

# 4th Meeting of the UNCTAD Informal Working Group on Data for Services Trade and Development Policies

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# Introduction

- ▶ Services trade
  - ▶ One third of global trade
  - ▶ Deep linkages between goods and services trade
  - ▶ Services industry large share of GDP and employment across OECD countries
- ▶ Services Trade, characteristics
  - ▶ Services can be supplied in four different modes
  - ▶ Modes of trade in services depends: type of services, firms' characteristics, trade agreements in place
  - ▶ Little to no empirical evidence on how firms supply services

# Overview

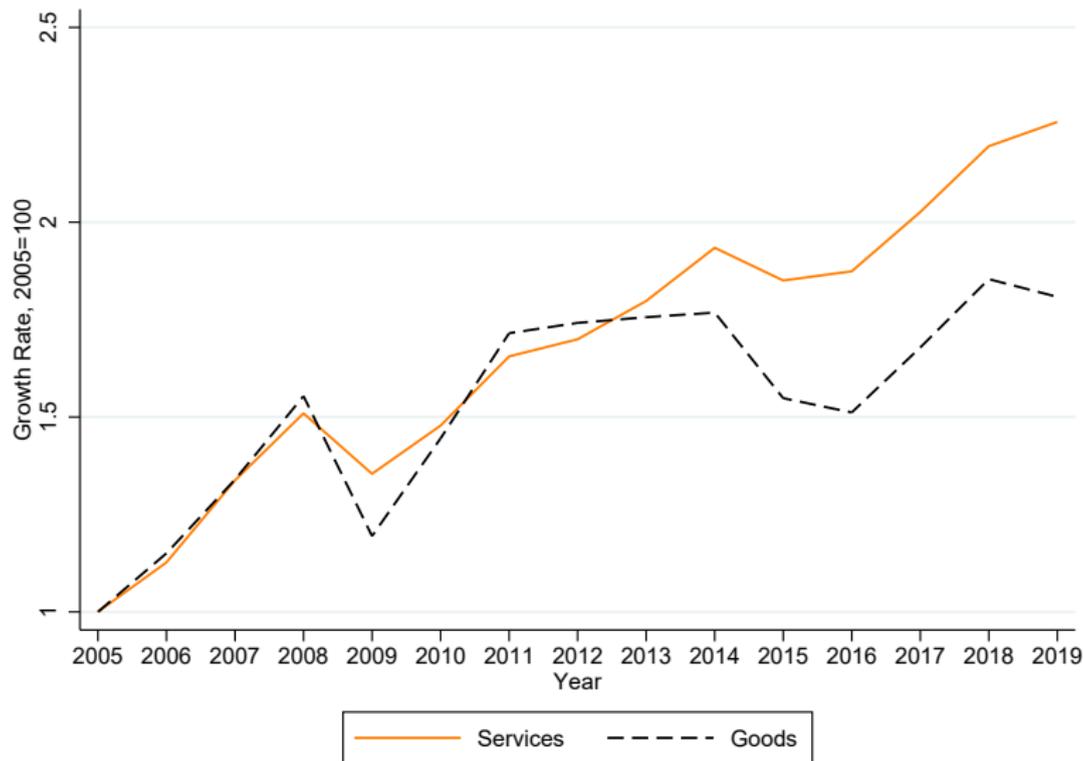
Services Trade

Modes Of Trade

Firm-level evidence

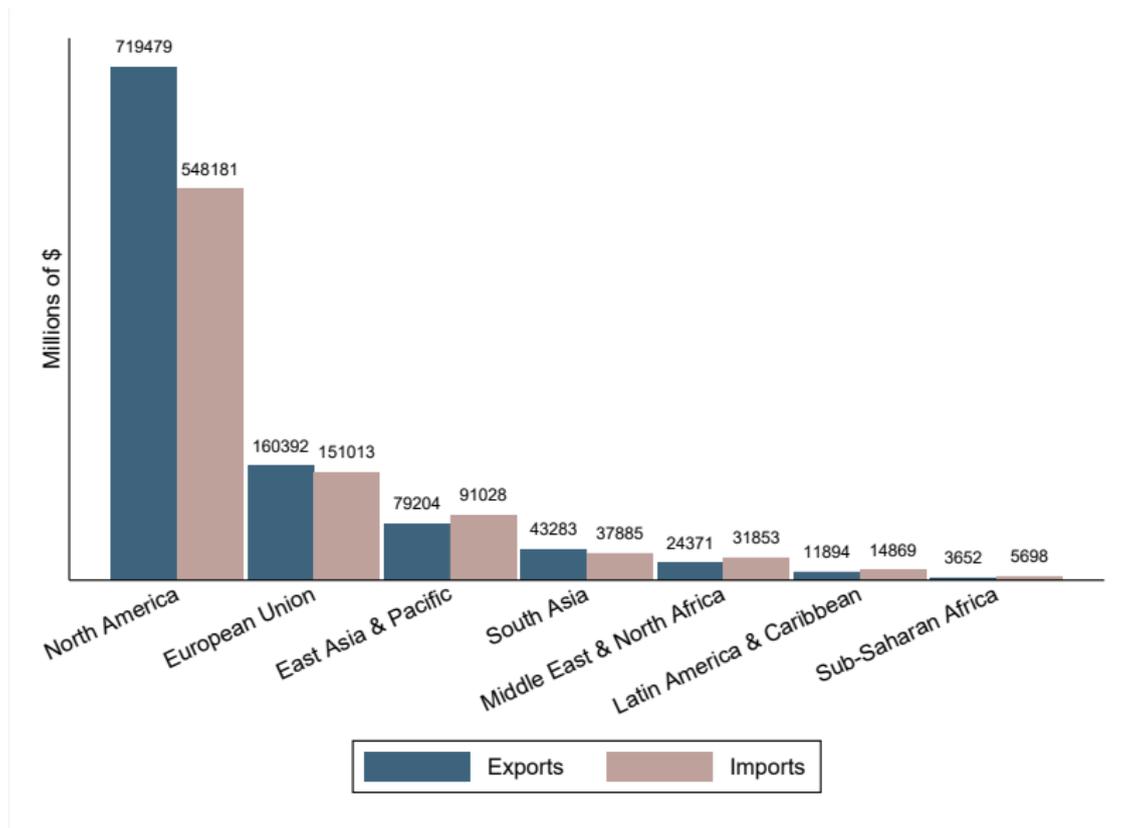
Available Data

# Trade in Goods and Services



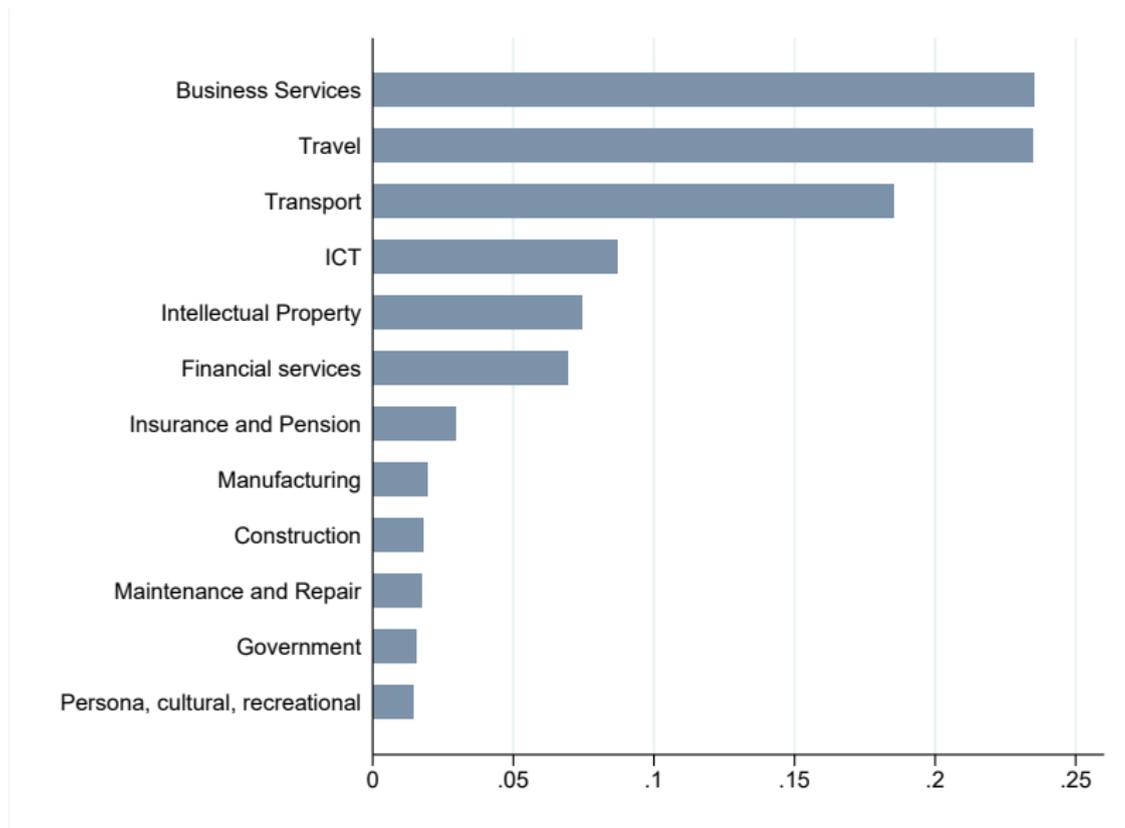
Source: Comtrade.

# Services Trade across Regions



Source: BATIS. Countries are sorted in decreasing services exports flows in 2019.

# Services trade, type

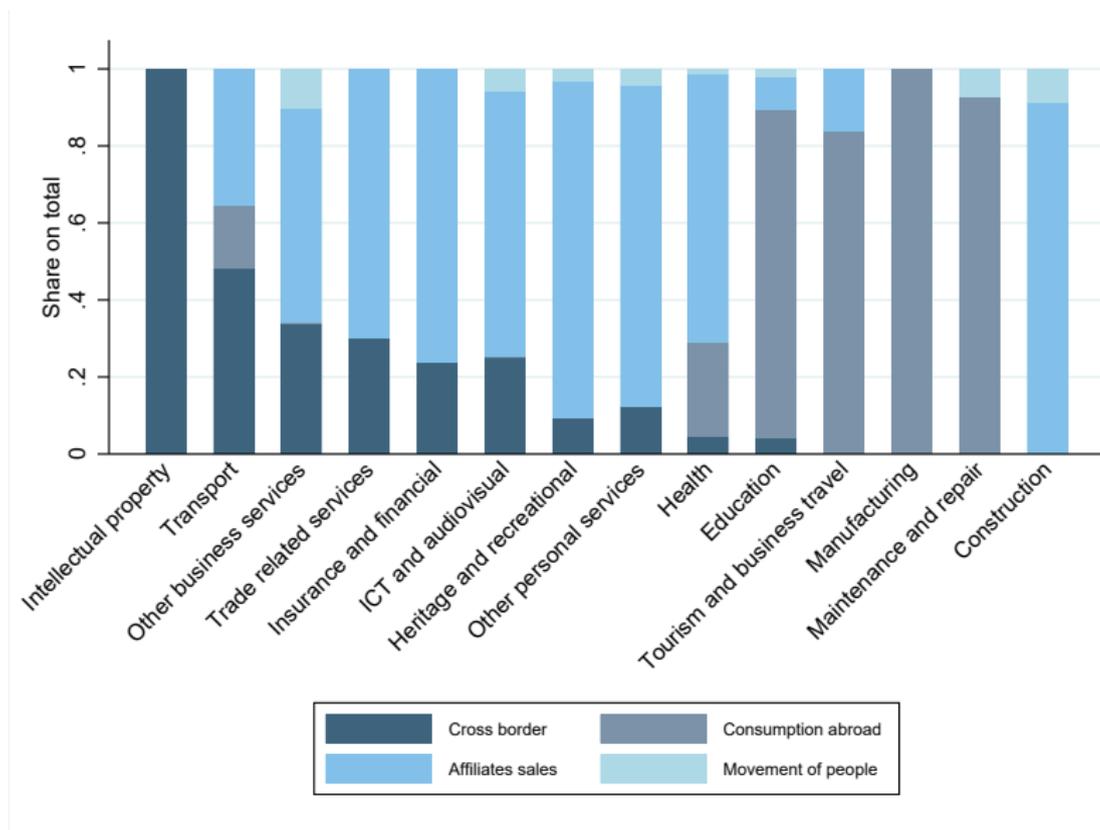


Source: BATIS. Share of traded services type on total traded services in 2019.

# Modes of trade in services

		Export	Import
Mode 1	Cross Border Supply	Selling Holiday Pictures to National Geographic.	IT Software from foreign country.
Mode 2	Consumption Abroad	Health service from foreign consumer.	Tourism.
Mode 3	Commercial Presence	Revenues as an affiliate of a parent company.	Revenues from an affiliate in a foreign country.
Mode 4	Movement of person	Maintenance service for an exported machinery.	Foreign consultant.

# Modes to supply services



Source: TISMOS. Share of mode of services supply by type of services.

# Modes to supply services

**Table 1:** Share of services imports by mode of supply and country classification

	(1) High Income	(2) Low Income	(3) Low Middle Income	(4) Upper Middle Income
Mode1	0.73	0.00	0.08	0.18
Mode2	0.72	0.01	0.05	0.22
Mode3	0.82	0.01	0.04	0.14
Mode4	0.73	0.00	0.08	0.18
Observations	14	14	14	14

**Table 2:** Share of services exports by mode of supply and country classification

	(1) High Income	(2) Low Income	(3) Low Middle Income	(4) Upper Middle Income
Mode1	0.77	0.00	0.06	0.16
Mode2	0.79	0.00	0.05	0.17
Mode3	0.89	0.00	0.00	0.10
Mode4	0.75	0.00	0.05	0.20
Observations	14	14	14	14

**Source:** TISMOS Dataset. Countries are defined according to the World Bank 2020 classification.

# Should we stay or should we go?

## Firms' decision on services mode of supply

H. Breinlich and M. Magli (2024)

- ▶ Present novel evidence on firms modes of services' supply
- ▶ Focus: Cross Border vs Commercial Presence
- ▶ Estimate firms' adjustment of supply mode to trade shocks using Brexit as a case study:
  - ▶ Distinguish between trade with EU and non-EU countries
  - ▶ Leverage on the time dimension (2009-2021) to isolate
    - ▶ Anticipation effect
    - ▶ Uncertainty of regulation
  - ▶ Impact on mode of supply choice and implication for
    - ▶ Aggregate trade flows
    - ▶ Domestic labour market

# Should we stay or should we go?

H. Breinlich and M. Magli (2024)

- ▶ Present novel evidence on firms' mode choices:
  - ▶ Services supplied differently depending on firm characteristics
  - ▶ Firms' trading in goods higher probability to trade services via Cross Border rather than Commercial Presence
- ▶ Estimate firms' adjustment of supply mode to the Brexit shock:
  - ▶ Increase of exports of services through Commercial Presence relative to Cross-Border
  - ▶ Opposite effect on the import side: Commercial Presence share declines
  - ▶ Higher elasticity of substitution between modes:
    - ▶ Higher overall services exports
    - ▶ Lower domestic employment

# Firm-level evidence Data

H. Breinlich and M. Magli (2024)

- ▶ International Trade in Services (ITIS):
  - ▶ 52 types of services by partner country
  - ▶ Separate entry for trade with affiliates
  - ▶ Cross Border: trade value
- ▶ Annual Inquiry into Foreign Direct Investment (AFDI):
  - ▶ Type and industry of investment by country
  - ▶ Commercial Presence : affiliates' profits

# Export Mode and Firms' Trade, Ownership and R&D

H. Breinlich and M. Magli (2024)

	(1)	(2)	(3)	(4)
	Cross Border	Commercial Presence	Affiliates Trade	Cross Border & Commercial Presence
Foreign Owned	-0.0562 <sup>***</sup> (0.0009)	-0.0667 <sup>***</sup> (0.0007)	-0.0003 (0.0003)	-0.0039 <sup>***</sup> (0.0002)
Export Goods	0.0332 <sup>***</sup> (0.0017)	0.0034 <sup>***</sup> (0.0006)	0.0100 <sup>***</sup> (0.0009)	0.0014 <sup>***</sup> (0.0002)
Import Goods	0.0537 <sup>***</sup> (0.0024)	-0.0018 <sup>*</sup> (0.0008)	0.0176 <sup>***</sup> (0.0009)	0.0012 <sup>***</sup> (0.0003)
Trading Goods	-0.0726 <sup>***</sup> (0.0027)	-0.0209 <sup>***</sup> (0.0009)	-0.0184 <sup>***</sup> (0.0011)	-0.0022 <sup>***</sup> (0.0003)
N	777,415	777,415	777,415	777,415

Source: Breinlich and Magli(2024). Standard errors in parenthesis are robust. All regression include 2-digit sector fixed effects. † ( $p < 0.10$ ), \* ( $p < 0.05$ ), \*\* ( $p < 0.01$ ), \*\*\* ( $p < 0.001$ )

# Export Mode and Firms' Characteristics

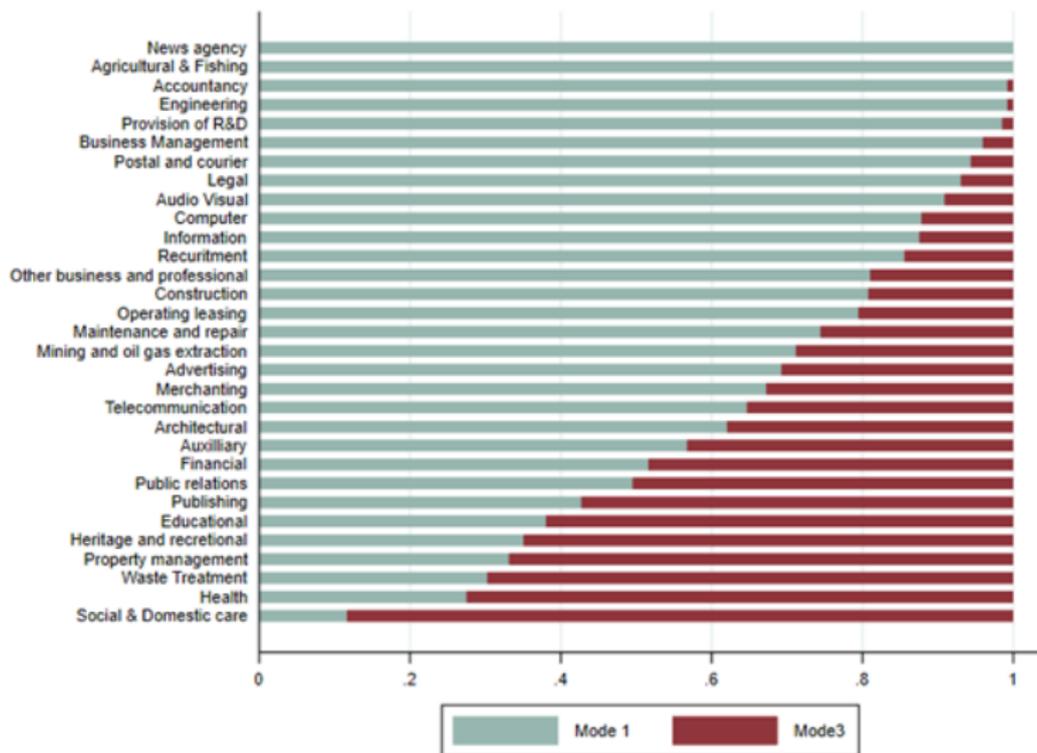
H. Breinlich and M. Magli (2024)

	(1) Employment	(2) Turnover (,000£)	(3) Wage Bill (,000£)	(4) Capex	(5) GVA	(6) Computer Investment
Cross Border (,000 £)	1.1701*** (0.1401)	9.9878*** (2.1089)	113.9228*** (12.3296)	0.0800*** (0.0174)	0.0539*** (0.0065)	1.1464** (0.4394)
Affiliates Sales, profits (mln£)	0.0000* (0.0000)	0.0000+ (0.0000)	0.0001* (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)
N	43,334	43,334	43,334	43,334	43,334	43,334

**Source:** Breinlich and Magli (2024). Standard errors in parenthesis are robust. All regression include 2-digit sector fixed effects. † ( $p < 0.10$ ), \* ( $p < 0.05$ ), \*\* ( $p < 0.01$ ), \*\*\* ( $p < 0.001$ )

# Services Exports by Mode

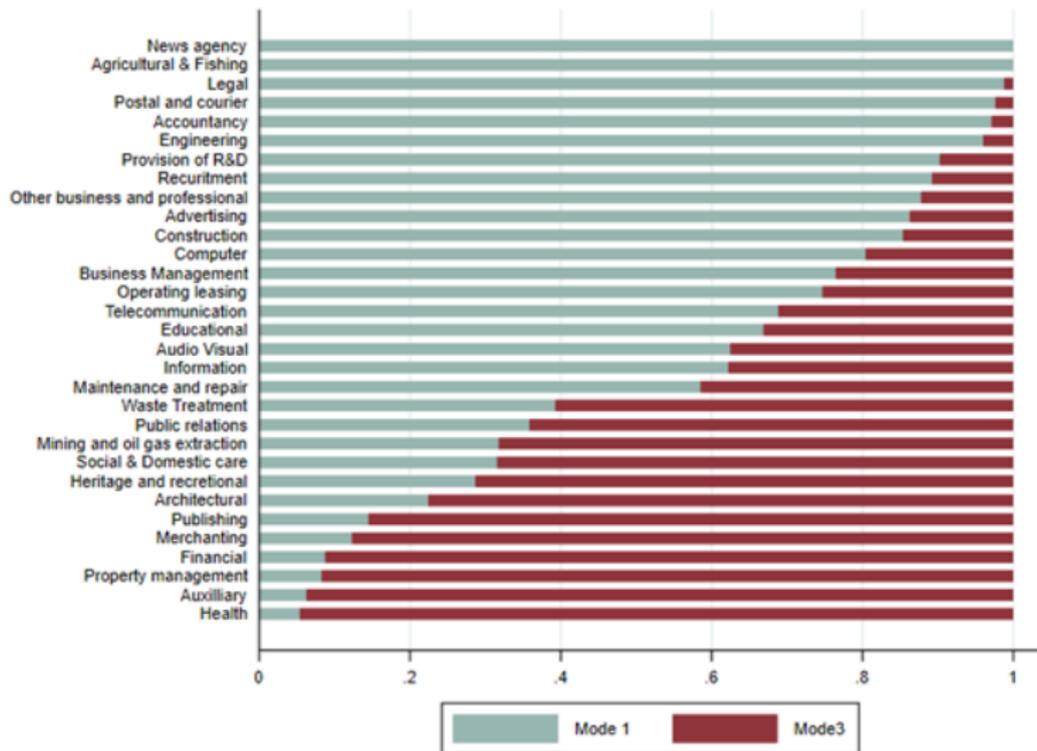
H. Breinlich and M. Magli (2024)



Source: Breinlich and Magli (2024).

# Services Imports by Mode

H. Breinlich and M. Magli (2024)



Source: Breinlich and Magli(2024).



# Available Data

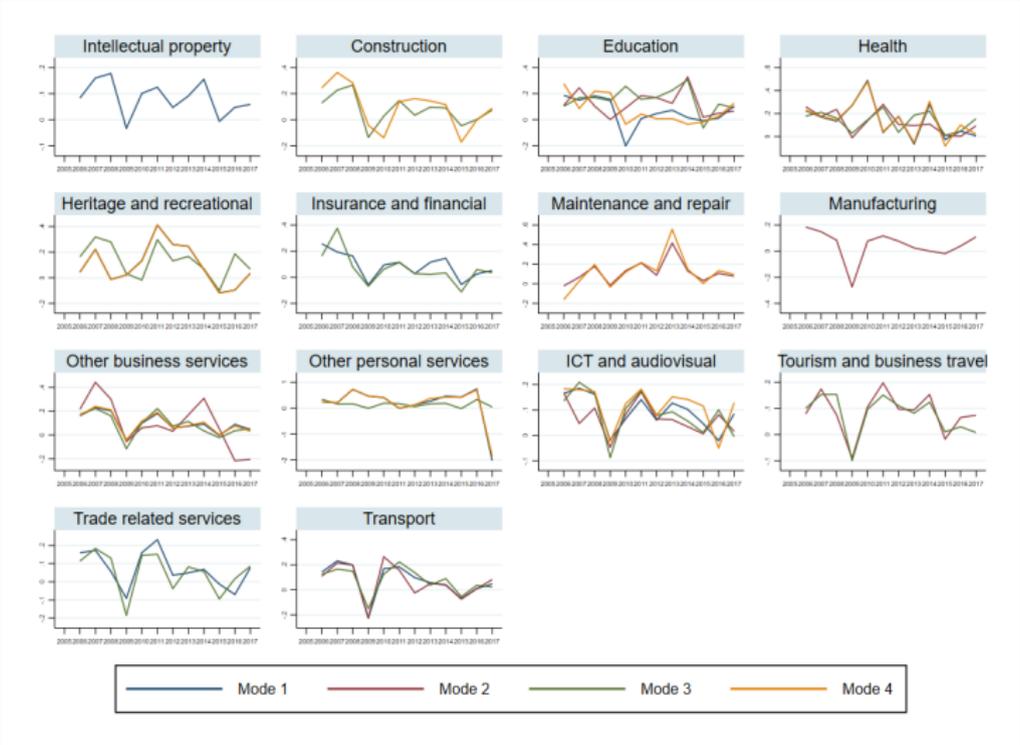
## Firm-level

- ▶ Trade off: coverage vs granularity
  - ▶ Coverage:
    - ▶ Mode 1: VAT Data (VIES, Sweden; VIES, Denmark)
    - ▶ Mode 3: Affiliates information (BEA, USA; Midi, Germany)
  - ▶ Granularity:
    - ▶ Trade by mode survey (ONS, UK - raw data not available to researchers)
  - ▶ Compromise:
    - ▶ Mode 1: Official statistics (Sits, Germany; ITIS, UK; Banque de France)
    - ▶ Mode 3: Inward and Outward FDI (Orbis; AFDI UK)

# Thank you!

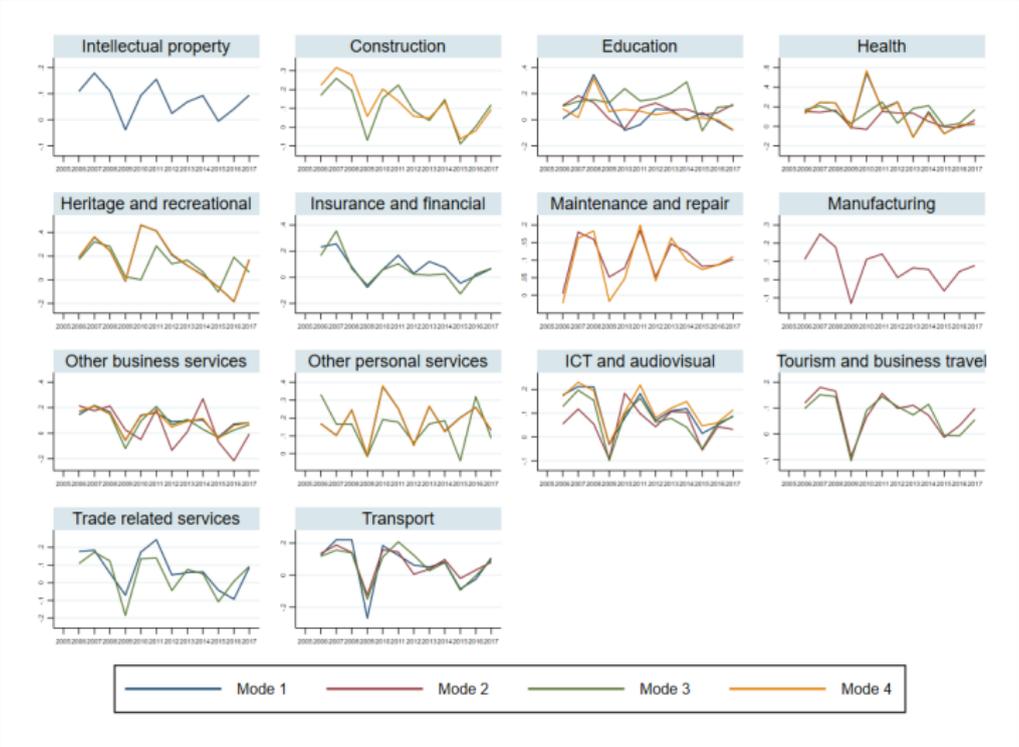
Contact e-mail: [martina.magli@econ.lmu.de](mailto:martina.magli@econ.lmu.de)

# Modes to supply services by type, imports



Source: TISMOS.

# Modes to supply services by type, exports



Source: TISMOS.

# Modes to supply services

Table 3: Share of services mode of supply on total mode of supply

	Imports		Exports	
	(1) Tax Havens	(2) No tax Havens	(3) Tax Havens	(4) No tax Havens
Mode1	0.11	0.89	0.17	0.83
Mode2	0.12	0.88	0.12	0.88
Mode3	0.09	0.91	0.10	0.90
Mode4	0.08	0.92	0.18	0.82
Observations	14	14	14	14

Table 4: Share of services mode of supply on countries' total trade

	Imports		Exports	
	(1) Tax Havens	(2) No tax Havens	(3) Tax Havens	(4) No tax Havens
Mode1	0.21	0.20	0.27	0.20
Mode2	0.32	0.28	0.30	0.29
Mode3	0.44	0.48	0.37	0.48
Mode4	0.03	0.03	0.06	0.03
Observations	14	14	14	14

Source: TISMOS Dataset. Tax havens classification following the classification as in Flach et al. (2021). Table indicates the share of each mode of supply by country classification .

# Available Data

## Country-level

- ▶ **Balanced trade in Services (BATIS)**
  - ▶ Bilateral Services Trade Flows
  - ▶ Coverage: 200 countries, 12 service categories, 2005-2021
  - ▶ Source: WTO-OECD
  
- ▶ **Trade in Services data by Mode of Supply (TISMOS)**
  - ▶ Unilateral Services Trade flows by Mode of Supply
  - ▶ Coverage: 200 countries, 50 type of services (14 macro-categories), 2005-2022
  - ▶ Source: WTO-OECD

# Available Data

## Country-level

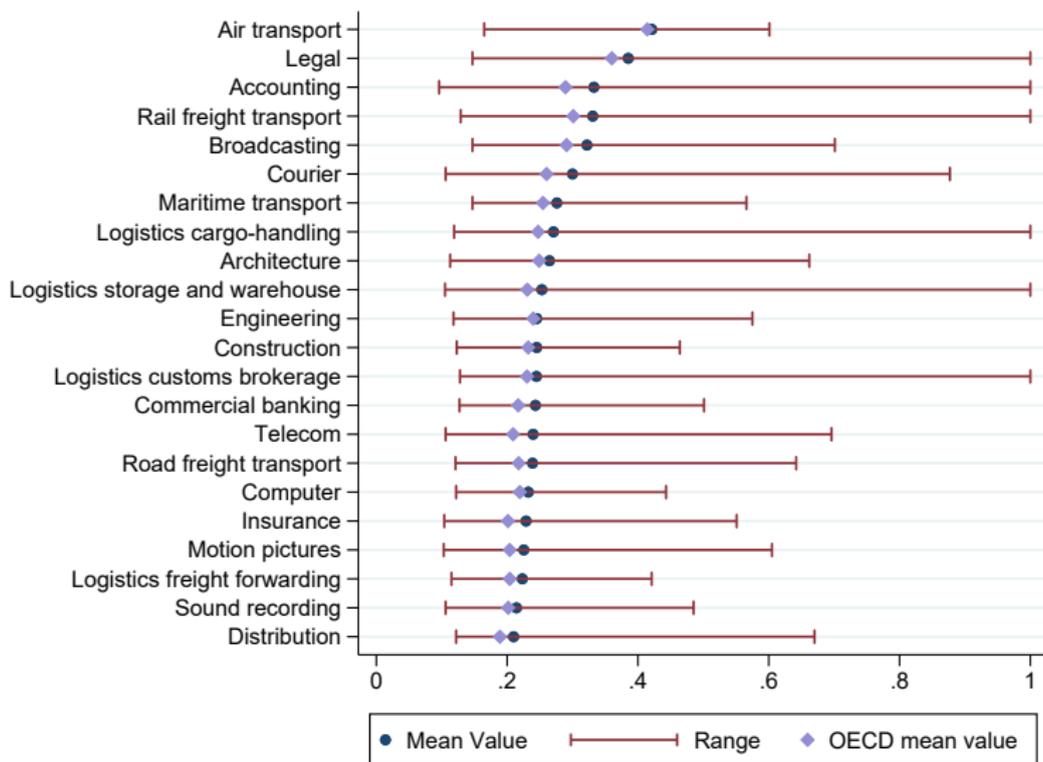
- ▶ Trade in Commercial Services
  - ▶ Unilateral Commercial Services Trade Flows
  - ▶ Coverage: 150 countries, 50 service categories, 2013-2023
  - ▶ Source: WTO-OECD
- ▶ Digitally delivered services trade
  - ▶ Unilateral Digital Services delivered by Mode
  - ▶ Coverage: 200 countries, 8 type of services, 2005-2023
  - ▶ Source: WTO-OECD

# Available Data

## Country-level

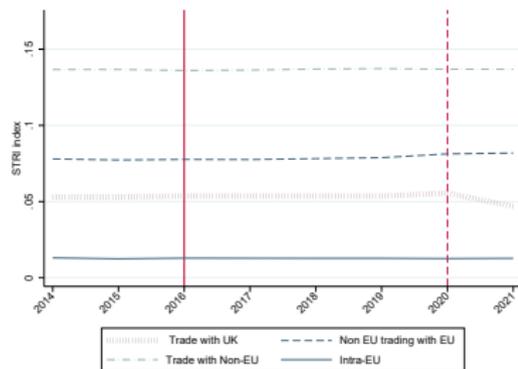
- ▶ International Trade and Production Database for Estimation (ITPD-E)
  - ▶ Internal Trade flows
  - ▶ Bilateral industry-level trade flows (goods and services)
  - ▶ Coverage: 243 countries, 17 services industries, 2000-2019
  - ▶ Source: Borchert, Larch, Shikher, and Yotov (2021, 2022)

# Restrictions to services trade

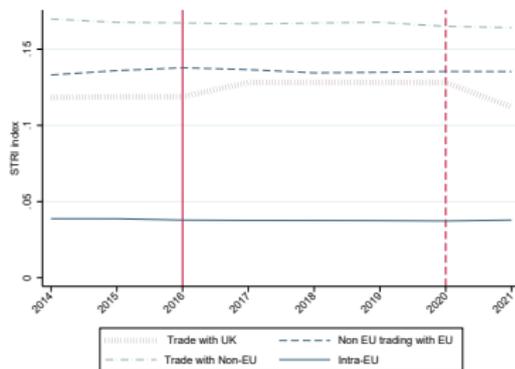


Source: OECD. Services Trade Restrictive Index for 2020.

# Restrictions to services trade by Mode



(a) Mode 3



(b) Other Modes

Source: OECD. Services Trade Restrictive Index for 2020.