

How is the uniform distribution of reference weeks provided in the French LFS?

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An European obligation

COUNCIL REGULATION (EC) No 577/98 of 9 March 1998

(article 1)

- the reference weeks are spread uniformly throughout the whole year;
- the interview normally takes place during the week immediately following the reference week. The reference week and the date of the interview may not be more than five weeks apart, except in the third quarter.....

Why is It so important to respect these constraints?

- Uniform distribution of reference weeks is essential to estimate **quarterly average** unemployment rate, activity, employment ..
- It also ensures a correct estimation of **annual means**: this is for example the case of the number of actual hours performed in the year Adaptation aux évolutions du marché du travail
- Short gathering period: memory effect

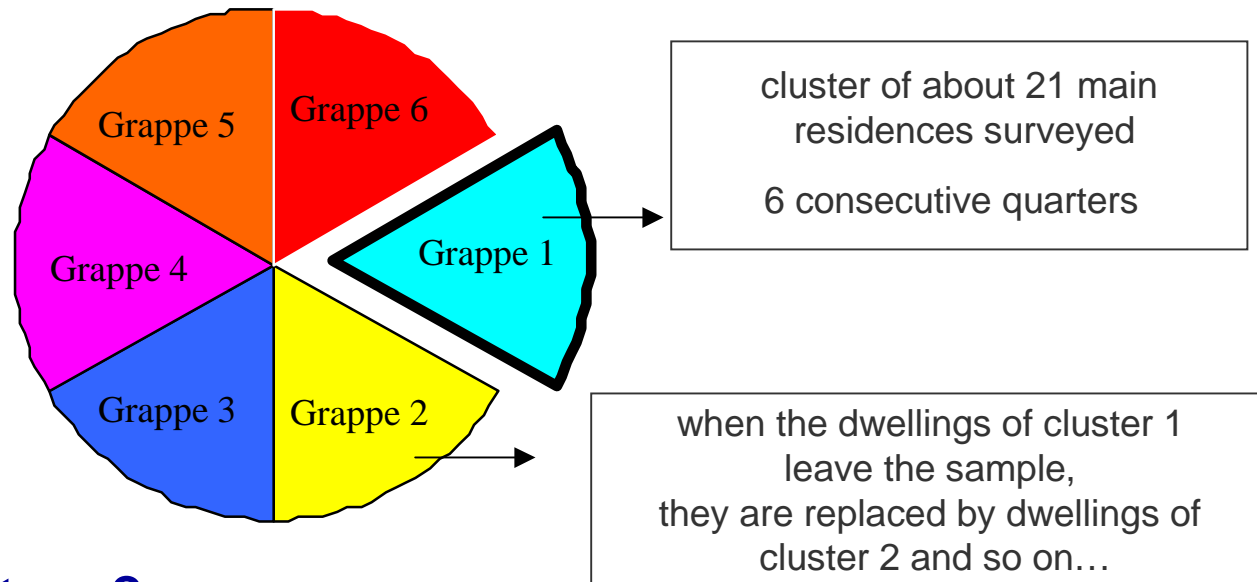
Short gathering periods of collection, including face to face + rotation pattern

- For each interviewer: the need to give several dwellings to survey in the same place and on the same gathering period (ie with the same reference week)
 - **Selection of nearby dwellings, called "clusters"**
 - **A cluster of 21 main residences (same place, same reference week)**

- A rotation pattern 6- : dwellings are interviewed six consecutive quarters; the sample is rotated 1 / 6th quarterly
 - **Cluster lifespan: 6 quarters**
 - **Replace a cluster by a nearby cluster (same place, same characteristics of the households) -> selection of nearby clusters, called « sectors »**

A sample of sectors

- **A sector including of 6 clusters**
Its life span: 6 clusters x 6 quarters query = 9 years

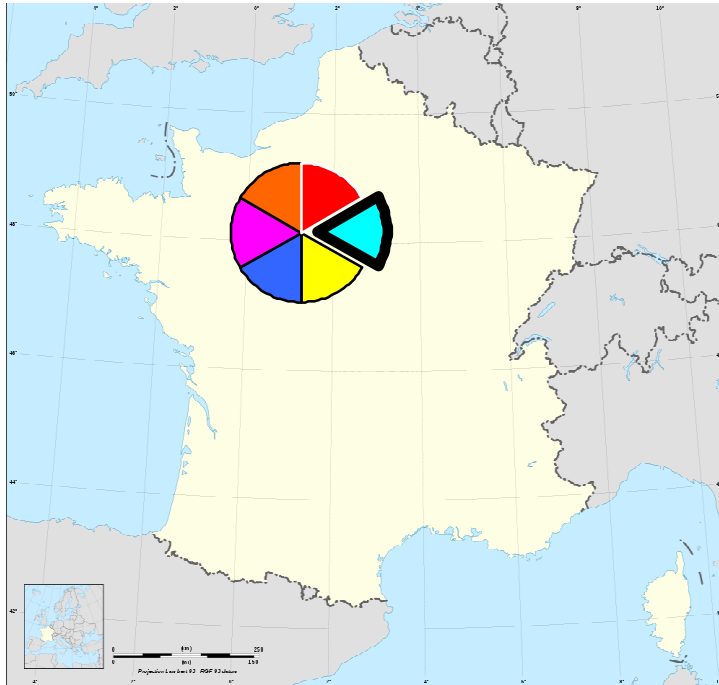


- **Why 6 clusters ?**
Sample life span : 9 years
One-shot random selection of sectors for 9 years in the housing tax register, updated each year (new dwellings, new households in the dwellings...)

The sampling design

1. the number of main homes to investigate each quarter is determined
67,350 per quarter under the new sample drawn from the tax register and mature from Q3 -2011
2. the number of sectors is deduced, knowing that a cluster of 21 main homes is interviewed each quarter
sectors approximately are $3210 = 67\ 350/21$
3. sectors are drawn and then assigned an order of entry into the sample
1 to 6; rotation pattern 6-
4. each of the 6 clusters constituting each sector is assigned a cluster number
5. each sector is assigned a reference week in the quarter :
 - cluster 1 will be surveyed for the first time in quarter determined in step 3;
 - subsequent interrogations are spaced 13 weeks, and so are the interrogations of the remaining clusters in the sector.

Partition of metropolitan France in clusters and areas



Dwellings: 32,3 millions
Main residences: 25,5 millions
Clusters: 1,2 millions of clusters
Sectors: 200 000

With geolocation data contained in housing tax register, this partition could be done in record time and by computer

Selection of the 3 210 sectors

1. The sectors sample is stratified by region, according to a proportional allocation.

The issue of allocation is very important : it determines regional and national precision, regional workload.

2. The selection of sectors within each region is proportional to the number of main homes according to a balanced sampling (socio -demographic criteria).

See J-C.Deville and Y.Tillé (2004); practical implementation with SAS macro FastCube.

Sectors rank ; cluster number

Determining the rank of introduction of sectors in the sample

Within each region , sectors of sub-sample 1 were drawn with a probability of $1/6$ th according to a balanced survey (same variables as above or less in small regions).

Then, the sub-sample 2 was selected from the remaining $5/6$ th of sectors with a probability equal to $1/5$ th according to a balanced survey and so on until the sixth and final subsample.

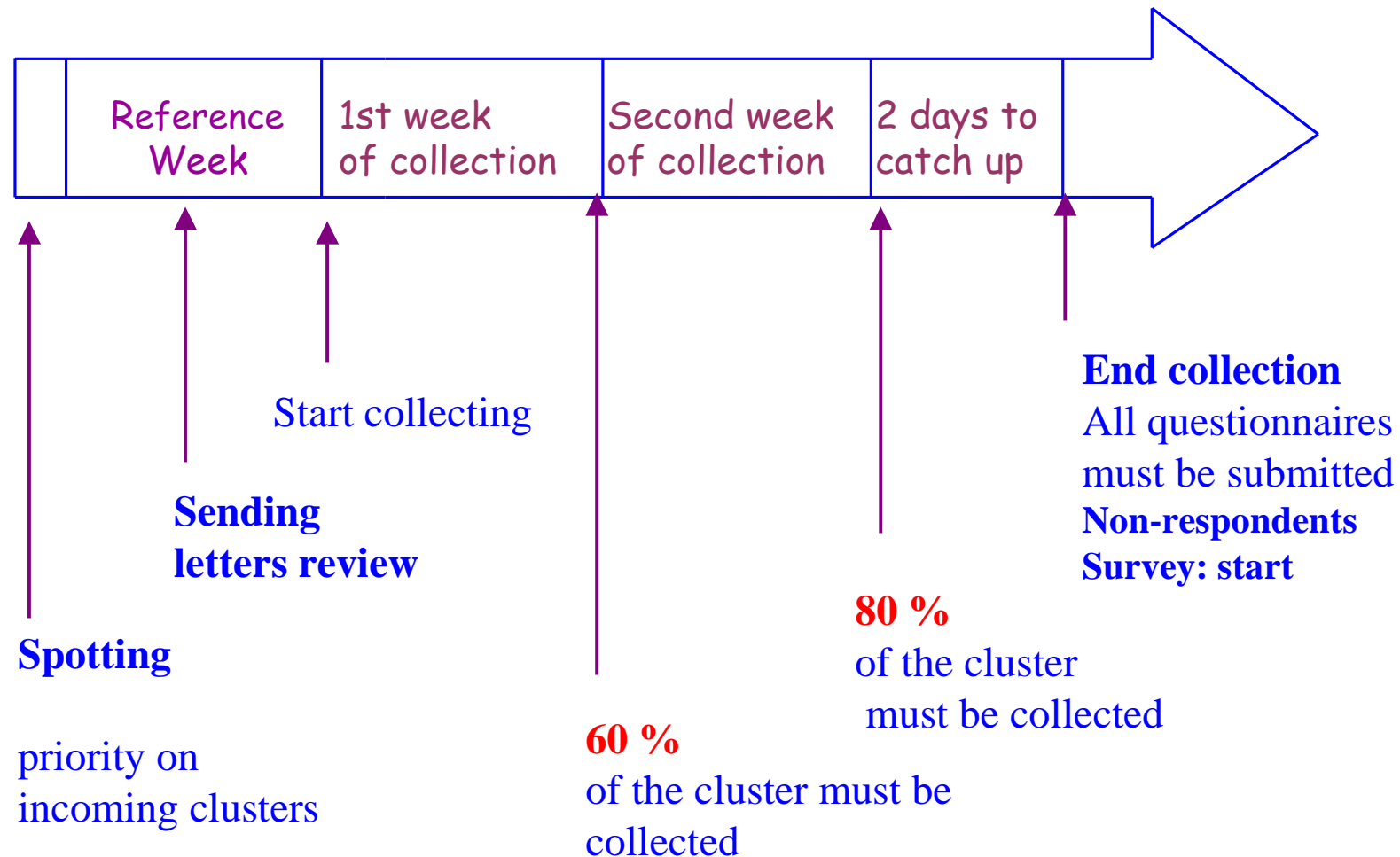
Using the same methodology, a cluster number from 1 to 6 was assigned to each of six clusters comprising each sector.

The uniform distribution of reference weeks (RW) had to meet the following requirements

- A uniform distribution of the RW by regions
 - A uniform distribution of the RW for each of the 6 sub-samples
 - The size of the sample by region and sub-sample is fixed
- +
- In urban areas having at least 5 sampled , the difference between the reference weeks is higher than or equal to 2

The resolution of this problem is similar to a game SUDOKU !

Organization of field collection that ensures the uniform distribution of reference weeks (RW)

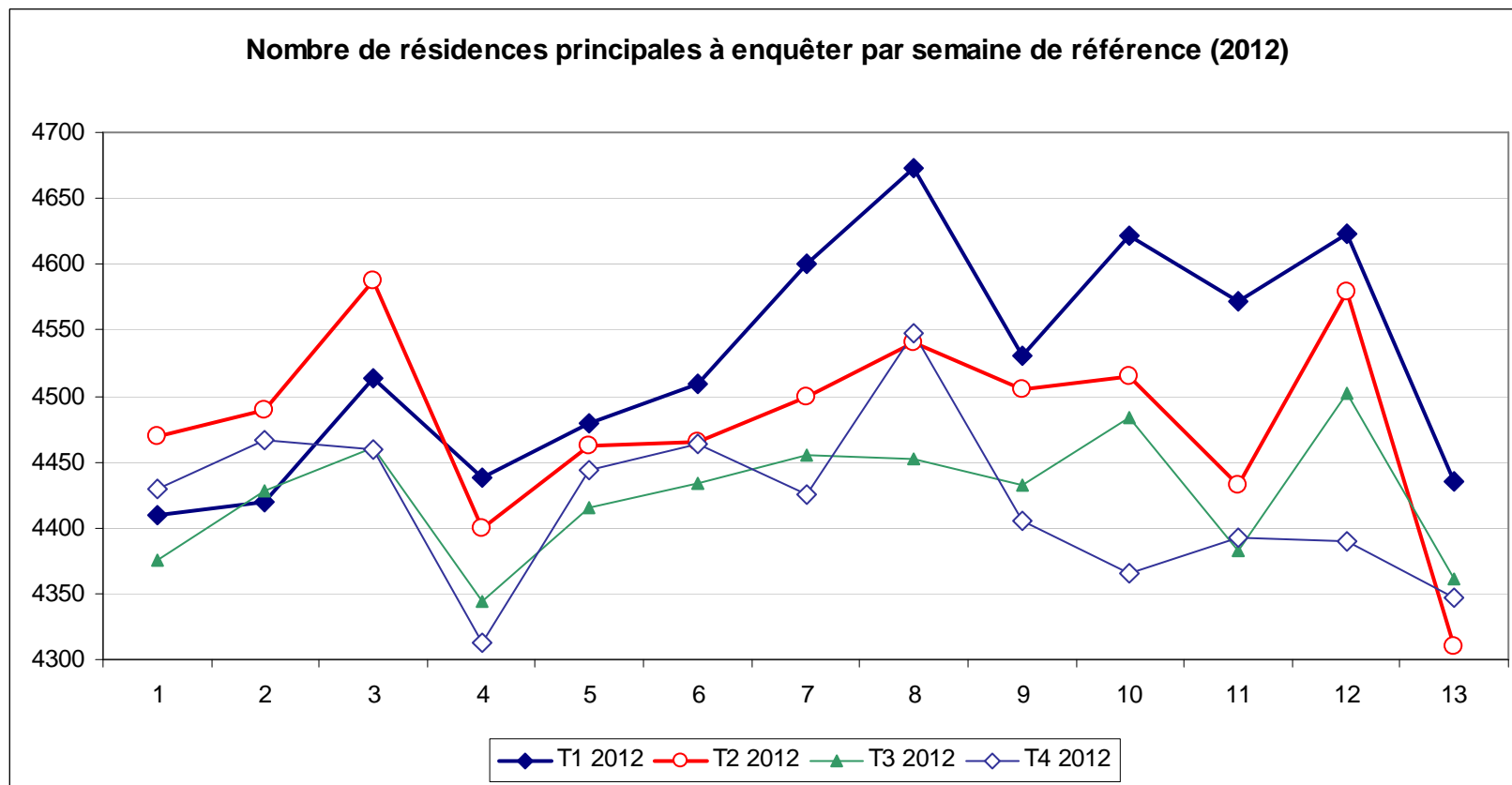


Monitoring enables regional offices to know each of their investigators and steer closer collection:

- The rate of progress of the collection on main residences
situation after 1 week, 2 weeks and 2 weeks and 2 days: number of main residences surveyed at a time given the total number of main residences to investigate
- The failure rate
share of refusal, absent long-term, impossible to reach and impossible to achieve among all units to investigate
- The surveys accepted rate
ratio between the number of accepted survey and the total number of units of the field/ by cluster rank
- The rate of investigations conducted by proxy:
it gives the share of individual questionnaires conducted by proxy.

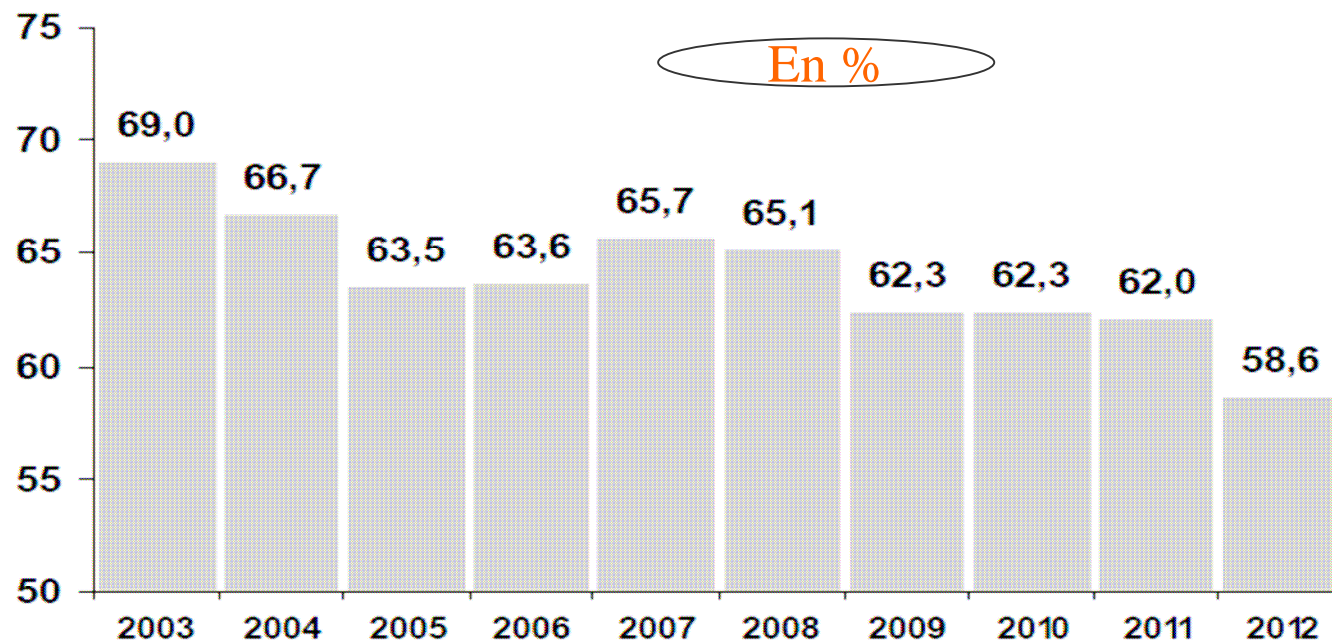
The LFS application, which was renovated in 2013, now allows multiple players to have **all these indicators permanently from their computer workstation.**

Number of main residences to survey per week



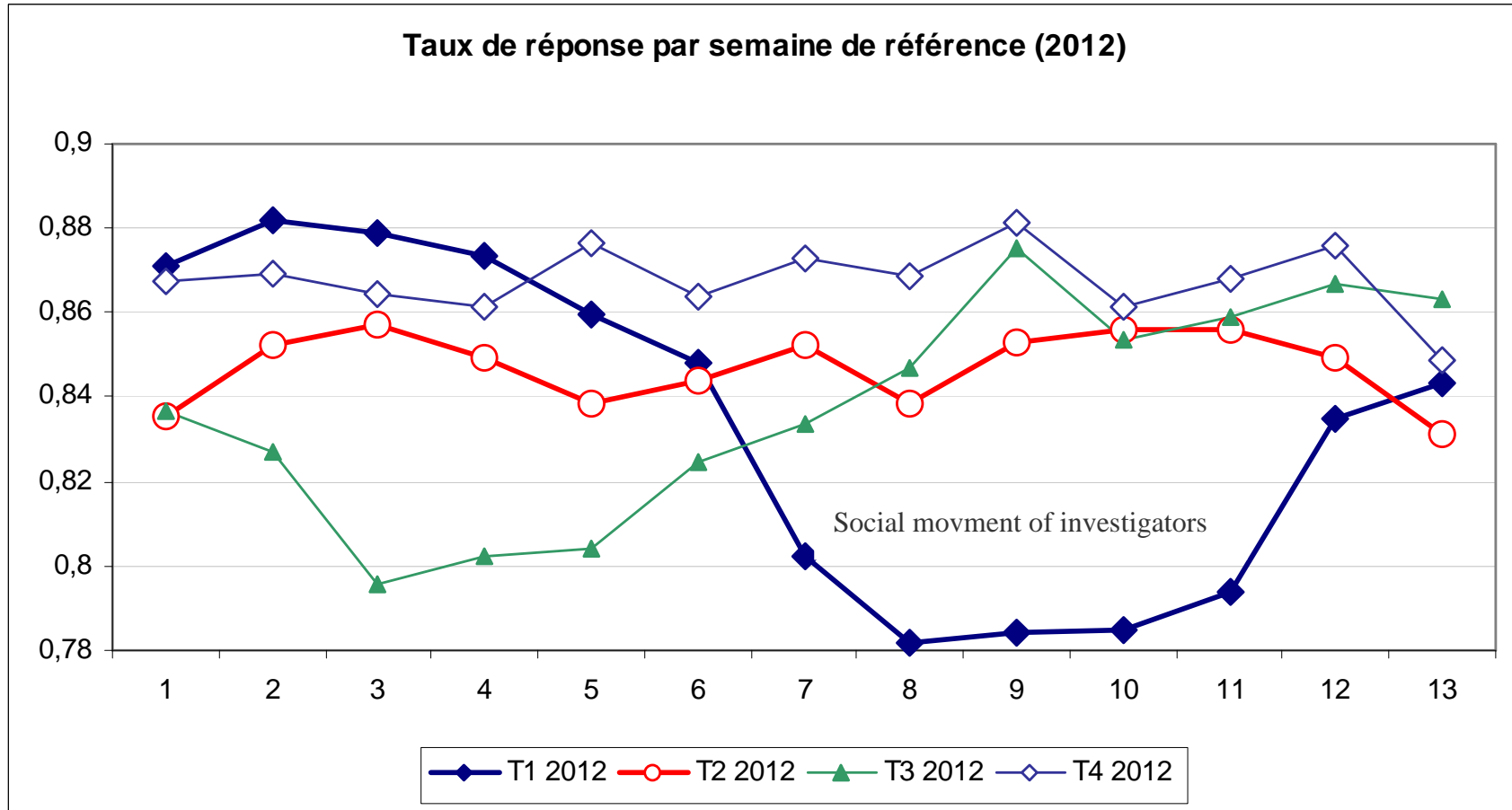
The rate of progress of the collection on main residences: situation after 1 week

Taux d'avancement de la collecte en première semaine



Source des graphiques : INSEE - Enquêtes Emploi 2003 à 2012

Response rate per week



Conclusion

The sampling and monitoring of the timeliness of field collection ensures a fairly good distribution of reference weeks per quarter.

INSEE is organized to implement an Internet collection in the LFS.

Experiments will take place from 2015. Uniform distribution of RF will obviously be respected.

The challenge will be to respect current collection time limits with several collection modes: in case of no answer on Internet, the collection will be made by an investigator.

Thank ou for your attention !

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du lundi au vendredi de 9h00 à 17h00