The Use of Economic Surveys, Business Records and the Economic Census in the statistics of the Global Manufacturing Production

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INEGI recognized the need to measure and/or estimate the Global Production (GP) to estimate the insertion of the manufactures in the Global Value Chains and to support users in decision making and in doing analysis of this sector.
The Global Production was measured for the first time in the country through the implementation of 3 criteria linked to microdata of the sources, namely:

- Companies whose inputs come from abroad and their production is for exports.
- Companies with most of foreign capital and whose production is destined for exports.
- Companies not considered in the two types above and their exports are intermediate consumption goods.
What we did to measure GMP

1. Trade data from administrative records of Foreign Trade 2008
2. Companies in the census with foreign capital participation
3. Link of foreign trade registers with EC 2009 and, export and import economical activity surveys
4. Use of the GTIET-NAICS* 2007 table by tariff
5. Development of the Export Value Added of Global Manufacturing
6. Implementation of the 3 criteria defined by a tree decisions

GTIET: General Tax of Import and Export Tariff
NAICS: North American Industrial Classification System
What we did to measure GMP

Articulation of the foreign trade registers with EC 2009 and surveys

**Consolidation of companies**
- Annual Survey of Manufacturing Industry and IMMEX statistics
  - Identifying establishments

**Orientation of companies**
- Companies oriented to export

**Link**
- Identify in the Database of Foreign Trade (customs records)

**Information by company**
- Economic Census 2009
  - Companies

- No oriented companies to export
What we did to measure Value Added of Global Manufacturing Exports (VAGME)

\[ X_{MG} = M_{MG} \]

- \( X_{MG} \) = Global Manufacturing Exports
- \( M_{MG} \) = Global Manufacturing Exports

\[ CIN_{MG} \] = Intermediate consumption of domestic Origin of Global Manufacturing

\[ VAB_{MG} \] = Gross Value Added of Global Manufacturing

\[ CIN_{MG} + VAB_{MG} \]
What results were obtained

With the use of microdata (2009 Economic Census, Foreign Trade Business Records and the Annual Survey of Manufacturing Industry), the following statistics were developed to the users:

- Export companies profile
- Export value by state
- Value Added of Global Manufacturing Exports (VAGME)
Export companies profile

Distribution of number of manufacturing companies and value of the entire foreign trade as size of the companies, 2010-2013

Number of companies

- Small (1 to 50): 18%
- Medium (51 to 250): 26%
- Big (251 to 500): 15%
- Macro Company (500 and more): 15%

Total trade

- Small (1 to 50): 83%
- Medium (51 to 250): 7%
- Big (251 to 500): 9%
- Macro Company (500 and more): 1%
Export value by state

Coverage of Exports of States in value of the Entire Exports of the country

Note: The exports that are distributed by State are in average 87% of the whole of the exports of goods for the period 2007-2013; the rest corresponds to the agricultural sector and to exports that were not possible to assign by State.
Value Added of Global Manufacturing Exports (VAGME)

<table>
<thead>
<tr>
<th>Year</th>
<th>Value Added</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>38.7</td>
</tr>
<tr>
<td>2004</td>
<td>36.9</td>
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<td>36.8</td>
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<tr>
<td>2012R</td>
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<tr>
<td>2013P</td>
<td>40.7</td>
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<tr>
<td>PROM</td>
<td>37.8</td>
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</tbody>
</table>
New characteristics of microdata that is provided by the Economic Census, Business Records and the Economic Surveys for the Measurement of Global Production
In order to strengthen and contribute to measurement of Global Production and Global Value Chains, the Economic Census included a set of three questions in the following questionnaires:

- Questionnaire for the Manufacturing Industry,
- Questionnaire for Service Establishments and,
- Questionnaire for Lodging Services.
Future goals: to identify economic units

The treatment of microdata from the census information will be associated with the answers received in the questionary, which will serve to identify the units that will be studied.

During 2013 this establishment participated in integrated processes through contracts or programs of economic cooperation with companies located in other countries?

Economic units that respond affirmatively will be used as part of the universe of study to generate extended IOT and the measurement and development of TiVA indicators.
Production use

With the QUESTION in the 2013 Census

“In 2013 what percentage of your income corresponded to contracts or partnership programs with companies located in other countries?”

It will be measured part of the production serving the domestic market, foreign market and the share of services by classifying income, production, and net sales at the microdata level (establishments).

Distinguishing transactions related to contracts with companies in other countries from those internal or domestic.
Also:

**QUESTION**

*Contracts or partnership programs with economic units located in other countries, mainly established:*  

1. Companies located abroad and belonging to the same group  
2. Mexican subsidiaries of companies located abroad  
3. No Subsidiaries  

Identifying transactions between subsidiaries / No Subsidiaries
Other characteristics to be identified of the microdata crossings with the census sections

**TYPE OF ECONOMIC UNIT**

To identify if the establishments invest in Research and Development

**SCIENCE, TECHNOLOGY AND INNOVATION**

Source of funding:
- own resources
- domestic subsidiaries
- foreign subsidiaries

A decision tree will be designed to assess whether it is possible to characterize the economic unit in:

- FACTORYLESS
- HEADOFFICE
- MERCHANTING

Among others...
Other characteristics to be identified

PROPERTY OF THE ECONOMIC UNIT

QUESTION

“Please indicate if there is foreign capital participation in the share capital of this establishment?”

Please indicate the percentage?

Another feature to be measured is the property of the economic unit through the participation of foreign capital.
Census information is classified by strata which will identify the size of the company based on the number of workers and rank establishments respectively:
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