Transfer of Data by Kind of Business
to Data by Homogeneous Production Units

Philippe Trogan
INSEE, France

Paris, September 1989

When carrying out National Accounts, more precisely, Product Accounts (Comptes de branches), one makes wide use, in France, of statistics on firms drawn out from fiscal sources. The latter are supplemented by the results of the Annual Surveys on Firms, which, now, cover almost completely the scope of non agricultural non financial market economy.

The mentioned statistics refer to the smallest legal unit, or enterprise. Enterprises are classified according to their principal activity within a reference activity classification, which, for the time being, is the 4-digit NAP 73 (Nomenclature d'Activités et de Produits de 1973).

The basic statistical information is therefore organized by kind of business (or sector[1]) of firms.

Enterprises are engaged into one principal activity, which is the criterium for their classification, but they may also carry out one or several secondary activities.

How is the principal activity determined?

The determination of the principal activity requires the choice of a way to measure the importance of the various activities into which the enterprises are engaged. The value added by each activity would have been the best indicator. However, measuring it would be too difficult. Therefore, the importance of a given activity is obtained using:
> -the personnel engaged in it, for activities within the
> scope of agriculture and manufacturing;
> -the sales or the receipts, for other activities (building,
> civil and agricultural engeneering, commerce, transports,
> communication, other services,...)

---

[1] From now on, the French terminology of sector (or sector of enterprises) will be used in state of kind of business.

sector-to-products (or, in the French jargon, a transfer sector-to-branches) is performed.

At this stage, the transfer sector-to-branches is only performed for enterprises within the scope of Annual Surveys on Firms, i.e .the sole institutional sector "corporate and quasi-corporate enterprises and individual enterpreneurs". It is therefore necessary to supplement the information by estimates of product production and sales for the other institutional sectors.

Furthermore, it should be pointed out that, besides some exceptions, any product may be sold by any enterprise, whatever its principal activity might be; in order to achieve a correct "sector-to-branches" transfer, it is necessary that the data collection system be comprehensive (annual surveys on firms must cover all sectors in the economy) and that the latter be incorporated into a unique data base. That is what is actually achieved, in France, in the SUSE data base (SUSE=Système Unifié de Statistiques d'Entreprises: Unified System of Enterprise Statitstics). The transfer sector-to-branches can be done according to the following schmeme:

Sector Products/Branches	Sector A	Sector B	Sector C	Sector ii	Productive system
Product/Branch A					Tot.prod.A
Product/Branch B					Tot.prod.A
Product/Branch C					Tot.prod.A
Product/Branch II					Tot.prod.ii
Productive system	Total for sector A	Total for sector B	Total for sector C	Total for sector ii	Total for all the productive system

The transfer "sector-to-branches" is made for each 4-digit level of the activity and product classification, for receipts and sales. One may also, using the weighting pattern of the products, make estimates for employment and value added at the same 4-digit level. However, in product (branch) national accounting, only production and commodity flow accounts are made at the 4-digit level (which corresponds to 600 groups); for other accounts (employment, value added, capital formation, ...), because of the

336

complexity of operations,the calculations are made at a more aggregated level (in general, using a 90-post classification).

The Unified System of Enterprise Statistics [2]

The Unified System of Enterprise Statistics aims at establishing a consistent set of statistics on enterprises, using coordinated processings of fiscal files and of annual surveys on firms. It was created because of the difficulties encountered by National Accountants, when they were carrying out the 1962 base and made use altogether of the data in the fiscal declarations by firms and the answers to the questionnaires of annual surveys on firms.

It is "a central system of structured statistics on enterprises, which presents enough consistency so as to elaborate from it the National Accounts".

In order to reconcile data coming from various sources ,it seems preferable to work at the elementary units level, at least for the most important among the units ... thus the idea to design a system which ensures the constency of individual data.

The general principles of the present system are: search of consistency, objective of comprehensiveness, selective treatment of anomalies and of observed divergences, enrichment of sources.

Several **types of consistencies** have to be distinguished:
- internal consistency of each source for a given fiscal year (balance of accounts, likehood, ...);
- temporal (pluri-annual) consistency (identity of "hooking" variables concepts such as stocks; likehood of time-to-time changes);

The **comprehensiveness** of each data source, fiscal source and annual surveys on firms, is not perfect. Some enterprises are not in the fiscal files (late declarations, enterprises not liable to taxation);

similarly, some enterprises are not in the surveys (all important enterprises are in the survey samples, non-responses, observation errors). There is therefore a need to create procedures for checking for the presence of big units by comparing the sources and examining the files of the previous years.

Anomalies and observed discerepancies are treated at the individual level, at least for great enterprises (in general, enterprises with, at least, 20 wage-earners) using all available sources (in, particular examination of assembly reports).

The matched sources do not have the same content: there is therefore **mutual enrichment.** Along this line, the survey questionnaires do not include requests dealing with the "bottom of the balance sheet" (i.e. short term data like: cash, short term liabilities, etc.). On the contrary, surveys on enterprises are used to collect numerous data on employment and, also, breakdowns of sales by products, which are not available in the fiscal source.

The Unified System is therefore a major source for the enterprise side of National Accounts.

For Accounts on Goods and Services, the estimate of production is made using the sales amount available at the 4-digit level of the activity classification (see the "sector-to-branches" transfer matrix). Annual surveys data, made consistent with the fiscal declarations, are used for estimating many data: fixed capital formation (which requires a breakdown by nature of capital formation), a transfer matrix "sector-to-branches" which permits the calculation of profit-and-loss accounts by branches, ...

The difficulties of the present system

-The SUSE data bank take all enterprises into accounts (about two millions units). For obvious reasons of processing burden, the emphasis is put on units with, at least, 20 wage earners (as well as on "false small enterprises"), which corresponds to the highest threshold of exhaustivity

338

in the firm surveys (in the manufacturing survey, all and only those enterprises with 10 wage earners and more are surveyed, while in commerce and market service industries surveys, all enterprises with 20 and more wage earners are surveyed along with a sample of smaller enterprises).

Thus,the analysis of discrepancies and anomalies, the check for the principal activity as derived from surveys (which is of better quality than the one declared on fiscal documents), the taking into accounts of the sales breakdown by product (transfer sector to branches), are done in a systematic manner only for enterprises with, at least, 20 wage earners.

This might be satisfactory for the manufacturing industries, where the main part of the production is made by big units, but this is not always so for service industries. As a consequence, the persons in charge of the branches in the "other market services" groups work, in fact, on a particular "sector-to-branches" transfer matrix which integrates the sales breakdowns for small units (with less than 20 wage earners).

-Annual surveys on enterprises are specialized by large fields (manufacturing industry, commerce, other market services industries, ...) and the persons in charge for them are specialized accordingly. It is not always easy, for those people, for example those working in the manufacturing industry field, to codify very precisely the secondary activities pertaining to fields which they are not familiar with, for example services provided to enterprises. This, in turn, results in some variations or imprecisions in the codifications. Discussion procedures are organized in order to harmonize and normalize the most frequent occurences of secondary activity codifications.

-There is a certain instability, from one year to another, of the "sector-to-branches" transfer matrixes, especially for those products the knowledge of which is usually not at the general knowledge level (services provided to enterprises, other market services provided to households, ...): this instability creates difficulties, in particular since it perturbates the time-to-time series of production by branch. Even if the person in charge of the concerned branch checks thoroughly the transfer matrix (a costly

operation as to working time), this does not permit to point out systematically what comes actually from real facts and what comes from eventual errors in processing and codifying. Along this line, for example, a correct breakdown of the sales of a given enterprise along with an incorrect codification of its principal activity, will result in a new transfer "sector-to-branches" and perhaps in a "massive" change from the previous one. It can be understood, from this example, that the "kind of industry" treatment is incorrect and it is precisely the next transfer "sector-to-branches" which allows to go back to reality. A proposal made by Michel LACROIX, in charge of the market services branches, would be to smooth the "sector-to-branches" transfer matrixes over the last three fiscal years.

-0-0-0-0-0-

BIBLIOGRAPHY

[1] Excerpt from the introduction to "Nomenclature d'activités et de produits 1973", pages 10 et 11 - 1988 issue.-Journal Officiel.

[2] Excerpt from "Les sources statistiques sur les entreprises", pages 263 and ssqq -Les Collections de l'INSEE, série E (ENTREPRISES) n° 117 (1988).

[3] Philippe Trogan: "The Use of Annual Surveys on Service Enterprises for the Making of National Accounts" - Communication to the third meeting of the "Voorburg Group", Wiesbaden 1988.