The changing face of agriculture and food trade: The role of global value chains

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Today’s talk

Focus is on trade within GVCs and the policy influences that impact it
• Interested in whether changes in the way trade is done have implications for international agro-food trade policy

But the concept of GVC used may differ from past studies
• Not a specific value chain/niche market perspective
• Broad global story of how trade is organised

Interested in exploring policies that allow countries to get the most from international markets
• Concept of domestic value added
Agro-food trade is growing

USD bn (real)

US GDP deflator
Food price deflator
Trade in agro-food products is increasingly ‘global’

- Sectors producing food source in inputs internationally
  - Production processes buy from GVCs

- Agro-food products also get used in the production of other food products
  - Exports are sold into ongoing into GVCs

- Interconnections mean policies have wider impacts on markets
  - Trade barriers and NTMs
‘Global’ trade seen with strong growth in intermediates trade

Agriculture

Food

Annual compound growth rates
GVCs – what are they?

Value chains: describe a production process for a final good
• Full range of activities from concept to final good
• Represent all the links between industries

Global value chains focus on the international linkages ⇒ relate to trade
• But there are also significant domestic linkages
• And products are often delivered to final demand
How do we measure GVCs?

Measured from country-industry perspective
• We look first at the links for an industry in a given country
• Look at the breakdown of value added in exports

Track trade in value added flows between countries
• And see where it is used and potentially re-exported
•Computed from Inter-Country Input-Output tables
INSIGHTS INTO VALUE ADDED
Which sectors contribute to agro-food final value? Broad players in the value chain

Shows the distribution of shares in agro-food final value of specific sectors

Most from ag and food – wider distribution in ag

Service share greater than industrial

Share of final agro-food value added

% of countries and regions
Differences across countries depending on levels of development

Shares of final agro-food value by broad sector grouping, 2011

**High income countries**

- Agriculture: 22%
- Food: 37%
- Industry: 15%
- Retail & wholesale: 4%
- Other services: 22%

**Middle and low income countries**

- Agriculture: 46%
- Food: 22%
- Industry: 11%
- Retail & wholesale: 8%
- Other services: 13%
SOME RESULTS ON AGRO-FOOD GVCs
How important are GVCs? Ratio of value added trade in intermediates to final goods

Ratio of value added trade in intermediates to final goods

Left hand axis
Right hand axis

Ratio less than 1
## What does the agro-food GVC landscape look like?

Agro-food GVC hubs: EU, China followed by ASEAN, USA

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Column shows source of foreign value added in own exports: **Buying from GVCs**

Row shows how exported value added is used in other country exports: **Selling to GVCs**
Example: Who uses China’s agro-food exports as inputs into their own exports?

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For EU, GVCs are internal to the common market.
Example: Where does China source from for its own exports?

China sources globally, with key links to USA, Sth America and ASEAN
Looking more closely at backward and forward linkages

**Backward linkages: buying from GVCs**
- Measures the amount of foreign value added embodied in exports
- Comes through intermediate input usage

**Forward linkages: selling into GVCs**
- Measures the amount of domestic value added that forms part of another country’s exports
- So picks up the ongoing value chain
- Domestic value exported can be either *direct* (own exports) or *indirect* (exports from other domestic industries that make use of the outputs produced, e.g., processing sector exports using agricultural production as inputs)
Forward and backward indicators across sectors

Mostly food products with lower rates of forward participation, but with higher backward.
Position and total participation across sectors

Position shows how relatively forward or backward a sector is.

Greater than 0 more forward, less than 0 more backward.

By sector

Position

Total participation
Forward and backward indicators across countries

- Backward (right hand axis)
- Forward (right hand axis)
- Backward (left hand axis)
- Forward (left hand axis)

Top 15

Bottom 5
GETTING THE MOST FROM GVCs: IMPLICATIONS FOR MULTILATERAL REFORMS?
Getting the most from GVCs: domestic value added creation

Domestic value added represents the returns from participation….

• The benefits to an economy from being involved in trade
• It represents the returns to labour and capital, along with taxes paid to governments (but less subsidies)
• It picks up the benefits to the entire economy from the activity
• Both within the sector and to all who contribute

• Directly links to jobs and growth
Getting the most from GVCs: participation spillovers

Past studies have found the potential for spillovers from GVC participation
• Past engagement through the use of foreign factors grows DVA over time
  • Often in developing country context, but results hold for developed
  • Results hold for agri & food along with manufacturing & services
• Influence on increasing export sophistication

Essentially productivity related upgrading (through scale or scope)
Employment effects from GVCs by region
Employment effects greatest in developing countries

Production sophistication vs. Workforce employed%
Policy influences on GVC participation

- Market size increases domestic sourcing and shift to final products
- So too are aspects of the enabling environment
- Trade facilitation important
- Trade policies important

Effect on standardised coefficients: direction of effect is important, not size
Policy influences on DVA

Imports important for export value creation

Robust enabling environment also important

Complex effects of NTMs

Graph showing various policy influences on DVA.
Which sectors contribute to agro-food exports?

Shows the distribution of shares in agro-food export value of domestic value added created by specific sectors.

Most usually generated in the industry itself.

Other ag and other food industries next most important.

Service share greater than industrial.

Negative value added in ag and food = policy risk.

Proportion of total country-sectors.

Services share
Own industry share
Industrial share
Other agriculture share
Other food share

Contribution to value added in exports.

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Share of export DVA.

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Key messages

• World agro-food markets have changed and so have the ways that policies impact the domestic effects of these

• Agro-food GVCs important – domestic value added creation is often underpinned by sourcing inputs internationally for exports
  • Import tariffs act as taxes on exports
  • NTMs – need to harness trade creation and minimise cost

• Domestic agricultural support policies need to be carefully designed to avoid negative effects on DVA (and so jobs)
  • Enabling environment important

• Policies outside agriculture are important – particularly services
  • Plus there will be an allied jobs effect, but issues of ‘where’