MODERN MACRO VIEW ON TRADE

Trade in Value Added (TiVA)

One step further in understanding international Trade
(beyond simple logics of simple minds)

With the globalization of production, there is a growing awareness that conventional trade statistics may give a misleading perspective of the importance of trade to economic growth and income.

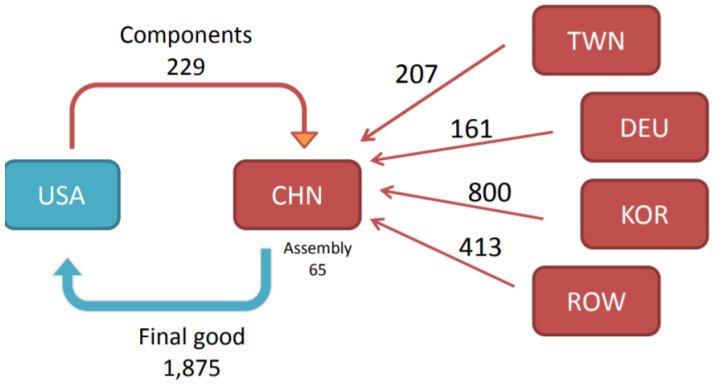
This reflects the fact that trade flows are measured gross and that the value of products that cross borders several times for further processing are counted multiple times.

The solution: Just count the value addition and not the gross value.

OVERVIEW

The iPhone example

Country	Components	Manufacturers	Costs
Chinese Taipei	Touch screen, camera	Largan Precision, Wintek	$ 20.75
Germany	Baseband, power management, transceiver	Dialog, Infineon	$ 16.08
Korea	Applications processor, display, DRAM memory	LG, Samsung	$ 80.05
United States	Audio codec, connectivity, GPS, memory, touchscreen controller	Broadcom, Cirrus Logic, Intel, Skyworks, Texas Instruments, TriQuint	$ 22.88
Other	Other	Misc.	$ 47.75
		Total	**$ 187.51**



When a finished good (here an iPhone) is sent from CN to US, the Gross trade is USD 187. Simple minds thinking only in trade deficits and surpluses ask now the Chinese to buy porc meat for USD 187 to balance the trades.

However like almost always the world is more complicated than that and the macro economist of today try to model it with new statistics like Trade in Value Added. With them the reality comes to the surface and presents a different picture.

From the USD 187 China only added USD 6.5 (or 3.5%) with the assembly of all components to the trade. The biggest value addition comes from South Korea with USD 80 (43%), the second biggest from the US themselves with USD 23 (12%) closely followed by Taiwan USD 21 (11%) and Germany USD 16 (9%), the rest comes from many other countries.

Thus no factual base to get mad with China, but with South Korea in regards to iPhone trading.

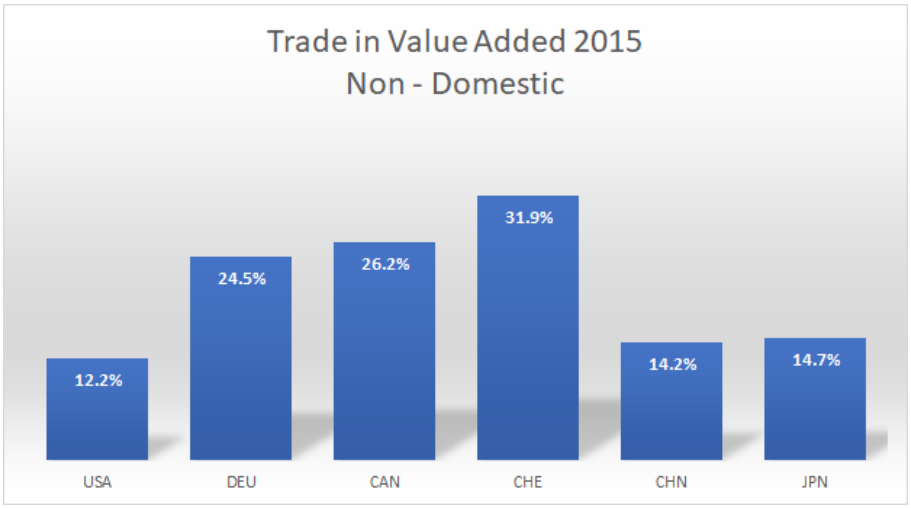
Many thanks to the economists and the OECD who brought these statistics to life and who share them with us, so that rational people can have productive discussion instead of twittering nonsense.

SOME MORE DATA

A disadvantage of macro is that the data are quite old (now latest data are from 2015 (Status May 2021!)

Following the press one could get the impression that the USA are de-industrialized and just importing everything and that e.g. China or Germany are the exporting heros.
Let us take a glimpse at the new statistics of TiVA and see what they tell us:

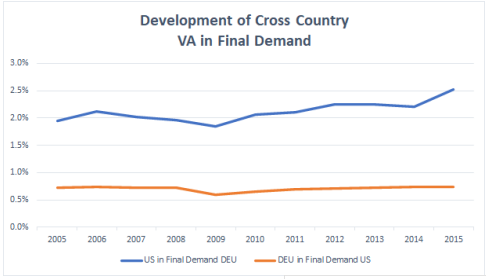
The Non Domestic value addition, meaning the value added which originates from foreign countries, has the lowest value in the USA. Meaning the USA are the most self-sufficient country and even China is more depended from others. Germany the export hero needs double as much from foreign countries than the USA. The autarky is of course dependent on the physical and economic size of a country. The EU15 countries are in there entirety as self-sufficient as USA, China or Japan. Switzerland as a smaller country is the most dependent in this selection of countries.



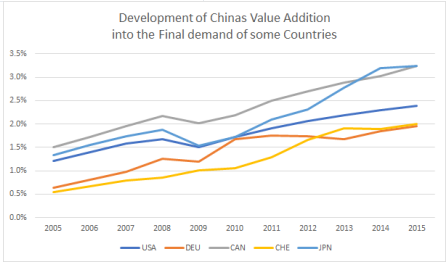
Check out

- OECD.Stat
- WTO.org

Looking at the development over time Germans value add share to the final demand in USA is constant, whereas the Germans utilize an increasing value addition from the USA from 2005 to 2015.



Also these figures show that China has become a very important Value addition partner for most countries final demand.



USE DATA AND PRINCIPLE IN MULTINATIONALS

In multinational enterprises, which comprise of many companies in various countries, the inter-company relations are consolidated, which means, they are eliminated. Thus consolidated figures show only the interactions with third parties, meaning all parties outside the envelope which is virtually wrapped around the group companies / consolidation circle.

For those multinationals with strong inter-company trading and intensive division of labor between group companies, it is beneficial to apply this value added thinking and measurements as an addition to their unconsolidated and consolidated figures Dashboard.

Moreover these macro statistics of TiVA can be used in Business intelligence and for Marketing decisions and strategy development, as these statistics can be drawn per industry (both value add per industry and final demand per industry).

This is just a glance of the data and its relationships. It is worth while to dive deeper into those data and the facts behind. Time to analyze.

Have a nice day!