordano, et al., 2019). Moreover, together with Globant and Stefanini, Softtek employs nearly three thousand Indians in its offices located in Bengaluru, Hyderabad Noida and Pune, with an overall investment of over 30 millions of dollars (Seshasayee, 2021).

#### C. Exports of modern services by mode of supply

Services are traditionally transacted via four modes of supply: Mode 1 refers to cross-border trade, Mode 2 covers consumption abroad, Mode 3 refers to commercial presence and Mode 4 covers presence of natural persons. With the exception of Mode 1, all three other modes require physical proximity between the producer and consumer. Due to the pandemic, government-imposed restrictions in the form of lockdowns and social-distancing measures have likely disrupted supply of services via these three modes. However, evidence suggests that modern services continue to be transacted online (Mode 1) despite the crisis.

Data for 2005 and 2017 on modes of supply of modern services services from World Trade Organizations TiSMoS database reveals the importance of each mode in exports of total services from four sub-regions of Latin America and the Caribbean as well as from India (figure 20). For India, Mode 1 represented 70% of total service exports in 2005 that was partially replaced by a margin of 10% by Mode 3 in 2017. However, the sheer importance of Mode 1 in India's exports sparks optimism during the pandemic as it is hoped services exports remained unaffected as a result of the government-mandated social-distancing measures. The shares of Mode 2 and Mode 4 remained fairly unchanged in the twelve-year period.

In the case of the LAC region, service exports were mainly transacted via Mode 2, followed by Mode 1 for Caribbean and Central American subregion. Evidence also suggests that these two sub-regions rely on exports of tourism and transport services, both of which were greatly affected during the pandemic. On the contrary, it is hoped modern services that are transacted mainly via Mode 1 would have been more resilient during the pandemic. In fact, anecdotal evidence corroborates this estimate: Mode 3, followed by Mode 1, comprised the largest share of services exports for Mercosur member countries in 2005 as well as in 2017; while for the Andean community, Mode 1, 2 and 3 comprised equal shares in 2017.



Source: Elaboration by the author based on WTO's TiSMoS database, 2017.

On a more disaggregated level of service exports, mode of supply composition of modern service exports as a share of total service exports is presented in figure 21. Within Mode 1, the share of modern services in total services was below 30% for Andean and Central American subregion across in 2005, 2011 and 2017. Moreover, the share of modern services was roughly 50% for the Caribbean and Mercosur countries and close to 80% for India. It is expected that modern services that were transacted via Mode 1 will be much less impacted due to the pandemic as opposed to modern services delivered via Mode 3 or Mode 4. Hence, it is fair to assume that the whole gamut of modern services will be less resilient due to the pandemic, especially those that require simultaneous physical presence of both producer and consumer.

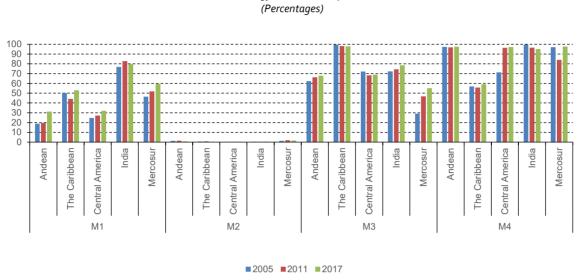


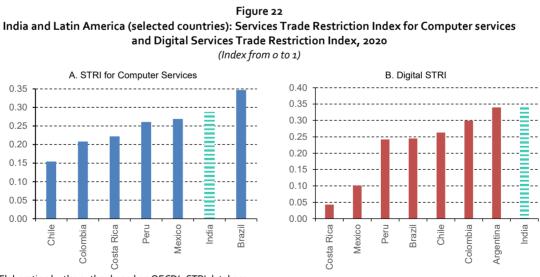
Figure 21 India and LAC subregions: share of modern services in total services exports by mode of supply, 2005, 2011 and 2017

Source: Elaboration by the author based on WTO's TiSMoS database, 2017.

# III. Factors driving (bilateral) services trade

#### A. Services Trade Restrictiveness Index

Based on a sample of six countries in LAC and India, Chile restricted the least its imports of computer services and Brazil the most in 2020. This assessment is based on the Services trade restrictiveness index data for Computer Services published by the Organization for Economic Cooperation and Development (OECD). These data vary from 0 (no restrictions) to 1 (fully restricted). Chile had a score of 0.154 and Brazil 0.347. India featured closer to Brazil with an STRI of 0.287 in 2020 (Graph 22-A). This partly reflects the obstacles faced by foreign service providers to sell computer services in India and LAC countries. These data are fairly constant since 2014, the earliest year available in the database.



Source: Elaboration by the author based on OECD's STRI database.

In the area of digital services trade, Costa Rica imposed the least number of barriers to imports of digitally enabled services, while India was surprisingly the most restrictive, followed by Argentina and

Colombia. This data comes from another complementary index published by the OECD referred to as the Digital Services Trade Restrictiveness Index (DSTRI). This dataset includes seven LAC countries and India for the year 2020 (figure 22B). On a more disaggregated level, India also imposed the most barriers to electronic transactions and online payments, but was the least restrictive in the area of infrastructure and connectivity for delivering digital services. Within LAC region, Colombia and Argentina were the most restrictive in terms of infrastructure and connectivity, Peru and Brazil were the most liberalized in terms of payment systems, while Peru, Argentina and Mexico were the least restrictive in the area of electronic transactions. These figures have remained unchanged since 2014, the first year available in the dataset.

#### B. ICT readiness: access and use

The delivery and exports of modern services require relevant infrastructure, including access to a stable broadband connection and mobile-internet services. Three such requirements are presented in figure 23 for India and four sub-regions of LAC: Fixed broadband subscriptions (per 100 people), Individuals using the internet (% of population) and Mobile cellular subscriptions (per 100 people). India is one of the worst performers on all three indicators, perhaps due to its large population; however, it seems to have improved from 2016. For example, the share of the population using the internet grew from just 22% to 32% in the three-year period. In LAC, the Andean and Central American sub-regions lead the mobile subscriptions per 100 people, while the Caribbean and Mercosur were the frontrunners in terms of fixed broadband subscriptions (per 100 people) in 2019. Mercosur and Central American registered the highest share of individuals using the internet in the total population. Within these sub-regions, Costa Rica and Uruguay have been the leaders since 2016.

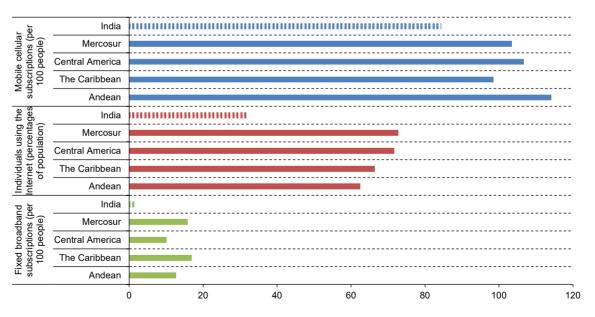
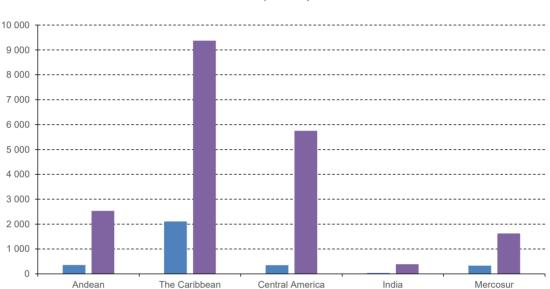
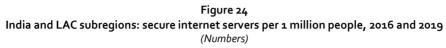


Figure 23 India and LAC subregions: internet coverage, 2019 (Percentages)

Source: Elaboration by the author based on World Development Indicators, World Bank, 2019.

Another useful indicator is the number of secure internet servers (per 1 million people) that guarantees secure online transactions and protects network communications. The Caribbean island countries were the best performers both in 2016 as well as in 2019 and recorded the highest growth in the three-year period from 2,109 secure servers to 9,371 secure servers per 1 million people. Of these, the British Virgin Islands, Belize and the Cayman Islands were the leaders in 2019. On the contrary, India, Andean countries and Mercosur members performed poorly in both the years and did not display substantial improvement in the last three years (figure 24).





Source: Elaboration by the author based on World Development Indicators, World Bank, 2019.

In terms of use of ICT-enabled services (table 3), United Nations Conference on Trade and Development (UNCTAD) publishes the B<sub>2</sub>C E-commerce index that is a composite of the indicators mentioned above as well as share of individuals with an online account (age 15+) in 2017 and postal reliability for 2018. The overall e-commerce index for 2020 ranked fifteen countries from the LAC region along with India. Of these, Costa Rica, Chile, Brazil, Colombia, and India had the highest scores, while El Salvador, Guatemala and Haiti comparatively scored poorly on the index. On closer inspection, it is found that most countries have similar scores for three out of four components of the composite index and lack mostly in reliability of the postal service performance, with the exception of Colombia and India. Another complementary indicator published by UNCTAD in 2017 is the number of internet shoppers as a share of total internet users. According to the latest data, both Brazil and Chile have the largest number of internet users (34%) engaged in online shopping among the group of countries chosen for this analysis, closely followed by Uruguay at 30% in 2017.

The World Economic Forum (WEF) ranks 134 countries based on the Network Readiness Index that covers four pillars: Technology, People, Governance and Impact. For the purpose of this paper, the

focus is on the overall index and on the technology<sup>3</sup> pillar that covers access, content and future technology. The index covers sixteen LAC countries as well as India (table 3). In 2020, Uruguay, Chile, Costa Rica and Brazil ranked in the top 60 countries. India, on the other hand, ranked 88th on the overall index among the 134 countries and 11th in our sample of countries. Within the pillar of technology, Venezuela (B.R. of), Guatemala and El Salvador were the worst performers, while Uruguay, Chile and Costa Rica had the highest scores in our sample. India, was in the middle of the pack and ranked 8th in this sample. It lacked mainly in access to the internet, ICT patent applications, adoption of emerging technologies and international internet bandwidth.

Country	B2C E-commerce Index, 2020	Internet shoppers as a share of internet users, 2019 <i>(percentages)</i>	Network Readiness Index Score 2020
Argentina	50.9	21ª	50.4
Bolivia	39.2	9ª	36.7
Brazil	65.3	39	50.6
Chile	68.4	32 ª	54.1
Colombia	59.1	12 <sup>b</sup>	46.8
Guatemala	36.8	13 ª	35.5
Haiti	20.2	8ª	-
Honduras	44.2	5	36.2
India	57.1	20ª	41.6
Mexico	46.8	32	49.7
Panama	49.5	11ª	44.7
Paraguay	47.1	17	41.1
Peru	52.5	12	43.7
Trinidad and Tobago	54.9	22ª	-
Uruguay	56.6	53	54.9
Venezuela (Rep. Bol. of)	48	23ª	34.6

Table 3
India and selected LAC countries: Access and use of ICT-enabled services, 2019 and 2020

Source: Elaboration by the author based on UNCTAD, 2020 and World Economic Forum, 2020 (last column only). <sup>a</sup>Data for 2017.

<sup>b</sup>Data for 2018.

### C. Workplace of the future and digital transformation

The COVID-19 pandemic strongly affected the global economy as businesses across industries had either been closed down or forced to adopt new ways of conducting business operations. Although recent data already points towards resilience of the global modern services sector in the face of this crisis, several interviews with industry leaders were conducted in India and the LAC region during the peak of the pandemic (September-October, 2020). Most small and large businesses had already emerged stronger by the time, having adopted the workplace of the future, with digital transformation at its centre. However, the candid interviews did reveal their past struggles during the first two quarters of the year 2020 when the pandemic was seen an exogenous shock that propelled the entire modern services industry into adopting innovative digital tools to transition to the new normal. These stories of some of the most successful Indian modern services firms in Latin America and the Caribbean and Latin American modern services firms in India bare not

<sup>&</sup>lt;sup>3</sup> It covers data on Mobile tariffs, Handset prices, Internet access, 4G mobile network coverage, Fixed-broadband subscriptions, International Internet bandwidth, Internet access in schools, GitHub commits, Wikipedia edits, Internet domain registrations, Mobile apps development, Adoption of emerging technologies, Investment in emerging technologies, ICT PCT patent applications, Computer software spending and Robot density (WEF, 2020).

just their experiences during the pandemic but also foretell the future of the industry. The latter includes the possibility of greater collaboration between the two regions to shape the global modern services industry on the principles of growth and sustainability.

# D. Transition through change: Insights from interviews with industry leaders

The transition to the new normal in the aftermath of the pandemic comprised of three main levels of change: enterprise, client, and employee. A factor common to all three levels was the adoption of new-innovative-technology solutions to the issues presented by the pandemic. Most of the companies interviewed were successful in transitioning to the work-from-home (WFH) or work-from-anywhere (WFA) scenario, albeit with infrastructural bottlenecks and security concerns. For example, the WFH scenario required the setting-up of workspaces at home that involved considerable investment in state-of-the-art hardware, with fast and reliable internet connectivity and secure (and encrypted) networks to protect from data breaches of sensitive information. Companies cited various reasons in support of this system-cost optimization, saved travel time, and greater productivity, and predicted the sustainability of this workplace of the future that also presented a unique opportunity to connect geograhically diverse workforces through digital platforms, ending the need for business travel. Surprisingly, some big firms were already ready for this shift as they drew from their experience during the H1N1 outbreak in 2009 that affected firms in the Americas. Hence, remote working was not a new concept for these incumbent firms. These firms were also capable of absorbing the short-term impact of the pandemic as they used the geoFigure ical and temporal heterogeneity of the pandemic to their advantage through their global network of offices.

Another strand of technology adoption across the enterprise level was in the form of embracing digital transformation in the workplace through elements of the Fourth Industrial Revolution, including virtual meetings, cloud computing, artificial intelligence, machine learning techniques, enterprise resource planning (ERP) to manage supply chains within a firm including process automation, and internet-of-things. Although this adoption assisted firms in providing cloud-based innovative solutions to clients, it also presented the need for upskilling of the existing workforce in the new-age digital tools. Many firms that were interviewed highlighted their ongoing upskilling and reskilling programs to enable a smooth transition for the employees, coupled with other employee well-being initiatives including entertainment, team bonding, fitness and therapy sessions to maintain their morale. Review of previous global crises anticipated a possible down-sizing by firms during this crisis, but anecdotal evidence as well as the interviews revealed that the modern services sector remained unaffected. Moreover, firms were interested to expand their employee base to benefit from the plethora of local talent available in both the regions in the aftermath of the pandemic.

One question of how they managed to not only maintain their client base but also grow across verticals during the crisis, firms revealed that timely purpose-driven and value-based communication was key to retain clients that were not prepared for this transition. Moreover, firms cited the emergence of new digital verticals such as e-health, e-education and financial technology (fintech) as a response to the pandemic helped them to diversify and onboard new clients that partially mitigated the adverse impact of the pandemic. In fact, most firms confirmed that their future expansion plans in their respective regions remained unaffected and were still-on-track despite the disturbance.

However, this was not the case for the small firms and start-ups in the industry that feared temporary or permanent closure due to their inability to withstand the impact of the disruption. For example, anecdotal evidence from Confederation of Indian Industry in India estimated that almost thirty % of MSMEs in the industry will not survive the pandemic in India (CII, 2020), while another survey by the National Association of Software and Service Companies (NASSCOM) in India reported that over

180 tech start-ups in the country expect slower growth as a result of the pandemic and about half of them expect negative growth (NASSCOM, 2020).

### E. The next big thing

The digital transformation embraced by firms not only ensured resilience of the modern services industry during the pandemic, but it is also the future of the industry. This was comprised of four main elements that also form the basis of these future developments:

- (i) A shift towards teleworking, whether from home, or co-working spaces. While the traditional setting of an office complex will not be entirely passé, a large share of the workforce is expected to permanently shift to WFA arrangements even as the impact of the pandemic dissipates over time. For example, the firms interviewed predicted that over half of their workforce will return to office under a hybrid setting that will involve working from office only 2-3 days a week. Benefits of this setting point towards cost optimization, greater efficiency and productivity, as well as the creation of a borderless digital workforce. Teleworking in turn, will increase the digital requirements across enterprises, clients and employees;
- (ii) A greater demand for technology in the form of new software, automation, cybersecurity as well as increased demand for auxiliary infrastructure-secure networks, and faster internet connectivity. This trend will necessitate the demand for digital upskilling of existing employees. The World Economic Forum already estimates that over 50% of the workforce will require significant reskilling and upskilling by the year 2022 (Sun et al., 2020);
- (iii) Skill development will involve training in cloud technology, Al/ML, enhanced user experience, customer relations management (CRM), and digital networking to ensure client as well as job retention (McKinsey, 2020). In fact, many large Indian modern services firms have already begun offering these training modules to their employees (KPMG, 2020). This trend will be supplemented by upgrading university curricula to support the evolving needs of the industry. The pandemic has also forced traditional brick-and-mortar businesses to move online by offering e-services and mobile applications. Notable examples include the proliferation of e-commerce vendors, in addition to growth of e-health and e-education services, contact-less payment options via fintech tools, and platform aggregators.
- (iv) The modern services industry has expanded to include a gamut of new digital services that also presents an opportunity to small and large firms to diversify into these verticals and cater to a larger variety of clients. This trend already began during the pandemic, it also paves the way for the future of the industry.

## **IV.** Conclusions

The modern services sector in both India and the LAC region remained resilient during the pandemic. This is evident from both real data and anecdotal evidence collected through a review of institutional reports and interviews with industry leaders. However, even before the pandemic, there were some shortcomings in the respective sectors that restricted the overall growth of exports and domestic sales. Therefore, there is a need to develop targeted policies by India and the LAC countries to not only address challenges at home but also promote bi-regional cooperation to achieve sustainable and cooperative growth.

India could increase public and private investment in ICT infrastructure to increase the access and use of ICT services by businesses and individuals alike. For example, the analysis of ICT readiness that compared India with its South and Central American counterparts ranks India very poorly, chiefly in terms of fixed broadband and mobile cellular subscriptions that comprise the overall access to internet. Moreover, it also lacks in the availability of secure internet servers that guarantees secure online transactions and protects network communications. This coupled with low adoption of emerging technologies and unavailability of internet bandwidth translates into inadequate access and use of ICT services. In addition, policies need to address data security issues to curtail fraudulent activity over the internet and provide a safe digital platform to conduct business by traditional firms as well as e-commerce vendors that rely on e-finance services.

Another key element of trade in modern services is the ability to not just promote exports of domestic firms but also incentivize imports of such services that can facilitate diffusion of new technology and invite foreign players into the Indian market that will promote competition while supporting growth in employment in the industry. However, India continues to apply restrictive measures that hinder the growth of imports of computer services (including software services). Likewise, other restrictive measures on conducting electronic transactions and online payments ensure that domestic players maintain complete autonomy to service the large Indian market that is growing rapidly during a global e-commerce boom sparked by the pandemic. Such measures inhibit the domestic industry and total trade in modern services in reaching its full potential. Thus, public policies

that address these limitations on imports of modern services services are the need of the hour as technology permeates more layers of business operations, in India and the world. Such policies can also support imports from Latin America and the Caribbean, especially by incentivizing LAC companies interested in entering or expanding in the Indian market.

Future government to government (G2G) interactions can focus on facilitating market access between the two regions; this will provide impetus to the exiting program of the Government of India called "Focus LAC Program" that was initiated in 1997. Joint consultative meetings between Indian officials and representatives of various LAC countries can be expanded to discuss mutually beneficial ways of enhancing trade and investment. Moreover, existing trade agreements between countries such as the India-Mercosur and India-Chile Preferential Trade Agreements signed in 2005 and 2006, respectively, can be broadened to include trade in services, especially due to the growing trade between the two partners. This can be modeled after the highly anticipated India-Peru Free Trade Agreement (FTA) that is currently being negotiated and includes goods, services, investment and movement of professionals (Siddiqui, 2020). In terms of investment relations, although the existing Investment Cooperation and Facilitation Treaty signed between India and Brazil in 2020 does promote and regulate bilateral investment, there is scope for signing new bilateral investment treaties (BITs) with other major partners in the region, including Mexico, Chile, Argentina, Costa Rica and Colombia.

Indian modern services exports are highly concentrated in business process management (BPM) services that have low value added. There is scope to move up the value chains to export software and engineering services that can help the Indian industry to mature into a technological hub. Within the modern services sector, India can diversify into new verticals that digitize healthcare, education, finance, manufacturing and agricultural sectors of the economy. New ways to sustainably integrate digital solutions into these traditional sectors could pave the way for unprecedented growth. For example, online medical diagnostics and telemedicine are changing the way countries provide healthcare services to a larger population based in both urban and rural areas with the help of mobile applications that let patients partake in consultations with doctors from the comfort of their homes. Anecdotal evidence suggests that such m-health services were already prevalent in India during the pandemic that imposed lockdowns and social distancing measures. However, policies that incentivize and regulate entry into these new verticals are needed to reap the benefits from this technological wave.

The final caveat in the growth story of India is the lack of statistical data on bilateral trade in services that obstructs the identification of issues restricting growth of trade in modern services with India's main partners and prohibits the formulation of policy initiatives to promote industrial activity. Hence, there is an urgent need for policymakers, researchers, and commerce bodies to develop an updated database of these figures. Similar lack of disaggregated data on services trade with smaller partners is an issue in most of the LAC countries, with the exception of Brazil and Colombia. This also inhibits the design of effective policies to promote bilateral trade in services.

Within the LAC region, countries' performance on network readiness-related infrastructure to support the modern services has been above average. For example, Uruguay, Chile, Costa Rica and Brazil ranked in the top 60 countries (out of 134 countries) on WEF's network readiness index that covers access, use and absorption of technology by businesses and individuals. The region boasts of many qualities including political stability, geographical proximity to the United States, favorable production and operational costs, high mobile penetration, and quality of life. This has attracted many large IT/modern services firms from India to set-up offices in the region. Despite this favorable environment, trade in modern services is limited-LAC countries comprise a share of less than 4% in global exports. Hence, future policies must focus on promoting development and exports from the modern services industry, including IT and consultancy services, financial and insurance services, and audiovisual services.

To this end, policies can be implemented that target upskilling of the existing workforce, training of SMEs in digital tools and designing of university-level programs in ICT and STEM (science, technology, engineering and mathematics) courses to promote innovation. These policies can benefit from public private partnerships and knowledge exchange with the Indian government that has successfully created a large skilled labor force to upgrade human capital in the region. Many SMEs and start-ups in the region mainly cater to the domestic market; their goal to expand operations and global outreach can benefit from greater access to credit in the form of seed capital to seamlessly transition into the new normal after the pandemic that requires greater digitalization of business processes.

Large LAC countries already have export promotion policies in place. However, most of the smaller countries need extra assistance in making this transition. Under the existing regional integration efforts, successful members can provide specialized recommendations through experience sharing to help smaller members liberalize their service sector that can generate many benefits. Future negotiations can aim to include dedicated chapters on services and investment to promote expansion of cross-border trade. Moreover, countries can harmonize digital standards, as well as immigration and tax policies to promote intra-regional trade in modern services services and position the region as a global hub of digital trade.

Additional harmonization efforts in standardization, regulation and completion policies with a view of stimulating investment can also ensure exports and production of high-quality services in the region. This move will also incentivize Indian IT companies to expand operations across countries that was earlier restricted due to stringent domestic regulations. Indian IT companies in the region are already large employers and cater to both the domestic and international markets on a best shore basis, but harmonization efforts, inter alia, can attract a diversified set of Indian companies in the region to set up fulfillment and global in-house centers to deliver modern services to a diverse range of markets in the Americas, Europe, Asia and the Pacific. This entry of Indian modern services firms into the LAC market and vice-versa can also benefit from multilateral initiatives under the World Trade Organization (WTO). For instance, the WTO Joint Initiative on Services Domestic Regulations aims to simplify the domestic measures such as license procedures, technical standards and professional standards that affect service trade; joining this initiative can facilitate entry of foreign modern services firms in both the regions.

The high dependence on Mode 3 and Mode 4 of delivery of services by LAC countries has also restricted the growth of the sector, especially during the pandemic. Thus, a shift to Mode 1 of delivery of modern services services will ensure businesses remain open and profitable during future crises. Incentives to diversify the sector into the new age verticals of e-health, e-education, fintech and e-governance can also help strengthen the capability of the overall sector in the region. To this end, knowledge exchange with Indian businesses on a business-to-business (B2B) or business-to-government (B2G basis) on successful ways to promote ICT and fintech technologies can help strengthen the industry.

Existing private sector and government arrangements from both sides to promote bilateral trade and investment, such as activities conducted by the Confederation of Indian Industry (CII), the Federation of Indian Chambers of Commerce and Industry (FICCI), and Associated Chambers of Commerce of India (ASSOCHAM) from the Indian side are already nurturing the relationship between the two megaregions. Moreover, export promotion and FDI attraction agencies of several LAC countries including Chile (Pro Chile and InvestChile), Colombia (ProColombia), Costa Rica (CINDE and PROCOMER), Uruguay (Uruguay XXI), and Venezuela (CONAPRI) can also promote the development of a long-term partnership with India in the modern services sector. In a nutshell, India's relationship with LAC still includes limited spaces for formal dialogue, but there is an opportunity for collaborative efforts between the two regions to develop digital solutions to ensure a favorable post-COVID recovery of their respective IT industries.

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