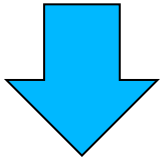
Measurement of trade statistics

- Focus on trade in merchandise (not services)
- Trade statistics are collected by various international organizations from national sources (NSOs, customs, central banks)
- Basic principle: recorded when merchandise crosses the border
  - Disregards the origin of the intermediate products in the production of exports



- Double-counting

Trade in Value Added (TiVA)

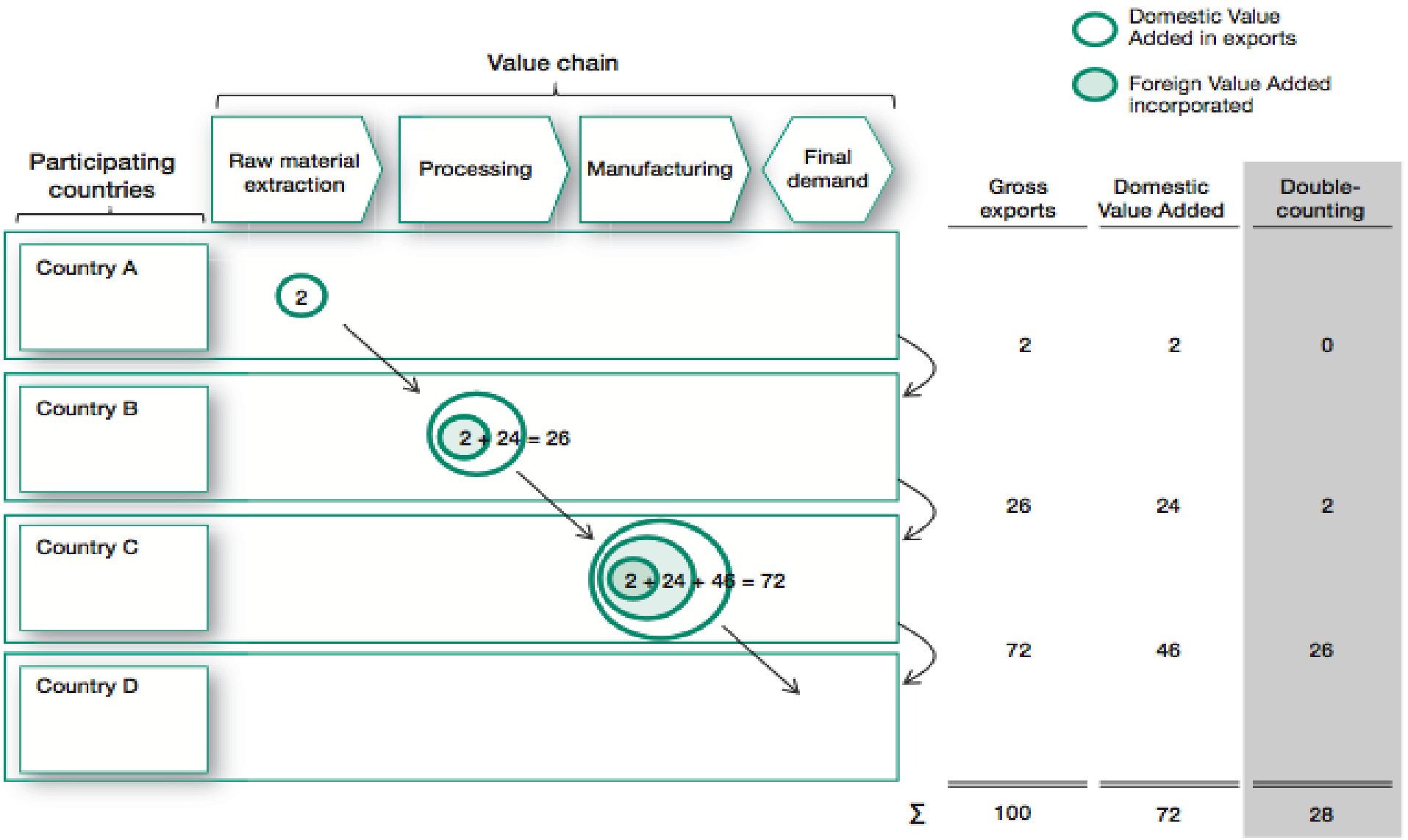
- Basic concept: measuring trade based on where value added (VA) is produced
  - Imported (foreign) VA will not be counted as exports
  - Addresses the problem with double-counting
- Overall trade balance with RoW will not change, but bilateral balances will change

Example: 2009 US trade balance in iPhones

	China	Japan	Korea, Rep. of	Germany	Rest of world	World
Traditional measure	-1,901.2	0	0	0	0	-1,901.2
Value added measure	-73.5	-684.8	-259.4	-340.7	-542.8	-1,901.2

Source: Maurer, 2011; Meng and Miroudot, 2011; and Xing and Detert, 2010.

Trade in value added, an illustration

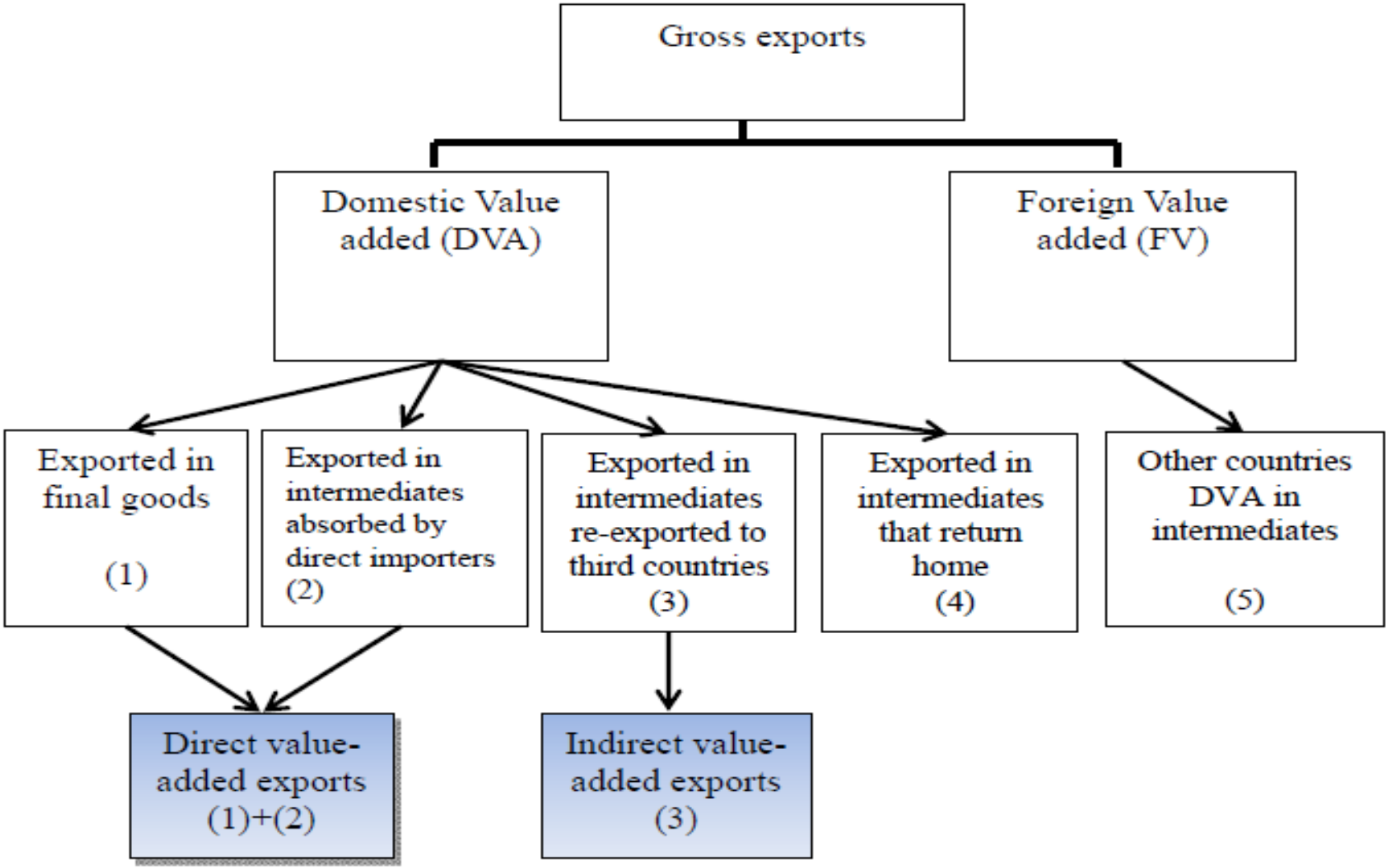


Source: UNCTAD, 2013a.

Benefits of TiVA

- Understand how and where domestic value added is created by exporters
- Understand how trade contributes to economic growth and competitiveness
- Understand how upstream domestic industries contribute to exports (e.g. services)
- Understand trade (im)balances in value added terms
- Understand the links between trade and employment, i.e. where jobs are created and which domestic industries are involved
- Provide policy makers a better understanding of potential impacts of macroeconomic shocks on trade (e.g. the 2008/09 financial crisis);
- Understand the environmental impact of trade, the potential impact of trade on climate change

TiVA framework of indicators



Source: Koopman and others, 2010.

GVC participation

Need to distinguish between:

- Forward linkages (downstream participation) – measured by DVX
- Backward linkages (upstream participation) – measured by FVA

- GVC participation index:

$$\mathrm{GVC}_{\mathrm{Participation}} = \frac{\mathrm{DVX+FVA}}{\mathrm{GE}}$$

ESTIMATING TIVA

1. National IOTs

- Ideally adapted from national SUTs
  - Assumptions needed
- Simplified IOT:

		Producers as Consumers								Final Demand			
		Agriculture	Mining	Const.	Manuf.	Trade	Transp.	Services	Other	Personal Consumption Expenditures	Gross Private Domestic Investment	Govt. Purchases of Goods and Services	Net Exports of Goods and Services
ucers	Agriculture												
	Mining												
	Const.												
	Manuf.												