For Insee, the French Statistical Institute, the business register is the backbone of business statistics: especially, it is used as a frame, to define the scope and select the samples, for surveys or other processes of production of statistics.

Recently, two main changes did concern French business statistics: use of the administrative sources in an intensified way, move from a system mainly based on legal units towards a system taking into account, in a better way, the concept of enterprise. At the same time, a new statistical business register, SIRUS [1], was implemented and closely related to the inter-administrative business register SIRENE that is existing since several decades.

This paper describes the main changes brought by SIRUS, mainly concerning two points:

- the statistical uses of the register (frame, sharing of information for statistical treatments);
- the questions raised by the move towards the concept of enterprise.

I. The standard uses of the business register for producing statistics

Business statisticians are familiar with the use of the register. The inter-administrative business register SIRENE offers a very rich material for them:

- Insee is responsible for identifying all legal entities and their local units, on the basis of documents sent by the business procedures centres (Centres de Formalités des Entreprises) which have been set up to deal with all administrative procedures to which legal entities are subject; in that way, there is no undercoverage problem;

- The id-number of SIRENE is used, in a mandatory way, by all French administrations; this characteristic makes the use of administrative files by statisticians relatively easy;
Different kinds of information are available within the register, as the legal form of the enterprise, the address of the headquarters, the address of local units, or the NACE code (named in French APE, as Activité Principale Exercée).

For all these reasons, SIRENE has been used for a long time as the reference frame for business statistics. However, the implementation of SIRUS, which is statistical business register closely related to SIRENE, led to some improvements. And the role of the business register was reinforced with the recent trends concerning the use of administrative data.

I.1. The innovations coming from the implementation of SIRUS:

Since SIRUS is closely linked to SIRENE, the classical uses of the business register as a sampling frame are the same: there is no problem of under-coverage in France, the main issues are concerning the updating of the units, either concerning the fact that they are active or not, or concerning the updating of some characteristics used for the sampling plans (especially the NACE code, as the number of employees, generally used as stratifying variables).

But a first innovation recently introduced is concerning the statistical burden, that Insee wants to reduce, as least for small enterprises, by using a new method of coordination of samples, especially negative coordination: the idea is to foster, when selecting a sample, the selection of enterprises that have not already been selected in recent surveys, while preserving the unbiasedness of the estimators. This kind of method does not reduce the global burden, but avoids getting some small units particularly affected by a heavy burden, because being simultaneously in different samples.

Insee did use, since recently, a method aiming at coordinating two successive surveys ([2], page 167). But this method was limited to the coordination between two surveys, and did not allow to take into account the cumulated burden computed on all surveys conducted during the last years. A new method has been developed [3], that gives this possibility. It uses a “coordination function”, and the technical principles of the method are not detailed in this paper.

The implementation of this coordination method needed to introduce, within SIRUS, additional variables: the random number of the enterprise, as the information about the cumulated burden, that are for internal users. Moreover, the information collected will be used to monitor, in a continuous way, the statistical burden (see another paper presented in this meeting [4]).

A second innovation is concerning the sharing of information for statistical treatments, especially when dealing with missing data. Some feedback form the surveys, as from administrative sources, is introduced in SIRUS, to be used by all business statisticians, when before everyone was using his own methods. For example, VAT (value added tax) files are used to provide information about enterprises being still active (because having VAT declarations) and at the same time being sometimes non-respondents for statistical surveys. In that sense, the creation of a statistical business register removed some difficulties existing with the use of an inter-administrative register, for which some lack of flexibility is observed: one cannot add or remove one unit of an administrative directory without notifying all associated administrative bodies, and the registered entities themselves.

However, the use of information obtained through statistical surveys cannot be used directly for some statistical purposes (for example calibration, or negative coordination of samples), since the partial updating of the register would lead to some bias. Since the information introduced in Sirus keeps the
trace of the source and the date, it is possible, for these purposes, to use information limited to “general” updating (and neutralizing the partial updating).

**I.2. The move towards a more systematic use of administrative sources:**

Enterprises send different kinds of forms to different administrations, and the French statistical law gives access, for the official statisticians, to the files containing this information. So, Insee has a long tradition of using them for producing statistics, for example to calculate a turnover monthly index with the monthly declarations of turnover sent to the tax authorities for the VAT, or wages statistics with the employer’s annual social security returns, whose main purpose for the administration is the validation of pension and sick benefits, and the cross-checking with declared incomes of salaries.

For all these statistical processes, the French business register is the backbone, and the fact that every French administration uses the id-number of SIRENE makes the use of the administrative files easy.

But the advantage of this unique id-number is much more obvious when combining different sources. And the present trends concerning the intensification of the use of the administrative sources do reinforce that point of view.

One example is the new device ESANE (*Elaboration des Statistiques ANNuelles d’Entreprises*) that Insee has implemented recently to produce the French structural business statistics. Three main objectives were given when the project was launched [5]:

- reduce the statistical burden;
- re-engineer the process of production of the structural business statistics, in order to make productivity gains;
- improve the quality of the statistics, especially, their relevance, by taking into account in a better way the European definition of the enterprise established in the European regulation N° 696/93. This topic is developed in part II of this paper.

The first objective was reached by using two kinds of administrative files:

- annual statements of benefits sent by enterprises to the tax authorities, containing mainly accounting variables;
- annual social security returns, containing information about employment and wages.

Combining these two kinds of sources is made easy, since they do use the same basic unit, defined within the business register SIRENE, and its id-number. However, merging these sources is not sufficient to answer to all kinds of needs. Particularly, a variable is considered as essential, especially for the national accounts: the breakdown of the turnover of the enterprise according to its different industries. This demand, as other kinds of needs, leads to run, besides the use of the administrative sources, a statistical survey on a sample of enterprises. The questionnaire of this survey is, of course, lightened compared to the one of the former survey that did include questions about accounting variables, employment and wages. It should be noticed that the use of tax data has been made possible since they can be transmitted by the tax authorities much more earlier than before.
The figure 1 gives the general principles of the production process. In this process, the business register plays a fundamental role. Then, since the statistics to produce do involve administrative files (obtained on the whole population) and survey data (obtained on a sample), specific estimation procedures have been developed [6].

**Figure 1 : ESANE, the system of production of the French structural business statistics**

II. Taking into account the definition of the enterprise

One important issue is the relevance of statistics. Until now and before the implementation of ESANE (for structural business statistics, but the question is raised for all kinds of statistics), the statistics were mainly obtained through a system considering companies as equivalent to legal units. In this system, large groups did not be taken into account, and the measurements of aggregates for each industry, as by unit sizes, were suspected to give a wrong view of the population of enterprises. This problem was not new, but it was enhanced by the increasing number of groups, as the increasing globalisation.

Then, the assimilation of a legal entity to an enterprise ceases to be appropriate in an increasing number of cases, and, moreover, theses cases are economically significant: this can lead to double counting for some variables, as turnover, and to wrong classification of some units.

II.1. The move to the concept of enterprise:

For this purpose, Insee has decided to produce statistics, especially structural business statistics, by using the unit “enterprise” instead of the legal unit.
To do this, and so to collect data relative to enterprises, and not to legal units, work had to be done, especially concerning the administrative data: what is existing in the tax files does correspond to the legal units, and it is necessary to get the same kind of information, for an enterprise which is “the smallest combination of legal units that is an organisational unit producing goods or services, and which benefits from a certain degree of autonomy, especially for the allocation of its current resources”.

Two different situations are considered (see [7] for more details):

- for large groups (at the present moment 40 groups in France), a tailor-made work is done, with a face-to-face discussion with representatives of the group, to define first the enterprises within the group, and then produce consolidated data for these enterprises;

- for the other groups, which constitute the large majority, more automatic procedures will be applied, that are being currently developed.

Some first studies have shown that the introduction of the concept of enterprise gives a modified view of the French economy, especially concerning its concentration [8].

Concerning the statistical business register SIRUS, this has needed to implement within it different units, that do co-exist: enterprises, and also groups, in addition to legal units and local units, that were still present in SIRENE. One consequence has been to define different id-numbers for these different units, to be able to differentiate them easily.

From a practical point of view, it leads to some changes compared to the former system, as, for example, using the concept of enterprise needs, once an enterprise has been defined, to neutralize the legal units composing each defined enterprise, in order to be sure to avoid double counting.

II.2. Scope issues:

The introduction of the concept of enterprise helped us to revisit the questions concerning the scope of business statistics. From a theoretical point of view, the scope, for example for structural business statistics, seems easy to define: it is composed of the market-oriented enterprises belonging to some sectors. More precisely, if the SBS (Structural Business Statistics) regulation of Eurostat is considered, this scope is referring to some NACE codes (sections B to N and division 95 of the NACE).

But the reality is more complex. First, using jointly administrative and survey data helped to be more precise when designing the scope within the register: observing how the records of the tax files do behave relatively to the scope that can be defined a priori by using criteria available in the register (as NACE code, legal status) is meaningful: some tax declarations are outside the scope defined a priori, as for some categories of enterprises considered as belonging to the scope, few tax declarations are found. Doing this raised some questions that very often brought back to the definition of the enterprise: one of the most important is concerning structures linked to big groups that had been put outside of the scope, and, even if they have no production, having large assets (in case of managing real estate for these groups). This exclusion was due to the fact that their juridical code was corresponding to a category mainly composed of family societies created in case of inheritance of a house, but mixing, in fact, very “various” enterprises. In the end, it was decided to reintegrate in the scope the units of this category sending a fiscal declaration.
Different specific cases have been highlighted, that need each time to make specific choices; and, from a general point of view, using enterprises defined within the statistical business register proved to be more relevant concerning the scope that using just legal units, in case of complex structures within groups.

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