Introduction of the Survey on China Imports Use

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Contents

1 Background
2 Methodology
3 Result & Problem
4 Comparison with IO survey
1. Background
- The international trade is increasing dominated by trade in parts and components due to globalization of supply chain
- China is dwell at the lower end of GVC, exports: 40%+ processing trade, Imports: a large amount of intermediate (parts & components)
- Current trade statistics standard on gross export no longer give accurate information on value added obtained by export country
• Research: WTO, OECD, USITC, IDE-JETRO
• Lamy suggests “trade in value-added” as a better measurement of world trade
# A Non-Competitive Input-Output Table

<table>
<thead>
<tr>
<th>Intermediate Use</th>
<th>Final Use</th>
<th>Gross Domestic Output or Imports</th>
</tr>
</thead>
<tbody>
<tr>
<td>( P_1, P_2, \ldots, p_n )</td>
<td>( W^D )</td>
<td>( F^D )</td>
</tr>
<tr>
<td>Intermediate Inputs from domestic production</td>
<td>( P_1 : P_n )</td>
<td>( W^M )</td>
</tr>
<tr>
<td>Intermediate Inputs from Imports</td>
<td>( P_1 : P_n )</td>
<td>( V_C )</td>
</tr>
<tr>
<td>Value-added</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total inputs</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Survey on imports use

- Pilot survey on 2010 imports
- Research study

- National input output survey 2012
2. Methodology
Objective

In order to acquire imports use matrix: the distribution data of imports for the use as intermediate input in different industrial sectors
Coverage

Import data
Commodities on HS8
Data on importer/enterprise level
Data selection

- Inward processing
  - Customs Administration record
  - Other Goods - use is clear
    - No Survey
  - Other Goods - use unclear
    - Survey
Other Goods - use unclear

- Questionnaire
- Importer/Enterprise
- HS8
- Proportion in % of value of the use in different industry sectors of this product
### 2012 Questionnaire

<table>
<thead>
<tr>
<th>Sector I</th>
<th>Sector II</th>
<th>Ratio in % of use</th>
<th>remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intermediate</td>
<td>01 agriculture</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>02 Forestry</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>03 Live stock</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>... ...</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>139 Public management</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>/social organization</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final use</td>
<td>XX Final consumption</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ZZ Capital goods</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Management

- Head quarter (GACC): Methodology, online questionnaire, Data verification
- Customs districts: enterprise survey within the district, promotional work, data verification
- Local customs: enterprise survey within the district, visit enterprises
中华人民共和国海关总署

公 告

2013 年 第 57 号

为使海关统计全方位、多角度反映我国对外贸易的发展状况，更好地服务于国家宏观经济决策，并为核算我国贸易增加值提供高质量的基础性统计资料，根据全国投入产出调查工作总体部署，海关总署决定在去年试点工作的基础上，继续开展 2012 年进口货物使用去向调查工作，现将有关事项公告如下：

一、调查目的

了解进口货物国内使用去向的金额比例。
Promotional events
Online questionnaire system
Working manual
Quality Control

问卷 调查 信息 质量 控制

Timeliness
Integrity
Accuracy

Mobile message prompt
On line system prompt
Validity + Rationality
3. Result & Problems
2010

- Non-inward processing: 343HS8 (32% of total), 1356 importers/enterprises;
- Inward processing: 300HS8, about 10000 enterprises
2012

- **Non-inward processing:**
  - 525HS8 (35% of total), 2144 importers

- **Inward processing:**
  - 6004HS8, 31,141 enterprises
<table>
<thead>
<tr>
<th>Importer</th>
<th>HS8</th>
<th>Sec I</th>
<th>Sec II</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1101xxxxx6</td>
<td>72191200</td>
<td>intermediate</td>
<td>27 metal production</td>
<td>100</td>
</tr>
<tr>
<td>1108xxxxx1</td>
<td>72191200</td>
<td>intermediate</td>
<td>53 wholesale &amp; retail</td>
<td>15</td>
</tr>
<tr>
<td>1108xxxxx1</td>
<td>72191200</td>
<td>intermediate</td>
<td>29 special equipment</td>
<td>55</td>
</tr>
<tr>
<td>1108xxxxx1</td>
<td>72191200</td>
<td>intermediate</td>
<td>32 shipping manufacture</td>
<td>30</td>
</tr>
</tbody>
</table>

Flat rolled prod, stainls steel,
Data Processing - Aggregate level

- Compilation in the NBS
- Accuracy check
- Linked with non-survey IM data
- Compare with NBS IO survey
Problems

- Misunderstanding of Industry description
- Final user unknown, imports to be sold to another retailer
- Warehousing goods
- Special products, such as electricity, coal
4. Comparation with IO survey
A. Distribution% of intermediate use from IO Survey

<table>
<thead>
<tr>
<th></th>
<th>01 agriculture</th>
<th>02 Forestry</th>
<th>03 Live stock</th>
<th>...</th>
<th>139 Public management</th>
<th>Total Intermediate Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>100%</td>
</tr>
<tr>
<td>02</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>100%</td>
</tr>
<tr>
<td>03</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>100%</td>
</tr>
<tr>
<td>...</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>100%</td>
</tr>
<tr>
<td>139</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>100%</td>
</tr>
</tbody>
</table>

General Administration of Customs of the People’s Republic of China
B. Distribution% of intermediate use from IM Survey

<table>
<thead>
<tr>
<th>01</th>
<th>02</th>
<th>03</th>
<th>...</th>
<th>139</th>
<th>TotalIntermediateUse</th>
</tr>
</thead>
<tbody>
<tr>
<td>agriculture</td>
<td>Forestry</td>
<td>Livestock</td>
<td>...</td>
<td>Public management</td>
<td></td>
</tr>
<tr>
<td>01</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>100%</td>
</tr>
<tr>
<td>02</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>100%</td>
</tr>
<tr>
<td>03</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>100%</td>
</tr>
<tr>
<td>...</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>100%</td>
</tr>
<tr>
<td>92</td>
<td>Measuring Instruments</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>100%</td>
</tr>
</tbody>
</table>
How different?

\[ RMSE(P_i) = \sqrt{\frac{1}{n} \sum_{j=1}^{n} (a_{ij} - b_{ij})^2} \]

\[ i=1,2...89, \quad n=139 \]

RMSE: Root Mean Squared Error
Distribution of Wearing Apparel Use

IM Survey
海关进口调查

91%

91% (Wearing Apparel)

IO Survey
统计局调查

8%

8% (Wearing Apparel)
IM survey method
-give actual picture of import use,
-improve the accuracy of DVA
Experience from IM survey

- Senior management support
- Scientific method
- Well training
- Inter department cooperation
- International Cooperation
Thanks
Q&A