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Capturing non-tariff related trade costs for Asia-Pacific countries

ESCAP Trade Cost Database and Implications

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Background

- Much progress has been made in developing trade facilitation/costs indicators
- However, there are limitations, including:
 - (1) partial coverage of international trade costs (e.g., only international shipping costs)
 - (2) little or no information on bilateral/regional/south-south trade costs
 - (3) very large variations in trade efficiency across products and trade routes not captured
- ESCAP is therefore:
 - Developing a database of bilateral and intraregional trade costs [macro]
 - Building capacity in Trade Process Analysis [micro]

ESCAP's Intraregional Trade Cost Database

- Based on the comprehensive trade costs measure proposed by Jacks, Meissner and Novy (2009)
 - Measure derived from the gravity equation, i.e., ratio based essentially on bilateral trade data and Gross Output data → “objective” measure of costs
- Captures all *additional costs involved in trading goods bilaterally relative to those involved in trading goods domestically*. It includes
 - International shipping and logistics costs
 - Tariff and non-tariff costs, including indirect and direct costs associated with trade procedures and regulations
 - Costs from differences in language, culture, currencies...

Methodology

Comprehensive trade cost equation:

$$\tau_{ij} \equiv \left(\frac{t_{ij} t_{ji}}{t_{ii} t_{jj}} \right)^{\frac{1}{2}} - 1 = \left(\frac{x_{ii} x_{jj}}{x_{ij} x_{ji}} \right)^{\frac{1}{2(\sigma-1)}} - 1$$

where

t_{ij} denotes geometric average trade costs between country i and country j

t_{ij} denotes international trade costs from country i to country j

t_{ji} denotes international trade costs from country j to country i

t_{ii} denotes intranational trade costs of country i

t_{jj} denotes intranational trade costs of country j

x_{ij} denotes international trade flows from country i to country j

x_{ji} denotes international trade flows from country j to country i

x_{ii} denotes intranational trade of country i

x_{jj} denotes intranational trade of country j

σ denotes elasticity of substitution (which is set = 8)



United Nations
ESCAP
Economic and Social Commission for Asia and the Pacific

ESCAP's Intraregional Trade Cost Database

(version 2, December 2011)

- Bilateral Comprehensive Trade Costs (CTC)
- Between 107 countries
- From 1994 to 2009 (2010 for some countries)
- 2 sectors: Agricultural CTC & Manufacturing CTC
- **CTC excluding tariffs (NT-CTC) also calculated**

● Available at:

www.unescap.org/tid/artnet/trade-costs.asp

Non-tariff intra and extra regional trade costs in Asia (2007/9)*

Region	ASEAN-4	East Asia-3	North & Central Asia	SAARC-4	AUS-NZL	EU-3	USA
ASEAN-4	79% (-9.5%)	73% (-5.9%)	291% (-14.2%)	134% (2.1%)	90% (-12.3%)	97% (-4.9%)	77% (3.0%)
East Asia-3	73% (-5.9%)	47% (-21.1%)	187% (-32.7%)	119% (-2.8%)	78% (-15.7%)	70% (-19.0%)	53% (-13.5%)
North & Central Asia	291% (-14.2%)	187% (-32.7%)	149% (-20.5%)	270% (-22.4%)	270% (-22.2%)	149% (-26.0%)	165% (5.0%)
SAARC-4	134% (2.1%)	119% (-2.8%)	270% (-22.4%)	113% (5.0%)	130% (-2.7%)	101% (-3.2%)	99% (5.9%)
AUS-NZL	90% (-12.3%)	78% (-15.7%)	270% (-22.2%)	130% (-2.7%)	45% (-23.5%)	89% (-17.0%)	82% (-11.1%)
EU3	97% (-4.9%)	70% (-19.0%)	149% (-26.0%)	101% (-3.2%)	89% (-17.0%)	32% (-32.6%)	51% (-18.2%)
USA	77% (3.0%)	53% (-13.5%)	165% (-17.3%)	99% (5.9%)	82% (-11.1%)	51% (-18.2%)	

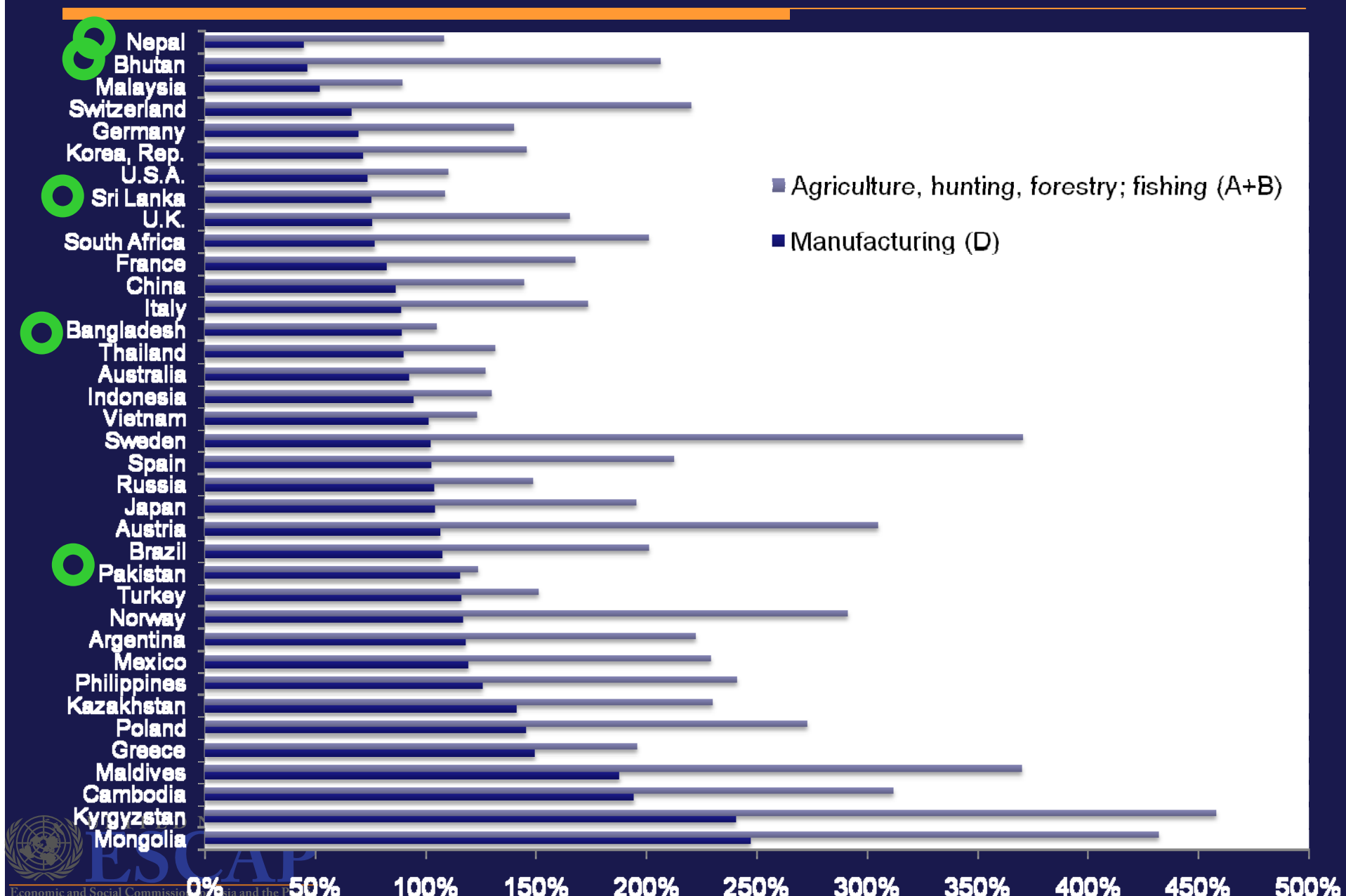
Source: ESCAP Trade Cost Database (version 2).

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Source: ESCAP Trade Cost Database (version 2).

Non-Tariff Comprehensive Trade Costs of Selected Economies with India (2007/2009, % ad valorem)



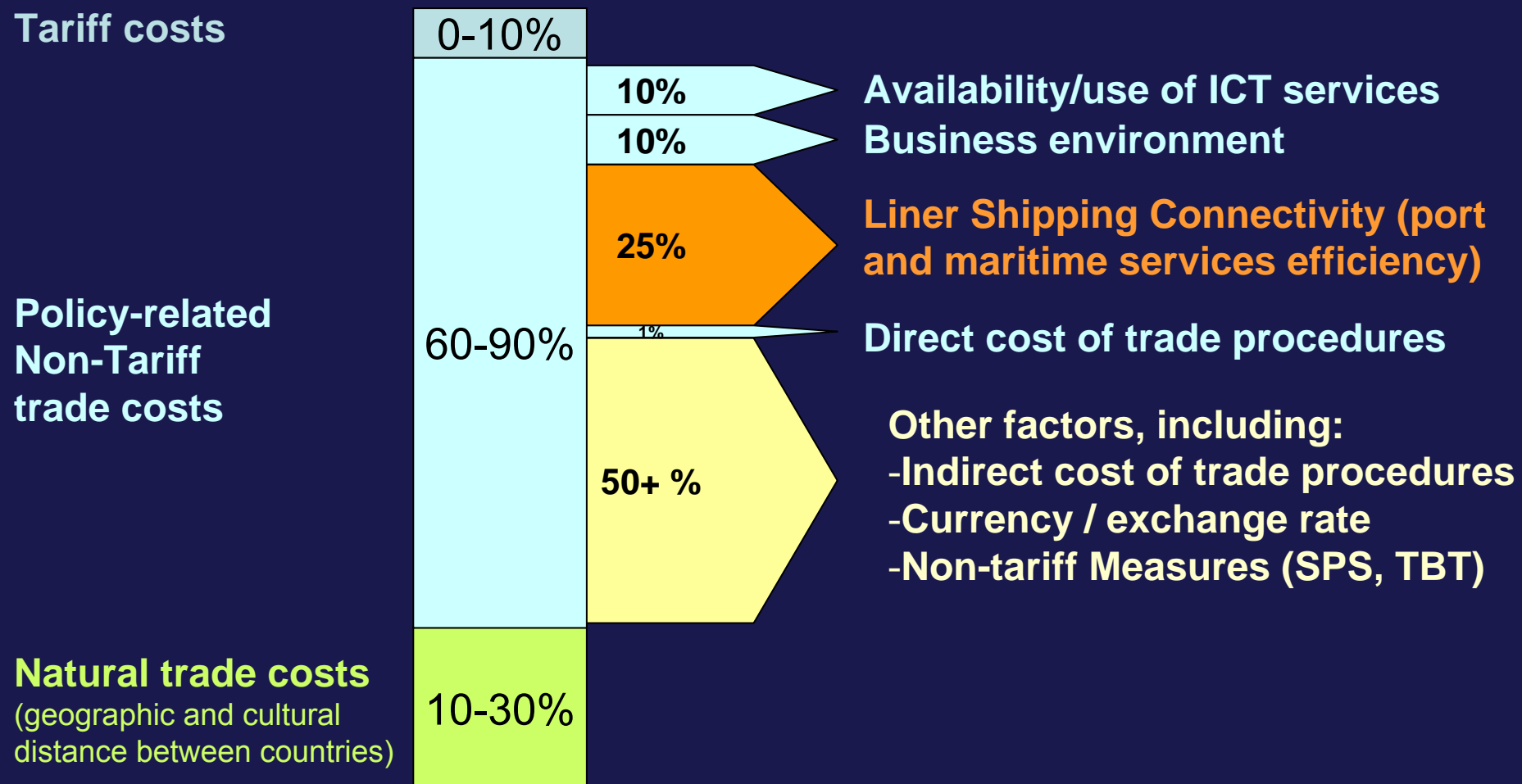
Bilateral Non-Tariff Comprehensive Trade Costs (Manufacturing, 2007-9)

	period	IND	BGD	PAK	LKA	THA	CHN	DEU	USA
India	2007-2009		89%	116%	76%	90%	86%	70%	74%
(IND)			(6%)	(-24%)	(9%)	(-4%)	(-8%)	(-17%)	(-5%)
Bangladesh	2007-2009	89%		142%	127%	130%	133%	101%	104%
(BGD)		(6%)		(-9%)	(11%)	(33%)	(6%)	(7%)	(12%)
Pakistan	2007-2009	116%	142%		127%	118%	105%	94%	94%
(PAK)		(-24%)	(-9%)		(14%)	(-2%)	(-7%)	(-15%)	(-10%)
Sri Lanka	2007-2009	76%	127%	127%		114%	140%	98%	103%
(LKA)		(9%)	(11%)	(14%)		(9%)	(-1%)	(2%)	(23%)
Thailand	2007-2009	90%	130%	118%	114%		66%	79%	72%
(THA)		(-4%)	(33%)	(-2%)	(9%)		(-14%)	(-13%)	(-3%)
China	2007-2009	86%	133%	105%	140%	66%		49%	51%
(CHN)		(-8%)	(6%)	(-7%)	(-1%)	(-14%)		(-28%)	(-15%)
Germany	2007-2009	70%	101%	94%	98%	79%	49%		46%
(DEU)		(-17%)	(7%)	(-15%)	(2%)	(-13%)	(-28%)		(-19%)
United States	2007-2009	74%	104%	94%	103%	72%	51%	46%	
(USA)		(-5%)	(12%)	(-10%)	(23%)	(-3%)	(-15%)	(-19%)	

Source: ESCAP Trade Cost Database (version 2)

Note: Change vis-à-vis 2001-2003 in bracket

What explains changes in the trade costs across countries?*



Conclusions and Way Forward

- Important to take a holistic approach to facilitating trade
 - Many components to trade costs
 - Availability and quality of logistics infrastructure and services a key component
 - Goal is to make the best possible use of existing hard infrastructure
 - Use of modern ICT also one of the keys → Paperless trade
- Sectoral focus of trade facilitation initiatives should be considered (e.g., agriculture)
- Micro-level trade facilitation performance monitoring systems needs to be developed
 - e.g., Standardized & Regular Trade Process Analyses of key products
 - to form the basis of national/sub-regional TF action plans

Conclusions and Way Forward

- Global ESCAP-World Bank Comprehensive Trade Cost Database to be released before the end of the year
- For more information on the ESCAP Trade Cost Database – www.unescap.org/tid/artnet/trade-costs.asp

References:

- Duval, Yann, and Uthoktham, C. (December 2011), “**Trade Costs in Asia and the Pacific: Improved and Sectoral Estimates**”, Trade and Investment Division, ESCAP Staff Working Paper 05/11.

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Annex

Tariff Cost: Agriculture

	period	IND	BGD	PAK	LKA	THA	CHN	DEU	USA
India	2007-2009		19%	18%	17%	25%	22%	17%	14%
(IND)			(-49%)	(-26%)	(-26%)	(-21%)	(-4%)	(7%)	(-11%)
Bangladesh	2007-2009	19%		13%	17%	15%	11%	5%	8%
(BGD)		(-49%)		(-26%)	(-31%)	(-41%)	(-52%)	(-69%)	(-55%)
Pakistan	2007-2009	18%	13%		10%	11%	9%	5%	5%
(PAK)		(-26%)	(-26%)		(-36%)	(-23%)	(-31%)	(-28%)	(-34%)
Sri Lanka	2007-2009	17%	17%	10%		22%	16%	12%	9%
(LKA)		(-26%)	(-31%)	(-36%)		(-15%)	(-22%)	(33%)	(25%)
Thailand	2007-2009	25%	15%	11%	22%		13%	11%	10%
(THA)		(-21%)	(-41%)	(-23%)	(-15%)		(-46%)	(-20%)	(-24%)
China	2007-2009	22%	11%	9%	16%	13%		9%	7%
(CHN)		(-4%)	(-52%)	(-31%)	(-22%)	(-46%)		(5%)	(-24%)
Germany	2007-2009	17%	5%	5%	12%	11%	9%		5%
(DEU)		(7%)	(-69%)	(-28%)	(33%)	(-20%)	(5%)		(7%)
United States	2007-2009	14%	8%	5%	9%	10%	7%	5%	
(USA)		(-11%)	(-55%)	(-34%)	(25%)	(-24%)	(-24%)	(7%)	

Source: ESCAP Trade Cost Database (version 2)

Note: Change vis-à-vis 2001-2003 in bracket

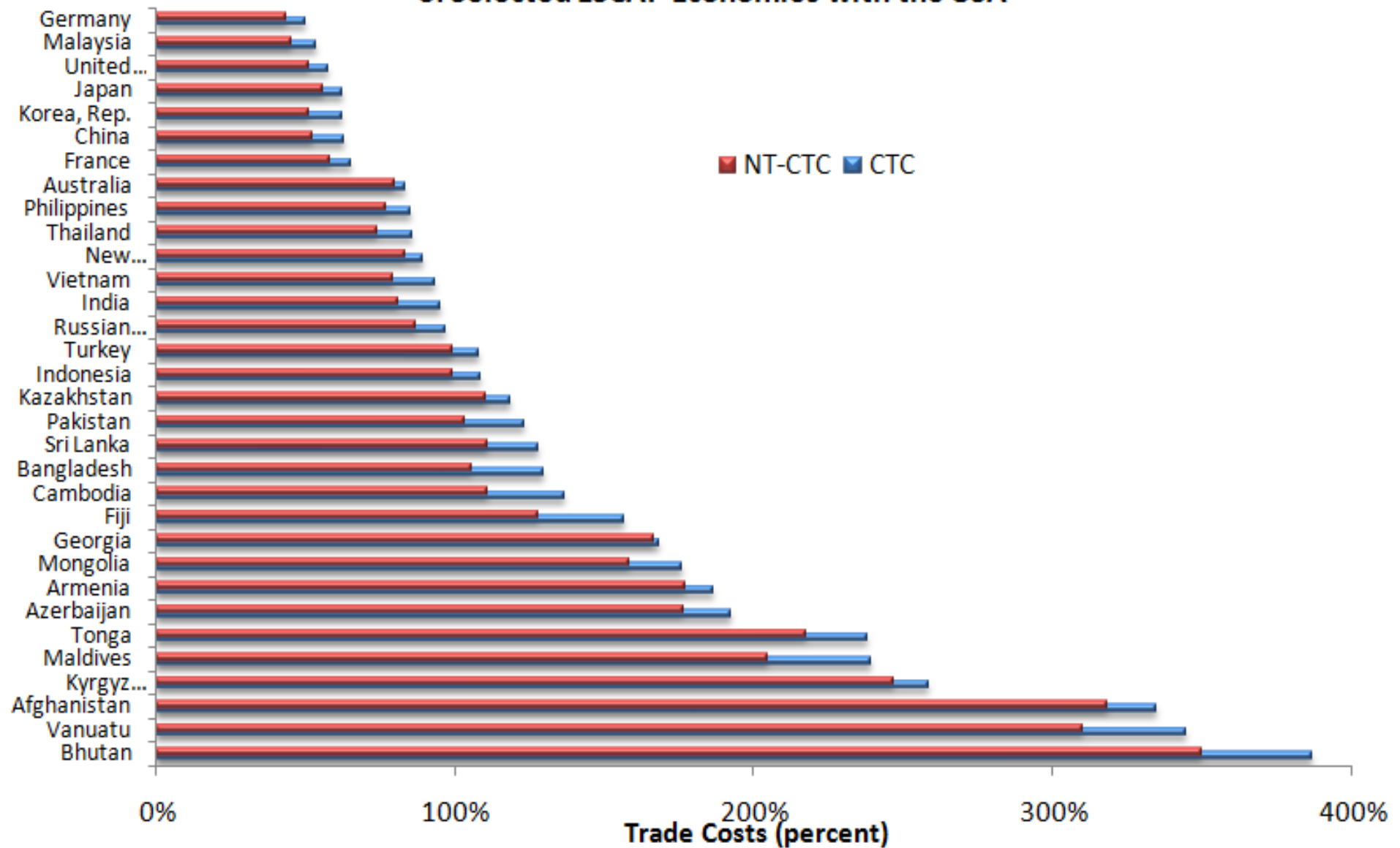
Tariff Cost: Manufacturing

	period	IND	BGD	PAK	LKA	THA	CHN	DEU	USA
India	2007-2009		18%	12%	7%	11%	11%	9%	8%
(IND)			(-42%)	(-35%)	(-54%)	(-54%)	(-53%)	(-48%)	(-56%)
Bangladesh	2007-2009	18%		19%	14%	19%	12%	7%	10%
(BGD)		(-42%)		(-5%)	(-41%)	(-46%)	(-56%)	(-62%)	(-56%)
Pakistan	2007-2009	12%	19%		11%	16%	10%	9%	10%
(PAK)		(-35%)	(-5%)		(-16%)	(-19%)	(-30%)	(0%)	(-11%)
Sri Lanka	2007-2009	7%	14%	11%		15%	11%	6%	8%
(LKA)		(-54%)	(-41%)	(-16%)		(-8%)	(-17%)	(-7%)	(11%)
Thailand	2007-2009	11%	19%	16%	15%		8%	6%	6%
(THA)		(-54%)	(-46%)	(-19%)	(-8%)		(-52%)	(-31%)	(-30%)
China	2007-2009	11%	12%	10%	11%	8%		6%	7%
(CHN)		(-53%)	(-56%)	(-30%)	(-17%)	(-52%)		(-26%)	(-25%)
Germany	2007-2009	9%	7%	9%	6%	6%	6%		5%
(DEU)		(-48%)	(-62%)	(0%)	(-7%)	(-31%)	(-26%)		(-9%)
United States	2007-2009	8%	10%	10%	8%	6%	7%	5%	
(USA)		(-56%)	(-56%)	(-11%)	(11%)	(-30%)	(-25%)	(-9%)	

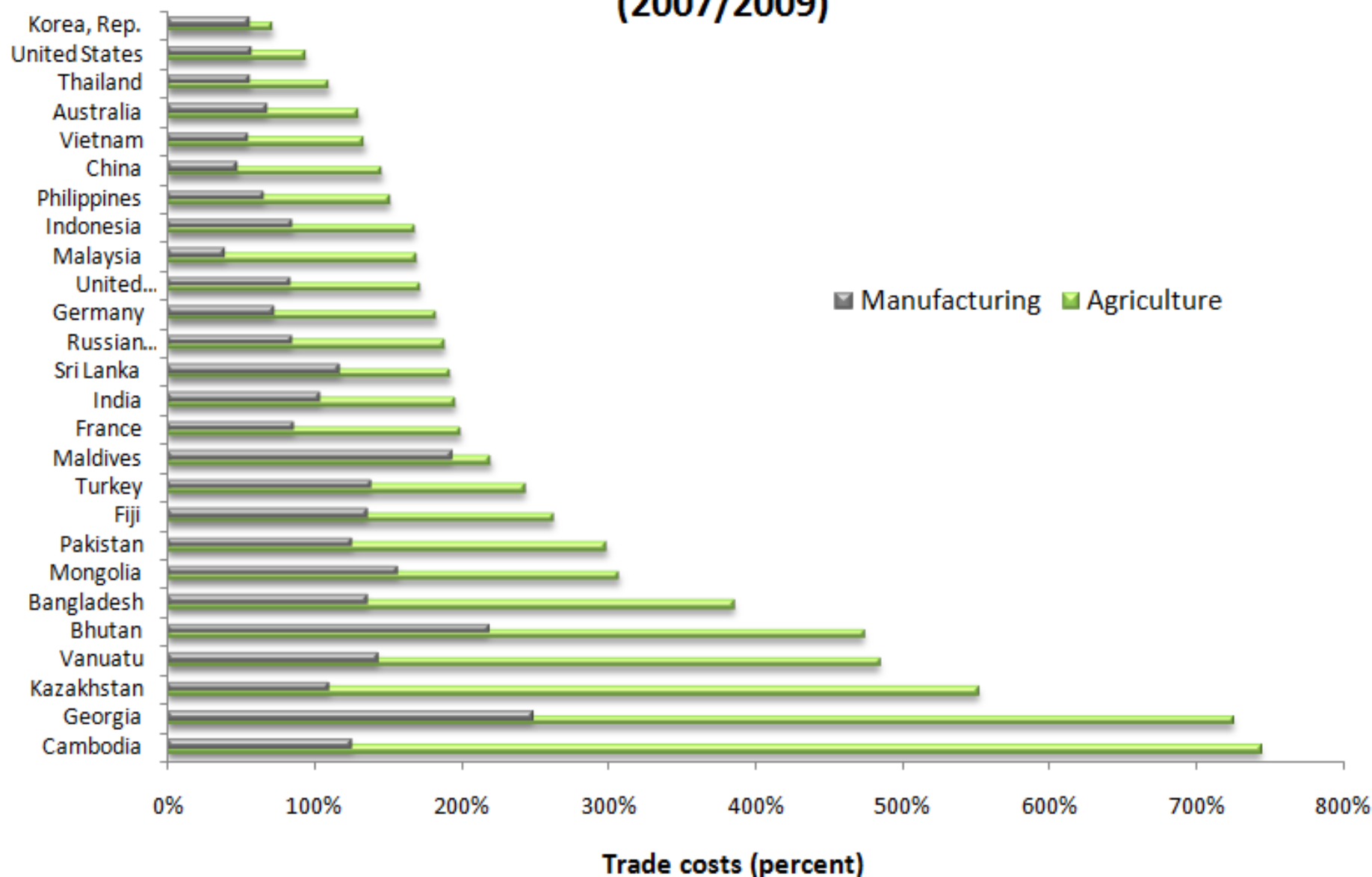
Source: ESCAP Trade Cost Database (version 2)

Note: Change vis-à-vis 2001-2003 in bracket

Comprehensive Trade Costs (CTC) and CTC excluding tariff costs of trade (NT-CTC) of Selected ESCAP Economies with the USA



Non-Tariff Comprehensive Trade Costs of Selected ESCAP Economies with Japan (2007/2009)



Bilateral Non-Tariff Comprehensive Trade Costs (Agriculture, 2007-9)

	period	IND	BGD	PAK	LKA	THA	CHN	DEU	USA
India	2007-2009		105%	124%	109%	132%	145%	140%	111%
(IND)			(29%)	(-19%)	(20%)	(-24%)	(-26%)	(-14%)	(-4%)
Bangladesh	2007-2009	105%		124%	293%	188%	167%	293%	176%
(BGD)		(29%)		(8%)	(18%)	(-3%)	(-15%)	(31%)	(-11%)
Pakistan	2007-2009	124%	124%		122%	180%	206%	235%	159%
(PAK)		(-19%)	(8%)		(6%)	(-8%)	(-16%)	(36%)	(-9%)
Sri Lanka	2007-2009	109%	293%	122%		226%	194%	141%	135%
(LKA)		(20%)	(18%)	(6%)		(0%)	(10%)	(-13%)	(0%)
Thailand	2007-2009	132%	188%	180%	226%		103%	142%	90%
(THA)		(-24%)	(-3%)	(-8%)	(0%)		(-2%)	(-12%)	(-6%)
China	2007-2009	145%	167%	206%	194%	103%		146%	92%
(CHN)		(-26%)	(-15%)	(-16%)	(10%)	(-2%)		(-9%)	(-23%)
Germany	2007-2009	140%	293%	235%	141%	142%	146%		97%
(DEU)		(-14%)	(31%)	(36%)	(-13%)	(-12%)	(-9%)		(-15%)
United States	2007-2009	111%	176%	159%	135%	90%	92%	97%	
(USA)		(-4%)	(-11%)	(-9%)	(0%)	(-6%)	(-23%)	(-15%)	

Source: ESCAP Trade Cost Database (version 2)

Note: Change vis-à-vis 2001-2003 in bracket