Profiling in France: Implementation and results

Conference of European Statisticians
(Geneva, 7-9 July 2015)

Jean-Marc Béguin and Vincent Hecquet
INSEE
Outlines of the presentation

1. SBS in France : a large use of administrative data, implementation of Profiling
2. The strategy for Profiling
3. First results of automatic Profiling
1. **SBS in France: a large use of administrative data, implementation of Profiling**
1.1 Insee widely uses administrative sources on legal units, but decided to implement profiling

- Insee used to equate the enterprise with the LU, and widely uses administrative sources on LU:
  - Sirene register: lists all the LUs operating in France;
  - ESANE process: produces SBS (all the corporate tax declarations + administrative sources + surveys on the breakdown by industry + specific statistical procedures).

- Equating the enterprise to the legal unit raises several issues:
  - A wrong vision of the concentration of the productive fabric: (A group with 10,000+ employees has on average 170 LUs in France)
  - Restructuring of LUs within groups distorts the developments we monitor: (A manufacturing group creates a trade affiliate => its manufacturing value added (in LUs) declines, non additive variables are changed.)
1.2 In 2008, a decree officially defined the enterprise itself and four size categories

1. The definition of the enterprise:
   The same as in European regulation n° 696/93 of March 15 1993 (Intended to be updated).

2. Four categories, defined by using three variables:
   - Micro enterprises
     Employ fewer than 10 people and their annual sales or total assets do not exceed € 2 million.
   - Small and medium-sized enterprises (SMEs)
     Employ fewer than 250 people and their annual sales do not exceed € 50 million or their total asset do not exceed € 43 million.
   - Intermediate-sized enterprises (ISEs)
     Do not belong to micro enterprises nor SMEs, employ fewer than 5,000 people and their annual sales do not exceed €1,500 millions or their total assets do not exceed 2,000 millions.
   - Large enterprises
     Not classified in any category above.

These criteria are defined for the French territory ⇒ Truncated enterprises
1.3 Before profiling is completed, the definition of the enterprise relies on two approximations

Profiling is currently under way in France, so the results published until now cannot use the real definition and relies on the following hypothesis “H2” [one enterprise = one group] that implies two main approximations:

1. **Each group is treated as a single enterprise.**
   Enterprises are:
   - A legal unit not controlled by a group (natural person or juridical unit)
   - All the French part of a group (French or foreign group)

2. **Accounts are simply added, not consolidated**
1.4 Implementation of intra-group links (H2) reveals the concentration of the productive fabric
2. The strategy for Profiling
2.1. Three targets of groups according to their size and complexity

79,000 non financial groups operating in France in 2012 (at less 2 LU)

- **Target 1**: face to face profiling annual meeting (60 groups)
  
  Enterprise profiled by top down delineation
  
  81 groups with 10,000+ employees: 22% of employees, 24% of VA
  
  (of all businesses)
  
  Face to face profiling and annual meeting by French Profiling team

- **Target 2**: automatic profiling, small and medium groups, or simple groups (2 LUs in France), (74 200 groups)
  
  Group as a whole = one enterprise
  
  17% of employees, 14% of VA
  
  Automative consolidation by an algorithm (see after)

- **Target 3**: semi-automatic profiling, needs additional information on intra flows) (4 740)
  
  Group = mostly one enterprise; maybe several in some exceptional cases?
  
  27% of employees, 29% of VA
  
  => profiled later with the lessons of the work carried out
2.2 Face to face profiling of largest groups (target 1)

Insee profilers meets group’s accountants in order to:

- **Delineate** the enterprise and identify the LUs it encompasses:
  - Delineate the enterprise (always top-down approach)
  - Identify the LUs it encompasses
  - For French SBS and National Accounts, the LUs are identified on France’s perimeter

- **Rebuild the consolidated accounts of the enterprises:**
  - 2 methods (bottom up or top down)
  - These accounts have to be truncated on France’s perimeter and according to national Gaap (for ESANE process)

- **Rebuild the breakdown of the consolidated turnover** according to the different activities at the level of entreprise:
  - generally speaking, half of the work time

- Then, each year, update the scope of LUs, rebuild the accounts and the breakdown of turnover
2.3 Recent progress: a method for automatic profiling and consolidation (hyp. “H3”)

Will be used for targets 2 and 3 a methodological work done in 2013 - 2014 with other European partners:

(Grants launched by Eurostat: Sogeti + Methods & tools for the EGR)

1) Identify the ancillary LUs to see the real diversity of market activities within each group;
(Ancillary LUs are determined through an analysis of their frequency among the 500 largest groups).

2) Identify automatically the enterprises according to the employment distribution of LUs
(Three different thresholds at different digit levels)

3) Calculate the accounts through assumptions for non additive variables
   - Turnover of ancillary LUs is eliminated
   - Assumptions to treat other non additive variables (such as fixed assets) : work in progress

=> 81% of groups include only one enterprise (46 % of large groups).
   - Results close to those from another algorithm by ISTAT
3. First results of automatic Profiling
3.1 Compared to the approximation (H2), automatic profiling and consolidation (H3) increases the weight of the intermediate category.

Outlook with H2 or H3 are both different from H1 with LUs.
3.2 Incorporating service-sector affiliates increases the weight of manufacturing

Share of manufacturing sectors in French economy 2011
(non farm, non financial sectors)

![Bar chart showing the share of manufacturing sectors in French economy 2011.

A big impact on value added, fixed assets, export sales
(more affected by spin-offs to affiliates and subsidiaries within the groups)
3.3. Industry and sector: what is the share of manufacturing?

Share of manufacturing (section C) in industry-based and sector-based approach in France, 2011

<table>
<thead>
<tr>
<th>Value added</th>
<th>source</th>
<th>Billions of €</th>
<th>share of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>In industry (branche d'activité)</td>
<td>National accounts</td>
<td>210,4</td>
<td>10,2</td>
</tr>
<tr>
<td>Manufacturing homogeneous production units</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In sector</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sector of LUs with Manufacturing principal activity (H1)</td>
<td>ESANE</td>
<td>213,7</td>
<td>10,4</td>
</tr>
<tr>
<td>Sector of manufacturing ent/Groups (H2)</td>
<td>ESANE, LIFI</td>
<td>257,3</td>
<td>12,5</td>
</tr>
<tr>
<td>Sector of manufacturing enterprises (H3)</td>
<td>ESANE, LIFI</td>
<td>241,9</td>
<td>11,7</td>
</tr>
</tbody>
</table>

Source: Insee, National accounts, Esane, Clap, Lif 2011

In the sector of LUs, secondary activities of LUs are included in the total.

In the sector of manufacturing enterprises/groups (H2), service sectors subsidiaries of manufacturing groups are included in the total.

In the sector of profiled enterprises (H3), service sectors enterprises of manufacturing groups are not included. Symetrically, manufacturing enterprises of non manufacturing groups are included.
Profiling in France: Implementation and results

Thank you for your attention!