

# **“Aid for trade” in services sectors and services trade: a correlation analysis**

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# Introduction

- Services are important for economic growth and development by virtue of their contribution to a country's GDP, tradability and potential for job creation
- Development assistance helps in building economic infrastructure (transport, energy and communications) and productive capacity (financial, travel/tourism and business services) in recipient countries
- Aid targeted at these services sectors is likely to have a direct positive impact on the development of these sectors and by virtue of their contribution to the economy, to the economic growth, development and structural transformation of the recipient countries

# Overview

- This presentation examines the relationship between AfT in services sectors and trade in services for Asian and Pacific economies over 2002-2014 and provides policy prescriptions for geographically-challenged economies in these regions to enhance their potential as recipients of AfT and participants in services trade
- This is an **important contribution** as there is no prior work on the impact that AfT in services may have on trade in services (TiS)

# Outline

- Definition, data sources and data availability constraints
- Descriptive trends for different geographical regions and for both aggregate and disaggregated services over 2002-2014
- Examining the AfT-services trade relationship for Asian and Pacific economies for both aggregate and disaggregated services (business, communications, financial, transport and travel)
- Studying the relationship for geographically-challenged Asian and Pacific economies in the sample
- Concluding with policy prescriptions for geographically-challenged economies in wake of the research findings

# **Definition, data sources and data availability constraints**

# Definition of AfT (OECD)

- Technical assistance for trade policy and regulations (e.g. helping countries to develop trade strategies, negotiate trade agreements, and implement their outcomes)
- **Trade-related infrastructure** (e.g. building roads, ports, and telecommunications networks to connect domestic markets to the global economy)
- **Productive capacity building**, including trade development (e.g. supporting the private sector to exploit their comparative advantages and diversify their exports)
- Trade-related adjustment (e.g. helping developing countries with the costs associated with trade liberalisation, such as tariff reductions, preference erosion, or declining terms of trade)
- Other trade-related needs, if identified as trade-related development priorities in partner countries' national development strategies

# Data constraints (AfT)

- The OECD's Creditor Reporting System (CRS) does not provide data that exactly match all of the above AfT categories
- Only parts of ODA data are reported as aid going to building economic infrastructure (includes three services: transport and storage, communications and information, and energy) and to the creation of "productive capacity" (includes three services: banking and financial services, business and other services, and tourism)
- But even these data are proxies at best for aid in trade-related infrastructure and productive capacity building as not all of ODA reported under these headings is trade-related
- **This said, ODA data reported under these headings are the closest approximation to the non-existent data on AfT in services that can be used for analysis**
- Data specific to the services sectors in other categories of AfT (technical assistance for trade policy and regulations, trade-related adjustment and other trade-related needs) are completely missing

# Data constraints (TiS)

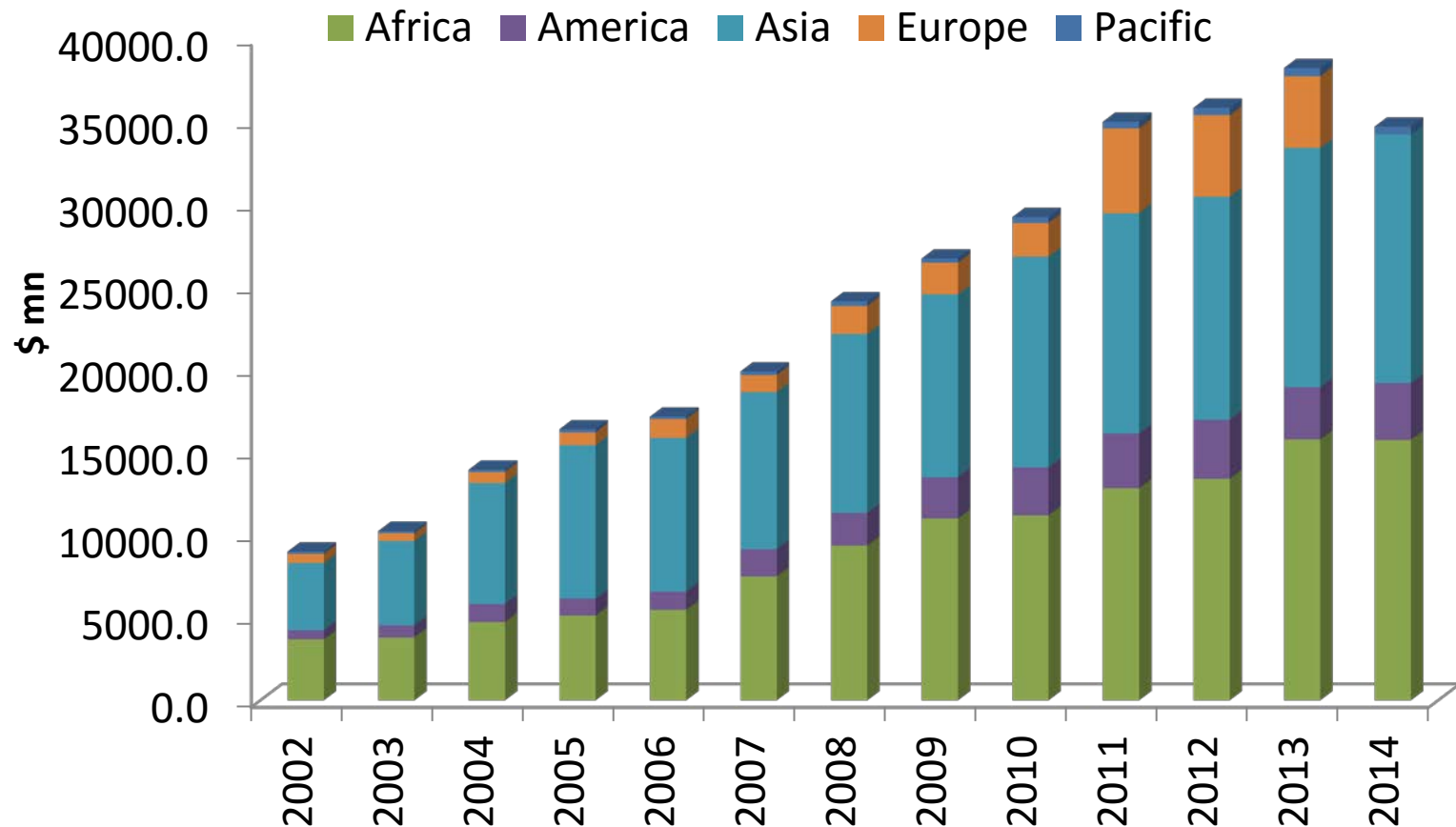
- Despite major improvements in services trade data availability, challenges remain for meaningful economic analyses – particularly in the case of LDCs and LICs, most of whom are major recipients of ODA and hence, the sample countries for this analysis
- For most reporting countries, the coverage of services trade data is more complete for total or aggregate services and for trade with the world
- Services trade data remain largely unavailable for bilateral trade and more disaggregated sectors, especially in the case of South-South trading partners
- Reliability of services trade data also continues to be a concern
- There is variability in the recorded coverage of LDC/LIC services trade across years, alongside at-times significant year-on-year variation (Shingal, 2015)

# Implication of data constraints

- *Data constraints imply that we use global, instead of bilateral, TiS for analysis so that the sample coverage is enhanced with respect to reporting countries, sectors and years and is also consistent with ODA data availability in the services sectors and the various regional and sub-regional aggregations that are included*
- ODA/AfT data sourced from the OECD
- TiS data sourced from UN Comtrade

# **Descriptive trends**

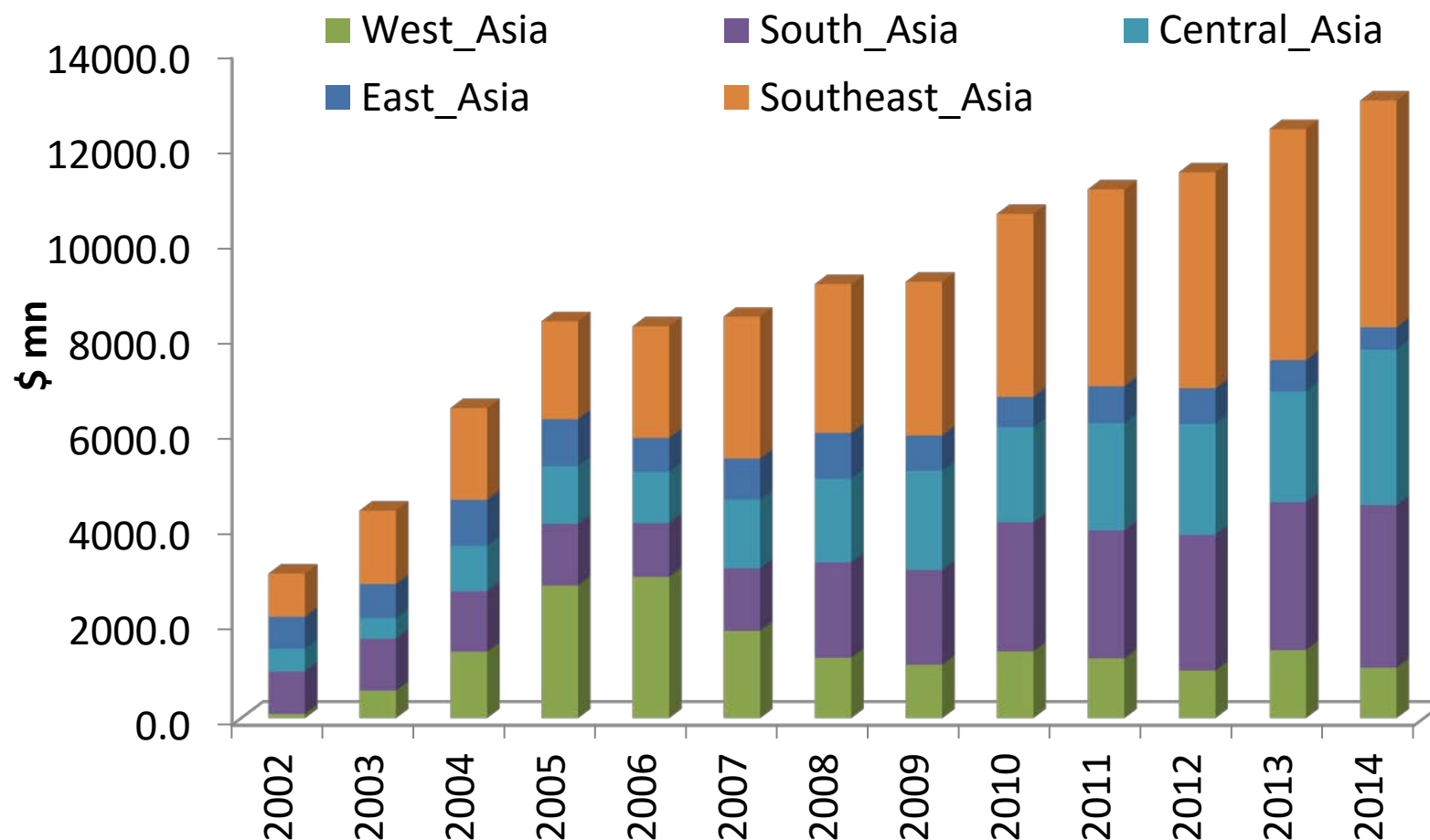
# Global ODA disbursements by geographical regions (\$mn)



**Source:** OECD QWIDS; own calculations

**Note:** Geographical coverage is consistent with ADB classification for Asia and the Pacific

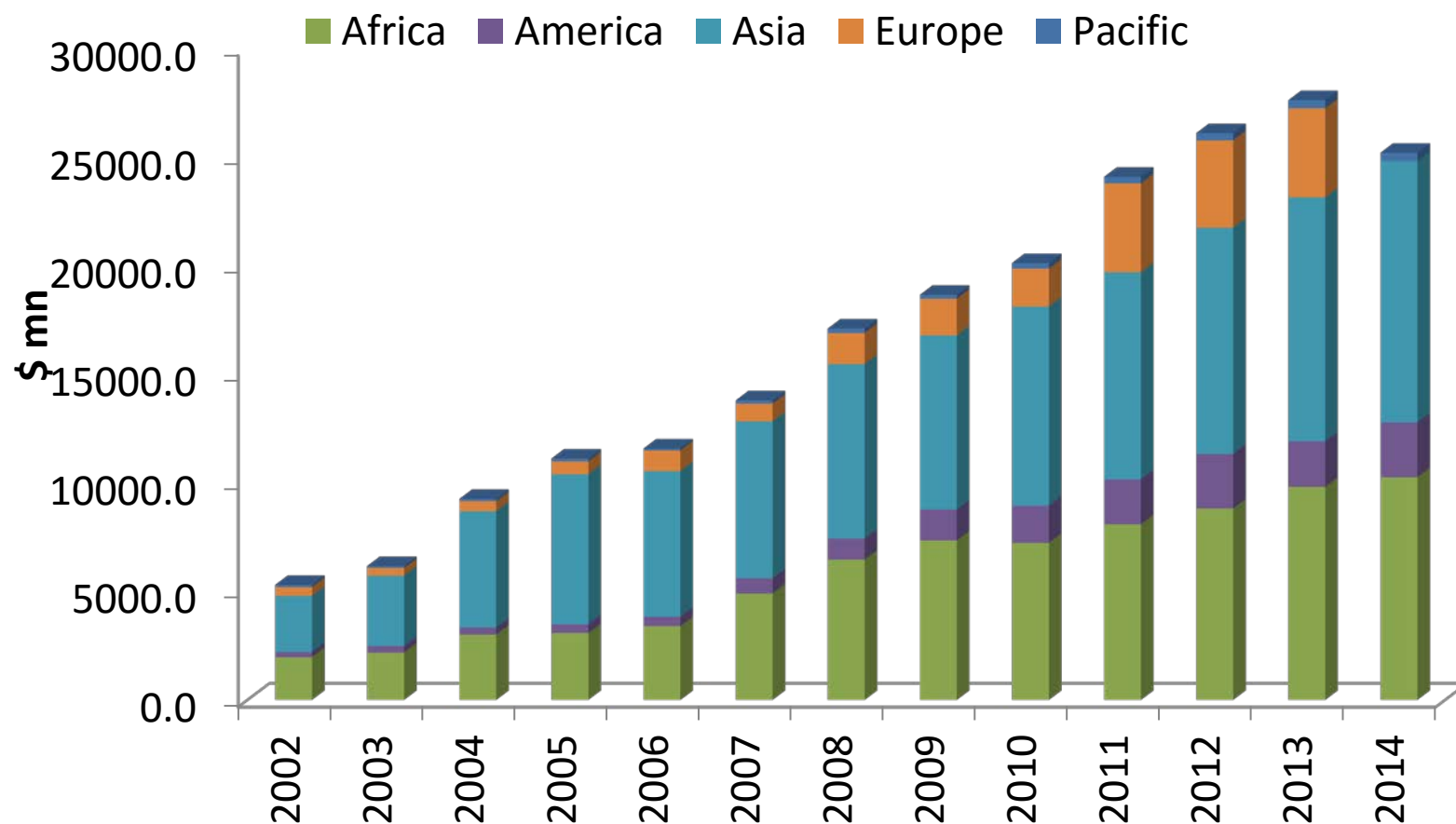
# Distribution of total ODA disbursements within Asia (\$mn)



**Source:** OECD QWIDS; own calculations

**Note:** Geographical coverage is consistent with ADB classification for Asian sub-regions

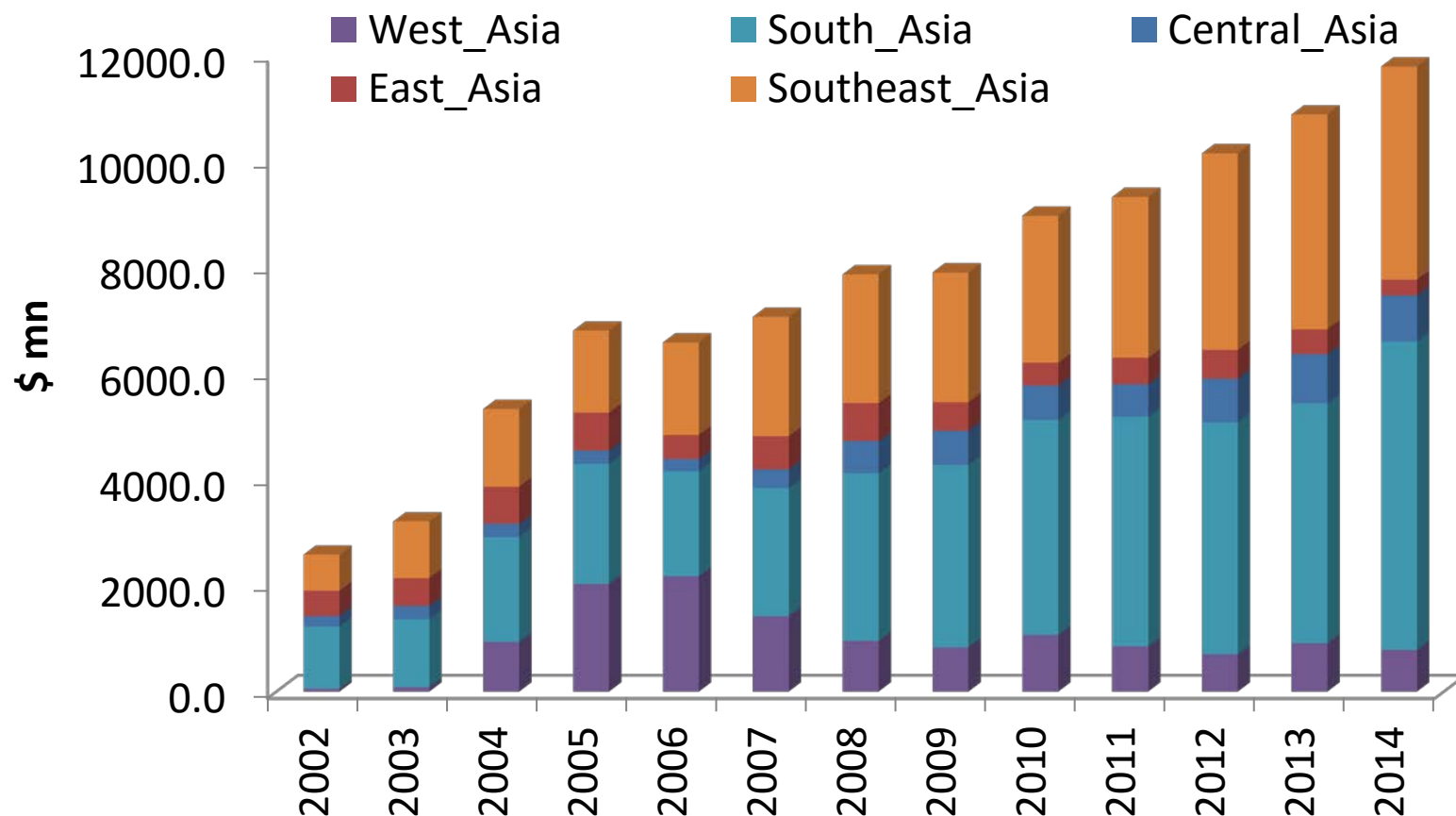
# Global AfT in services by geographical regions (\$mn)



**Source:** OECD QWIDS; own calculations

**Note:** Services include six aggregate sectors – transport and storage; communications; energy; banking and finance; business and other services; and tourism

# Distribution of AfT in services within Asia (\$mn)



**Source:** OECD QWIDS; own calculations

**Note:** Services include six aggregate sectors – transport and storage; communications; energy; banking and finance; business and other services; and tourism

# Geographical distribution of AfT in services by sector (\$mn)

AfT in services (avg. 2002-2014, \$mn)	Africa	America	Asia	Europe	Pacific	Global
Transport & Storage	2882.8	440.3	3571.5	611.5	145.2	7604.1
Communications	155.6	48.5	187.3	60.1	9.2	456.0
Energy	1672.6	411.3	2646.9	393.4	32.7	5126.5
Banking & Financial Services	778.3	198.8	804.2	508.1	5.5	2255.9
Business & Other Services	376.9	88.9	480.1	144.1	12.2	1091.1
Tourism	42.2	21.2	28.3	6.6	3.9	101.8
<b>SERVICES</b>	<b>5908.4</b>	<b>1208.9</b>	<b>7718.3</b>	<b>1723.7</b>	<b>208.7</b>	<b>16635.5</b>
Share of GDP (%)	19.9	1.0	2.0	2.5	16.8	11.4

**Source:** OECD QWIDS; own calculations

**Note:** For Europe, the average is over 2002-2013 as the European countries did not receive any ODA in 2014 as reported in the OECD database

# STRI data across regions

STRI/Region	Asia	Europe	America	Africa	CA	WA	SA	EA	SEA
Overall	37.3	26.7	21.5	33.0	17.8	45.8	47.8	25.2	43.8
Mode1	33.9	43.5	34.6	31.2	28.0	32.3	44.2	36.8	33.9
Mode3	36.0	22.8	18.4	31.5	13.3	47.4	45.9	21.2	43.6
Mode4	68.4	63.8	52.6	60.7	52.5	70.0	76.3	62.5	79.2
Financial	32.6	24.5	19.4	27.4	19.2	44.2	35.5	20.0	34.8
Transport	42.5	30.1	22.0	33.3	25.5	47.9	56.7	30.4	47.9
Telecom	35.0	21.9	22.1	36.6	14.6	42.9	53.1	25.0	37.5
Professional	55.7	52.5	38.3	50.9	34.1	63.5	63.9	47.0	65.8

**Source:** World Bank, Borchert et al. 2014; own calculations

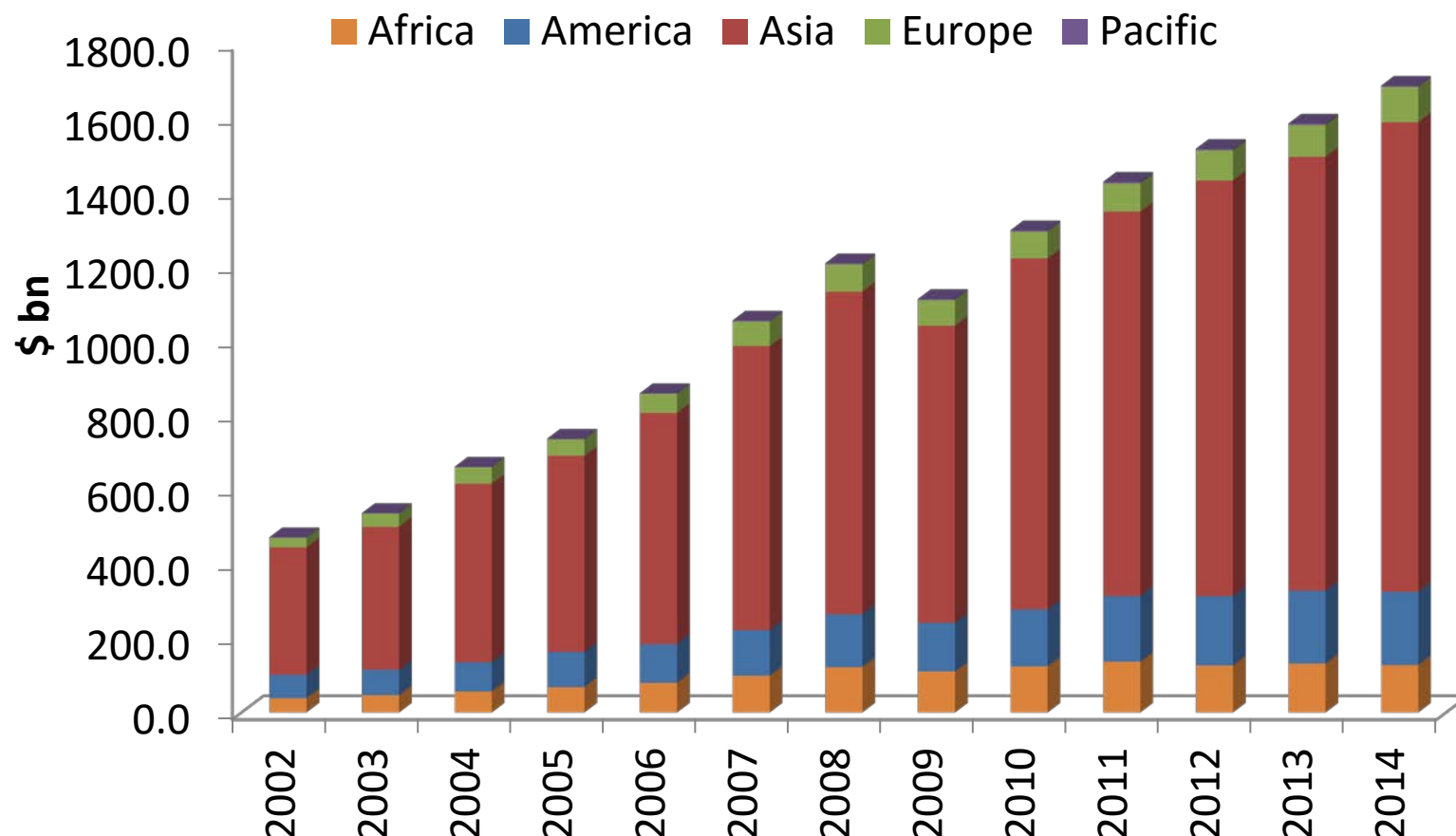
**Note:** The STRI is an index ranging from 0 (most liberal) to 100 (most restrictive). The regions correspond to the classifications used in the study. STRI data are not available for the Pacific countries in the study.

# Sectoral distribution of AfT in services within Asia (\$mn)

AfT in services (avg. 2002-2014, \$mn)	West	South	Central	East	Southeast	Asia
Transport & Storage	265.6	966.2	659.3	268.7	1402.1	3571.5
Communications	32.8	36.0	25.5	26.1	52.8	187.3
Energy	556.1	672.5	537.7	157.2	677.8	2646.9
Banking & Financial Services	53.7	249.1	188.5	73.3	178.5	804.2
Business & Other Services	68.4	55.4	247.6	10.0	78.3	480.1
Tourism	7.3	5.2	4.3	1.0	9.1	28.3
<b>SERVICES</b>	<b>983.9</b>	<b>1984.6</b>	<b>1662.9</b>	<b>536.3</b>	<b>2398.6</b>	<b>7718.3</b>
Share of GDP (%)	0.8	0.8	4.0	0.02	1.5	2.0

**Source:** OECD QWIDS; own calculations

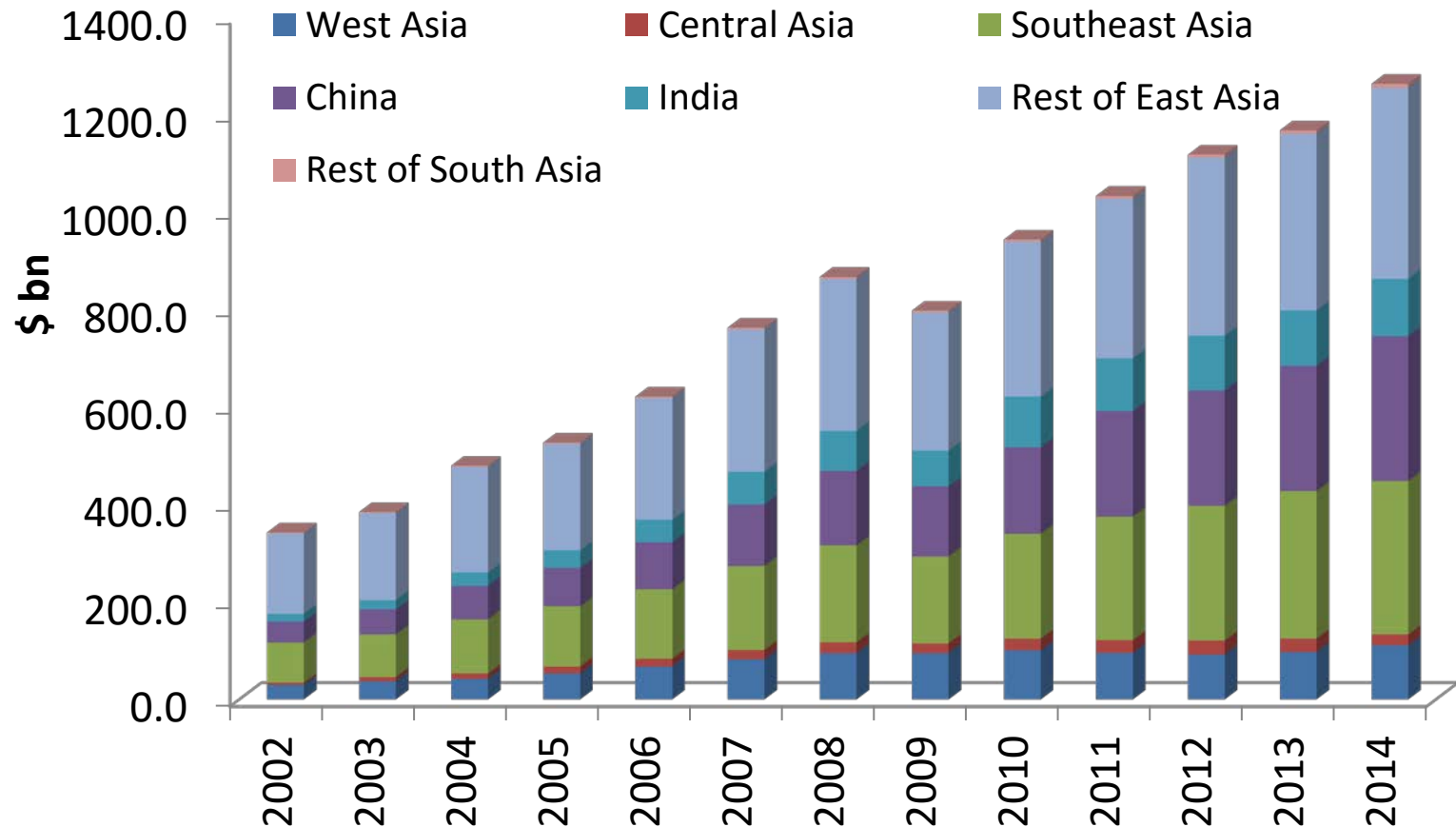
# Average services trade by geographical regions for AfT sample (\$bn)



**Source:** UNComtrade; own calculations

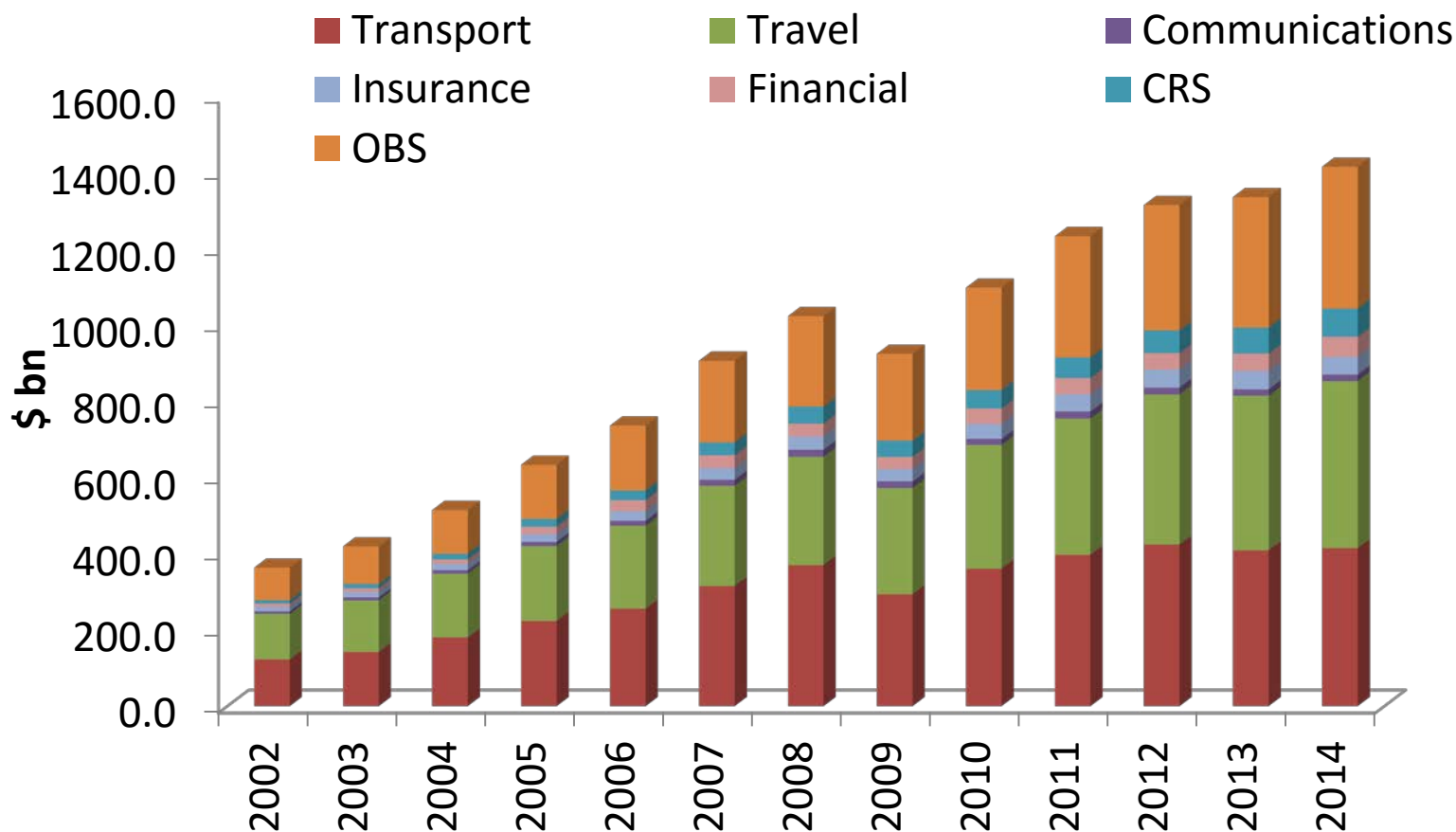
**Note:** The geographical coverage is consistent with the coverage for the AfT sample

# Distribution of average services trade across Asia (\$bn)



Source: UNComtrade; own calculations

# Sectoral distribution of average services trade (\$bn)

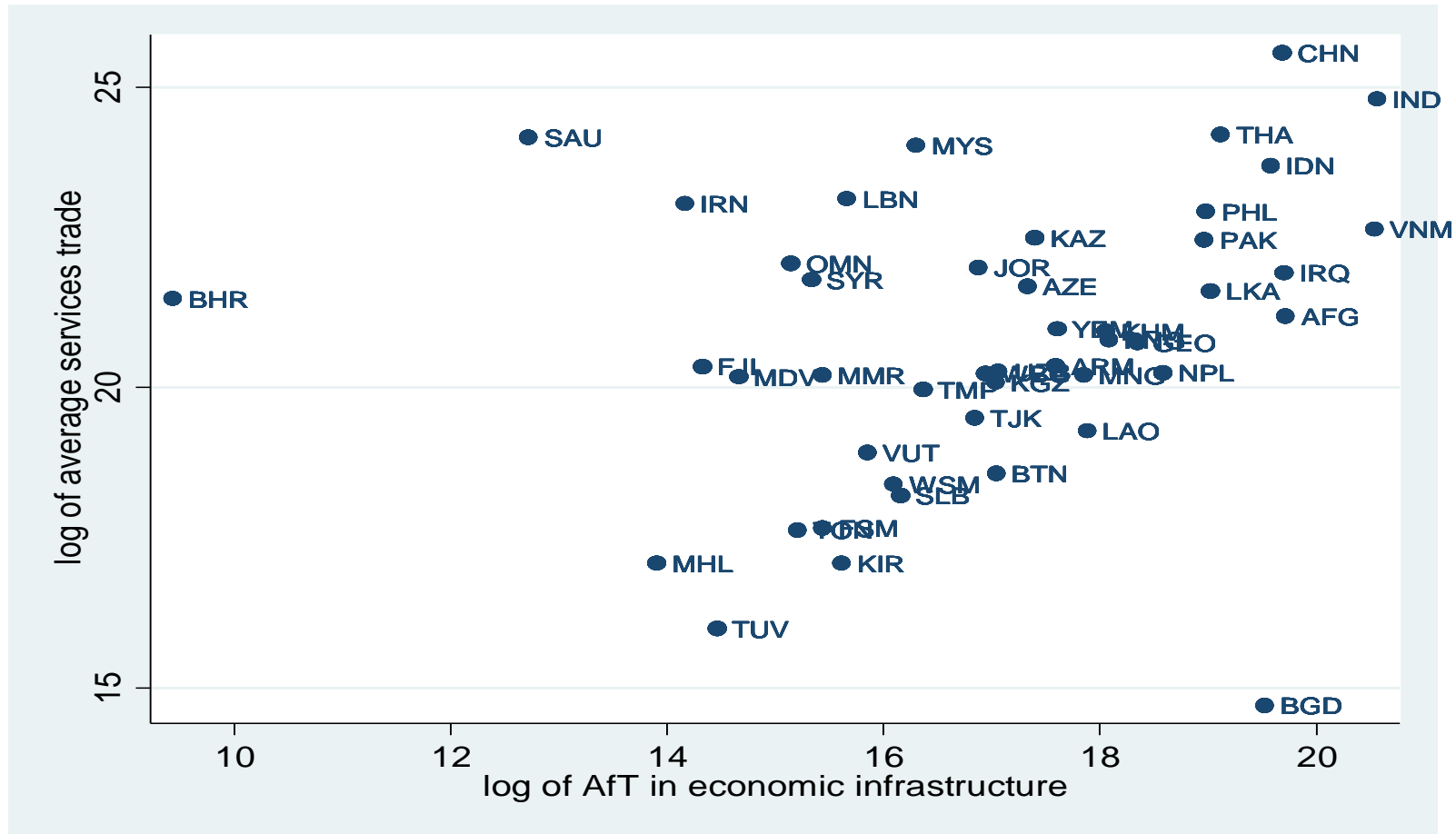


**Source:** UNComtrade; own calculations

**Note:** CRS = Computer and related services; OBS = Other business services

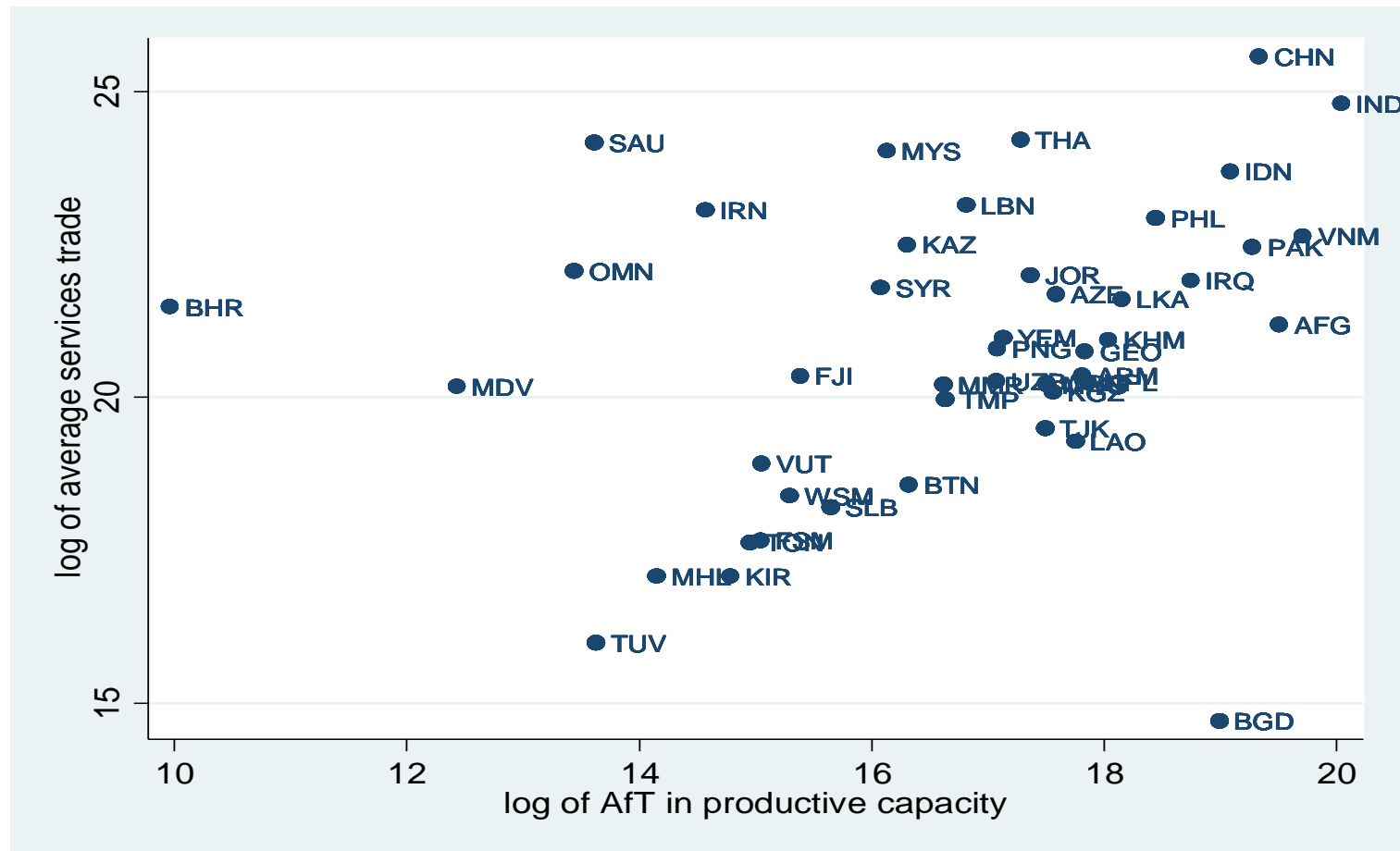
# **AfT-TiS relationship**

# Mean services trade and AfT in economic infrastructure: Asia and Pacific (average 2002-2014)



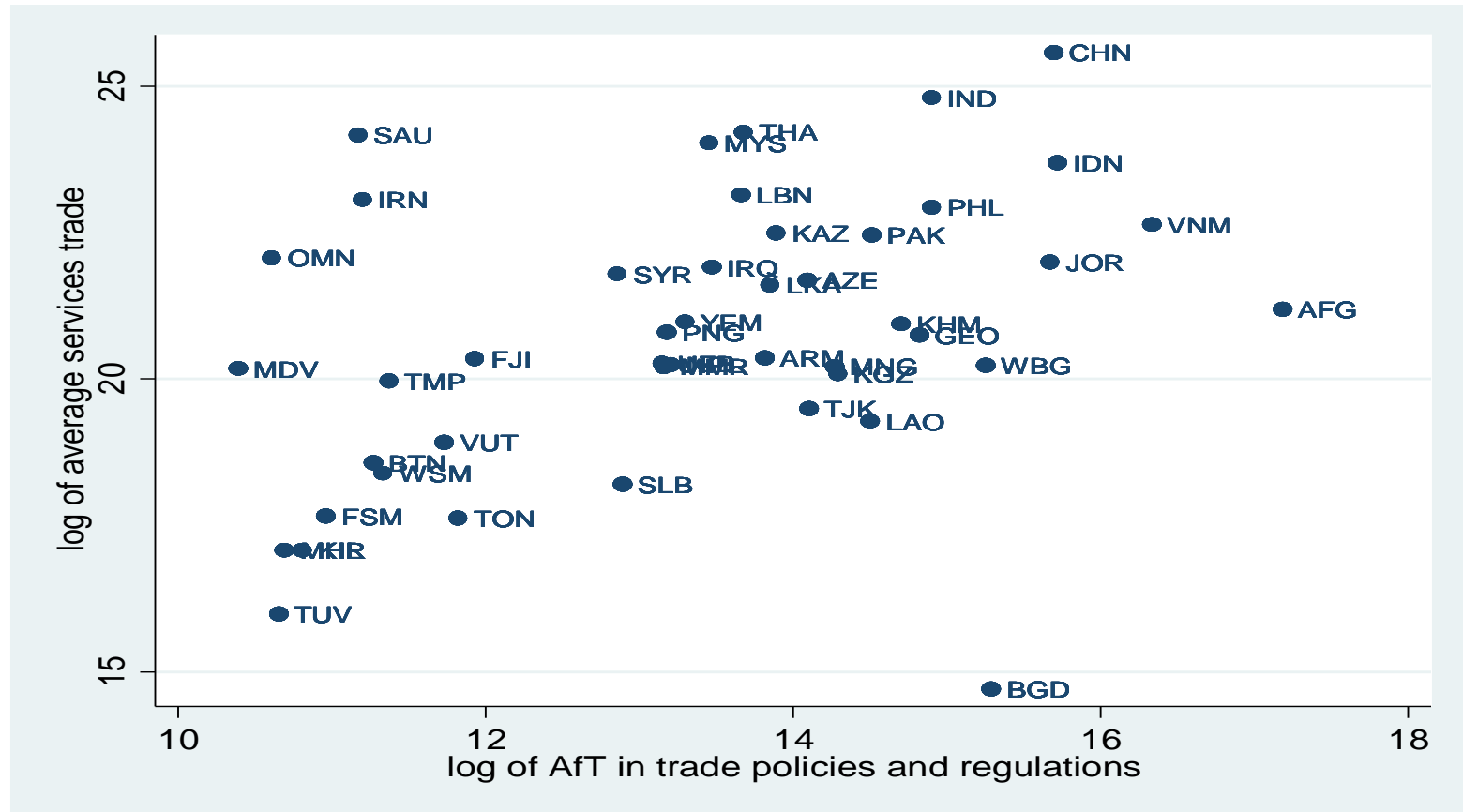
Source: OECD QWIDS and UNComtrade; own calculations

# Mean services trade and AfT in productive capacity: Asia and Pacific (average 2002-2014)



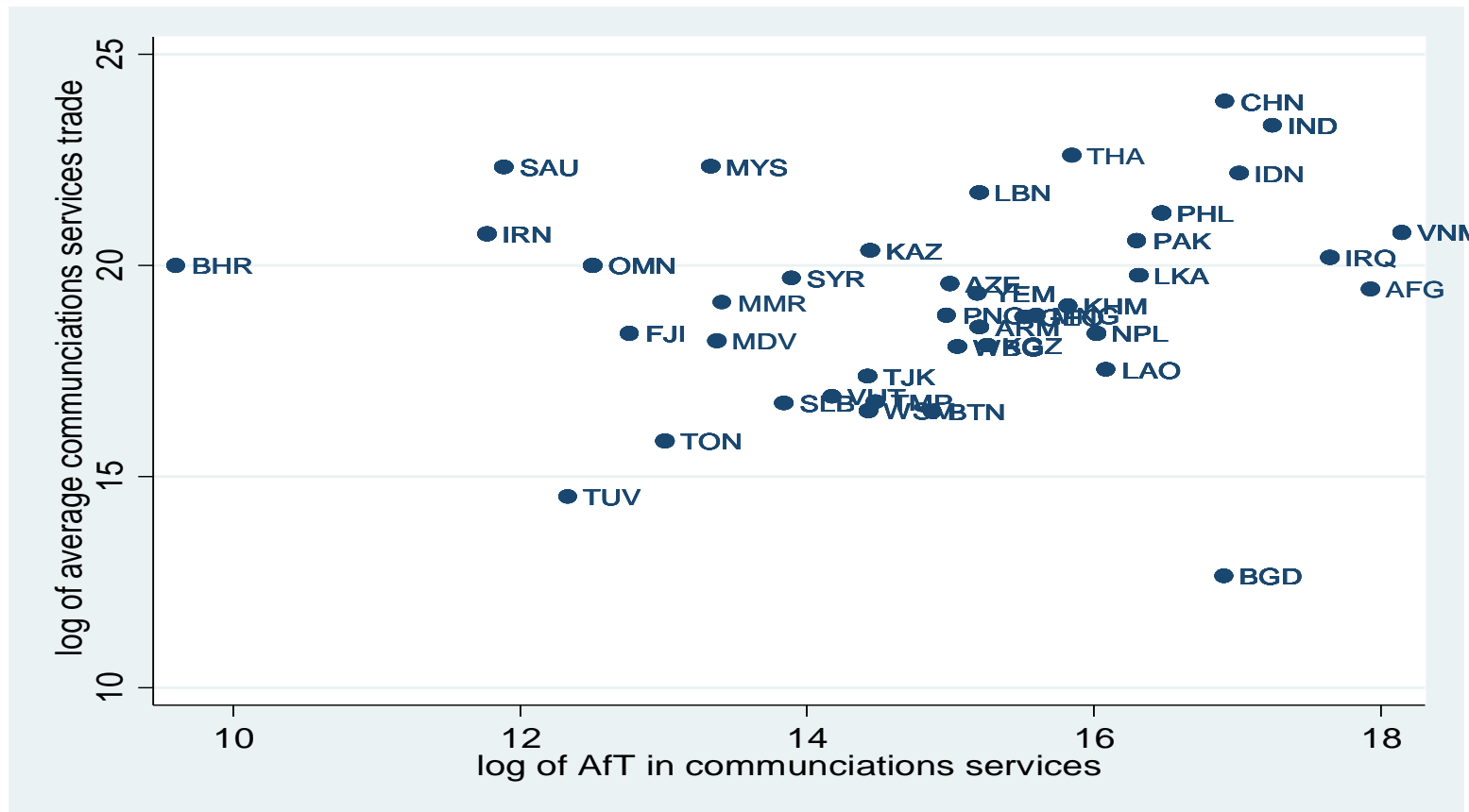
Source: OECD QWIDS and UNComtrade; own calculations

# Mean services trade and AfT in trade policies and regulation: Asia and Pacific (average 2002-2014)



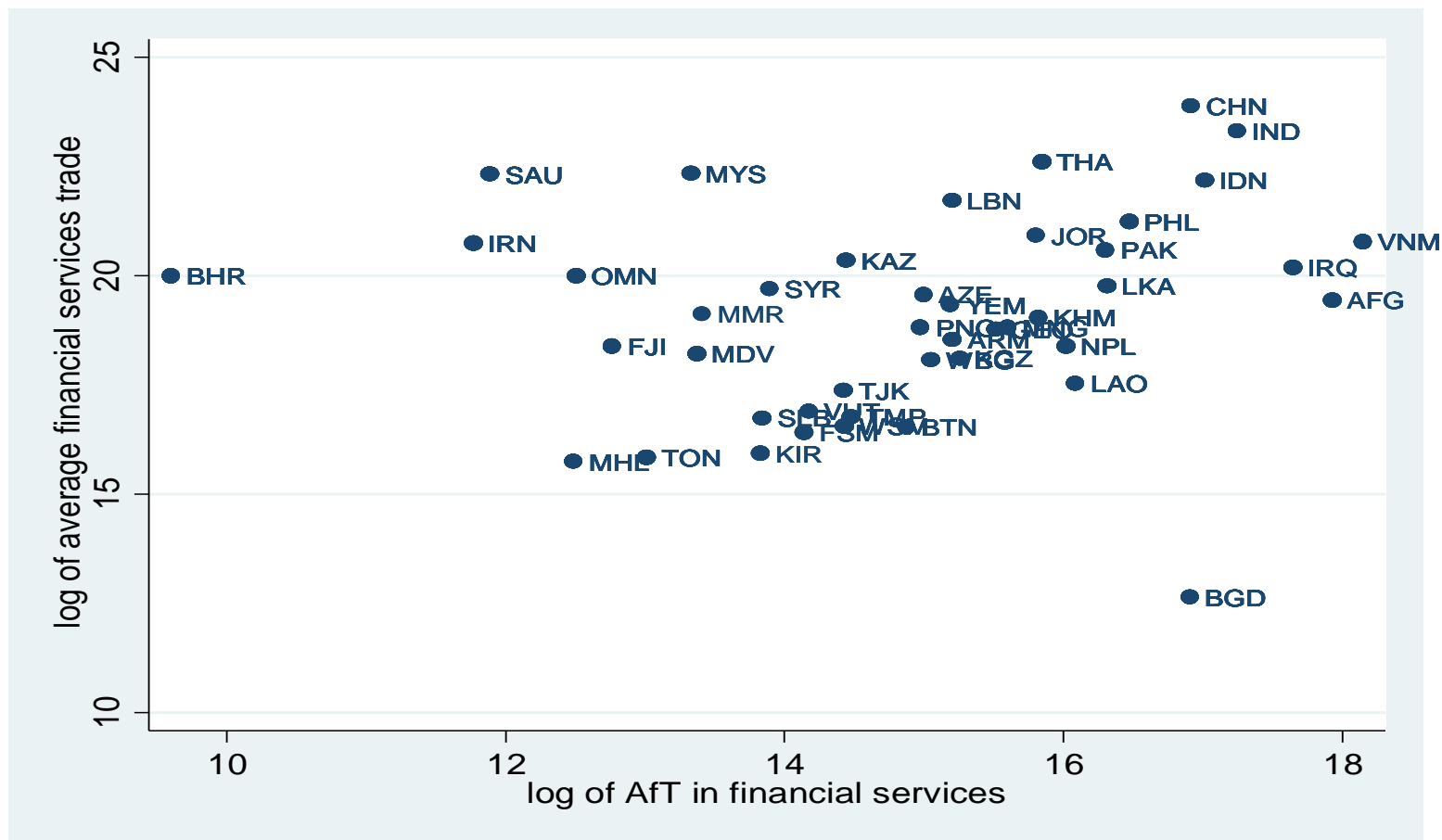
Source: OECD QWIDS and UNComtrade; own calculations

# Mean services trade and AfT: communications services (Asia and Pacific, 2002-2014)



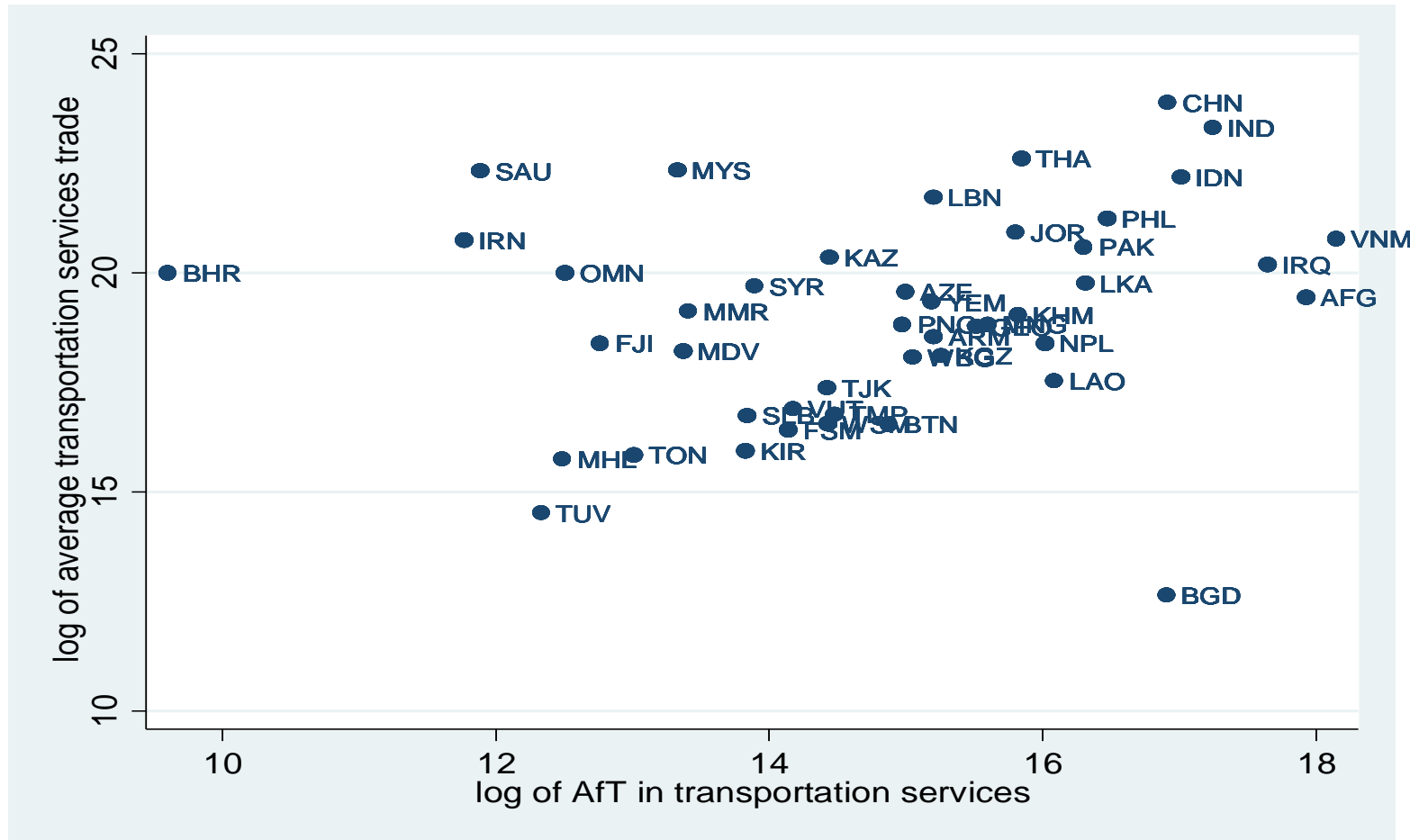
**Source:** OECD QWIDS and UNComtrade; own calculations

# Mean services trade and AfT: financial services (Asia and Pacific, 2002-2014)

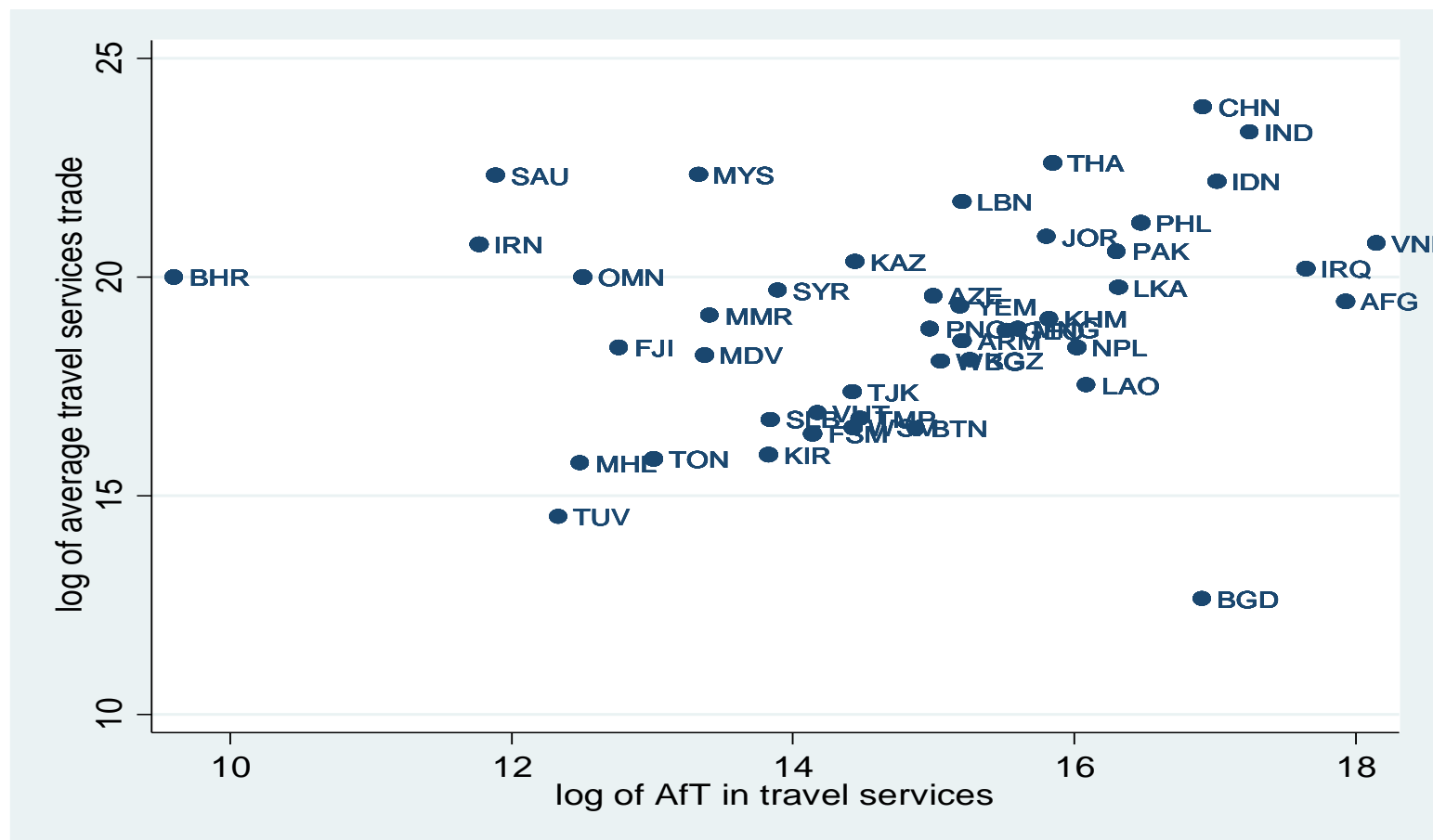


Source: OECD QWIDS and UNComtrade; own calculations

# Mean services trade and AfT: transportation services (Asia and Pacific, 2002-2014)

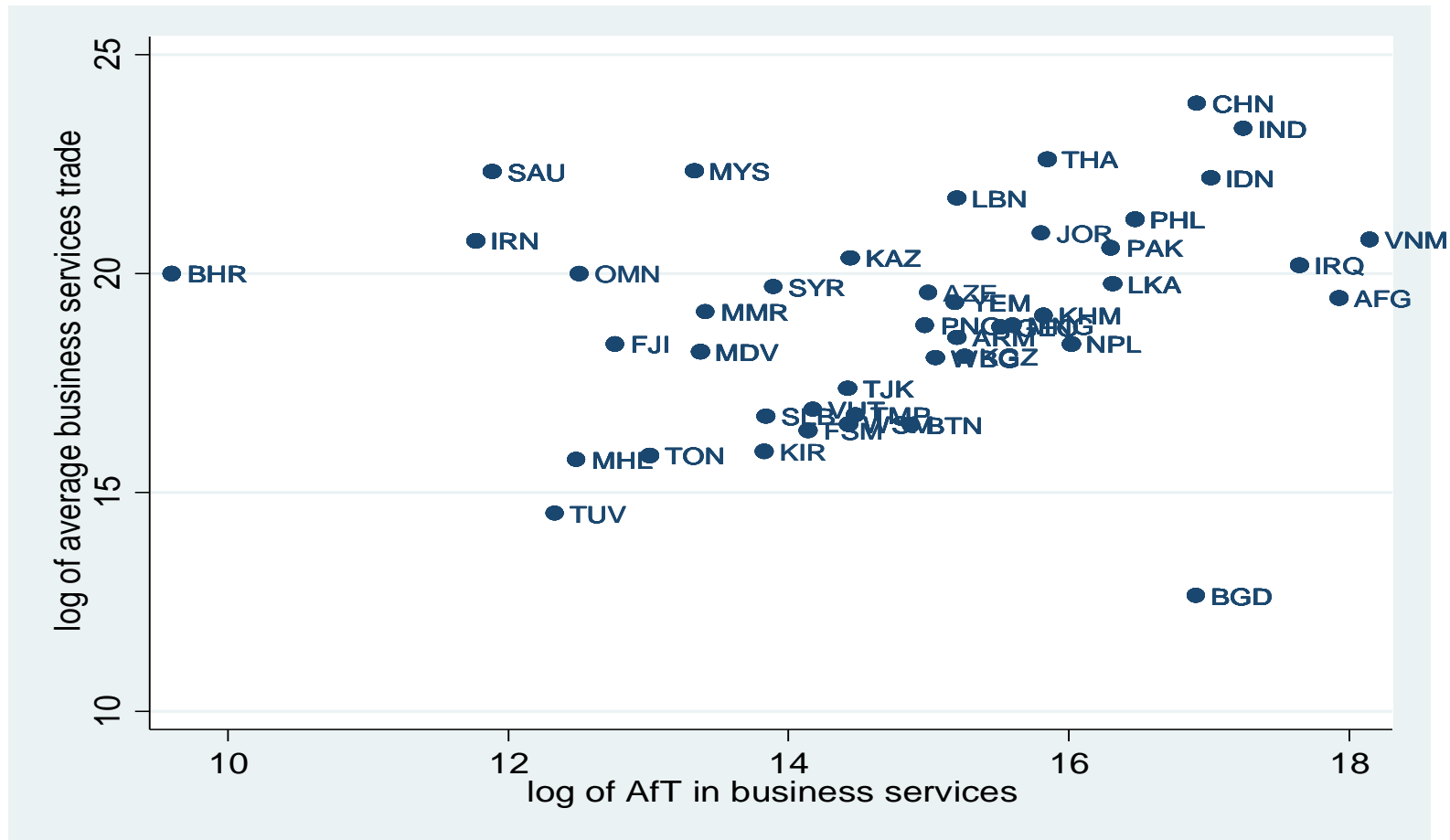


# Mean services trade and AfT: travel services (Asia and Pacific, 2002-2014)



**Source:** OECD QWIDS and UNComtrade; own calculations

# Mean services trade and AfT: other business services (Asia and Pacific, 2002-2014)



**Source:** OECD QWIDS and UNComtrade; own calculations

# OLS results for aggregate services over 2012-2015: Asia and Pacific sub-regions with lagged AfT in services

	OLS: Dependent variable = $\ln(\text{Avg. services trade}_{ct})$						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	All	CA	WA	SA	EA	SEA	Pac
$\ln(\text{AfT}_{ct-1})$	0.037**	0.133***	0.043*	-0.036	0.258***	0.043	-0.005
	(0.015)	(0.035)	(0.025)	(0.053)	(0.091)	(0.031)	(0.018)
$\ln(\text{GDP}_{ct})$	0.136	-1.400***	1.190	5.046***	-5.253**	2.200**	1.232**
	(0.249)	(0.393)	(0.722)	(1.716)	(2.004)	(0.982)	(0.539)
$\ln(\text{PCGDP}_{ct})$	0.428*	1.583***	0.068	-4.924***	6.351***	-1.743*	-0.650
	(0.242)	(0.466)	(0.719)	(1.521)	(2.092)	(0.991)	(0.650)
Constant	0.826	28.446***	-20.713*	-94.893***	111.615**	-32.431**	-15.189**
	(4.355)	(6.663)	(11.181)	(33.386)	(41.250)	(16.122)	(6.703)
N	516.000	100.000	97.000	71.000	25.000	102.000	121.000
r2	0.994	0.976	0.980	0.998	0.999	0.992	0.989
Fixed effects	c,t	c,t	c,t	c,t	c,t	c,t	c,t

**Note:** Robust standard errors, clustered at country-year level, reported in parentheses. Levels of significance: 1%\*\*\*, 5%\*\* , 10%\*.

# **Geographically-challenged economies**

# Introduction

- Geographically-challenged economies include both landlocked countries and small island nations in remote locations that are similarly isolated from the rest of the world – the latter are effectively “sealocked”
- Asia has 12 landlocked countries: Afghanistan, Armenia, Azerbaijan, Bhutan, Laos, Kazakhstan, Kyrgyzstan, Mongolia, Nepal, Tajikistan, Turkmenistan, and Uzbekistan
- All the small island nations of the Pacific, with the exception of Timor-Leste, are sealocked

# Share of landlocked economies' AfT in services in the total sample (%)

Share of sample ODA flows (%)	2002	2005	2010	2014
Transport & Storage	5.5	12.4	11.0	6.6
Communications	9.2	9.6	6.1	5.1
Energy	7.6	6.4	9.4	6.0
Banking & Financial Services	3.9	9.5	6.2	5.3
Business & Other Services	16.7	9.3	16.2	20.0
Tourism	10.4	17.9	7.0	2.3
All services	6.5	9.8	10.2	6.7
Share of GDP (%)	6.5	10.7	7.5	4.1

**Source:** OECD QWIDS; own calculations

# Share of sealoeked economies' AfT in services in the total sample (%)

Share of world ODA flows (%)	2002	2005	2010	2014
Transport & Storage	3.0	1.6	1.7	1.9
Communications	0.4	1.1	1.5	1.3
Energy	0.8	0.3	0.8	0.9
Banking & Financial Services	0.1	0.2	0.2	0.4
Business & Other Services	0.2	0.7	0.2	1.4
Tourism	3.2	2.7	3.6	5.7
All services	<b>1.8</b>	<b>0.9</b>	<b>1.2</b>	<b>1.3</b>
Share of GDP (%)	<b>15.8</b>	<b>11.3</b>	<b>17.5</b>	<b>15.9</b>

**Source:** OECD QWIDS; own calculations

# Share of landlocked economies' average services trade in the total sample (%)

Year	2002	2005	2010	2014
Transport	0.91	0.94	1.23	1.58
Travel	0.93	0.77	1.04	1.67
Communications	1.73	1.47	2.42	1.59
Insurance	0.54	0.73	0.83	0.77
Financial	0.31	0.07	0.76	0.56
CRS	0.15	0.21	0.21	0.25
OBS	0.72	1.28	1.53	0.54
All services	<b>1.02</b>	<b>1.21</b>	<b>1.37</b>	<b>1.41</b>

**Source:** UNComtrade; own calculations

# Share of sealoaked economies' average services trade in the total sample (%)

Year	2002	2005	2010	2014
Transport	0.44	0.42	0.33	0.25
Travel	0.54	0.51	0.35	0.24
Communications	0.51	0.56	0.57	0.29
Insurance	0.51	0.42	0.30	0.26
Financial	0.05	0.25	0.40	0.11
CRS	0.07	0.09	0.04	0.05
OBS	0.71	0.61	0.42	0.17
All services	<b>0.45</b>	<b>0.45</b>	<b>0.35</b>	<b>0.21</b>

**Source:** UNComtrade; own calculations

# Findings from correlation charts

- Correlation charts between TiS and AfT for geographically-challenged economies suggest positive relationships between  $\ln(\text{AfT})$  and  $\ln(\text{avg. services trade})$  at both aggregate and sectoral levels for the full sample of geographically-challenged economies
- However, correlation results are driven by the sub-sample of sealoaked economies
- Interestingly, while landlocked economies also display a positive relationship between these variables at the aggregate services level and for business, financial and transport services, the relationship is near-horizontal for travel services, and negative for communication services

# OLS results for aggregate services over 2012-2015: Geographically-challenged economies with lagged AfT in services

OLS: Dependent variable = $\ln(\text{Avg. services trade}_{ct})$			
	(1)	(2)	(3)
	GC	LL	SL
$\ln(\text{AfT}_{ct-1})$	0.020	0.084**	0.003
	(0.018)	(0.037)	(0.017)
$\ln(\text{GDP}_{ct})$	1.134**	-0.404	1.928***
	(0.475)	(0.863)	(0.436)
$\ln(\text{PCGDP}_{ct})$	-0.618	0.618	-1.444***
	(0.506)	(0.913)	(0.539)
Constant	-15.861**	11.432	-23.891***
	(7.984)	(14.512)	(5.405)
N	235.000	124.000	111.000
r2	0.989	0.975	0.993
Fixed effects	c,t	c,t	c,t

**Note:** Robust standard errors, clustered at country-year level, reported in parentheses. Levels of significance: 1%\*\*\*, 5%\*\*, 10%\*. GC = Geographically-challenged; LL = Landlocked; SL = Sealed.

# **Policy prescriptions**

# Policy prescription (1)

- The need to integrate sealoaked economies into global services trade is relatively more urgent
- The robust, positive TiS-AfT relationship for landlocked economies in particular suggests that directing global aid to the services sectors in these countries – especially to business, financial and transport services – may translate into greater trading opportunities
- Findings also underline the role of macroeconomic stability, enabling infrastructure and other complimentary policy and good governance measures that can improve the “connectivity” of geographically-challenged with their most immediate neighbours and nullify the disadvantages of scale that their geography imposes on them

## Policy prescription (2)

- Business services in landlocked economies and the tourism sector in seafar economies have been more successful in attracting global AfT than other sectors
- Thus, inherent characteristics of these sectors, such as the propensity for reform, domestic and international demand, and the propensity for some business services in particular to be delivered online, need to be harnessed for both more aid and trade
- One also needs to acknowledge the positive role that regulatory reform and novel, trade-facilitating solutions such as e-commerce and digital trade can play in enhancing services trade

## Policy prescription (3)

- AfT has facilitated the rise of e-commerce and digital trade in the region by building the ICT infrastructure and supporting the enabling regulatory environment that is needed for such growth
- The potential gains from digital connectivity are the greatest for the landlocked and seafar economies where geography is a significant barrier
- The cross-border nature of e-commerce transactions also necessitates a harmonized regional legal framework to promote economic growth and competitiveness
- Finally, the geographical and cultural proximity of the seafar economies or landlocked countries in Central Asia in particular render regulatory convergence initiatives more feasible

**Thank you!**

**Comments welcome!**

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