Value of Production in Agriculture: Meaning, Measurement, and Implications in a WTO Context

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Why worry about Value of Production?

- Key measurement in Agreement on Agriculture

- *De minimis* thresholds
  - Exemptions for distorting support
  - 5% or 10% of VOP

- Exemptions motivate much concern in Doha
  - 5% was thought too large
**De minimis** percentage of selected countries

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<th>Total AMS commitment?</th>
<th>De minimis percentage</th>
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<td>5%</td>
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<td>Positive</td>
<td>EU</td>
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<td>Japan</td>
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<td>United States</td>
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More important but often overlooked

- Increasing support in developing countries
- How soon will they hit 10%?
- Have some already done so?
- This requires data on their VOP
Consistency and quality of VOP data

• Not a WTO principle

• Important for analysis, assessment, projection

• Differences in VOP measurements?
  – Among countries? Over time?
Outline

• Review VOP concept

• Examine VOP data series
  – Twelve countries
  – 1995-2011

• VOP series in different sources – how close?

• VOP versus value-added in agriculture
Sources of agr sector VOP data

- WTO
  - Notifications (some members; many notif’s missing)
  - Secr 2010 Doha paper (some members; up to 2008)
- FAO data base
- OECD PSE data base (some countries)
- National sources
- + World Bank value-added in “agriculture”
VOP definitions

- Few countries publish **Value of Production**
  - Can be part of National Accounts
  - But not defined in SNA **System of National Accounts**
  - Contrast to **Value Added in Agriculture**
    - WB: VA in agriculture, hunting, fishing, forestry

- VOP definitions vary across countries
  - Different wording, similar concepts
  - Coverage can differ (commodity, pricing, timing, etc.)
Examples

- USDA: Value of agricultural sector production is the gross value of the commodities and services produced ...

- Eurostat: The valuation of output at basic prices.

- Australia: The value estimates ... are derived by the multiplication of price and quantity estimates of agricultural commodities.

- Canada: ... total value of production, which represents the value of the farm sector's gross output.

- FAO: Value of gross production has been compiled by multiplying gross production in physical terms by output prices at farm gate.

- OECD: National sources (inconsistent definitions?)
China: VOP data by source

CNY billion

- WTO notif.
- WTO Secr.
- OECD
- FAO
India: VOP data by source

Notes:
• No OECD data.
• National data is sum of crops and livestock.
Indonesia: VOP data by source

Note:
• WTO notifications show no VOP data
Philippines: VOP data by source

- WTO Secr.
- FAO
- National stats.

Note:
- No VOP in WTO notif.
- No OECD data
Russia: VOP data by source

Accession data
OECD
FAO
National stats.

Note
• No WTO Secr. data
United States: VOP data by source

USD billion

1995 1997 1999 2001 2003 2005 2007 2009 2011

WTO notif.
WTO Secr.
OECD
FAO
Value added in agriculture

• World Bank data
  – Value added in agriculture
    • Value added is the net output of a sector after adding up all outputs and subtracting intermediate inputs.
    • Agriculture corresponds to ISIC divisions 1-5 and includes forestry, hunting, and fishing, as well as cultivation of crops and livestock production.

• WB data overstates value added in agriculture
  – Significance varies by country and type of economy
India: VOP and VA data

Notes:
- No OECD data.
- National data is sum of crops and livestock.
Indonesia: VOP and VA data

Note:
• WTO notifications show no VOP data
Japan: VOP and VA data

JPY billion

WTO notif.
WTO Secr.
OECD
FAO
VA in agr (WB)
Mexico: VOP and VA data

1991 pesos billion

WTO notif.
WTO Secr.
OECD
FAO
VA in agr (WB)
Norway: VOP and VA data

- WTO notif. (est.)
- WTO Secr.
- OECD
- FAO
- National stats.
- VA in agr (WB)
Philippines: VOP and VA data

Note
• No VOP in WTO notif.
• No OECD data
Russia: VOP and VA data

- Accession data
- OECD
- FAO
- National stats.
- VA in agr (WB)

**Note**

- No WTO Secr. data
Value added in agriculture

• Expect more “developed” countries to use more intermediate inputs in production
  – Means smaller share of Value-added in VOP

• Rank 12 countries by GDP per capita
  – Show share of value-added in VOP
  – Broadly consistent with expectation
  – Indonesia and Norway outliers
  – Forestry and fisheries?
Implications

– VOP data from several sources
  • WTO notifications, country submissions to WTO, OECD, FAO, national sources

– Measurements do not fully coincide
  • Timing and small definitional differences

– More serious: large differences between:
  • WTO notifications vs. other sources
  • Submissions to WTO vs. notifications
Conclusions

– Members report different kinds of VOP to WTO
  • Marketed vs. total production? Measuring value-added?
– Larger VOP used for WTO than in other outlets?
  • Larger VOP gives higher *de minimis* threshold
  • Some countries, but not all, use larger VOP for WTO
– What difference does it make?
  – If VOP in WTO is 10% mis-reported & *dm* percentage is 10%
  – 11%, or 9%, of VOP can make big difference in tight situation
  – Extreme: one country, with $100 billion VOP, seemingly 100% off?
– Uncertainty in monitoring compliance
– What about product-specific VOP?
Thank you for your attention!

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