Overview of the treatment of household surveys at INSEE

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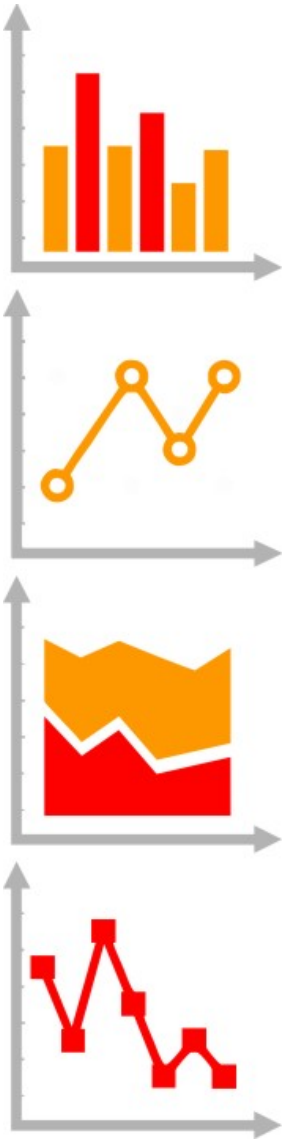
Activity D7 : Integration of sampling, workload allocation, management and monitoring in a multi-field survey approach



Insee

Mesurer pour comprendre

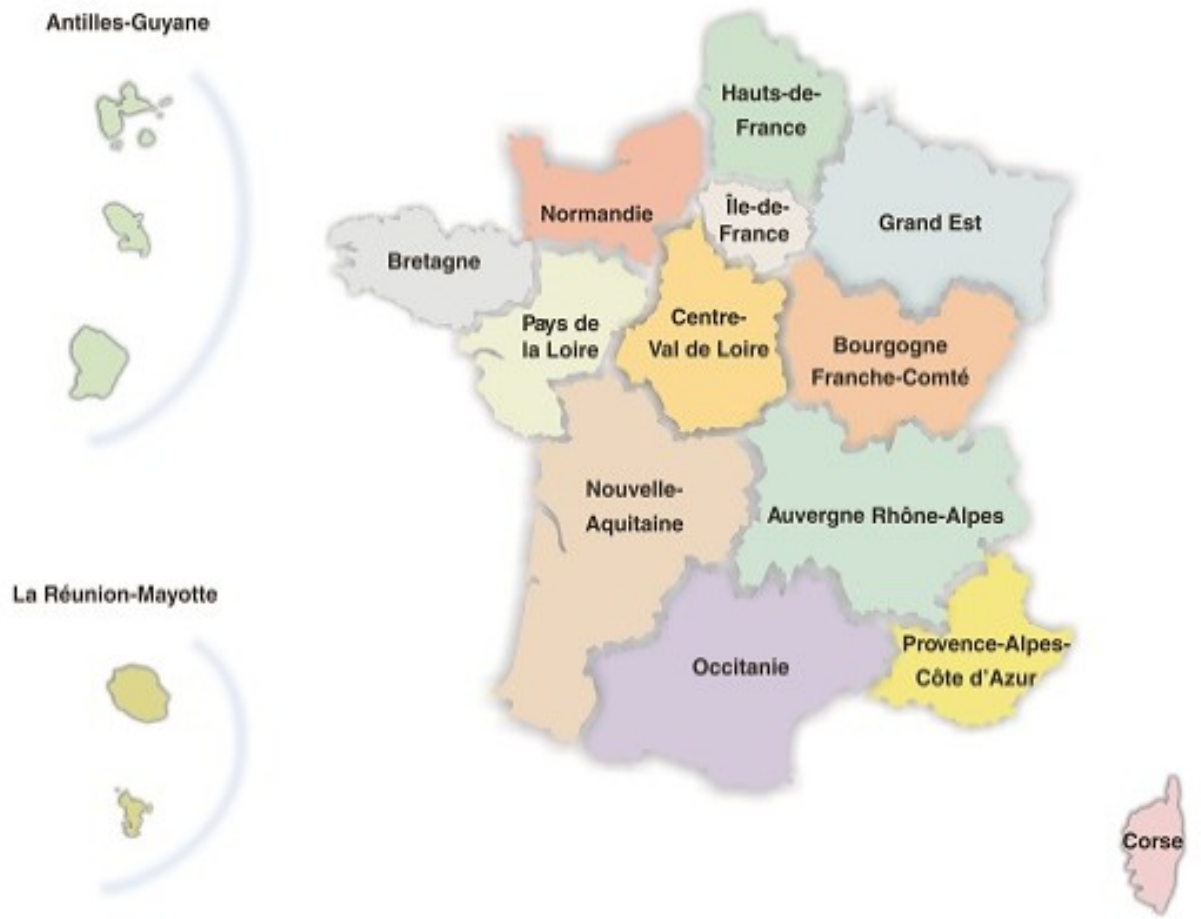
Plan

- General information about INSEE
- Actors and their roles
- The tools
- General presentation of CAPI
- General presentation of OPALE
- The evaluation of the interviewers
- CAPI

General information

- Insee is :
  - 5 400 agents
  - A central directorate
  - 15 regional offices: 3 000 agents
  - The regional offices
    - Alsace - Champagne-Ardenne - Lorraine
    - Antilles-Guyane (Dirag)
    - Aquitaine - Limousin - Poitou-Charentes
    - Auvergne - Rhône-Alpes
    - Bourgogne - Franche-Comté
    - Bretagne
    - Centre-Val de Loire
    - Corse
    - Ile-de-France
    - Languedoc-Roussillon - Midi-Pyrénées
    - Nord-Pas-de-Calais - Picardie
    - Normandie
    - Pays de la Loire
    - Provence-Alpes-Côte d'Azur
    - La réunion - Mayotte

Map of regional offices



Central directorate

- Internal Audit Office
- General Secretariat
- Methodology, Statistical Coordination and International Relations Directorate (DMCSI)
- Business Statistics Directorate (DSE)
- Demographic and Social Statistics Directorate (DSDS)
- Economic Studies and National Accounts Directorate (DESE)
- Dissemination and Regional Action Directorate (DDAR)

Regionals offices

- **Organized around three services**
  - **Study and Publication**
    - **To make of regional studies and disseminate economic information to local users private or institutional.**
      - **This is a very important service for the implementation of regional policies**
  - **Statistics**
    - **To provide the statistical production (household surveys, business surveys, business register,...)**
  - **Administrations of resources**
    - **To manage human, material and movable of the regional resources**

The collect and management of household surveys

- A regional action
  - Statistics service
    - Surveys Households division
      - Surveys managers in charge of a portfolio of surveys
- … but also central

Household surveys are :

- 8 to 10 surveys per year
- 550 000 households surveyed
- More than 900 interviewers (Insee staff, unit of time work depending on the choice of each, 100 %, 80 %, 70 %, 60 % or 50 %)
- 570 ZAE (Zone d'Activité d'Enquêtes) Investigating Action Zones
  - Pierre-Arnaud will present exactly the ZAE

Actors and their roles in the collection of household survey :

Actors	Location	Responsability
The survey designer	DSDS	Defined the concept, the questionaire
Project manager in Organization statistics (CPOS (Chef de Projet en Organisation Statistique))	DSDS	In charge of the logistics of setting up the investigation (definition and respect the planning of operations (training of interviewers, deployement of the survey, respect of collection dates,...)
Administrator CAPI	DSDS	Manage the CAPI process
Team BLAISE	National computer centres and services	In charge of writing the electronic questionnaire
Team CAPI	National computer centres and services	In charge of the integration of the electronic questionnaire in the CAPI process

Actors and their roles in the collection of household survey :

Actors	Location	Responsability
Division household surveys	Regional office	In charge of the collection and management of surveys and interviewers (recruitment, training,...)
Survey manager	Regional office	Monitors, managing a portfolio of surveys
Interviewers	Regional office	Responsible for the collection of household surveys
IT manager of survey	National computer centres and services	Supported the endorsement of the collection, provision of files to the designer – In charge of « Aval Capi » - Control the final data (completness, duplication)

Several tools for the management and collection of households surveys

Software, application	Feature
EEC2	To draw the sectors of employment and records adresses for Labor Force Survey (LFS)
OCTOPUSSE (Organisation Coordonnée de Tirages Optimisés Pour une Utilisation Statistique des Echantillons)	To draw the other household surveys
NAUTILE (Nouvelle Application Utilisée pour le Tirage des Individus et des Logements dans les Enquêtes)	New application (will be in production 2019-2020) to draw the household surveys including LFS
OPALE (Outil de planification des activités liées aux enquêtes) : Tool of planning activities realted to investigations, commected to CAPI to prepare the tour diaries) (in service since 2016)	Evaluate and leave the workload of interviewers
BLAISE	Software used for the electronic questionnaire writing (developed by CBS Netherlands)
CAPI (connected to OPALE for the transfer of assignment in order to recalculate the interviewers charges)	Responsible for the computerized collection of household surveys Dialogue with the manager Recovery of the interviewer sample from a server, address records to investigate Seizure of the information collected Transfers of the addresses in the case of panel management sheets Transmission of the information collected to the central server

The general objective of CAPI

- A hardware and software architecture for :
  - Integrate and provide access to electronic questionnaires
  - The transfert of data over the network
  - Allow the cohabitation of several surveys on the workstation
- But also
  - Training tools
  - Follow-up of the collection tools
  - Check and clear data in regional office
  - Transfer sheets addresses between interviewers
  - Have an environment SICORE (automatic codification), sound files, video files, external tables

A new CAPI project : CAPI3G

- Will be put into service at the end of 2018
- Will accompagny all the phases of the work of the interviewers
- The tracking will be done directly in the application
- A centralized application
  - A follow-up at the national level
  - Deployments and support facilities

OPALE : Outil de Planification des Activités Liées aux Enquêtes
Toll for planning of activities related to surveys

- An application for
  - Spread the load of collection interviewers and estimate the work units associated
  - View the schedule of activities of interviewers (collection, meetings, training, leave and absences)
- Why a new application ?
  - The new interviewers employment contracts (since 1st janurary 2013)
    - Time of work generated by the given load, in number to carry out investigations must be estimated
    - The annual workload assigned to each interviewers must correspond to the fraction of his contract

OPALE

- The work of an investigator times includes
  - Related to the collection and its preparation time
  - Associated travel time
  - Time spent in training and meeting
- The evaluation of load in percentage points through the calculation of a planned work based on time
  - Data to each survey
  - Individual data to each interviewer

Estimation method of time related to the collection of household surveys

- Time collection is the sum :
  - Time of interview
  - Time to work out collection (tracking)
  - Interstitial time
  - Travel time

Interview time

- **Product of the average length of the interview for the investigation by the collection rate of the interviewer**

Time to work out collection

- **Estimated inclusively by survey**

Interstitial time

- **Estimated at 10 % of the sum of the interview time and work out collection time**
  - **To compensate for the time lost for appointments cancelled late, absences or delays of the investigated**

The travel time

- **The estimation of the travel time per sheet-address is automatically calculated by the formula**

$$temps\_dep = \frac{Nbkm\_ref}{V} \times \frac{I}{I\_ref} \times \frac{d}{d\_ref}$$

The travel time

- Nbkm_ref : Number of kilometers of reference by investigator Household
- V : Average speed of travel in the area of the investigator
- I : Index of displacement of the survey
- I_Ref : index of average displacement of the surveys of the reference year
- D : Distance home – Household (By Google maps)
- d_Ref : average distance home – Household during the reference year

Index of displacement of the surveys

Type d'enquête	Valeur de l'indice I
Ré-interrogations en face-à-face des enquêtes par panel (FA sortantes de l'enquête Emploi, de Loyers et charges)	1
EEC grappe entrante	2,5
Enquête « classique » (CVS)	3
Enquête pouvant nécessiter deux visites s'il y a plusieurs personnes à interroger (AES, RPS)	3,5
Enquête à deux visites systématiques (Budget des familles, Emploi du temps)	4

Exemple

- During the reference year (for Pierre)
  - 10 households (Re-investigates) for EEC
  - 25 households for CVS
  - 15 households for BDF
  - 750 km declared for the reference year
  - d_ref : 10 km
  - V= 30km/h

Reference parameters for the interviewer

- Nbkm_ref=750/50=15
- d_ref= 10
- l_ref=(10*1+25*3+15*4)/(10+25+15)=2,9

Travel time for 1 household BDF from 12 km of the interviewer's house

- Temps_dep=(15/30)*(4/2,9)*(12/10)=0,828 h (=49,7 minutes)

How estimate distance between interviewer's house and collect'household (collection's place) ?

- The interviewers's house are geo-located by adress
- The collection's place are geo-located by center of town

How to evaluate the interviewers

- Posteriori controls (1 survey per year)
- The accompaniment of the interviewers in the field
  - for learning
  - For the evaluation (1time/year)
  - If problem