

## LOCATING IN FRANCE OR ABROAD: THE CHOICE OF FRENCH FIRMS

*The number of subsidiaries created abroad by French manufacturing firms has strongly increased during the last greatly in fifteen years. In a globalized economy, companies tend more and more to locate more and more abroad to get closer to dynamic markets and take advantage of lower costs. However, a model explaining location choices of location that integrates these phenomena brings out a major bias in favor of the home territory. The probability of a medium-sized firm creating a subsidiary in France is ten times higher than of it doing so in a country that is comparable in terms of market, production and transaction costs (distance, language, etc.). This bias can be explained in large part by the density of financial and commercial relations that a firm has in its own country. It is tending to decline insofar as the burgeoning number of foreign subsidiaries abroad is gradually building up this type of network in the countries of location.*

### ■ A sensitive question

Globalization stirs up many fears in developed countries. The question of outsourcing is a particularly sensitive subject. Closure of plants and their transfer to countries with low labor costs prompts a fear that the home territory is losing its attractiveness with companies that are more and more mobile and free to choose their installation sites. This economic “threat” occupies increasing space in debates. A survey conducted by the European Commission indicates that the fear of outsourcing was the main reason the French rejected the European constitutional treaty in the referendum of May 2005.<sup>1</sup> Citizens’ concerns about these economic upheavals force political leaders to take a stand on the measures they recommend for responding to this issue, notably in an electoral period. This is why quantified analysis of companies’ location choices is important, both concerning their causes and their consequences.

Several recent microeconomic analyses make interesting contributions from this standpoint. They adopt different approaches. One consists of detecting outsourcing decisions, by listing the companies that simultaneously close a site in France and increase their imports, then measuring the corresponding job losses. The results generally indicate that job losses are low.<sup>2</sup> A second approach tries to assess the impact of the decision to invest abroad on the company’s employment and wages in France.<sup>3</sup> Here again, the estimated impact is limited. One last type of research tries to explain the decision to invest abroad itself, rather than its impact. The CEPII recently conducted an empirical study on the factors influencing the location choices of French companies creating new subsidiaries.<sup>4</sup> The originality of this work consists in including France among the possible locations. When the factors determining the

1. Eurobaromètre-TNS Sofres, 2005, “The European Constitution: Post-referendum poll in France,” Flash Eurobaromètre, 171.

2. P. Aubert and P. Sillard (2005) certainly provide the strictest application of this approach for France and arrive at a figure of 13,500 gross job losses per year between 1995 and 2001. To judge the importance of this figure, the authors note that “gross annual job losses in industry are around 500,000.” This method can be compared with the calculation of the job content in French external trade, which is more macroeconomic but which yields quite comparable orders of magnitude of the impact of international openness. P. Aubert & P. Sillard (2005), “Outsourcing and staff reductions in French industry,” INSEE, Paris.

3. For a recent estimate of these effects in the French case, see D. Castellani, A.-C. Disdier and G. Navaretti (2006), “How Does Investing in Cheap Labour Countries Affect Performance at Home? France and Italy,” *CEPR Discussion Paper* no. 5765, as well as A. Hijzen, S. Jean and T. Mayer (2007), “The Effects at Home of Initiating Production Abroad: Evidence from Matched French Firms,” *mimeo*.

4. T. Mayer, I. Méjean & B. Nefussi (2007), “The location of domestic and foreign production affiliates by French multinational firms,” forthcoming *CEPII Working Paper*.

location of foreign direct investment (FDI) also explain investment in France, we can estimate to what extent French firms do or do not place a subsidiary creation in France or abroad on the same level. If a bias is found in favor of France, this could be measured and an explanation can be sought.

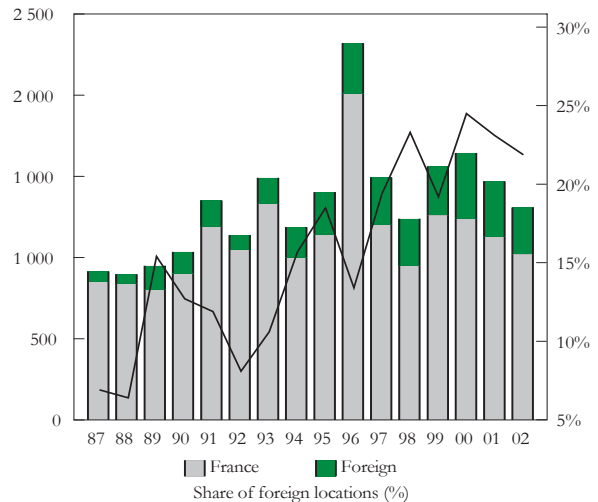
## Facts and trends

Our data concerns the manufacturing sector and the period 1987-2002. The dataset of French firms' investments abroad is built on the results of the SSSI's *Annual surveys of companies* completed with the Financial connections survey conducted by the French statistical institute and data collected by the DGTPE (General department of the treasury and economic policy). From this, we get a database of more than 21,000 affiliate creations by companies of more than 20 employees in France or abroad (87 countries considered). For each of these investments, the location site of the subsidiary is detailed along with the year of investment and a certain number of characteristics of the investing company (size, productivity, business sector, etc.).

### Increase of foreign locations

Of the total 21,500 subsidiary creations over the period, a little more than 3,500 are located abroad, while 18,000 correspond to the creation of a subsidiary in France. The preference of French companies for locations in France thus appears to be very pronounced. This declines, though, in the course of the 1990s, since the share of foreign locations goes from 9.5% on the average at the end of the 1980s to 23% in the early 2000s (graph 1). Investments outside France go by majority to the neighboring European

Graph 1 – Creations of subsidiaries in France and abroad



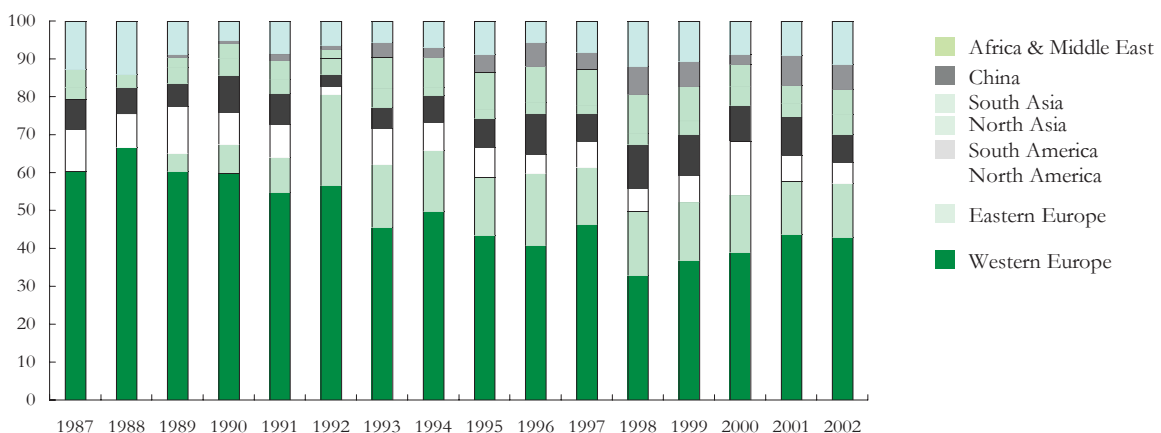
Source: SSSI (EAE), INSEE (LIFI) and DGTPE, authors' calculations.

countries, with growing interest in Eastern Europe (graph 2). The number of investments in Asia also increases, especially in China, which alone received more than 6% of French installations abroad in 2002.

### Role of the market

This increasing number of investments in low-wage countries illustrates the role of one of the essential factors influencing location choices: the level of production costs. But recent works on the determining factors of foreign direct investment have shown that the explosion of FDI flows mainly reflects the will of multinational companies to access their foreign markets by producing directly on site rather than by selling their production on international markets.<sup>5</sup> Companies thus primarily choose to install their

Graph 2 – Geographic distribution of annual installations abroad (%).

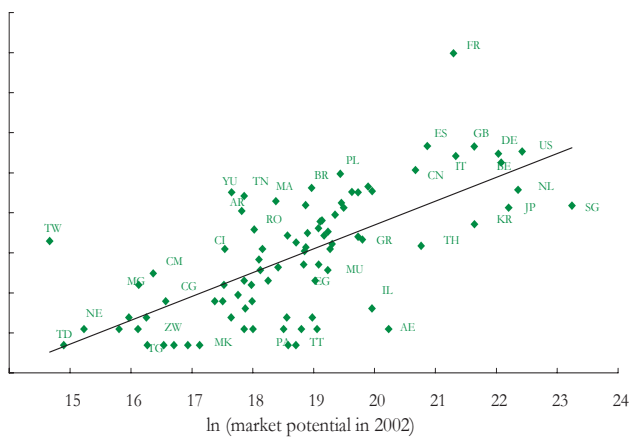


Source: INSEE (LIFI) and DGTPE, authors' calculations.

5. See, for example, G. B. Navaretti & A. Vanables (2004), *Multinational Firms in the World Economy* (Princeton University Press) for a review of the recent literature.

subsidiaries in countries where the demand prospects are interesting.<sup>6</sup> This relation is illustrated by graph 3, which shows the statistical link between the number of subsidiaries created by French companies in a given country over the period and the market potential of this country.<sup>7</sup> The positive impact of market size on the location of investments is obvious. The exceptional position of France is just as remarkable: its position well above the regression line indicates that the number of installations in France is much higher than the French market potential would justify.

Graph 3 – Relation between the number of installations in a country and its market potential.  $\ln(\text{number of investments})$



Source: Authors' calculations.

To explain this bias, we have to go beyond the descriptive approach and look at a model of location choices.

## ■ An explanatory model

Our model explains the location of a subsidiary by different characteristics specific to i) the investing company and ii) the countries that might possibly receive this investment. More precisely, the estimated equation explains the probability for an average company of the sample to choose a given country by the country's macro-economic characteristics (market potential, production costs) and by the transaction costs facing investors in their relation with this country: geographic distance comes into play here, along with linguistic barriers and cultural ties. In order to study more particularly the trade-off between investing in France or abroad, a "France" dummy variable is added to the model. This measures the difference of

probability that an average company invests in France rather than in a foreign country, all other things remaining equal. The coefficient relative to this indicator can be interpreted as a measure of the propensity of companies to "over-invest" ("under-invest" if this bias is negative) in their own market.

The estimation of the model on all of the creations of subsidiaries in France and abroad indicates that a market potential that is 10% higher increases by 4.4% the probability for a country to be chosen as a subsidiary installation site. Inversely, production costs that are 10% higher decrease this probability by 2.8%.

### *The bias in favor of France*

A major bias in favor of domestic investments can then be measured: The probability of investing in France is more than ten times greater than the probability of investing in a comparable country in terms of market, production costs, distance, etc. The bias of French investors in favor of their home country is thus much higher than the "preference" that could be deduced from graph 1 (of the order of 4 at the end of the period).

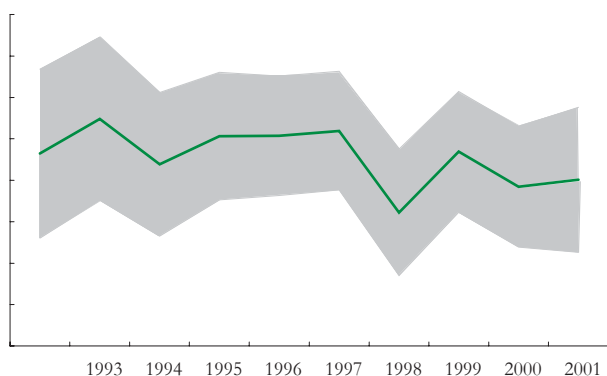
Can statistical explanations be found for this "bias"? We know that the density of financial and commercial relations that a firm has in its own country is one of the main explanations for its attachment to its territory. When we take these networks into account (by introducing a variable in the model measuring the intensity of the subsidiary's relations with the whole industrial group to which it belongs), everything else remaining equal, the probability for a firm to create a subsidiary in France is only 2.6 time greater than that of creating it abroad.

An estimate of the model over sub-periods makes it possible to observe the trend of this "unexplained bias" in favor of France over time. The coefficient relative to the "France" indicator variable obtained by estimating the model over three-year windows appears to be relatively stable (graph 4): The propensity of French companies to over-invest in their own country does not decrease in the course of the period under consideration. In other words, the increase of foreign installations in the location choices of French firms is a phenomenon that is explained by the combined variation of the variables we have identified: market size, price of factors, belonging to an industrial group, etc.

6. The two criteria are of course not mutually exclusive. Certain locations combine an attractive market with a cost advantage (China is the best example of this).

7. Market potential is measured by the size of the host market as well as by the quality of access to the surrounding markets from this installation. These markets are weighted from the estimation of a gravity equation according to the method of Redding and Venables (2004), "Economic Geography and International Inequality," *Journal of International Economics*, 62 (1).

Graph 4 – Variation of the unexplained bias in favor of France\*



\* Estimated coefficient relative to the “France” indicator and confidence interval.

Source: Authors’ calculations.

In light of the dynamism of the large world markets and cost differentials that incite French firms to create subsidiaries abroad, it is interesting to note that the factor that traditionally attaches firms to their home territory - their industrial and financial networks - tends to lose its singularity. As the installations abroad multiply, they constitute this type of network in the receiving countries, which facilitates the creation of new subsidiaries which, in turn, will further increase the density of the networks. The entry cost on foreign markets - which explains why firms that invest abroad are those that have achieved adequate size and productivity<sup>8</sup> - can thus be lowered.

In a globalized economy, the less exclusive preference of French firms with respect to the home territory is a sign of dynamism. A greater orientation towards foreign locations would nonetheless be worrisome, notably in terms of jobs, if it were to the detriment of business expansion in the home territory (which the figures on subsidiary creations does not indicate) and if it were accompanied by a weaker attractiveness from the foreign firms’ viewpoint (which seems no longer to be the case). In this respect, it may be of use to recall one of the conclusions of our work: The crucial explanatory factor of location choice is the dynamism of the demand. Even if measures aimed at reducing production costs or the tax burden on investors are not to be neglected, the attractiveness of France depends essentially on the long-term prospects of French and European demand.

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8. We estimate this influence of the characteristics of firms on the location choices, see T. Mayer, I. Méjean & B. Nefussi (2007), *op. cit.*.

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