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**GLOBALIZATION AND ENTERPRISE STATISTICS: ASSESSMENT OF USE AND  
PRIORITIES OF STANDARDIZATION**

**An example of combined use of existing Polish and French data**

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1. The economic globalization needs indicators on the role of multinational enterprise groups (cf. [1] and [2]). Yet some exist at national level, in several countries (see for example [3], [4] and [5]), we nevertheless need indicators at transnational level, overpassing the national level, and we need transnational indicators articulated with national levels (cf. [6], [7] and [8]). Hence, when it is possible, we need to articulate national indicators together with other countries' national indicators. That arises three kinds of questions: defining, comparing-standardizing, choosing the relevant multi- (or trans-) national observation frame (on this matter, see also, [9]).

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2. Within the framework of a cooperation between the Polish National Statistical Institute (GUS) and the French one (Insee), in order to evaluate and improve our means of observation of the globalization process, we used and compared the existing statistics, respecting statistical secret constraints<sup>1</sup>. The statistics compared come from two principal sources: the survey EKD (GUS) and the survey LIFI (Insee).

3. The present paper utilizes that work in progress to formulate hypothesis concerning: identifying priorities for international standards elaboration, improving international comparability between existing statistics, assessing priorities and modalities in coordinating or combining national statistical systems.

(i) The comparison between the two sources allows us to evaluating the quality of indicators taken from each survey to describe the foreign firms penetration in a given country, here the French firms penetration in Poland. (ii) It allows us to draw out priorities for implementing, or defining, statistical standards, (iii) as well as for the relevant breakdowns needed to make and for the documentation needed to join to the publication of statistics. (iv) With respect of the limits of the existing sources, it is proposed a brief economic analysis of the globalization of both, Polish economy and French enterprise groups.

4. In terms of quality, standards and economic diagnostic, the conclusions are:

- quality: we have usable indicator, supposing we restrict our aim to the notion, and not to a precise concept, of foreign penetration/extension of firms.
- quality: international comparability is not so bad
- indicators standardization: sectors, size, firm control and rank of the control are the priorities (cf. [1] and [2])
- publication standardization: several standardization of the breakdowns to be published could help us to go ahead rapidly enough in the international use of enterprise statistics.
- economic diagnosis: complexity of enterprises groups organization
- economic diagnosis: sectors and forms of the globalization
- economic diagnosis: what economic contribution ?

... and a main conclusion: we can make a lot of interesting things yet with the existing system (statistical and legal) ! The conclusion has to be validated on data from other kinds of countries (European Union Members, USA, Canada, Japan, etc.).

#### What are the Available Statistics ?

5. To observe the globalization of Polish economy, the GUS realizes, since 1993, a survey on *foreign investments in Poland*, asking to the *Polish resident* incorporated companies<sup>2</sup> their foreign shareholder. For the France, the Insee realizes, since 1979, a survey on *financial links of French enterprises*, asking to French resident incorporated companies<sup>3</sup> all their shareholders (upward shareholding) and all their participations in other companies (downward shareholding), this first rank upward and downward includes (direct) links with non resident units.

6. At first glance, and by their nature itself, none of these two statistical tools is really implemented in order to answering to the beginning question of this paper: multinational indicators, compatible all together, informing on the role of the multinational enterprise groups. And yet, it appears that those existing tools can be used, in the existing legal frame, to give relevant information in that direction, on condition that their limits having be identified.

7. Rather than insisting on the intrinsic limits of each tool as to measure what they are build to measure, let us characterize the two indicators relatively to the aim of describing the globalization from firms side. We will come back later to the imperfect matching between statistical concepts on which each tool is based and the reality of the actual implementation (field, coverage rate, etc.).

#### The Polish Survey (EKD, from GUS)

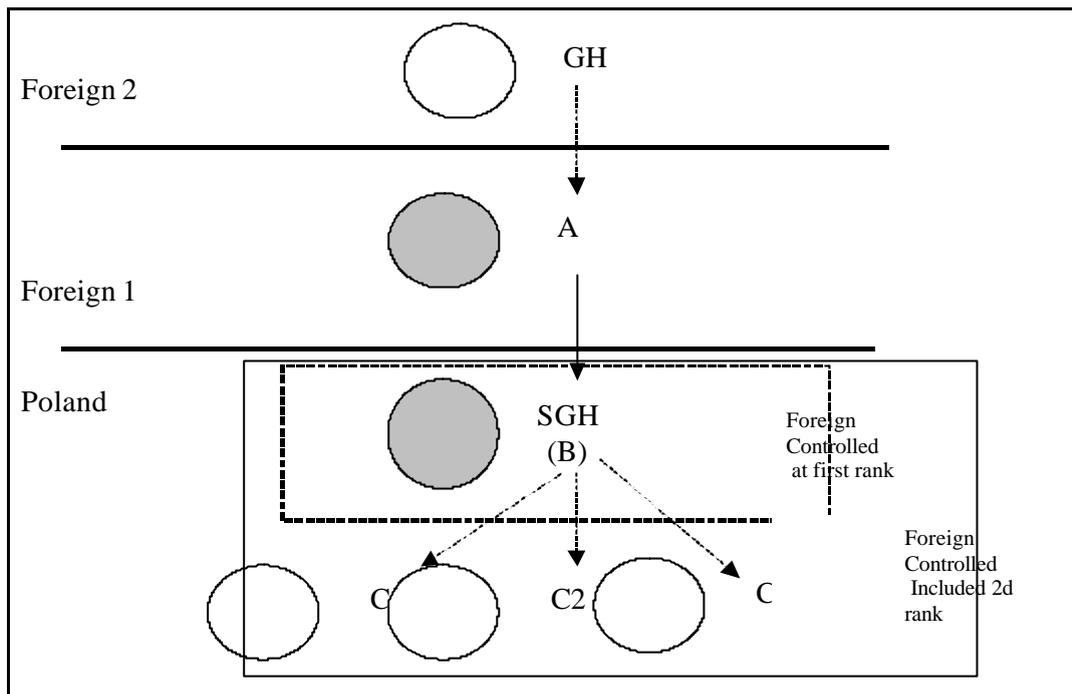
8. The Polish survey is sent, since 1993, to all the unincorporated companies of Polish law, registered in the enterprise register (REGON)<sup>4</sup>. If they declare to have a foreign participation in their capital, they are asked to give their detailed shareholding (upward), by country (percent and amount), as it is on December 31st of the reference year. Several questions are also asked in order to distinguish between greenfield investment and fusions/acquisits, between re-exports and exports after transformation, other information are collected about investments in Poland, investments in other countries, and about importations of these incorporated companies.

9. The survey is thus conducted on a very large field, quasi-exhaustive. In 1998 more than 30.000 enterprises answered, of which 12.000 in the right field (having an activity, having the right activity, and having a foreign shareholder) and accepting to give their detailed shareholding (upward), representing 800.000 employees, knowing that Polish economy count 84.000 companies having a balance sheet, with a total of 5,4 millions of employees, of which 50.000 limited companies with 2,5 millions of employees. We can distinguish the companies with a majority of their capital (directly) owned by shareholder(s??) of a given country from the companies with minority foreign shareholding. Moreover, the national (Polish) identifier of the enterprise register (REGON) allows the GUS to match the individual information of the survey with other available information, especially the accounts of the enterprises and their economic activity code. Hence, the survey allows a good detail.

10. The essential limit of the survey is that it does not take into account the *downward* participations of that enterprises [companies] in Poland itself. So we miss the control itself of (a lot of?) Polish enterprises [companies] by foreign groups. For, we are in a « balance of payments » approach: a foreign enterprise group which invests in Poland to create several companies through a single Polish company which controls the others, as a local group-head (or sub group-head), will be taken into account as a foreign investor only for its investment amount from foreign into that sub group-head (SGH) and not for its investment from SGH - which is a Polish company - in other Polish companies controlled by SGH. So we are limited to the downward first-rank. It implies that we probably miss a significant part of the foreign controlled affiliates (cf. graph. 1).

#### Graph. 1

GH: Group Head; SGH: Sub Group Head



11. As a point of comparison, if such a limitation to the downward first rank would be applied on French statistics, almost 75% of the workforce actually classified as being under foreign control would be classified as under domestic control. It is the same for 70% of the sales, purchases, operating profits (gross operating income), 2/3 of the total of the assets (balance sheet), of the exports, and 1/4 of financial profits (cf. table 1).

12. In parallel, and more classically, for the *upward* investor which controls SGH, we will not go up beyond the first rank (the first shot, like A on the graph. 1), even when the name of the companies permits to attribute the right investor or nationality. Hence, by construction, the survey is based on the concept of the first shot and not on that of the UBO (Ultimate Beneficial Ownership) which could be the Group Head (GH) (see also [10]).

13. Those two points — limitation to the downward first rank and to the upward first rank — are consistent with the notion of *owning* a share, i.e. with the notion of *possession* by foreign capital, and it is useful for analyzing cross border flows. Yet, for real phenomena analyses, as opposed to financial ones, the notion of *control* is necessary, and, in fact, implicitly favored by users of statistics. For example, when one deals with “the share of total aggregated Polish capital « owned » by foreigners”, « owned » is often used to mean « controlled » and not « possessed », the latter situation being defined only for *direct* possession: a corporation (A) which possesses the majority of the assets of a corporation B do not have the *property* (or the possession) of the assets possessed by that corporation (B) in a third corporation (C). Those assets of C are possessed only by B, even though they are controlled by A.

Table 1

Values in millions of F

| <b>French Affiliates of Foreign Groups (LIFI 1998)</b> |                                       |                  |                                   |                                       |  |
|--|---------------------------------------|------------------|-----------------------------------|---------------------------------------|--|
|  | <b>Number</b>                         | <b>Employees</b> | <b>Tangible Assets</b>            | <b>Total Assets</b>                   | <b>Sales</b>                                       |
| <b>Rank 1</b>  | 1 878                                 | 419 550          | 236 749                           | 1 479 454                             | 742 189  |
| <b>Rank &gt;= 2</b>                                    | 8 004                                 | 1 229 798        | 681 894                           | 2 995 106                             | 1 877 745  |
| <b>Total</b>   | 9 882                                 | 1 649 348        | 918 643                           | 4 474 561                             | 2 619 934  |
| <b>rk&gt;=2 / Total</b>                                | 81,0%                                 | 74,6%            | 74,2%                             | 66,9%                                 | 71,7%  |
|  |                                       |                  |                                   |                                       |  |
|  | <b>Exported Sales (survey source)</b> | <b>Purchases</b> | <b>Gross Operating Income (1)</b> | <b>Gross Profits before Taxes (2)</b> | <b>Financial and Exceptional Profits (2) - (1)</b> |
| <b>Rank 1</b>  | 209 876                               | 557 771          | 56 455                            | 449 027                               | 392 571  |
| <b>rank &gt;= 2</b>                                    | 401 129                               | 1 384 802        | 145 278                           | 277 057                               | 131 778  |
| <b>Total</b>   | 611 005                               | 1 942 572        | 201 734                           | 726 083                               | 524 350  |
| <b>rk&gt;=2 / Total</b>                                | 65,7%                                 | 71,3%            | 72,0%                             | 38,2%                                 | 25,1%  |

Source: LIFI (Insee)

14. Hence, to have the right measure of the share of aggregated capital under foreign control, we should be able to take into account the assets possessed by companies controlled by SGH (downward) and so forth. For evaluating the share of total workforce under control, this bias is probably even higher, because if SGH is a sub-head company - like a holding one - controlling affiliates in Poland, the probability that SGH employs itself very few employees is high, whereas the main part of the workforce is employed directly in the other Polish affiliates.

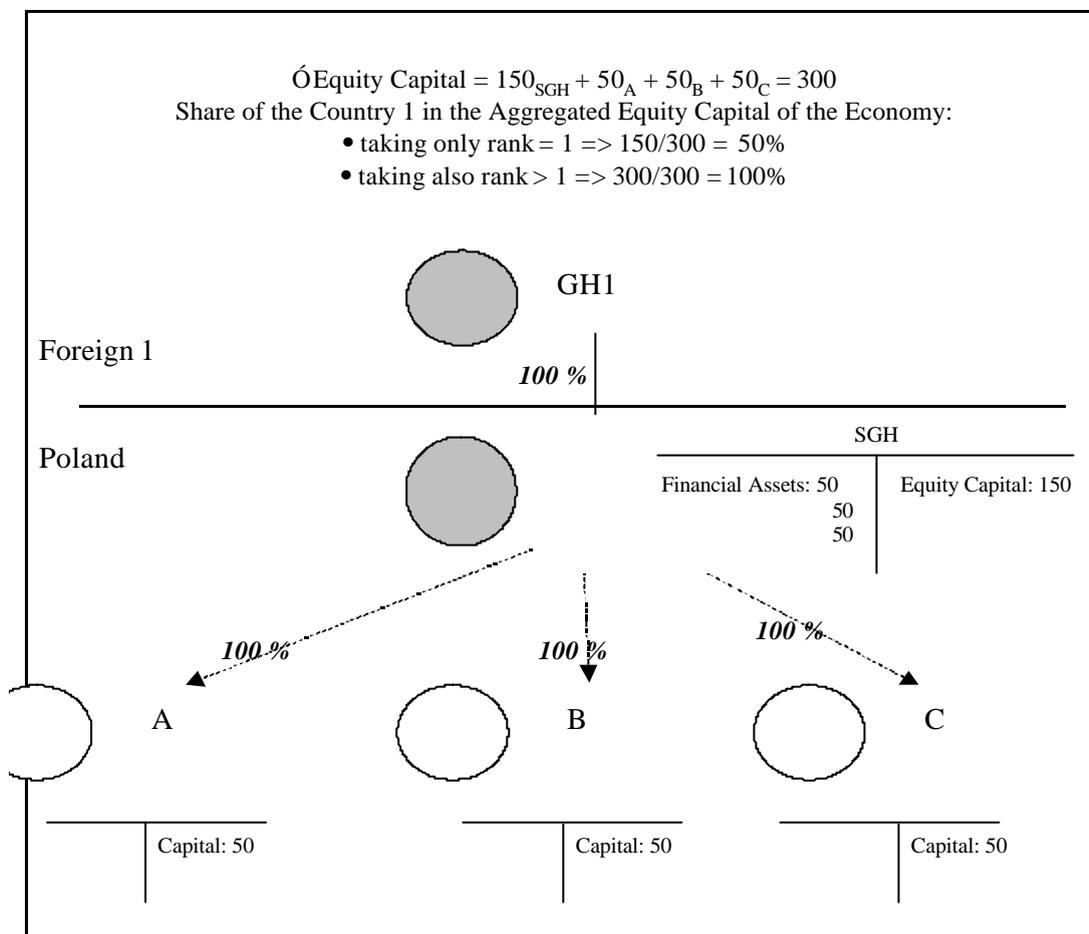
15. As a third point, we have to notice that a participation to the capital of a Polish company by a physical person foreign resident is, in EKD, taken into account as a foreign capital.

#### The French Survey (LIFI, from Insee)

16. LIFI is a different survey, answering to different needs: the external and statistical re-building of the enterprise groups perimeters in France. As the Polish survey, it is not implemented in order to measure French penetration in foreign countries, and in our case not to measure French penetration in Poland. Nevertheless, we collect through LIFI information on affiliates located in other countries: inside the list of the participations that the France resident companies declare to LIFI (downward shareholding), and also others in the list of the shareholders of France resident companies (upward shareholding). So, as for EKD survey, we have only the first rank (directly) controlled in (or by) the foreign country.

Graph. 2

Limitation to the downward first rank: Under estimation of the share of “foreign capital”,  
an example



17. Moreover, LIFI have some limitations in terms of thresholds<sup>5</sup>, so we miss several categories of small enterprises. There is also problems of incomplete information: the answering enterprises are more inclined to omit detailed information (workforce, sector of activity) on the foreign enterprises that they declare to control. In addition LIFI does not ask the *amount* of capital possessed. We have also identifiers problems: foreign enterprises have evidently not a unique French identifier number (SIREN). So, they may be counted twice, or certain links could be omitted (for example, if they pass through a third country, etc.). Finally, LIFI interrogates companies, so the possession of a part or all of the assets of a Polish company by a physical person, French resident, will not be inside the field of LIFI.

18. However, LIFI presents certain advantages: we can come upward in France to the French controlling company and to the head of the group, that we can thus characterize. In particular, we can know its activity sector, the size of the group (restricted to France), and even, under certain restrictions, calculate the apparent principal activity of the group as a whole (more precisely: that of the group restricted to its enterprises [companies] in France). We are also, in principle, capable to know whether the French controlling enterprise is, or not, controlled itself by a foreign enterprise, even if we do not systematically and rigorously come upward to the UBO.

19. So, despite their respective limits and their non negligible differences, the two principles of the two surveys are more or less in correspondence for identifying French enterprises in Poland. Above all, they are in correspondence in the fact that both surveys give the Polish companies (directly) controlled *at the first rank* by a French one. It is thus **legitimate** to compare and combine them.

#### Quality and comparison of discrepancies

##### General View

20. Here we give tables of discrepancies between the two sources. In short, the sources are in a certain correspondence at the end of the period (1997 or 1998), under the condition that comparable fields are taken: excluding either very small companies (<10 employees), either those from trade sector and banking<sup>6</sup>. The two kinds of corrections are based on the idea that we have higher probability of missing “little” units than others. The first correction excludes trade sector as a proxy for excluding “little” units, while the second one excludes directly the 1 to 9 employee companies. We have close orders of magnitude (200 companies directly controlled, table 2a and 2c) and similar patterns by activity sector (table 3). The figures show that the exclusion of the trade and banking sectors is not sufficient to make the figures being enough similar. Among the various explanations of that insufficiency is the fact that trade sector mixes retail trade and wholesale trade which are probably differently captured by a given survey. The exclusion of the 1 to 9 employees companies makes the figures being nearer, to the condition that we keep the companies with missing employee variable, for we can suspect that those companies with missing employee variable are not so little for being reported in the survey by their controlling company.

Table 2a

Number of Affiliates of full control in the 2 sources

| 1998<br>NACE  | Number of affiliates in Poland controlled from France |     |                 |     |                |     |                 |     |
|---|---|-----|-----------------|-----|----------------|-----|-----------------|-----|
|   | TOT Number  |     | of missing empl |     | of which 1to 9 |     | TOT excl 1 to 9 |     |
|   | Insee   | GUS | Insee           | GUS | Insee          | GUS | Insee           | GUS |
| A Agric, hunting, forestry                                      | X   | 6   | 0               |     | X              |     | 0               |     |
| C Mining, quarrying   |   |     |                 |     |                |     |                 |     |
| D Manufacturing   | 86  | 156 | 30              |     | 16             |     | 70              |     |
| E Elect, gas and water supply                                   | X   |     | X               |     | 0              |     | 3               |     |
| F Construction  | 7   | 20  | X               |     | 0              |     | 7               |     |
| G Trade (wholesale + retail), repair                            | 52  | 154 | 21              |     | 12             |     | 40              |     |
| H Hotels, restaurants   | 5   | 7   | X               |     | 0              |     | 5               |     |
| I Tsp, storage, communication                                   | 5   | 18  | X               |     | X              |     | X               |     |
| J Financial intermediation                                      | 16  | 4   | 9               |     | 0              |     | 16              |     |
| K Real estate, renting, business activity (Services to enterp.) | 32  | 69  | 17              |     | 5              |     | 27              |     |
| M Educ  |   |     |                 |     |                |     |                 |     |
| N Health, social  |   |     |                 |     |                |     |                 |     |
| O Community, social and personal services                       | 6   | 8   | X               |     | X              |     | X               |     |
| X Unknown   |   |     |                 |     |                |     |                 |     |
| Total   | 213   | 450 | 90              |     | 37             | 236 | 176             | 214 |
| Total exclud Trade and Banking                                  | 145   | 292 | 69              | 0   |                |     |                 |     |

X = confidential cell.

Table 2b

Number of companies of significant ownership in the 2 sources  
(not only full control)

| 1998  | Number of affiliates in Poland controlled from France |     |                       |     |                      |     |                  |     |
|---|---|-----|-----------------------|-----|----------------------|-----|------------------|-----|
| NACE  | TOT Nbr   |     | of which missing empl |     | of which 1 to 9 empl |     | TOT excl. 1 to 9 |     |
|   | Insee   | GUS | Insee                 | GUS | Insee                | GUS | Insee            | GUS |
| A Agric, hunting, forestry                                      | X   | 12  | 0                     |     | X                    |     | X                |     |
| C Mining, quarrying   |   | 3   |                       |     |                      |     |                  |     |
| D Manufacturing   | 101   | 219 | 39                    |     | 17                   |     | 84               |     |
| E Elect, gas and water supply                                   | 4   | 3   | 4                     |     | 0                    |     | 4                |     |
| F Construction  | 8   | 26  | X                     |     | 0                    |     | 8                |     |
| G Trade (wholesale + retail), repair                            | 56  | 203 | 24                    |     | 13                   |     | 43               |     |
| H Hotels, restaurants   | 5   | 7   | X                     |     | 0                    |     | 5                |     |
| I Tsp, storage, communication                                   | 7   | 27  | 4                     |     | X                    |     | X                |     |
| J Financial intermediation                                      | 28  | 11  | 18                    |     | 0                    |     | 28               |     |
| K Real estate, renting, business activity (Services to enterp.) | 41  | 97  | 21                    |     | 8                    |     | 33               |     |
| M Educ  |   | 6   |                       |     |                      |     |                  |     |
| N Health, social  |   | X   |                       |     |                      |     |                  |     |
| O Community, social and personal services                       | 8   | 11  | X                     |     | X                    |     | X                |     |
| X Unknown   | X   |     | X                     |     | 0                    |     | 0                |     |
| Total   | 261   | 630 | 120                   |     | 42                   | 325 | 219              | 305 |
| Total exclud Trade and Banking                                  | 177   | 416 | 96                    | 0   |                      |     |                  |     |

ownership (direct and indirect)  $\geq \epsilon$  ; but, in fact  $\geq 10\%$ .

21. The quality seems not to be well in the beginning of the studied period (1993), even if we make (rough) corrections of field (table 2c).

Table 2c

Summary of the comparison of the numbers of affiliates of full control

| <b>Number of affiliates in Poland controlled from France</b> |              |            |               |              |            |               |              |            |               |
|--|--------------|------------|---------------|--------------|------------|---------------|--------------|------------|---------------|
|  | 1998         |            |               | 1997         |            |               | 1993         |            |               |
|  | <i>Insee</i> | <i>GUS</i> | Insee/<br>GUS | <i>Insee</i> | <i>GUS</i> | Insee/<br>GUS | <i>Insee</i> | <i>GUS</i> | Insee/<br>GUS |
| Total  | 213          | 450        | 47 %          | 162          | 473        | 34 %          | 45           | 298        | 15 %          |
| Total excluded<br>Trade and<br>banking                       | 145          | 292        | 50 %          | 116          | 308        | 38 %          | 34           | 188        | 18 %          |
| Total excluded<br>1 to 9                                     | 176          | 214        | 82 %          | 132          | 195        | 68 %          | 45           | 110        | 41 %          |

Table 3

Sector Distribution of Affiliates of full control in the 2 sources

|  | 1998   |            |
|--|--|------------|
|  | <b>Number of affiliates in<br/>Poland controlled<br/>from France</b> |            |
|  | %  |            |
| NACE   | Nbre TOT   |            |
|  | <i>Insee</i>   | <i>GUS</i> |
| A Agric, hunting, forestry   | X  | 2,1%       |
| C Mining, quarrying  |  |            |
| D Manufacturing  | 59,3%  | 53,4%      |
| E Elect, gas and water supply                                      | X  |            |
| F Construction   | 4,8%   | 6,8%       |
| G Trade (wholesale + retail), repair                               |  |            |
| H Hotels, restaurants  | 3,4%   | 2,4%       |
| I Tsp, storage, communication                                      | 3,4%   | 6,2%       |
| J Financial intermediation   |  |            |
| K Real estate, renting, business<br>activity (Services to enterp.) | 22,1%  | 23,6%      |
| M Educ   |  |            |
| N Health, social   |  |            |
| O Community, social and personal<br>services                       | 4,1%   | 2,7%       |
|  | 97,2%*   | 97,3%*     |

\* without confidential cells

22. With the average of employee by company tables 4a, 4b, 4c give an idea of how the variable “workforce of the company” is consistent between the 2 sources, when it is not missing in the French source (that information is rather often missing in LIFI). The discrepancy is important in aggregated number since by size class the figures are, obviously, rather similar. That confirms the hypothesis of an

under-coverage of smaller companies. Moreover, the quality of the year 1993 seems not to be of the same level as the other 2 years.

Table 4a

| Year 1998<br>Employees |                  |              |              |                   |              |                    |              |            |              |            |              |            |
|------------------------|------------------|--------------|--------------|-------------------|--------------|--------------------|--------------|------------|--------------|------------|--------------|------------|
|                        | missing<br>empl. | 1 to 9 empl. |              | 10 to 49<br>empl. |              | 50 to 249<br>empl. |              | 250 and +  |              | All        |              |            |
|                        | <i>Insee</i>     | <i>GUS</i>   | <i>Insee</i> | <i>GUS</i>        | <i>Insee</i> | <i>GUS</i>         | <i>Insee</i> | <i>GUS</i> | <i>Insee</i> | <i>GUS</i> | <i>Insee</i> | <i>GUS</i> |
| Total                  | 0*               | 0            | 169          | 753               | 839          | 2 809              | 3 823        | 7 664      | 14 567       | 32 368     | 19 398       | 43 594     |
| Average<br>empl.       |                  |              | 5            | 3                 | 23           | 24                 | 106          | 113        | 1 121        | 1 079      | 158          | 97         |

\* corresponding to 90 affiliates with missing workforce variable

Table 4b

| Year 1997<br>Employees |                  |              |              |                   |              |                    |              |            |              |            |              |            |
|------------------------|------------------|--------------|--------------|-------------------|--------------|--------------------|--------------|------------|--------------|------------|--------------|------------|
|                        | missing<br>empl. | 1 to 9 empl. |              | 10 to 49<br>empl. |              | 50 to 249<br>empl. |              | 250 and +  |              | All        |              |            |
|                        | <i>Insee</i>     | <i>GUS</i>   | <i>Insee</i> | <i>GUS</i>        | <i>Insee</i> | <i>GUS</i>         | <i>Insee</i> | <i>GUS</i> | <i>Insee</i> | <i>GUS</i> | <i>Insee</i> | <i>GUS</i> |
| Total                  | 0*               | 0            | 124          | 912               | 587          | 2 387              | 3 008        | 7 461      | 12 019       | 29 979     | 15 738       | 40 739     |
| Average<br>empl.       |                  |              | 4            | 3                 | 23           | 22                 | 100          | 115        | 1 717        | 1 363      | 169          | 86         |

\* corresponding to 69 affiliates with missing workforce variable

Table 4c

| Year 1993<br>Employees |                  |              |              |                   |              |                    |              |            |              |            |              |            |
|------------------------|------------------|--------------|--------------|-------------------|--------------|--------------------|--------------|------------|--------------|------------|--------------|------------|
|                        | Missing<br>empl. | 1 to 9 empl. |              | 10 to 49<br>empl. |              | 50 to 249<br>empl. |              | 250 and +  |              | All        |              |            |
|                        | <i>Insee</i>     | <i>GUS</i>   | <i>Insee</i> | <i>GUS</i>        | <i>Insee</i> | <i>GUS</i>         | <i>Insee</i> | <i>GUS</i> | <i>Insee</i> | <i>GUS</i> | <i>Insee</i> | <i>GUS</i> |
| Total                  | 0*               | 0            | 18           | 565               | 292          | 1 746              | 627          | 3 204      | 3 684        | 4 940      | 4 621        | 10 455     |
| Average<br>empl.       |                  |              |              | 3                 | 29           | 23                 | 90           | 100        | 3 684        | 1 647      | 210          | 35         |

\* corresponding to 23 affiliates with missing workforce variable

23. The evolution figures are clearly not reliable (cf. table 5). The only constructive question that we can ask is: is the evolution of the total of employees an indicator of the medium term evolution ?

Table 5

Evolution: Number of Affiliates versus Employees ?

|                             | <b>Affiliates in Poland controlled from France Evolutions</b> |            |              |            |              |            |
|-----------------------------|---|------------|--------------|------------|--------------|------------|
|                             | 1998/1993   |            | 1998/1997    |            | 1997/1993    |            |
|                             | <i>Insee</i>  | <i>GUS</i> | <i>Insee</i> | <i>GUS</i> | <i>Insee</i> | <i>GUS</i> |
| <b>Number of affiliates</b> | 329 %   | 95 %       | 33 %         | 10 %       | 222 %        | 77 %       |
| <b>Total of employees</b>   | 318 %   | 333 %      | 23 %         | 8 %        | 239 %        | 303 %      |

24. In conclusion, for the levels, and the same year reconciliations or comparisons, the number of affiliates seems to be of some reliable meaning, whereas it is not for the evolutions. For the short term evolutions we do not have usable figures. But, for medium term evolutions, the number of employees figures could give a useful information.

Standards for publication

25. The aim is to propose standards that help a joint use of several national sources in order to draw an economic analysis of the globalization process. By joint use, we mean a use based on combination and/or cross-checking of published statistics from different national sources.

26. For publication, the needs of comparison France-Poland shows that we need breakdown by companies' size, to correct the field properly, or, at least, cells excluding the smallest companies. It is also useful to separate some specific sectors, like retail trade or banking, which have a high probability to be treated differently according to the sources. In this work, those two kinds of corrections (sector and size) have not been done together but only separately: one or the other.

27. That discussion on quality shows also that variables on the number of affiliates and on workforce are both essential. Independently with the needs for the correction of field, the total are usefully completed by variables giving breakdown by sectors, even a rough one (industry, trade, services), or by size.

28. A statistic on the main activity of the groups themselves is also very useful, even if it is fuzzy defined, on condition that it does not replace figures on the main activity of the companies controlled and that it does not follow a too detailed the breakdown (cf. [1]). The tables 8 and 10 (infra) shows the interest of such a statistic for economic analysis.

29. If available, statistics on control abroad (or, if not, ownership) are necessary, from the aim of reconciliation, with the precision of the rank rule (first or Nth).

Standards for documentation

30. It is absolutely necessary to know if the published statistics are based on the notion of control (here direct or indirect control of more than 50% of the votes, or, if not available, of more than 50% of the capital). It is the only one way to avoid double counting in enterprise statistics, either within one single national source, either between sources from different countries. The comparison of table 2a and table 2b gives indications about the amount of unit concerned which is not negligible.

31. It is equally necessary to precise the “rank” taken for defining a company with foreign interest (direct = first rank Versus indirect = rank N), both inside and outside the country.

32. To precise the **sectors** covered, as well as the **sizes** excluded.

33. To distinguish 0 employees from missing, at least globally in the totals, in order to facilitate international comparison and/or reconciliation of figures.

34. To give information, at least in footnotes, on the share of foreign control at rank 1 in the total of controlled companies in the domestic country, for several variables, facilitates **reconciliation**.

#### Standards for Surveys

35. Several production standards follow:

- to have the information on control and not only on ownership, which implies (1) calculation or use of indirect rates of ownerships<sup>7</sup>, (2) being based on the enterprise group concept and not only on foreign flows of capital (=> inclusion of ranks >1);
- to treat together foreign based groups *and* domestic groups (in order to have the whole the branching of the groups in the surveying country, including ranks > 1);
- do not neglect the detention abroad;
- to determine an activity code (not too much detailed) for the enterprise group itself;
- to avoid surveys restricted only to the industry (or manufacturing).

#### Economic Analysis (overview)

36. The relative (... !) consistency of French and Polish data allows us to give an economic elementary overview of both: the globalization of French firms in Poland and the globalization of Polish productive system, on the condition that we take into account the identified statistic limits.

**Point 1:** French enterprise groups expand relatively more in Poland than in the other Central and Eastern European countries (CEE): their affiliates controlled directly from France (at first rank) amount to 37% of the total number of those French affiliates in CEE countries. The comparison of 1993 and 1998 statistics rises the question to know whether this expansion accelerated or not during this period, relatively to the expansion in the other countries of the same area. Similarly, GUS statistics show that in Poland, France appears to be one of the 4 or 5 main investors, in flows and in stocks, depending the year chosen.

**Point 2:** A non negligible number of French settings-up in Poland (1/5 of all Polish companies registered in the LIFI file, and more than 1/4 for EKD source) are done through joint-companies or non majority ownerships (table 2b). This proportion seems not to have increased if we compare 1993 and 1998 figures. Those joint companies act more frequently in finance and transportation than affiliates fully controlled.

**Point 3:** The EKD source allows us to evaluate the share of the so-called greenfield investments in the total of companies newly under foreign controlled (table 6). By mixing EKD and the enterprise register (REGON), we have in publications the distinction between newly controlled and newly opened companies, and among them, for 1998, we can isolate the transformations of existent units by a take-over or a division of another pre-existent company.

Table 6

| <b>1998</b>              | <b>Greenfield /(Greenfield+<br/>Already Existent)</b><br>% Number of affiliates |
|--------------------------|---|
| <b><i>Total</i></b>      | 90%   |
| <b>Manufacturing</b>     | 84%   |
| <b>Construction</b>      | 91%   |
| <b>Trade</b>             | 93%   |
| <b>Transport</b>         | 93%   |
| <b>Business</b>          | 94%   |
| <b>Services</b>          |   |
| <b>Social &amp; Coll</b> | 89%   |
| <b>Services</b>          |   |

Already existent = taken over + restructured

In 1998<sup>8</sup>, trade and services are the activities which are developing the most by greenfield FDI in terms of the share of affiliates, while industry is clearly dominated by restructurings and take-overs, as social and collective services. Complementary, the Foreign affiliates (all countries) contribute globally by 33 Mds Z<sup>3</sup> to the Gross Fixed Capital Formation, which represents 7 % to be added to the cash contribution inflow declared by foreign investors in 1998<sup>9</sup>.

**Point 4:** The France plays the role of a relay country for foreign groups for setting them up in Poland, especially for US-groups (table 7). In those cases, Polish affiliates seem to be of a bigger size.

Table 7  
LIFI 1998

| Country of Group Head |                                       | France | United-Kingdom | USA   | Rest Of Europe | Total  |
|-----------------------|---------------------------------------|--------|----------------|-------|----------------|--------|
| Poland                | Number                                | 184    | 5              | 11    | 13             | 213    |
|                       | <i>of which non missing workforce</i> | 75     | 5              | 4     | X              | X      |
|                       | Total Workforce                       | 14 469 | 101            | 4 502 | 326            | 19 398 |
|                       | Average Workforce                     | 193    | 20             | 1 126 | X              | X      |

**Point 5:** The manufacturing branches predominate in the total, but it reflects the predominance of groups of such a main activity (table 8). Conversely, relatively to the main branch (sector) of the groups<sup>10</sup>, services and trade have to be pointed: each activity sector (of the group) has a service implantation in Poland, and manufacturing often control a trade company in Poland while we observe only few manufacturing affiliates controlled by a *non* manufacturing group.

Table 8 (1998)

Number of Affiliates by Branch of Activity According to the Activity of the Group

Country Group Head =FRANCE

| Main Activity of the Group                       | Main Activity of Affiliate | Industry (incl. Food, Elect., Gas, Water Supply) | Trans -porta tion | Trade ; Repair | Cons- Truc- tion | Finance | Services to Business* | Service s to Persons | Total (incl. Mis- cella- neous) |
|--|----------------------------|--|-------------------|----------------|------------------|---------|-----------------------|----------------------|---------------------------------|
| Industry (incl. Food, Elect., Gas, Water Supply) |                            | 64   | X                 | 23             | X                | X       | 8                     |                      | 100**                           |
| Transport  |                            | 4  | X                 |                |                  | 4       | 6                     |                      | 17                              |
| Trade ; Repair                                   |                            | X  |                   | 15             |                  | X       | 4                     | X                    | 22                              |
| Construction                                     |                            | 5  |                   | X              | 6                |         | X                     |                      | 16                              |
| Finance + R. Estate                              |                            |  |                   |                |                  | 7       | X                     | X                    | 9                               |
| Services to Business                             |                            | X  |                   | X              |                  |         | 9                     | X                    | 19                              |
| Services to Persons                              |                            |  |                   |                |                  |         |                       |                      | 0                               |
| <b>Total</b>                                     |                            | 77   | 4                 | 42             | 7                | 15      | 33                    | 5                    | 183                             |

\* included Real Estate

\*\* included Intermediate Goods

**Point 6:** In comparison with all French first rank establishments abroad, French manufacturing groups are, in Poland, more established in trade, even more than in other CEE countries, in average (table 9). They are more established in industry than the average of all countries, but similarly to a class of other “emerging” (Latin America, other CEE) or ex-emerging (Spain) countries. For industry, we have to notice a difference with Asian countries, which are very much invested in industrial affiliates, in terms of number of affiliates. In business services and in finance, the expansion in Poland seems to be near to the average. That proportion of establishments in services distinguishes Poland from Asia (except Japan) and Latin America, since finance distinguishes Poland only from Asia.

That informs us on the role played by the different kinds of countries in the internal division of labor of French multinational enterprise groups, and rise interrogation about the enterprise groups of the other main industrialized countries.

Table 9

**Country Group Head = France**

**1998**

| Country of Affiliates            | Activity of affiliates | Industry (incl. Food, Elect., Gas, Water Supply) | Constr uction | Trade, Repair | Trans- port | Finance    | Services to Business <sup>1</sup> | Services to Persons | Total Number (incl. Miscellaneous) |
|----------------------------------|------------------------|--|---------------|---------------|-------------|------------|-----------------------------------|---------------------|------------------------------------|
| Poland                           |                        | 42 %   | 4 %           | 23 %          | 2 %         | 8 %        | 18 %                              | 3 %                 | 183                                |
| CEE <sup>2</sup>                 |                        | 39 %   | 8 %           | 18 %          | 4 %         | 7 %        | 18 %                              | 5 %                 | 314                                |
| <b>All Countries<sup>3</sup></b> |                        | <b>37 %</b>                                      | <b>4 %</b>    | <b>20 %</b>   | <b>5 %</b>  | <b>9 %</b> | <b>21 %</b>                       | <b>4 %</b>          | <b>8 296</b>                       |
| Latin America                    |                        | 44 %   | 5 %           | 14 %          | 4 %         | 9 %        | 19 %                              | 4 %                 | 566                                |
| Asia (excl Japan)                |                        | 60 %   | 7 %           | 8 %           | 3 %         | 3 %        | 13 %                              | 5 %                 | 339                                |
| Spain                            |                        | 40 %   | 2 %           | 22 %          | 4 %         | 9 %        | 18 %                              | 4 %                 | 710                                |
| Germany                          |                        | 39 %   | 4 %           | 23 %          | 5 %         | 8 %        | 18 %                              | 3 %                 | 595                                |
| USA                              |                        | 38 %   | 1 %           | 19 %          | 3 %         | 10 %       | 26 %                              | 2 %                 | 631                                |

Source LIFI

<sup>1</sup> including Real Estate

<sup>2</sup> Central and Eastern European countries, excl Poland and ex-Soviet Union.

<sup>3</sup> All affiliates located in other countries controlled by a French Group Head

**Point 7:** Complementarily, we can cross the distinction between commercial and manufacturing establishments in Poland with the distinction of a commercial group and an industrial one, as measured by the principal activity in France of the group in a whole. That allows us to evaluate the position of Poland within the French groups strategy of international development: productive basis, supply basis, local consumers market basis, basis for a regional market abroad.

Figures (table 10) confirm that, for the industrial French groups, Poland plays the role of a productive basis, as for other CEE or for Spain, yet on a different scale, and is not much considered by industrial groups as a local market or a supply basis. The share of trade implantations for manufacturing French

groups in Poland is close to that share in Spain or other CEE and clearly under that share for their German, US and Latin America implantations.

Conversely, the trade establishment comes more from trade groups themselves than in other CEE, close to that proportion in Spain. That reveal a strategy of conquest of an interior Polish market of consumers.

Complementary to that, French trade groups have a proportion of non-trade affiliates, among their total affiliates in Poland, higher than in the other CEE, similar to that in Spain and in Germany. That underline a strategy of productive basis, for the count of trade groups, and also of reaching the regional market abroad, through services and real estate affiliates.

Table 10

Trade Groups/Manufacturing Groups and their Affiliates

|                           | <b>Trade Affiliates Abroad:<br/>Activity of their Origin Group</b>                        |   | <b>The Organization of the Groups:<br/>Share of their Trade Affiliates Abroad</b>   |   |
|---------------------------|---|---|---|---|
|                           | <b>Trade Affiliates of<br/><u>Manufacturing</u><br/>Groups /<br/>All Trade affiliates</b> | <b>Trade affiliates<br/>of <u>Trade Groups</u><br/>/<br/>All Trade<br/>affiliates</b> | <b>Trade Affiliates /<br/>All Affiliates of<br/><u>Manufacturing</u><br/>Groups</b> | <b>Trade Affiliates /<br/>All Affiliates of<br/><u>Trade Groups</u></b> |
| <b>PECO excl. Poland</b>  | 53%   | 24%   | 19%   | 81%   |
| <b>All Countries *</b>    | <b>60%</b>  | <b>31%</b>  | <b>22%</b>  | <b>68%</b>  |
| <b>Latin America</b>      | 74%   | 21%   | 18%   | 55%   |
| <b>ASIA (excl. Japan)</b> | 82%   | 14%   | 10%   | 25%   |
| <b>Spain</b>              | 50%   | 41%   | 21%   | 74%   |
| <b>Germany</b>            | 75%   | 20%   | 29%   | 69%   |
| <b>USA</b>                | 63%   | 26%   | 20%   | 63%   |
| <b>Poland</b>             | <b>55%</b>  | <b>36%</b>  | <b>23%</b>  | <b>68%</b>  |

\*Group Head Country = FRANCE

**Point 8:** The GUS source allows us to complete the picture in the direction of the economic results of the affiliates (table 11). French affiliates (of 1<sup>st</sup> rank) in Poland export out of Poland 1/3 of their sales<sup>11</sup> (1/4 in 1997). For a comparison, foreign affiliates located in France export some 18% of their sales<sup>12</sup>. That denotes a rather extroverted activity.

But, their contribution to the Polish external trade balance is not possible, because the omission of the affiliates of a rank superior to 1 is a high factor of missing exports or imports.

We identify a manifestation of an investment cycle, groups accepting deficits during their first years of setting-up abroad. Indeed they are globally in deficit (aggregated) in 1993 whereas they globally record a surplus in 1997 and 1998. In the same line, their aggregated profit margin ratio (gross revenue/sales) changes a lot between the beginning and the end of the period under observation. For the trade sector (including hypermarkets), the investment cycle still seems to be in its first phases, for it globally records a deficit in 1998 for the total of its foreign affiliates.

Table 11

Economic Results and ProfitabilityIn millions of Z<sup>3</sup>

|  | 1993           |                |                | 1997          |               |               |                | 1998          |                |               |                |
|--|----------------|----------------|----------------|---------------|---------------|---------------|----------------|---------------|----------------|---------------|----------------|
|  | ALL            | <=9<br>empl.   | >9<br>empl.    | ALL           | <=9<br>empl.  | >9<br>empl.   | >=250<br>empl. | ALL           | <=9<br>empl.   | >9<br>empl.   | >=250<br>empl. |
| Total Capital                          | 218            | 22             | 196            | 2 389         | 195           | 2 194         | 1 174          | 3 286         | 43             | 3 243         | 1 839          |
| Total Revenue*                         | 852            | 84             | 768            | 12 051        | 440           | 11 611        | 7 946          | 16 205        | 399            | 15 806        | 11 045         |
| Sales (Merch.)                         | 518            | 30             | 488            | 7 434         | 258           | 7 176         | 6 095          | 9 783         | 139            | 9 645         | 7 939          |
| Exports                                |                |                |                | 1 622         | 35            | 1 586         | 1 377          | 3 038         | 33             | 3 005         | 2 680          |
| <b>Exports/Sales</b>                   |                |                |                | <b>21,8%</b>  | <b>13,8%</b>  | <b>22,1%</b>  | <b>22,6%</b>   | <b>31,1%</b>  | <b>23,8%</b>   | <b>31,2%</b>  | <b>33,8%</b>   |
| Gross Profit                           | -53            | -9             | -45            | 446           | -7            | 453           | 346            | 511           | 3              | 508           | 473            |
| Net Profit                             | -60            | -10            | -50            | 175           | -15           | 190           | 180            | 238           | -5             | 243           | 275            |
| Gross Profit/<br>Total Revenue         | -6,2 %         | -10,0 %        | -5,8 %         | 3,7 %         | -1,6 %        | 3,9 %         | 4,4 %          | 3,2 %         | 0,7%           | 3,2 %         | 4,3 %          |
| Gross Profit/<br>Total Revenue         | -7,0 %         | -11,6 %        | -6,5 %         | 1,5 %         | -3,4 %        | 1,6 %         | 2,3 %          | 1,5 %         | -1,3%          | 1,5 %         | 2,5 %          |
| <b>Gross Profit/<br/>Total Capital</b> | <b>-24,4 %</b> | <b>-39,1 %</b> | <b>-22,8 %</b> | <b>18,7 %</b> | <b>-3,7 %</b> | <b>20,6 %</b> | <b>29,5 %</b>  | <b>15,6 %</b> | <b>6,7%</b>    | <b>15,7 %</b> | <b>25,7 %</b>  |
| <b>Net Profit/<br/>Total Capital</b>   | <b>-27,5 %</b> | <b>-45,4 %</b> | <b>-25,5 %</b> | <b>7,3 %</b>  | <b>-7,8 %</b> | <b>8,7 %</b>  | <b>15,3 %</b>  | <b>7,2 %</b>  | <b>-11,7 %</b> | <b>7,5 %</b>  | <b>15,0 %</b>  |
| French<br>Capital**/<br>Total Capital  | 74 %           | 87 %           | 73 %           | 88 %          | 98 %          | 87 %          | 91 %           | 86 %          | 88 %           | 86 %          | 87 %           |

\* Sales + Exceptional Income + Financial Activity Income (Gross)

\*\* included non majority equity capital

37. Evaluating the profitability of French investments abroad from those figures has some limits. After the first negative period of the investment cycle, the figures in table 9 show rather high gross and net profitability, of 16 to 19 %, compared to some 10-15 % in advanced capitalist countries. It can even amount, in those figures about Poland, to some 26-30 % for biggest affiliates, which means a 3-4 years of return rate on capital.

38. But, unfortunately, the figures could not be commented, once more time because of the omission of the non first rank affiliates. That omission introduces a radical bias in the estimates, for they are likely to concentrate a higher share of the capital, since they concentrate a lesser share of profits, the latter being likely to be more concentrated in the local (Polish located) head of the group, in line with the expected role of a head of a group (yet a local one) and as suggested by the French case (cf. table 1).

39. Indeed, French figures (table 1) show that this discrepancy may be very high. In the French case, the discrepancy amounts to 50%, from a (gross) profit rate of 30%, as measured at the first rank affiliates in France, to a profit rate of 16%, taking the all ranks affiliates. It is possible that this phenomenon would not be so high in Poland than in France, because of a possible lower development

of the group structuring (?) and of its local complexity. But it is not sure at all and the French case shows that there is a place to a high bias.

### Conclusion

40. As a provisory conclusion, we must underline the feasibility of using different national figures to construct a statistical image of the globalization, as from the firm and enterprise groups side. This exercise has identified some key points to know how the national statistics are constructed (only first rank downward or not, field definition) and to have some necessary common breakdowns available, in line with other previous statistical papers (e.g. [1], [6], [7], [8] and [9]).

41. That indicates a direction to go ahead. The next step should be, indeed, to propose a common framework, with acceptable approximations, for gathering and collecting figures from existing national sources (as near as possible to the existing sources). That would need, in some cases, different presentations and/or calculations and/or breakdowns than those given in already published tables. That would be a “second degree survey”, involving national statistical Offices — at least several leading ones at the beginning. From that survey we could hence draw directly some statistical economic picture of the globalization phenomenon, at an international level.

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## NOTES

<sup>1</sup> For the statistician of a given country: no disclosure of individual data of the other country, no publication of cells having less than 3 units and/or with one unit of more than 75% of the total of the cell.

<sup>2</sup> The legal units, with juridical autonomy.

<sup>3</sup> The legal units, with juridical autonomy.

<sup>4</sup> Excluded banking and insurance sectors, for which are used other sources.

<sup>5</sup> There is a threshold for selecting the companies which are *questioned*. This threshold is in terms of workforce (500 empl.), sales (400 mil. FF) or total portfolio of assets held in other companies (8 mil. FF). But this threshold is not directly that of the companies present in LIFI, because the answering company gives a list of shareholders (or participations) and this is that list which is recorded in LIFI files, yet among them there may be companies of a size inferior to the threshold. Nevertheless, practically, we have obviously a lesser coverage rate on small companies population than on bigger ones, but small ones are not excluded, especially if they are controlled by a large enough company located in France. Moreover, three criteria complete the list of companies to question: the previous year heads of group, the companies directly controlled the previous year by a foreign group, and, among the companies controlled by the previous year by the (French) State (i.e. belonging to the n-1 RECME), those of direct control, those of more than 19 employees, and those having at least one financial link downward. The set LIFI+RECME (named here LIFI) questioned 21.200 companies in 1999, concerning the year 1998, and collected information on 90.315 companies of which 72.897 French resident (7.065.000 employees) and 17.418 foreign resident (1.760.000 employees, without correcting the workforce missing values).

<sup>6</sup> Formally, this sector is *not* in the field of the EKD survey, but we have, nevertheless, some companies(why ?).

<sup>7</sup> or, better, votes.

<sup>8</sup> In 1997, the greenfield FDI in Poland by French capital concerns 1/6 of the newly French controlled Polish companies, close to the all countries average.

<sup>9</sup> In Polish EKD survey, the distinction between cash and non-cash contribution is given, more or less in line with the IMF recommendations.

<sup>10</sup> Calculated in LIFI on the basis of the activity of each *French resident* affiliate.

<sup>11</sup> The Polish export figures include goods *and* services.

<sup>12</sup> Cf. « Mondialisation, entreprises et groupes (France 1983-1996) cinq constats et un défi statistique », Frédéric Boccara, *Document de Travail de la Direction des Statistiques d'Entreprises*, Insee, to be published.

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