

Comments on “Trade in Value-added: East Asian Perspective”

Yuqing Xing

Asian Development Bank Institute

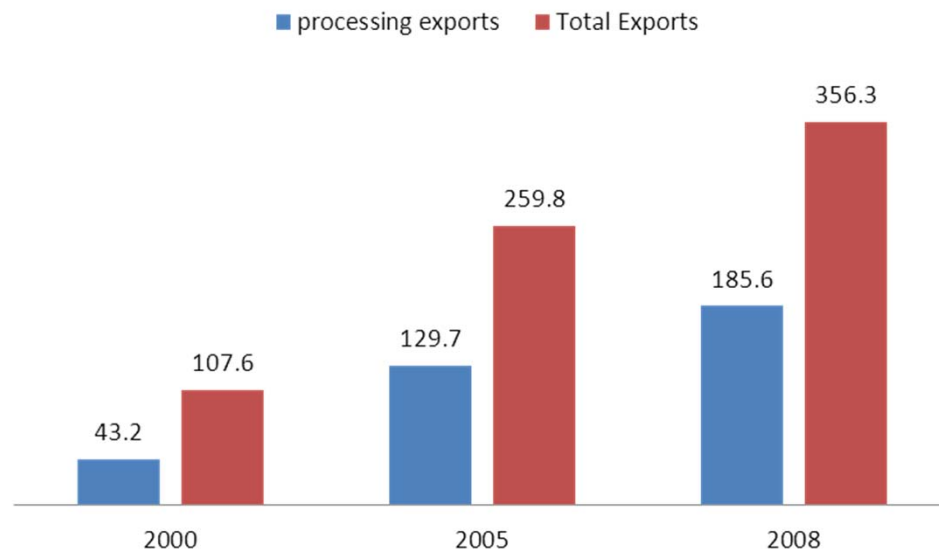
A Brief Summary of the paper

- The paper uses the iPhone study (Xing and Detert, 2010) to illustrate that conventional trade statistics
 1. significantly inflates China's iPhone exports to the US;
 2. incorrectly credits other countries' trade surplus with the US to China;
- The paper argues that value-added approach should be adopted for measuring trade flows and bilateral trade balances. Regional Input-output tables is an ideal tool for this purpose;
- Using the Asian International Input-output table, developed by IDE-JETRO, the author estimates that China, Japan, Korea and Thailand produce 90%, 94%, 81% and 74% respectively of the value-added embodied in their exports to the US in 2005;
- In terms of value-added, China's trade surplus with the US would be at least 20% lower than based on conventional trade statistics .

China's Value Added is Over-estimated

China produced 90% of the value-added of its exports to the US

China's Exports to the US



This estimate is too high.

Processing trade accounted for 40% of its exports to the US in 2000 and the share rose to 52% in 2008.

According to Koopman, Wang and Wei (2008), China's value-added in its exports was estimated at 71-61%. For processing exports it was even lower at 37%.

UNCTAD (2013) estimated that China produced only 70% value added in its exports.

Figure 7 and Figure 9 are Inconsistent

- Figure 7 shows that 90% of the value-added in China's export to the US originated in China in 2005. Figure 9 indicates that the US trade deficit with China would be 27% lower based on value-added.
- For figure 7 and 9 to be consistent, the following equation should hold:

$$(\alpha EX - 0.9 IM) = (1 - 0.27)(EX - IM) \quad (1)$$

Where, IM: US imports from China;

EX: US exports to China,

α : share of US valued-added in its exports to China; $0 \leq \alpha \leq 1$

Equation 1 can be simplified as

$$0.17IM = (\alpha - 0.73) EX \quad (2)$$

According to the US data, IM=\$259.8 billion, EX=\$41.8 billion.

$$\text{Let } \alpha=1, 0.17IM = 44.17 \gg (1 - 0.73)EX = 11.29 \quad (4)$$

According to the Chinese data, IM=\$168.85 billion, EX=\$48.62 billion

$$\text{Let } \alpha=1, 0.17IM = 28.7 \gg (1-0.73)EX = 13.13$$

Eq. (1) does not hold and the discrepancy is very large, suggesting that figure 7 and 9 are inconsistent .

Rethinking Revealed Comparative Advantage

- With the value-added approach, China's RCA in "computer and OA equipment" was reduced to 2.66 from 4.01.
- Could we still interpret RCA indexes in the tradition fashion, if we did not slice a product into major components and tasks required to make it?
- China remains an exclusive iPhone assembler. In 2012, China exported \$22.38 billion worth of iPhones. If China only exported iPhones nothing else, based on value added, China's RCA in iPhone would be greater than one. Could we then conclude China would have a RCA in making iPhone?
- Production fragmentation along global production networks and supply chains requires defining comparative advantage over tasks and components rather than finished products. Highly aggregated I-O tables may not serve this purpose.