Working Paper 399 | October 2020

QUANTIFYING BARRIERS TO MOVEMENT OF SERVICE SUPPLIERS AND EXAMINING THEIR EFFECTS: IMPLICATIONS FOR COVID-19

Anirudh Shingal

Key Highlights

- Using qualitative information from the OECD's STRI data, we construct an index to quantify regulatory barriers to the movement of service suppliers, and examine its relationship with services trade by mode of supply.
- Results show that the constructed Mode 4 restrictiveness index is negatively correlated with services imports in three of the four modes of services delivery that require proximity between buyers and sellers.
- A 10% increase in Mode 4 restrictiveness is found to be associated with a proportionate decline in Mode 4 services imports on average and a 7.6 and 5.0% decline in services imports delivered by Modes 2 and 3, respectively.
- Notably, services delivered by these Modes 2, 3 and 4 are already adversely affected by COVID-19 and accounted for over 70% of global services trade in 2017 according to WTO data.
- These findings thus further underline the need for countries to refrain from imposing prohibitive restrictions on service suppliers during this pandemic.

EXECUTIVE SUMMARY

The importance of services trade and "servicification" of economic activity has grown in countries overtime. However, regulatory and administrative barriers to the movement of service suppliers have meant that "Mode 4" accounted for only 2.1% of total services trade in 2005 and 2.9% in 2017. While trade costs for services have been computed in the literature, barriers specific to Mode 4 services trade have not yet been quantified. We contribute by constructing an index to quantify regulatory barriers to the movement of service suppliers, using qualitative information embedded in OECD data on services trade restrictions, and examining its relationship with services trade by "mode" of supply. Results show that the Mode 4 restrictiveness index is negatively correlated with services imports in three of the four modes of services delivery that require proximity between buyers and sellers. Notably, services delivered by these modes are already adversely affected by COVID-19. These findings thus further underline the need for countries to refrain from imposing prohibitive restrictions on service suppliers during this pandemic.

BACKGROUND

Trade in services is important for countries globally. Services are also important for economic growth and development given their role as inputs into production in all sectors of economic activity. While services trade and FDI are found to foster productivity growth (Arnold et al. 2011, 2016; Beverelli et al. 2017), trade costs for services are higher than those for goods and the rate of decline observed for services trade costs has been much less than that for goods (Miroudot et al. 2013).

These costs are especially salient for services delivered by the "temporary movement of natural persons" or "Mode 4" trade in WTO GATS parlance, which inter alia explains the low share of Mode 4 trade in total services trade. There are four different ways in which services are

traded internationally: Mode 1 ("cross-border services trade") that includes the entire range of services transacted via the internet e.g. online medical transcription services; Mode 2 ("consumption abroad" where the buyer travels overseas to consume a service e.g. tourism); Mode 3 ("commercial presence" by a foreign affiliate in the domestic economy and the affiliate's transactions e.g. international retail banking services); and Mode 4 ("movement of natural persons" where the seller travels abroad to deliver a service e.g. IT professionals working onsite abroad and intra-corporate transferees).

According to WTO's Trade in Services by Modes of Supply (TiSMoS) dataset, in 2017, 59.3% of global trade in services was delivered by Mode 3, 27.6% by Mode 1, 10.2% by Mode 2 and only 2.9% by Mode 4. In fact, irrespective of the level of economic development, the share of Mode 4 in services trade hovers around 3% though it was even lower at 2.1% in 2005 and 2.5% in 2010.

Trade costs for services, for intermediate vs final services, and for disaggregated services sectors, have been computed (Miroudot et al. 2013; Miroudot and Shepherd, 2016) and also estimated using structural gravity (WTO, 2019). Measures of regulatory impediments to services trade – the services trade restrictiveness indices (STRI) – have also been used to examine the effects of regulatory incidence and heterogeneity on services trade, investment, integration into global value chains and membership and depth of preferential trade agreements (Kox and Nordås, 2007, 2009; Nordås, 2016; Miroudot and Cadestin, 2017; Nordas and Rouzet, 2017; Rouzet and Spinelli, 2016; Rouzet et al. 2017; Andrenelli et al. 2018; Shingal et al. 2018; Egger and Shingal, 2020). However, barriers specific to Mode 4 services trade have not yet been quantified.

Against this background, we contribute by constructing an index (see Figure 1) to quantify regulatory barriers to the movement of service suppliers, using qualitative information from the OECD's STRI data, and examining its relationship with services trade by mode of supply. Note that the OECD's STRI database only provides qualitative responses to measures that affect Mode 4 trade. We thus add value by quantifying these responses and constructing an index that can be used in empirical analysis.

HYPOTHESES

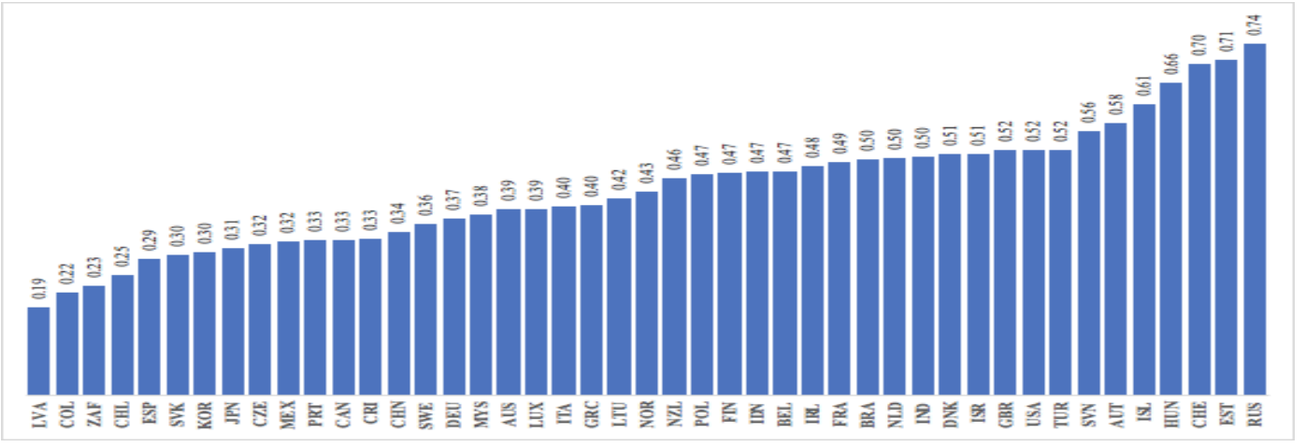
We expect Mode 4 restrictiveness to be negatively correlated with Mode 4 services imports. At the same time, given complementarities between different ways in which services trade is transacted, we expect the index to also be negatively correlated with services imports delivered via Modes 2 and 3.

RESULTS

Figure 1 presents the average Mode 4 restrictiveness in 2017 based on weighted averages. The average score ranges from 0.19 for Latvia (at the bottom end of the distribution) to 0.74 for Russia (at the top end). The average score for non-OECD countries (0.39) is found to be lower than that for the OECD (0.45) as Latvia, Colombia, and South Africa are amongst the least restrictive countries in the sample while nine of the top ten most restrictive Mode 4 countries (barring Russia at the top) belong to the OECD.

In general, barriers to services trade do not take the form of border measures such as tariffs, but are rather embedded in regulatory frameworks. However, barriers to Mode 4 trade also include border measures such as visas, work permits and quotas and are therefore more distinct. At the same time, labour market tests for work permits for service providers, and nationality/citizenship/permanent residency requirements for license to practice are examples of "behind-the-border" regulatory barriers constraining Mode 4 trade.

Figure 1: Weighted average Mode 4 restrictiveness index (2017)



Source: OECD STRI; own calculations | Note: The aggregate index by country is constructed using weighted averages of the constructed index across sectors, where the weights are sectoral shares in total services imports by value for each country

Table 1: Count of countries for which the simple average Mode 4 restrictiveness by STRI measure exceeds the STRI measure mean (2017)

STRI measure	Average by STRI measure	Count of countries
A temporary licensing system is in place	0.391	25
Appointed actuaries must be nationals or residents	0.178	8
At least one engineer must be licensed for the issuance of construction permits	0.667	30
Domicile required for Licence to practice	0.300	23
Foreign construction engineers are required to practice locally for at least 1 year	0.178	8
Foreign construction engineers are required to take a local examination	0.356	16
Foreign professionals are required to practice locally for at least 1 year	0.258	18
Foreign professionals are required to take a local examination	0.440	17
Foreign providers have to completely re-do the university degree, practice and exam in the domestic country	0.093	14
Labour market tests: contractual services suppliers	0.751	34
Labour market tests: independent services suppliers	0.662	30
Labour market tests: intra-corporate transferees	0.756	34
Laws or regulations establish a process for recognising qualifications gained abroad	0.353	21
Laws or regulations establish a process for recognising qualifications in engineering gained abroad	0.178	8
Limitation on duration of stay for contractual services suppliers (months)	0.630	23
Limitation on duration of stay for independent services suppliers (months)	0.601	32
Limitation on duration of stay for intra-corporate transferees (months)	0.484	19
Membership in the professional association is closed to foreigners	0.067	3
Memo: Licence or authorisation is required to practice	0.583	24
Nationality or citizenship required for construction engineers	0.089	4
Nationality or citizenship required for Licence to practice	0.139	12
Other restrictions to movement of people	0.148	7
Prior or permanent residency is required for Licence to practice	0.185	14
Quotas: contractual services suppliers	0.174	8
Quotas: independent services suppliers	0.196	9
Quotas: intra-corporate transferees	0.133	6
Residency is required to practice	0.207	21

Source: OECD STRI; own calculations

Table 1 reports the average Mode 4 restrictiveness score by STRI measure in 2017 and the count of countries for which the (simple) average score by measure exceeded the mean. The most Mode 4 restrictive measures include: labour market tests and limitations on duration of stay for contractual (CSSs) and independent services suppliers (ISSs) and intra-corporate transferees (ICTs); need for a temporary licensing system; and license requirement for at least one engineer for issuing construction permits. In contrast, the least Mode 4 restrictive measures were professional association memberships closed to foreigners; and nationality/citizenship requirement for construction engineers.

The Mode 4 restrictiveness index is found to be negatively associated with imports of services delivered by Modes 2-4; the estimated coefficient for Mode 1 services imports is found to be statistically indifferent from zero. Given that the index captures regulatory barriers to the movement of service providers, one would expect the estimated elasticity to be the largest for Mode 4 imports. Encouragingly, this is what we find: a 10% increase in Mode 4 restrictiveness is associated with a proportionate decline in services imports delivered by the movement of service providers in these results, ceteris paribus and on average. Given that barriers to Mode 4 trade also include labour market tests, quotas and limitations on duration of stay for CSSs, ISSs and ICTs, one would also expect the estimated elasticities to be high for Mode 2 and 3 services imports. This is also found to be the case: a 10% increase in Mode 4 restrictiveness is associated with a 7.6 and 5.0% decline in services imports delivered by Modes 2 and 3, respectively, ceteris paribus and on average.

These findings also confirm complementarities between different ways in which services trade is transacted. They also illustrate how barriers in one mode of service delivery can affect another. Such complementarities are obvious, for instance, when establishing commercial presence abroad (Mode 3 trade) leads to intra-corporate transfers (Mode 4 trade) from the home country to the host country. In such a scenario, any restrictions on the movement of ICTs is also likely to have an adverse effect on foreign affiliate transactions. Similarly, a

short-duration professional visit abroad (Mode 4 trade) can also generate an appetite for exploring a new country as a tourist (Mode 2 trade), possibly with family. Thus, any curbs on the movements of CSSs and ISSs could also result in a decline in tourism.

Disaggregated analysis suggests that the overall results may be driven by computer; maintenance & repair; professional & management consulting; and technical, trade-related and other business services.

CONTRIBUTION

The world is going through an unprecedented health and economic crisis emanating from COVID-19. Services trade will be more severely affected and will also take longer to recover in this crisis than it did during the 2008 global financial crisis because over 70% of global services trade is transacted via the three modes of supply (Modes 2, 3 and 4) that require some form of physical proximity between buyers and sellers and the latter is the first casualty of social distancing and related practices in the wake of COVID-19 (Shingal, 2020).

The need for social distancing and continued fear of the pandemic until a vaccine is available has resulted in countries imposing restrictions on international travel. Meanwhile, our findings underline the need for countries to refrain from imposing prohibitive restrictions on service suppliers. Such restrictions are found to be negatively correlated with precisely those modes of supply that are already more adversely affected by COVID-19, suggesting that imposing them would be doubly detrimental. Moreover, given the importance of services for economic activity in general, de-restricting this sector would also be a crucial determinant of economic recovery in the aftermath of this pandemic.

***

ABOUT AUTHOR

Anirudh Shingal is Senior Fellow at the Indian Council for Research on International Economic Relations (ICRIER), New Delhi. He is also affiliated to the European University Institute, Florence and World Trade Institute, University of Bern. Email: ashingal@icrier.res.in

ABOUT ICRIER

ICRIER, one of India's leading think tanks, was established in August 1981 as a not-for-profit research organisation to provide a strong economic basis for policy making. Over the years, ICRIER has continued and reinforced the pursuit of its original vision and in the process significantly expanded the scope of its research activities. ICRIER is ably supported by its current Chairperson Mr. Pramod Bhasin and a Board of Governors, which includes leading policy makers, academicians, opinion makers and well-known representatives of the corporate world. ICRIER's success lies in the quality of its human capital. Led by Dr. Rajat Kathuria, Director & Chief Executive, ICRIER's research team consists of highly qualified professors, senior fellows, fellows, research associates and assistants and consultants.

ICRIER conducts thematic research in eight thrust areas, namely, Macroeconomic Management, Financial Liberalisation and Regulation; Global Competitiveness of the Indian Economy – Agriculture, Manufacturing and Services; Challenges and Opportunities of Urbanisation; Climate Change and Sustainable Development; Physical and Social Infrastructure including Telecom, Transport, Energy and Health; Skill Development, Entrepreneurship and Jobs; Asian Economic Integration with focus on South Asia; Multilateral Trade Negotiations and FTAs.

International conferences, seminars, public policy workshops, public lectures and publications form an integral part of ICRIER's outreach activities. ICRIER maintains a wide network of resource persons from India and abroad. It strives to attract well-qualified researchers, provides them a stimulating and scholarly work environment and encourages researchers to work in teams. ICRIER's research is widely cited by both academia and the popular press, and has over the years provided critical inputs for policy making.

Indian Council for Research on International Economic Relations (ICRIER)
Our Research Location:
Plot No. 16-17, Pushp Vihar, Institutional Area, Sector 6, New Delhi-110017
Seminar and Outreach:
4th Floor, Core 6A, India Habitat Centre, Lodhi Road, New Delhi-110003
O: +91 11 43112400 | **F**: +91 11 24620180 | **W:** www.icrier.org
Follow us: /ICRIER | /ICRIER | @ICRIER

Scan QR and read full paper:

http://icrier.org/pdf/Working_Paper_399.pdf