Trade in Value-added: Its concept and application
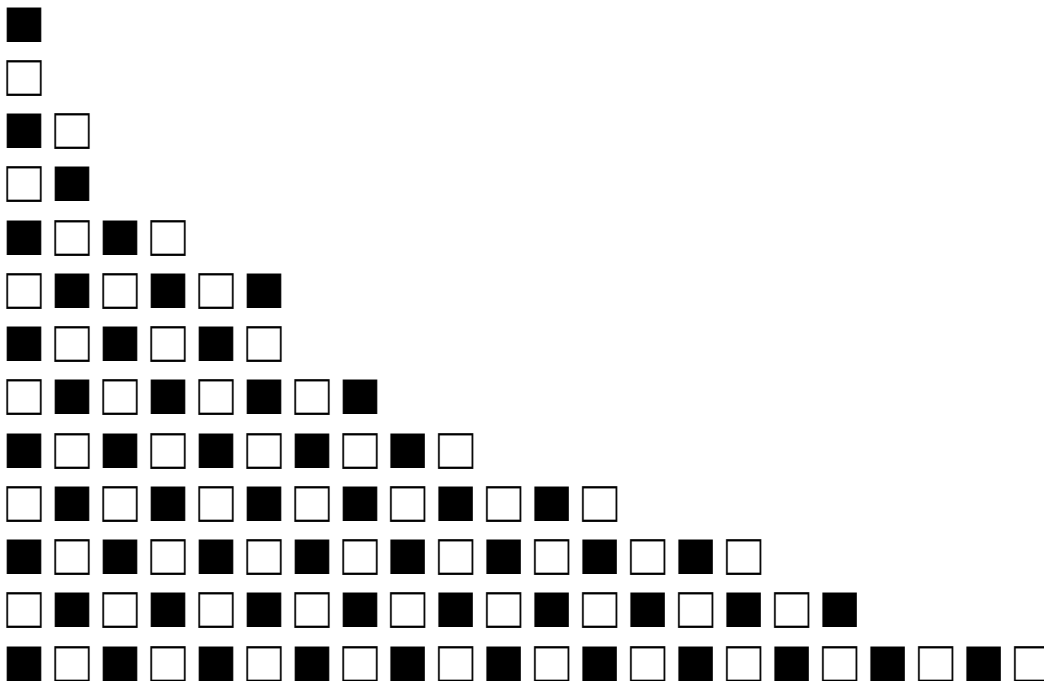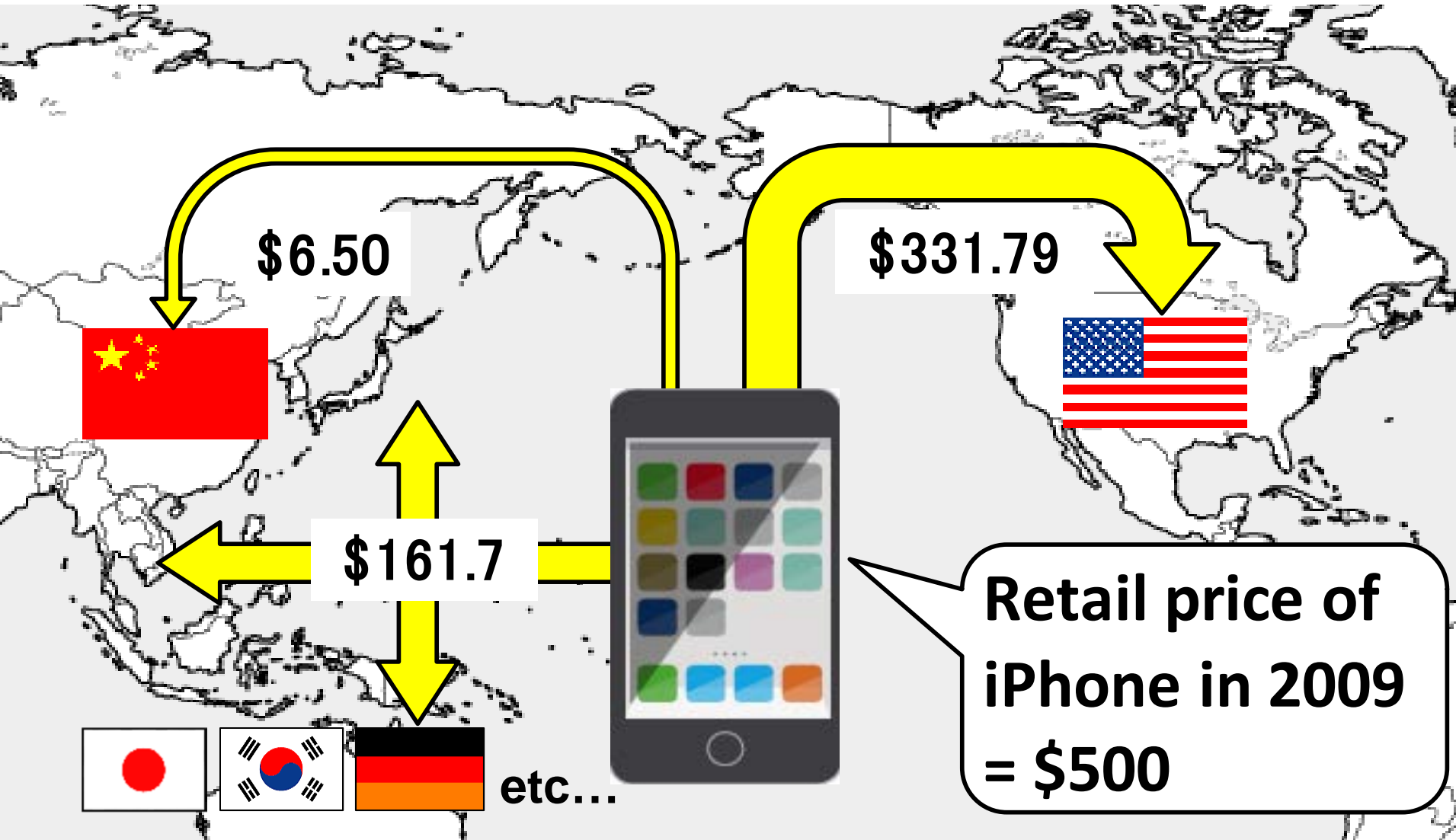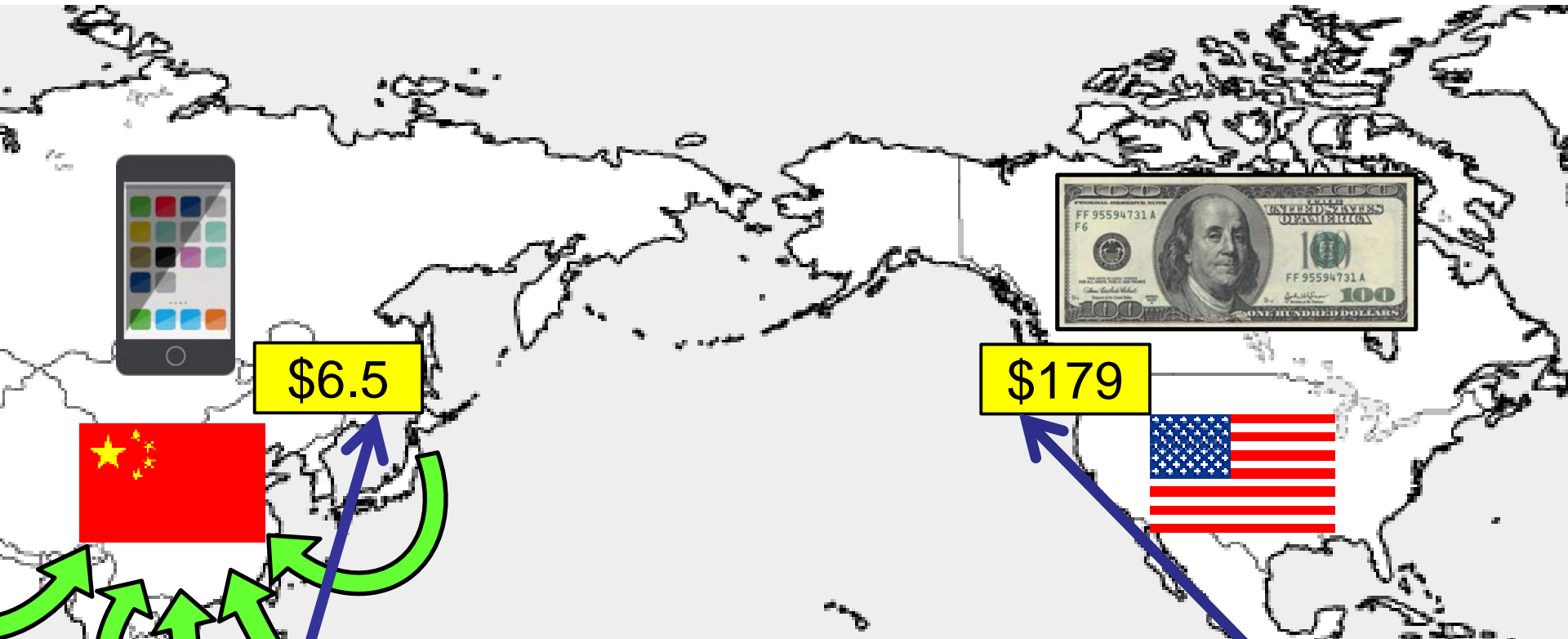
Satoshi Inomata

IDE-JETRO

International value distribution of iPhone

$6.50

$331.79

$161.7

Retail price of iPhone in 2009 = $500
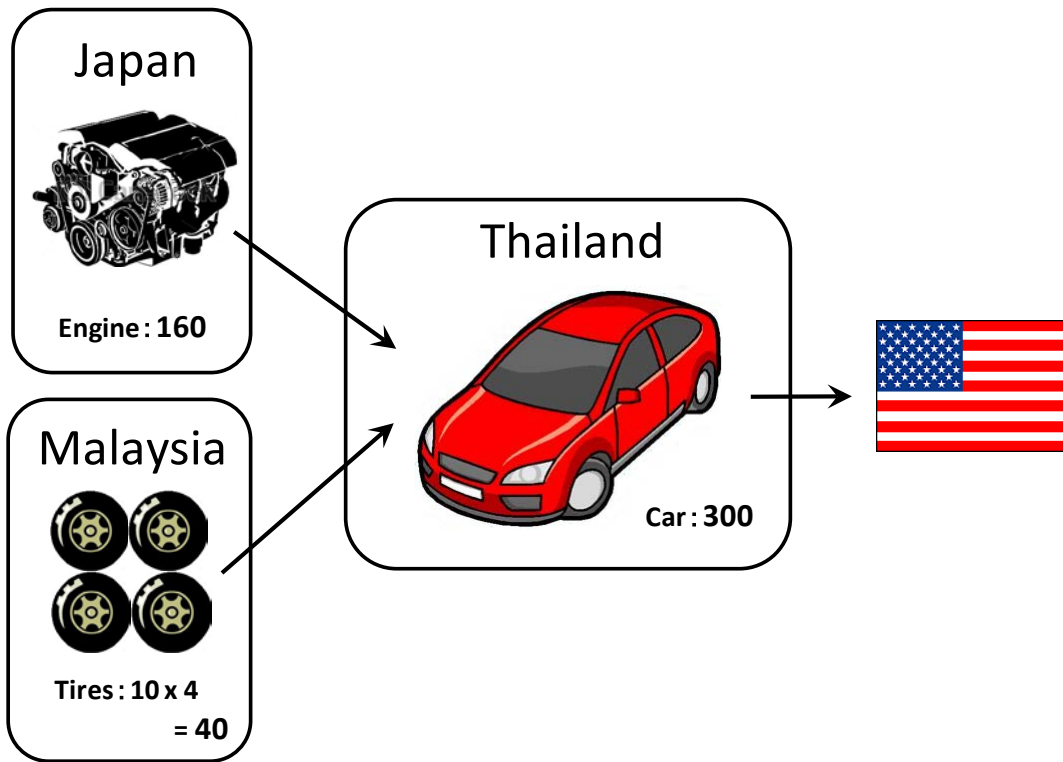
etc…

A problem of gross trade statistics

$6.5

$179

The current trade statistics record the amount of China's export which has no relevance to the real picture of manufacturers in China.

Trade in value-added measures international trade as **a flow of values** rather than of products.

	Traditional measurement	Value-added measurement
① Japan→Thailand	160	0
② Malaysia→Thailand	40	0
③ Thailand→USA	300	100
④ Japan→USA	0	160
⑤ Malaysia→USA	0	40
⑥ Total traded values	160+40+300=500	100+160+40=300

	Intermediate Demand CHINA			Intermediate Demand U.S.A.			Final Demand CHINA		Final Demand U.S.A.		
	Agri-culture	Manu-facturing	Services	Agri-culture	Manu-facturing	Services	Cons-umption	Invest-ment	Cons-umption	Invest-ment	Export to RoW
CHINA Agriculture / Manufacturing / Services		A^{CC}			A^{CU}			F^{CC}		F^{CU}	L^{CW}
U.S.A. Agriculture / Manufacturing / Services		A^{UC}			A^{UU}			F^{UC}		F^{UU}	L^{UW}
REST OF THE WORLD Agriculture / Manufacturing / Services		A^{WC}			A^{WU}			F^{WC}		F^{WU}	
Value-added Wages / Profits / Depreciation / Taxes		V^{C}			V^{U}						

Bilateral IIOT between China and USA

The origins of value-added embodied in export (2008)

China's export

Domestic source 68%

Japan's export

Domestic source 85%

Legend:
- China
- Japan
- USA
- Korea
- Other Asia
- EU27
- Rest of the World
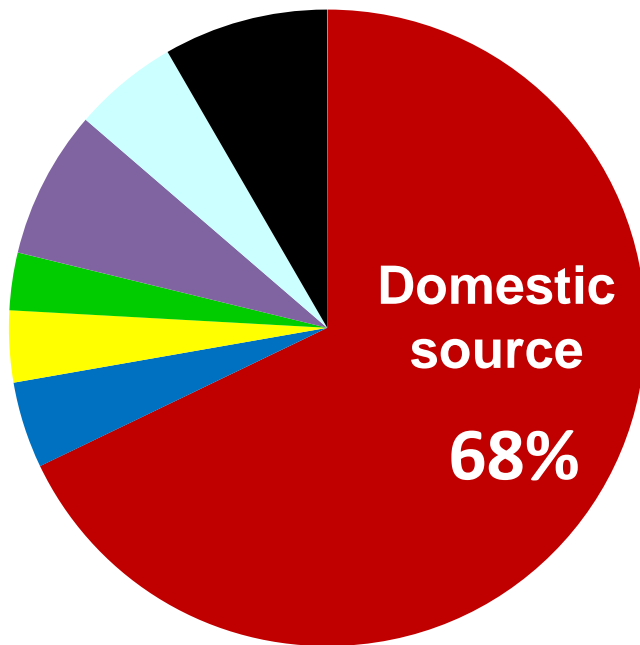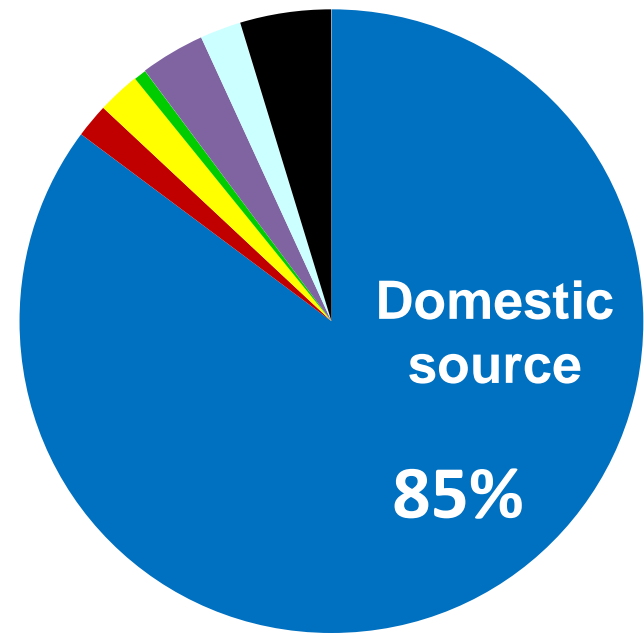
US trade deficit with selected Asian countries (2008)

Million USD

Legend:
- ☐ Traditional measurement
- ■ Value-added measurement
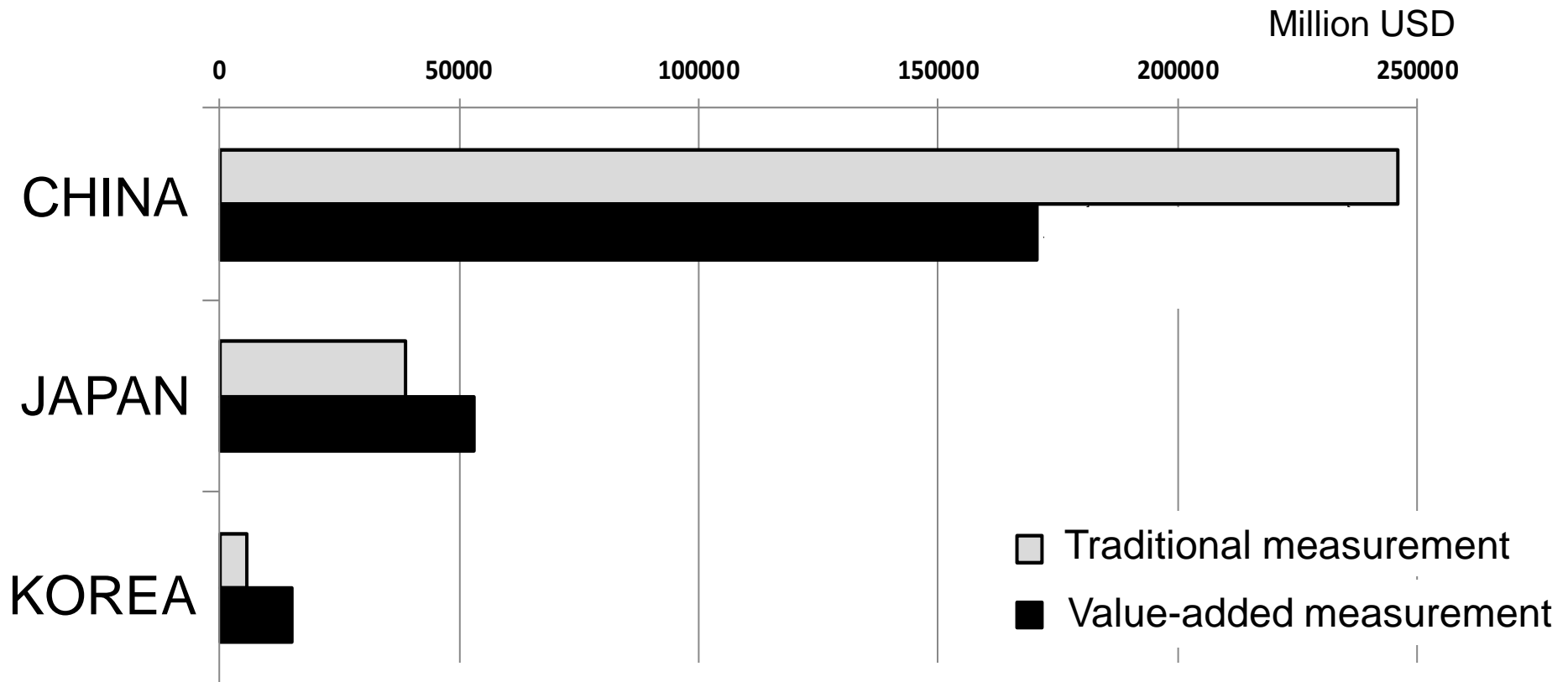
Database Name	Number of countries	Number of industries and products	Years	Availability of data
AIIOT	10 (8 for 1975 table)	76 products (56 for 1975 table, 77 for 1985 table)	1975, 1985, 1990, 1995, 2000, 2005	Yes
EORA	187	Varying across countries; simplified version with 26 industries	1990-2012	Yes
EXIOBASE	43 countries; 5 world regions	220 products; 163 industries	2000, 2007	Yes
FIGARO	28 EU countries; USA; Rest of the World	64 industries; 64 products	2010; 2010-2017 (in progress)	Yes
GTAP-MRIO	140 GTAP regions	57 GTAP commodities	2004, 2007, 2011	Only to GTAP members
OECD-ICIO	64 (including Rest of the World)	34 industries; 34 products	1995, 2000, 2005, 2008-2011; nowcasted for 2012-2014	Yes (TiVA indicators only)
WIOD (2013 release)	41 (including Rest of the World)	35 industries; 35 products	1995-2011	Yes
WIOD (2016 release)	44 (including Rest of the World)	56 industries; 56 products	2000-2014	Yes