

Offshore Outsourcing and Employment in French Manufacturing Industries

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Motivations

- Employment in manufacturing industries is decreasing in France, partly due to foreign competition
 - 1990: 4.7 millions workers, 34% of the workforce
 - 2000: 4.2 millions, 27%
 - 2005: 3.9 millions, 25%
- Great concern in the French public opinion on the phenomenon of “offshore outsourcing”
- Up to know, only indirect “estimations” have been performed (for instance, observing the share of low wage countries in foreign direct investments or imports)

A Definition for “Offshore Outsourcing”

- Decision of a firm or a business group to substitute a production in a domestic plant for a production in a foreign plant
 - Creating a new foreign subsidiary
 - Increasing production in an existing foreign subsidiary
 - Subcontracting to a foreign firm

- Many determinants
 - Lower labour costs
 - Rationalization of production
 - Entering new markets

Identification Strategy

We identify a case of offshore outsourcing by observing *simultaneously*:

- ❑ A sharp decrease of employment in a domestic (French) establishment of a firm or group
- ❑ An increase of imports of the same kind of good, by the same firm or group and from a single foreign country
+ the amount of imports is proportional to the foregone production in the domestic establishment

A Relatively Large Definition of Offshore Outsourcing

- ❑ Do not necessarily imply a plant closure in France
- ❑ Do not necessarily imply the creation of a subsidiary in the foreign country
- ❑ Not necessarily toward a low wage country
- ❑ The good produced in the foreign country may not be exactly the same that was produced in France (*types of goods are identified at a 60 industry classification level only*)

... But Also Some Factors of Underestimation

- ❑ If there is no importation in France of the foregone production (e.g. if it was totally exported)
- ❑ If the importation is done by another group
- ❑ Offshore outsourcing of a production that was not the main production of the establishment (identified by the NES114 classification)
- *However, our robustness checks show that trying to take these phenomena into account do not change much the results*

Criteria to Define a « Sharp Decrease in Employment »

- Plant closure

or

- « Large downsizing »

- Employment decreases by at least 25% between (*year-1*) and (*year+1*)

Criteria to Define an « Increase of Imports »

- An import flow is characterized by: a type of good (NES114 industry classification), a year, a country and a business group (or an independent firm)
- Increase measured on a 3 year period (between *(year-1)* and *(year+1)*)
- There can be a maximum time gap of 2 years between the decrease in employment and the increase in importation
- Lasting increase: we verify that the amount of imports do not fall back to its initial level during the 3 years following the increase

- The foregone production in the domestic establishment is estimated as the decrease in the wage bill * average production / wage bill ratio in the industry
- The increase of imports must be superior to a fraction of the foregone production
- This fraction depends on the country of origin of imports

$$\text{Increase of imports} \geq \left(\frac{GDP/pop(\text{foreigncountry})}{GDP/pop(\text{domestic})} \right)^{2/3} * \text{foregone production}$$

- Exemples: China 10%; Tunisia 20%; Poland 30%; USA and Western Europe countries 100%

Data

Exhaustive Individual Dataset on French Manufacturing industries (except Energy) 1995 to 2001 :

- **DADS**: employment and wage bill by establishment
- **Customs Data** : amount of imports by firm or group, country of origin, « type of good » (*NES114 industry classification: we identify 60 types of goods in Manufacturing*)
- **SIREN register and LIFI survey**: ownership structure of firms and business groups (enables to link establishments to the firms or groups that own them)

On Average 13,500 Jobs Lost per Year

- Between 1995 and 2001, about 13,500 jobs were lost due to offshore outsourcing in Manufacturing industries (except energy) i.e. 0.35 % of the total employment in these industries
- Slightly less than half of them were lost due to offshore outsourcing toward a low wage country

A Majority of Job Losses due to Offshore Outsourcing toward High Wage Countries

| High Wage Countries | | Low Wage Countries | |
|--|-----|--|-----|
| 53 % of job losses due to O.O. between 1995 and 2001 | | 47 % of job losses due to O.O. between 1995 and 2001 | |
| | % | | % |
| Spain | 16% | China | 30% |
| Italy | 15% | Brazil | 8% |
| Germany | 14% | Morocco | 8% |
| USA | 13% | Tunisia | 8% |
| Belgium | 10% | Czech republic | 6% |
| UK | 8% | India | 5% |
| The Netherlands | 7% | Poland | 5% |
| Switzerland | 4% | Viet-Nam | 4% |
| Portugal | 2% | Rumania | 4% |

In Almost All Manufacturing Industries

- To different extent: on average 0.1% of the total employment is concerned per year in Printing, 0.7% per year in Clothing
- Offshore Outsourcing toward high wage countries is more frequent in concentrated industries
 - Fabrication of motor vehicles, pharmaceuticals, aeronautics
- Offshore Outsourcing toward low wage countries are more frequent in industries with a large share of unskilled workers
 - Clothing and Textile
 - But also electronics and domestic equipments

| Industry (NES 16 classification) | Average yearly variation of employment (%) | Job losses due to OO (% of total employment in the industry) | | |
|---|--|--|------------------------------|---------------------------|
| | | Total | Toward a high wage countries | Toward a low wage country |
| <i>Manufacture of ...</i> | | | | |
| Clothing | -5,8 | 0,8 | 0,1 | 0,7 |
| Textile | -3,2 | 0,4 | 0,1 | 0,3 |
| Electric and electronic equipments | -1 | 0,5 | 0,3 | 0,3 |
| Pharmaceuticals | -0,9 | 0,3 | 0,6 | 0 |
| Mining | -0,9 | 0,1 | 0,2 | 0,1 |
| Editing and Printing | -0,9 | 0,6 | 0,1 | 0 |
| Wood and Paper products | -0,5 | 0,2 | 0,1 | 0,1 |
| Domestic Equipments | -0,4 | 0,6 | 0,1 | 0,5 |
| Building of ships and boats (aeronautics) | -0,3 | 0,4 | 0,4 | 0 |
| Motor vehicles | 0,2 | 0,2 | 0,2 | 0 |
| Machinery and equipments | 0,7 | 0,2 | 0,1 | 0,1 |
| Basic metals and fabricated metal products | 0,7 | 0,2 | 0,1 | 0,1 |
| Chemicals, Plastic | 0,9 | 0,2 | 0,2 | 0,1 |
| Food products, beverages | 0,9 | 0,3 | 0,2 | 0,1 |
| Electric and electronic components | 2,6 | 0,7 | 0,4 | 0,3 |
| Total: Manufacturing (except Energy) | -0,1 | 0,3 | 0,2 | 0,2 |

Offshore Outsourcing is More Frequent in Large Business Groups

- Between 1995 and 2001, O.O. concerns on average per year:
 - 0.7% of the total employment in large business groups (more than 5,000 workers in France)
 - 0.1% of the total employment in small groups or firms (less than 50 workers in France)

Structure of the Workforce

- Offshore Outsourcing ...
 - ... toward low wage countries: job losses more frequent among unskilled or low-skilled workers (unskilled production workers: 26% of job losses; managers: 11%)
 - ... toward high wage countries: job losses relatively more frequent among high-skilled categories (unskilled production workers: 13% of job losses; managers: 15%)
- But mainly due to industry composition: OO toward low wage countries are more frequent in industries with a large share of un- or low-skilled workers

Conclusion

- A relatively low number of job losses, compared to the total level of employment in manufacturing industries
- Toward high wage countries as much as toward low wage countries