The French way of SPPI sampling method

Cross-cutting Topic (2)
35th Voorburg Group meeting

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01 Process overview

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A sampling system

Several phases with manual interventions

- Pre-determination of the list of units to be surveyed
- Setting up databases and basic sampling frames from data disseminated by the annual scheme of companies (SBS)
- Samples are determined at two different levels:
  - Firms:
    - Cut-off sampling
    - "well-informed choice" method
  - Service products: engineers-surveyors visit the sample of firms to define representative services

02 _____ Sources

Preparing basic sampling frames

- **Information comes from "Elaboration of annual statistics of companies":**
  - Exhaustive scheme: sales revenues for each enterprise in every industry of activity (with 2 years apart)
  - For indicators BtoB and BtoX it provides a split of sales by customer category (nationality of customer and kind of customers)
- **We rework these data to build our own databases:**
  - This scheme contains legal units, profiled enterprises and units involved in restructurings → *identify the productive unit*
  - The split of sales correspond to the whole activity not only to the activity in the industry concerned → *identify and bypass out of scope information*

Enhancing sample of firms by matching with other databases

- The business and establishment register : update location data
- The database for restructurings: changes of business conditions
- The financial links between companies: identify the groups of enterprises operating in France

03   Sample of firms

Sampling frames over the entire scopes of FRIBS regulation

- A list of renewals of industries is drawn up each year (five-year cycle renewal)
- But sampling frames over the entire scope in order to:
  - Cope with uncertainty
  - Identify and process multi-branch companies

Setting up basic sampling frames

- For BtoAll,BtoB and BtoX indicators: entreprises with less than 4 Million € in turnover are removed
- No specific sampling frame for BtoX dissociated indicator (Eurozone / rest of the world) and for indicator BtoC:
  - We use the information of the previous frames
  - For most SPPI, BtoC indices can be duplicated from CPIs

"cut-off" sampling

- Firms are ranked by decreasing turnover and kept up to a limit defined by **3 parameters**

Indicator	CPA level	Maximum number of firms	Minimum coverage rate (%)	Minimum number of firms
BtoAll	CPA4	35	70	5
	CPA5	35	55	5
BtoB	CPA4	5	0	0
BtoX	CPA4	5	0	0

"well-informed choice" method

- Identify forgotten firms by Web researches and meetings with professional trade unions
- Pick up firms from the "Top100" sample (first 100 firms in terms of sales revenues in the industry) for a better coverage

- Specific construction module from the Annual Sectoral Structural Survey with an exhaustive and a sampled stratums

- Pre-determination of the firms sampled only on the last *Siren* Number (id number)
  - Complete renewal of the sample over a 5 years period

- Cut-off sampling:
  - Sales revenues higher than 500k euros
  - Treatments to reduce out of domain's risk and stop multiple interrogation of small businesses

- Early and later samples → share weighted method to produce a definitive sample

04 **Sample of services products**

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Engineers-surveyors visit the sample of firms

- To define services that will be followed in a customized quarterly questionnaire
- Their aims:
  - Define representative services of the price variation of a product family: kind of product x kind of market
  - Report export activities as precisely as domestic activities
- Transactions prices are then weighted by the corresponding turnover according to the distribution of turnover they have collected

This process help to increase the rate of response and quality of the survey

- Engineers-surveyors are specialized in services
- They discuss the list of representative products face to face with firms

05 Assessment of our methods

- Conditions of cut-off → Small businesses are not sampled

- But:
    - Limited bias under the assumption that main firms are "price maker" and small companies are "price taker"
    - Since a 2016 law, small businesses are limited to one mandatory survey each year
    - Face to face interrogation system limits: the disposable interview capacity can't afford to interrogate more companies

- **Under-coverage issue**: an example with the architect's branch
  - Need of additional sample whose weights do not distort distribution of revenues

- **Under-coverage on the services products** growing with market's and demand's evolutions

- **Over-coverage issue**: specific to the sampling for building maintenance and improvement works
  - Sample longer than needed → engineers-surveyors contact only a part of the sample
  - Potential source of bias → prioritization method implemented

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