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**AN EXAMPLE OF THE USE OF ANNUAL SURVEYS ON ENTERPRISES
FOR NATIONAL ACCOUNTS :
THE TRANSFER "SECTOR TO BRANCH" ON TURNOVER.
(APPLICATION TO THE COMPUTER SERVICE BRANCH)**

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AN EXAMPLE OF THE USE OF ANNUAL SURVEYS ON ENTERPRISES

FOR NATIONAL ACCOUNTS : THE TRANSFER "SECTOR TO BRANCH" ON TURNOVER. (APPLICATION TO THE COMPUTER SERVICE BRANCH)

While for making short term indicators there is generally a coincidence between the definition of the observation unit and of the most adequate economical unit (the branch for manufacture sectors, the enterprise for service sectors), the same does not apply when French National Accounts, on the base year 1980, have to be prepared.

I. What is the problem ?

According to the rules of French National Accounts, whatever the kind of activity may be, the economical unit on which the Input-Output table (I/OT) is based is the Homogeneous Production Unit (HPU). All the HPUs which correspond to the same kind of activity are aggregated into a branch. This definition is of economical type ; its main interest is that a branch is rather very homogeneous and, thus, is very close to a product (without being exactly similar) and to its demand.

While, from a conceptual standpoint, the concept of branch may be seducing, in reality, it is not generally a unit whose all accounting characteristics can be observed. The French statistical system has therefore been organized around the concept of enterprise, a juridical, fiscal and accounting entity, the characteristics of which can be easily observed.

Each statistical unit (enterprise) is classified according to its principal activity. The latter is determined in consideration of the activity which requires the highest number of salaried as to manufacturing activities, or which provides the greatest part of the turnover as to service activities.

If one refers to the classification of activities, it is thus possible to re-group the enterprises with the same principal activity. But, enterprises with the same principal activity may have different secondary activities. For example, enterprises classified in the sector of computer manufacturing produce computers as their principal activity, but some of them produce, as secondary activities, computer services. This is the outcome of a classification of enterprises as a whole, without dividing them into homogeneous production units.

It should be pointed out that ancillary activities, i.e. activities achieved not for themselves, but because the services which are produced are necessary to achieve the principal and the secondary activities (management, accounting, cleaning, ... activities achieved by the enterprise for itself) are not, in general, accounted for in the enterprises turnover.

The reconciliation, between the statistical approach in term of enterprise and the economical approach in term of branch, is the outcome of a large co-ordinated organization of annual surveys on enterprises, which cover the quasi totality of market activities. The quasi complete coverage has been completed only at the beginning of the eighties with the launching of the survey on service enterprise, the last born of the great annual surveys on enterprises.

II. The method

All enterprises with 20 or more wage earners receive a questionnaire each year, as well as a sample (variable according to the kind of activity and to the size) of enterprises with less than 20 wage earners. But, as a general rule, for the transfers "sector to branch", only data provided by enterprises with 20 or more wage earners are used. Each enterprise, classified as to its principal activity in the 600 headings of the present 4-digit French activity classification, is required to provide a breakdown of its sales according to a branch nomenclature which is rather similar to the activity classification (see annex 3). The tabulation of the complete set of data for all enterprises provides a repartition of sales into the 600 branches for the 600 kinds of activities (sectors). This repartition is used as a structure ; it is applied to sales by enterprises classified by kind of (principal) activity obtained using a more comprehensive source than the annual surveys (1). One obtains, in so doing, a (600X600) transfer "sector to branch" matrix which permits to "read" directly on each row the amount of sales by each branch (see annexes 2 and 3).

As to enterprises classified in sectors of activity which are not surveyed, and as to enterprises with less than 20 wage earners, except in some cases, it is assumed that they do not carry out a secondary activity. The total sales of one of such enterprises are thus assumed to be made for the branch corresponding to the principal activity code of the enterprise (a diagonal transfer sector to branch).

The process of reconciliation between the enterprise and the branch approaches can be achieved only if all activities are covered in the annual surveys on enterprises. If this is not the case, there is an over-estimate of the sales of branches which correspond to non surveyed sectors (the secondary activities of the enterprises of a given sector are kept with the corresponding branch, instead of being attributed to other branches) ; there is consequently an under-estimate of the sales of branches corresponding to surveyed sectors and this under-estimate is higher when the number of non surveyed sectors is more important (the level of sales of a given branch does not include either the secondary activities of the corresponding sector achieved in other branches, which is normal, or the secondary activities of the non surveyed sectors achieved in the given branch).

III. Application to the branch "computer services"

Computer services correspond to two headings in the French 4 - digit classification of activities and products :

- Heading 7703 : computer and management studies
- heading 7704 : computer services made to order

For each of these two headings, the following data are available :

- **As to kind of (enterprise) activities (sectors)**, the total sales of enterprises whose principal activity is to make studies on computer and management (annex 1.1) or is to provide computer services made to order (annex 1.2) along with the breakdown of these sales into the various branches. These results have been obtained from a processing of the framework "breakdown of turnover" in the questionnaire of the annual survey on service enterprises (see annex 3) for enterprises with 20 or more wage earners.

1 This source is quasi exhaustive. It is obtained as the result of a synthesis between the annual survey files and the tax report files of all taxable enterprises.

It can be seen, for example, that enterprises whose principal activity is to make "studies on computer and management" make 91,7 % of their sales in the corresponding branch : the sector is therefore quite homogeneous. However, these enterprises draw 3,6 % of their turnover from commercial activities and 2,6 % from computer services made to order.

On the opposite, the enterprises whose principal activity is to provide "computer services made to order" have a less homogeneous activity since only 80,4 % of their sales are made in the corresponding branch and 19,6 % in other branches, out of which 12,5 % in the neighbour branch "computer and management studies".

- **As to branch**, the total sales in the branches "computer and management studies" (annex 2.1) and "computer services made to order" (annex 2.2), and the breakdown of these sales according to the providing sector.

It can be seen that 19,7 % of the sales in the branch "computer and management services" are made by enterprises whose principal activity does not correspond to the branch. In particular, the sector of computer manufacturers (heading 2701) has an important secondary activity in computer services, which contribute to 10,7 % of the sales in the studied branch. One can also point out the computer and management studies achieved by enterprises in the computer service made to order industry (5,1 % of the sales in the studied branch).

As to the branch "computer services made to order", 13,8 % of the sales are made by enterprises whose principal activity does not correspond to the branch. The number of sectors of enterprises which provide the corresponding services as a secondary activity is high, which is not surprising. Indeed, many major enterprises in the manufacturing or service sectors have their own data entering units and can, thus, provide and invoice corresponding services to other enterprises.

Conclusion

While the completed coverage of the market sectors by the annual surveys on service enterprises in the eighties has made it feasible by National Accountants to make an integrated transfer from the enterprises approach to the branch approach, the method established for that purpose require a phase of file manipulation and of controls which is rather burdensome. In particular, branches with low sales are extremely sensitive to variations, even small, in the structure of sales according to branches of major enterprises. So, the branch approach appears to be often too dependant on the quality of raw data collected at a previous stage and outside of the approach.

With the use of the local unit, the orientations taken in France for the future base of National Accounts and for the revision of annual surveys may allow to achieve a compromise (are compromises always satisfying ?) between the definition of the economical unit adequate for National Accounts and the economical unit actually observed via surveys. So National Accounts data would appear less theoretical and closer to the observed reality.

ANNEX 3

8. BREAK DOWN OF TURNOVER, REVENUES, "IMMOBILIZED" PRODUCTION, OR COMMISSIONS (INCLUDING EXPORT)

- . Preferably, make this break down not including VAT
- . Enter with the rubrics which correspond the best to your activity the re-embursable charges, the services to be re-paid by fellows, the advantages in kind provided to the personnel
- . If you do not carry out a precise accounting, please make the best approximations, for example with the use of percentages.

TECHNICAL STUDIES (excluding delivery and installation of materials)

- . Technical studies for building, infrastructure, manufacture (give precisions)

ORGANIZATION

- . Studies in organization, advices for direction and management
- . Advises in formation, specific formation
- . Adult and continuous formation (activity requiring authorization and entry in the file of a formation center)
- . Advice in personnel recruitment, in personnel selection

STUDIES AND OPERATIONS MADE TO ORDER (excluding delivery and installation of material)

- . System engineering (excluding delivery and installation of material)
- . Studies and advices in computer
- . Sale or renting of standard software created by the enterprise
- . Computer formation
- . Creation of non standard softwares, technical assistance
- . Provision of personnel within the framework of a computer service contract
- . "Third part" maintenance of basic software
- . Data entry and preparation
- . Computer services made to order, other than data entry and preparation
- . Provision of computer material and network (including servers, excluding material rental)
- . Facility management services
- . Computer center management and assistance
- . Maintenance and repair of computers and computer equipment
- . Sale of documents and appliances
- . Immobilized production of computer services, expenditures en R&D

DELIVERY AND INSTALLATION OF MATERIALS

- (Only in the framework of a turnkey operation, excluding invoices for studies)
- . Delivery and installation of material (buildings, infrastructures, manufactures)
- . Delivery and installation of material (computer, organization, ...)

WHOLESALE AND RETAIL SALES

- . Wholesales of computers (main frame) and equipment, micro computers, standard softwares
- . Retail sales of micro computers, standard computer softwares, other computer material
- . Commission on sales of computer material

ECONOMICAL AND SOCIOLOGICAL STUDIES

- . economical, sociological or financial, market studies, opinion surveys (precisions?)

OTHER ACTIVITIES

- . Management and dissemination of data banks
- . Advises and research in documentation
- . Rental of personnel, provision of personnel
- . Expertise, provide precisions on the major domain
- . Other activities, please name

TOTAL (must be equal to the total turnover entered in framework 4).

ANNEX 1.1

Print out in 600 sectors and 600 branches

Sector 7703 : Entreprises making studies on computer and management

ENTERPRISES WITH 20 TO 100 WAGE EARNERS

2701 :	113021	2913 :	1537	2914 :	13375	5101 :	1250	5804 :	8311	5911 :	336633
6245 :	336	6421 :	603	6424 :	462254	7701 :	41690	7702 :	65659	7703 :	12154096
7704 :	396378	7707 :	7382	7708 :	655	7710 :	1814	7712 :	764	7714 :	160076
8003 :	18452	8006 :	327	8008 :	364	8111 :	383	8121 :	31623	8202 :	43079
8707 :	6723										

ENTERPRISES WITH MORE THAN 100 WAGES EARNERS

2701 :	234355	5811 :	46939	5911 :	653280	6424 :	256928	7600 :	486	7701 :	21571
7702 :	101640	7703 :	19475152	7704 :	875509	7707 :	61946	7714 :	118503	8003 :	1493
8202 :	11005										

TOTAL DES ENTREPRISES

2701 :	348176	2913 :	1537	2914 :	13375	5101 :	1250	5804 :	8311	5811 :	46939
5911 :	989913	6245 :	336	6421 :	603	6424 :	719182	7600 :	486	7701 :	63261
7702 :	167299	7703 :	45059462	7704 :	1271887	7707 :	69328	7708 :	655	7710 :	1814
7712 :	764	7714 :	278577	8003 :	20145	8006 :	327	8008 :	364	8111 :	383
8121 :	31623	8202 :	54084	8707 :	6723						

TOTAL : 49 156 804 milliers de F.

ANNEX 1.2

Sector 7704 : Entreprises custom made computer services

EDITION EN 600 SECTEURS ET 600 BRANCHES , SECTEUR : 7704

ENTREPRISES DE MOINS DE VINGT SALARIES

7704 : 4031389 !

ENTREPRISES DE VINGT A CENT SALARIES

2701 :	32716 !	5111 :	21836 !	5804 :	437 !	5911 :	3095 !	6424 :	214597 !	6501 :	2865 !
7410 :	26742 !	7701 :	16875 !	7703 :	750283 !	7704 :	5772172 !	7707 :	609 !	7709 :	1653 !
7712 :	2174 !	7714 :	148367 !	8003 :	28775 !	8008 :	2 !	8121 :	11287 !	8202 :	145 !
8606 :	387 !										

ENTREPRISES DE PLUS DE CENT SALARIES

2701 :	40631 !	5911 :	143496 !	5914 :	29 !	6424 :	134205 !	7701 :	272315 !	7703 :	2104200 !
7704 :	8500901 !	7707 :	1159 !	7712 :	94798 !	7714 :	90479 !	8003 :	247115 !	8121 :	11813 !
8203 :	44041 !										

TOTAL DES ENTREPRISES

2701 :	81347 !	5111 :	21836 !	5804 :	437 !	5911 :	146591 !	5914 :	29 !	6424 :	348802 !
6501 :	2865 !	7410 :	26742 !	7701 :	289190 !	7703 :	2854483 !	7704 :	18304462 !	7707 :	1748 !
7709 :	1653 !	7712 :	94972 !	7714 :	238846 !	8003 :	275890 !	8008 :	2 !	8121 :	23100 !
8202 :	145 !	8203 :	44041 !	8606 :	387 !						

TOTAL : 22 759 568 milliers de F.

ANNEX 2.1

Print out in 600 branches and 600 sectors

Branch 7703 : Studies on computer and management

ENTREPRISES DE VINGT A CENT SALARIES

2701 :	23649 !	2913 :	12430 !	5704 :	1310 !	5804 :	13195 !	5911 :	101179 !	6010 :	44331 !
6424 :	19726 !	6443 :	10409 !	6503 :	2995 !	6506 :	6432 !	7410 :	3449 !	7701 :	172747 !
7702 :	33194 !	7703 :	12154096 !	7704 :	750283 !	7707 :	6175 !	7708 :	341 !	7709 :	132427 !
7710 :	1151 !	7712 :	921 !	7716 :	24273 !	7905 :	1835 !	7906 :	5130 !	8202 :	16936 !
8702 :	2 !	8708 :	3819 !								

ENTREPRISES DE PLUS DE CENT SALARIES

1503 :	21801 !	1506 :	808 !	1721 :	972 !	2301 :	80026 !	2408 :	15729 !	2701 :	80755 !
2812 :	10054 !	2913 :	50810 !	4423 :	5500 !	4432 :	2768 !	4701 :	24387 !	4904 :	23289 !
5120 :	79238 !	5203 :	9074 !	5804 :	93201 !	5911 :	234779 !	6503 :	13211 !	6701 :	28207 !
7307 :	1962 !	7600 :	499 !	7701 :	476315 !	7702 :	39731 !	7703 :	19475152 !	7704 :	2104200 !
7709 :	229997 !	7714 :	52965 !	8003 :	70591 !	8111 :	6 !				

TOTAL DES ENTREPRISES

1503 :	21001 !	1506 :	808 !	1721 :	972 !	2301 :	80026 !	2408 :	15729 !	2701 :	5994404 !
2812 :	10054 !	2913 :	63240 !	4423 :	5500 !	4432 :	2768 !	4701 :	24387 !	4904 :	23289 !
5120 :	79238 !	5203 :	9074 !	5704 :	1310 !	5804 :	106396 !	5911 :	335958 !	6010 :	44331 !
6424 :	19726 !	6443 :	10409 !	6503 :	16206 !	6506 :	6432 !	6701 :	28207 !	7307 :	1962 !
7410 :	3449 !	7600 :	499 !	7701 :	649062 !	7702 :	72925 !	7703 :	45059462 !	7704 :	2854483 !
7707 :	6175 !	7708 :	341 !	7709 :	362424 !	7710 :	1151 !	7712 :	921 !	7714 :	77238 !
7905 :	1835 !	7906 :	5130 !	8003 :	70591 !	8111 :	6 !	8202 :	16936 !	8702 :	2 !
8708 :	3819 !										

TOTAL : 56 086 976 milliers de F.

ANNEX 2.2

Branch 77404 : Custom made computer services

ENTREPRISES DE MOINS DE VINGT SALARIES

7704 : 4031389 !

ENTREPRISES DE VINGT A CENT SALARIES

1500 :	845 !	2701 :	7982 !	3203 :	1149 !	3904 :	177 !	3908 :	193 !	5112 :	396 !
5120 :	22131 !	5540 :	743 !	5706 :	12 !	5801 :	761 !	5812 :	357 !	5908 :	2096 !
5911 :	3489 !	5914 :	198 !	6411 :	3 !	6424 :	21443 !	6443 :	262 !	7307 :	2551 !
7410 :	4317 !	7701 :	27192 !	7702 :	1682 !	7703 :	396378 !	7704 :	5772172 !	7706 :	20 !
7707 :	500 !	7708 :	304 !	7709 :	164580 !	7710 :	1481 !	7712 :	6159 !	7714 :	54516 !
7901 :	168 !	7904 :	8895 !	8202 :	8719 !						

ENTREPRISES DE PLUS DE CENT SALARIES

1001 :	20835 !	1105 :	13375 !	1512 :	3516 !	1901 :	16808 !	2701 :	721 !	2815 :	21300 !
2823 :	4678 !	2912 :	883 !	2913 :	3268 !	2914 :	78979 !	2921 :	21596 !	3111 :	58313 !
3202 :	2939 !	3407 :	10142 !	4416 :	8905 !	4423 :	796 !	4601 :	56 !	5004 :	115660 !
5112 :	123353 !	5303 :	46573 !	5511 :	61439 !	5570 :	5299 !	5572 :	379 !	5804 :	7784 !
5807 :	1002 !	5905 :	144 !	5908 :	546 !	5911 :	51929 !	6604 :	652 !	7410 :	86579 !
7600 :	999 !	7701 :	506 !	7703 :	875509 !	7704 :	8500901 !	7709 :	15930 !	7710 :	212 !
7712 :	1080 !	7714 :	94491 !	7901 :	58857 !	7904 :	30559 !	8003 :	253798 !		

TOTAL DES ENTREPRISES

1001 :	20835 !	1105 :	13375 !	1508 :	845 !	1512 :	3516 !	1901 :	16808 !	2701 :	93203 !
2815 :	21300 !	2823 :	4678 !	2912 :	883 !	2913 :	3268 !	2914 :	78979 !	2921 :	21596 !
3111 :	58313 !	3202 :	2939 !	3203 :	1149 !	3407 :	10142 !	3904 :	177 !	3908 :	193 !
4416 :	8905 !	4423 :	796 !	4601 :	56 !	5004 :	115660 !	5112 :	123749 !	5120 :	22131 !
5303 :	46573 !	5511 :	61439 !	5540 :	743 !	5570 :	5299 !	5572 :	379 !	5704 :	12 !
5801 :	761 !	5804 :	7784 !	5807 :	1002 !	5812 :	357 !	5905 :	144 !	5908 :	2642 !
5911 :	55418 !	5914 :	198 !	6411 :	3 !	6424 :	21443 !	6443 :	262 !	6604 :	652 !
7307 :	2551 !	7410 :	90896 !	7600 :	999 !	7701 :	27628 !	7702 :	1682 !	7703 :	1271887 !
7704 :	1830462 !	7706 :	20 !	7707 :	500 !	7708 :	304 !	7709 :	180510 !	7710 :	1693 !
7712 :	7239 !	7714 :	149007 !	7901 :	59005 !	7904 :	39454 !	8003 :	253798 !	8202 :	8719 !

TOTAL : 21 229 441 milliers de F.