

Comment to

Have Global Value Chains Contributed to

Global Imbalances?

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Summary

- Simultaneous increase of GVCs and imbalances
- Other literature:
 - Georgiadis, Grab, and Trottner (2014): positive effect (for downstream countries)
 - IMF (2012): slow down of adjustments driven by exchange rate movements
- Two measures of GVC
 - GVC participation
 - GVC position
- Panel econometrics (first differences, weighted, etc.)
 - Considers pre-crisis period
 - Interaction of measures and lagged
 - “GVCs participation” *negatively* related to a country’s CA balance
 - Countries moving upstream has negative impact for CA
 - However, effects are (very) small

Comment 1: Generally difficult to assess

- National/global accounting principles
 - As rightly pointed out: Global $TB=0$ [by definition]
- Trade balance of countries is the same whether measured in gross or value added terms
 - A country's trade balance reflects its (macro-economic) saving position, i.e. production-consumption
- Trade balances can differ
 - Bilaterally
 - For production processes related to GVCs: e.g. intermediates trade
 - E.g. Final consumption levels can be “independent”

Gross and VA trade balances

- Example for 3 countries:

Net VA trade of country 1: $t_v^1 = \mathbf{v}'(\mathbf{I} - \mathbf{A})^{-1} \mathbf{t}^1$

where $\mathbf{t}^1 = (x^{1*}, -x^{21}, -x^{31})$

and $\mathbf{v}' = \mathbf{v}' - \mathbf{v}'\mathbf{A} = \mathbf{v}'(\mathbf{I} - \mathbf{A})$

- Results in

$$t_v^r = \mathbf{v}'(\mathbf{I} - \mathbf{A})^{-1} \mathbf{t}^r = \mathbf{v}'(\mathbf{I} - \mathbf{A})(\mathbf{I} - \mathbf{A})^{-1} \mathbf{t}^r = \mathbf{v}' \mathbf{t}^r = t^r$$

- A bit more algebra: Net savings position
- **From this: Would one expect any effect from GVCs on TB?**
- **If yes: What are the exact channels?**

Comment 2: Needs careful interpretation

- “Global imbalances” driven by
 - China and Germany (surplus)
 - US (deficit)
 - Oil and raw material prices
- “Upstreamness”: providing more “primary” inputs
 - Advanced countries (providing e.g. R&D)
 - Resource-based countries (Russia, Brazil):
Oil price, raw materials price etc. matters
 - Germany (moved) downstream: Offshoring and exporting final goods
- Measuring EU whole vs. EU member states
 - Note: EU ~1% surplus but intra-EU imbalances (see Nagengast and Stehrer, 2014)
- Measuring of (global) imbalances:
 - Dispersion vs (absolute) magnitude of imbalances
 - Imbalances might arise from better access to intl. finance

Comment 3: Econometric issues

- Interpretation of interaction terms without direct effects?
 - Need to include both direct and interacted terms
- Economic explanation/interpretation of lags?
 - Note: intermediates are defined as being used within one year
 - E.g. argued that “change in TB in year t depends on change of $GVC_{pos} * GVC_{part}$ in year $t-3$ ”
- Smaller issues
 - Weighting scheme not clear: trade share how defined
 - Number of lags: years/quarters(?), why 4 (tests)?, period remaining 1999-2007
 - Interpretation of results concerning levels of imbalances, changes, etc.

■ Other controls:

- Share of manufacturing (Stöllinger, 2013)
- Structure of manufacturing activities (e.g. GVCs important mostly in machinery, transport equipment and electrical equipment)

■ Policy conclusions

- Reflections on crisis- and post-crises developments with respect to results
- Recent developments: US shale gas; China loss in dynamics
- Global architecture vs. country-specific issues (e.g. GVC participation and exchange rate model)

Comment 4: Smaller issues

- Graphs
 - Put country labels in graphs (e.g. Figure 8 and 9)
 - Axis description
 - Show graphs of data used in regressions: i.e. in changes
- WIOD webpage asks to cite WIOD data source as:
 - Timmer, M. P., Dietzenbacher, E., Los, B., Stehrer, R. and de Vries, G. J. (2015), An Illustrated User Guide to the World Input–Output Database: The Case of Global Automotive Production, *Review of International Economics*, 23: 575–605.
 - E. Dietzenbacher, B. Los, R. Stehrer, M.P. Timmer and G.J. de Vries (2013), The Construction of World Input-Output Tables in the WIOD Project, *Economic Systems Research*, 25, 71-98.

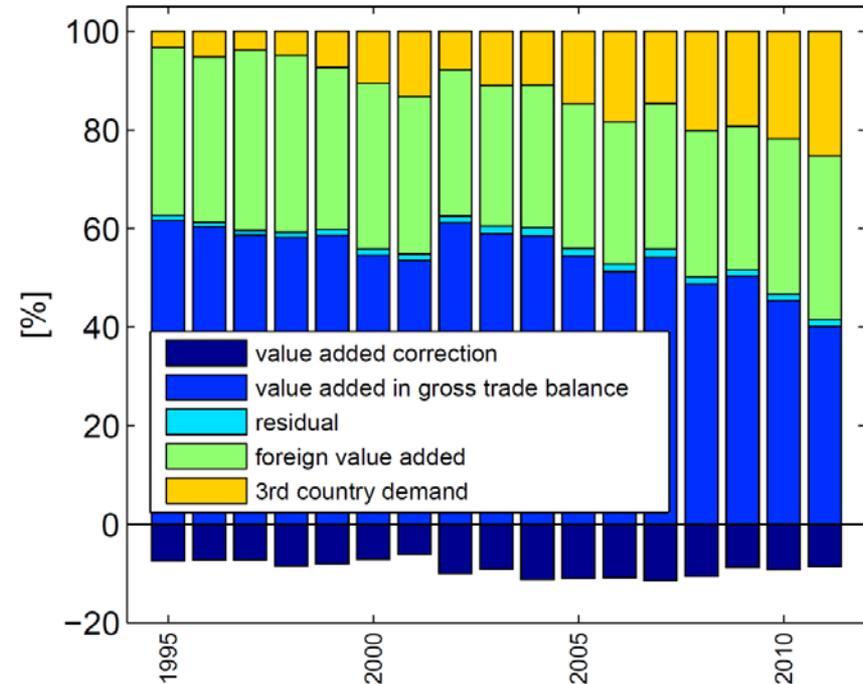
Suggestions for further research

- Consideration of bilateral up/downstreamness positions and impacts on bilateral gross and VA trade imbalances
- Consideration of industry-specific or GVC-chain specific imbalances (get rid of effects of e.g. final consumption expenditures)
- More reflections on potential channels
 - Modelling/theory
 - Country case studies:
 - US, UK: moving upstream (in R&D, now in gas?) but losing manufacturing base
 - Germany: moving downstream by offshoring activities but keeping manufacturing base
 - Role of manufacturing specialisation (still most important driver of TB imbalances)

Variance decomposition: intra-EU27 bilateral trade balances

$$\text{var}(\sum_i x_i) = \sum_i \text{var}(x_i) + \sum_i \sum_{j \neq i} \text{cov}(x_i, x_j)$$

$$\varphi(x_i) = \frac{\text{var}(x_i) + \sum_{j \neq i} \text{cov}(x_i, x_j)}{\text{var}(\sum_i x_i)}$$



- $27^2 - 27 = 702$ bilateral trade balances
- **In 1995 the bilateral trade balances in value added accounted for 60% of the variance in trade balances in gross terms, in 2011 for 40%**
- The contribution of foreign value added consumed by one of the two trade partners is sizable, but has remained relatively constant (32% on average between 1995-2011)
- **The importance of 3rd country demand increased from 3% in 1995 to 25% in 2011**

Source: Nagengast and Stehrer, 2014