EUROPEAN INTEGRATION AND LEADING

FIRMS' ENTRY AND EXIT STRATEGIES

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Abstract

This paper provides empirical evidence on how EU leading firms adjusted to European economic integration with respect to the following strategic variables: entry/exit decisions in the product/geographic space (diversification/multinationality). A novel dataset, including detailed information on firms' output across industries and countries for a sample of 100 EU leading firms in 1987 and 1993, also enables us to provide preliminary evidence on the "globalisation - return to core business" hypothesis. The econometric analysis of entries/exits in the primary industry suggests that the Single Market program affected company strategy by making multinational activity more necessary to face increased competitive pressure. Our results are thus far more consistent with a "think European view" than with the "return to core country" hypothesis, as implied by fuller exploitation of scale economies and comparative advantages.

JEL: L10, L20, F02

1.   Introduction

The primary purpose of this paper is to provide fresh empirical evidence on how EU leading firms have adjusted to increased European economic integration with respect to two strategic variables: entry/exit decisions in the product space (diversification) and entry/exit decisions in the geographic space (multinationality). However, since one of the expected effects of European integration in general and of the Single European Market (SEM, hereafter) program in particular, is an increase in the toughness of competition, the purpose of this paper is more general and aims at analyzing the impact of a shift in the competitive regime on firms' entry/exit strategies.

Obviously, EU firms do not operate in a vacuum and their entry/exit strategies might depend on other, perhaps world-wide, factors. In particular, according to both financial press and academic research[1], recent years have witnessed remarkable changes in the organisation of firms throughout the world. Thus, terms as "globalisation" and "return to core business" have entered common language. On the one hand, at the geographic level, it has often been argued that the "globalisation" of competition has led to a dramatic increase in the scale of multinational operations. On the other hand, there is anecdotal evidence that the trend in product space has been apparently in the opposite direction. Today's popular terms as "return to core", "refocusing", "de-diversifying", all describe recent efforts pursued by firms to concentrate on a smaller range of industries, in each of which the firm aims to reach a leading position.

In spite of all these casual evidence, as far as we know there has been no comprehensive analysis on whether these phenomena are widespread among EU leading firms. Also, if evidence supporting the "globalisation - return to core" hypothesis is found, it is not however clear whether it has been fostered or hindered by European integration. To shed some light on these issues we make use of a novel dataset which includes detailed information on firms' output across industries and countries for a sample of 100 EU leading firms and for two distinct years, 1987 and 1993. Furthermore, since we know a priori which type of industries were most likely to be affected by the SEM program the possibility of comparing changes in corporate structure of firms operating in "1992 most affected industries" to those of firms operating in less affected industries should allow us

to isolate the impact of specific measures that were, almost by definition, aimed at fostering European integration.

The remainder of the paper is organised as follows. Section 2 defines the dimensions of corporate structure to be considered, and discusses some of the likely impact of European integration, "globalisation" and "return to the core". Section 3 describes the methodological framework which enables us to organise available information on firms' entry and exit decisions in an integrated and coherent way. Section 4 describes the main changes in corporate structure that occurred between 1987 and 1993 for our sample of large European firms. Section 5 comments upon the econometric results and links empirical evidence with ex-ante theoretical predictions. Section 6 concludes.

2.   European Integration and Firms' Strategies

In the view of policy-makers who signed the Single European Act in 1987, the implementation of the 300 or so detailed measures were expected to affect EU manufacturing positively in a variety of ways. These measures included the abolition of all remaining tariffs and quotas, but they were mainly aimed at the non-tariff barriers of: frontier controls, national differences in technical regulations, public procurement biases in favour of domestic producers; and so-called fiscal frontiers created by differences in tax levels and regimes. In particular, the "official" EU view identified two crucial mechanisms: cost savings and increased competitive pressure.

Cost savings should have occurred both directly, following the elimination of non-tariff barriers, and indirectly, because of a more efficient division of labour among member states. In turn, this would have allowed both a fuller exploitation of scale or learning economies and a higher specialisation of production based on country specific comparative advantages. More competitive pressure would have instead been the result of a larger number of firms from different member states competing in a larger and integrated European market. This aggressive competitive stance would have increased social welfare because of reduced prices, lower inefficiency and speedier innovation.

Some of the theoretical implications for industrial structure at the EU level have been formalised by Davies, Lyons et al. (1996). As the fixed and variable costs of exporting decline

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[1] On this issue see Markides (1995) and Davies and Petts (1997) for US and UK firms respectively.

because of the removal of non-tariff barriers, artificially segmented national markets are increasingly replaced by a larger integrated market. As a consequence, they show that in the new equilibrium, prices fall and inefficient producers exit, whereas efficient firms typically expand their size to exploit scale economies. Note that these results are obtained without assuming that integration increases the toughness of price competition, but simply as a consequence of market expansion. Obviously, if integration indeed introduces tougher price competition, prices will fall even further as well as the number of firms sustainable in equilibrium. In short, the end result is a European market place which comprises more and larger sellers than was previously the case in the national market place. Finally, they also show that in industries where endogenous sunk costs, such as R&D and advertising expenditures, are used as competitive weapons, market enlargement will be followed by the escalation of such costs by leading firms. Typically, this will lead to an EU market structure which is more concentrated than when firms compete largely on the basis of price.

The theoretical implications on firms' multinationality and diversification optimal strategies of a shift in the competitive regime associated with market integration are not easily obtainable from formal modelling. However, informal reasoning suggests that firms under increased competitive pressure might find it rational to exit (not to enter) secondary industries, especially if the scale of production is low and there are no economies of scope. This behaviour is popularly known as "return to core" strategy, and might be observed as firm's reaction to an increase in competition in both its secondary industry or its core industry.

As far as entry/exit decisions in the geographic space are concerned, the "officia predicts that the reduction in the marginal costs of exporting within the EU, which should have followed the abolition of non-tariff barriers should make intra-EU multinational operations less necessary. As a consequence, we should observe multinational firms which set up an excessive number of production plants in order to overcome non-tariff barriers, reducing the number of their plants and increasing production at each plant. This prediction is based on a rather narrow concept of EU integration, which is basically equated to unimpaired trade among member states. However, following Davies, Lyons et al. (1996), integration is a term which can be interpreted more widely in order to include not only large trade flows, but also integrated corporate strategies. SEM can thus be expected to have made many more firms "think European", even when the product is not intrisically tradeable across frontiers, for instance because of high transport costs. In other words, even when

the abolition of non-tariff barriers may not have resulted in a single integrated marketplace, it may have encouraged firms to formulate their strategy on an European scale. This happens to be the case whenever strategic decisions on product characteristics (both horizontal and vertical differentiation) are taken at the EU (or even world) level, even though price and quantity competition still occurs in national fragmented markets. This might occur if the move towards common standards and technical harmonisation lead to a narrowing of tastes differences between consumers in different member states[2]. In these circumstances, the oligopoly game might involve an escalation of endogenous sunk costs (RD and, possibly, advertising expenditures), increasing dominance by a small number of firms, increased oligopolistic interdependence, and multinational entry in a number of national markets (i.e. multimarket contacts) for strategic reasons.

Obviously, not all manufacturing industries were expected to be equally affected by the completion of the Single European Market (SEM, hereafter). On the basis of a number of so-called "structural criteria", 40 industries were identified as those industries "most affected" by 1992 (CEC, 1990). The structural criteria included i) the level of non-tariff barriers and the dispersion of prices for identical products between member states as measures of the degree of fragmentation of EU markets; ii) the level of penetration of intra-EU imports as measure of the degree of internationalization iii) the potential for economies of scale as proxy for potential reduction in costs for European firms.

3.   Entry and Exit Decisions: Methodology and Data

Real world large firms usually operate in more than one industry (diversification) and in more than one country (multinationality). From this point of view, the firm's present corporate structure reflects past entry (and exit) decisions in foreign countries and/or in industries different from its primary activity. Accordingly, at any point in time, firms' corporate structures differ from each other depending on entries occurred in foreign countries and/or secondary industries. Thus, a firm can be multinational without being diversified, or viceversa, or it can be both. In this case, different structures are possible, depending on whether firms are multinational in more than one industry or, analogously,

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[2] The idea here is that non-tariff barriers affect not only trade (trade barriers) but also direct investment (direct investment barriers).

on whether they are diversified in more than one country. The latter clearly implies overlapping between multinationality and diversification. In fact, entering a secondary industry in a foreign country affects the extent of both multinationality and diversification.

More precisely, a firm can produce one product in one country, more than one product in one country (the firm is locally diversified), one product in more than one country (a single-product multinational), more than one product in more than one country (a diversified multinational)[3]. As a result, the firm's corporate structure can be roughly described by its output shares in its primary industry, whether in the home country (HC-PI) or abroad (FC-PI), and in secondary industries, whether produced in the domestic market (HC-SI) or in foreign countries (FC-SI). However, by comparing the firm's output shares' distributions in two points in time we cannot observe entry and exit decisions, as indeed we are observing how the firm's output has been relocated across countries and across industries. This, of course, can occur via an increase (reduction) in the quantity produced in other industries/countries by already existing plants or because the firm has opened (closed) a new plant or, alternatively, it has taken over (divested) an already existing plant. Obviously, only the latter can strictly be defined as entry (exit).

In order to measure entries and exits, more refined data are required than aggregate output shares. What is needed, for any individual firm, is a matrix with industries in the rows and countries in the columns, where each cell reports output in a given country and in a given industry at the finest possible level. In other words, information must include estimates of its domestic and foreign production in all industries in which it operates.

A data base with such characteristics was constructed for a set of 313 leading European firms for 1987. It was assembled as a part of a wide ranging study of the structure of European Union Manufacturing and is fully discussed in Davies, Lyons et al. (1996). Its salient features for present purposes are that it includes all the five leading producers (at the EU level) in each of the 100 3-digit NACE manufacturing industries, observed for 1987, and that each firm aggregate EU production in each industry is disaggregated into separate figures for each member state in which it

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[3] Other combinations can be obviously envisaged and Davies, Rondi and Sembenelli (1997) show that this is sometime the case with real world firms.

was produced[4]. As part of an ongoing project on the structural changes in EU manufacturing, we have updated all relevant information to 1993 for the largest 100 surviving firms after excluding non-EU multinationals with operations within EU boundaries[5].

Let us define with firm i's primary industry (PI) the industry with the largest EU share of output in 1987 and with firm i's home country (HC) its country of origin. By comparing the two matrices (1987 and 1993), entry and exit decisions at the firm level can thus be observed between 1987 and 1993, i.e. over the Single European Market program implementation period. In particular, it is possible to quantify for each firm: i) the number of entries (exits) in secondary industries - home country (home diversification), ii) the number of entries (exits) in foreign countries - primary industry (primary multinationality), iii) the number of entries (exits) in foreign countries - secondary industries (diversified multinationality or multinational diversification).

4.   Descriptive Statistics

Empirical evidence from the U.S. (see Markides, 1995) reports for the past decade quite a widespread trend towards corporate restructuring by means of "refocusing" or "return to core

Bhagat, Shleifer and Vishny, 1990 and Davies and Petts, 1997). This is generally understood as a reduction in the extent of diversification in order to recover profitability, after twenty years of full immersion in conglomeration. Can we provide any evidence that this is also occurring in the EU? One of the ex-ante expectation is precisely that the increased competitive pressures in both the core business and in secondary industries should draw companies efforts towards efficiency, possibly by divesting marginal activities in unrelated businesses (see section 2). Obviously, the "return to corporate specialisation" hypothesis is not at odds with an increase in the acquisitions of related businesses. Unfortunately, this would be blurred by the simple analysis of the entry and exit decisions, independent of the directions of diversification.

Table 1 summarises data on the distribution of output shares in the product/geographic space in 1987 and 1993 for the top 100 EU owned firms, as identified in section 3. The hypothesis of

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[4] As it was a project on the structure of EU manufacturing industry, all non-manufacturing activities were excluded as well as multinational operations outside the EU boundaries.

corporate refocusing on the primary industry is not clearly borne out by the data. Adding up the PI output shares produced both at home and abroad, we find that production in the primary industry did indeed fall from 57.5% to 52.8% on average, with the share produced in foreign countries rising from 9.8% to 14.2%. Quite to the contrary, the evidence suggests that diversification has kept going on over the period, especially in foreign countries - the FC-SI output share has increased by almost 5 percentage points, whereas diversification in the home country has remained stable. Summarising, there appears to be an increasing trend towards both multinationality and diversification amongst the largest European companies, but with an interesting twist, whereby the growth in both primary and secondary industries was carried out via cross-border operations, whereas diversification has increased mainly because of a more pronounced multinational penetration.

A breakdown by country of origin of the top 100 firms (see Table 2) confirms that the increase in multinationality is a widespread trend which extends to both primary and diversified activities. Only Dutch and Belgian firms report a decline in diversification abroad (FC-SI), whereas French, Italian and British companies reveal quite pronounced increases in foreign shares. On the other hand, diversification in the home country (HC-SI) appears to be declining in all but German firms. As the number of German firms is disproportionally large in our sample, it is likely that the average results in Table 1 were somewhat biased to hide an underlying trend towards de-diversification, at least in the home country.

So far we have analysed the changing pattern of output shares across countries and industries for top 100 EU owned firms, in other words, the relocation of their production between 1987 and 1993. We now turn to entry and exit decisions, as defined in section 3. Table 3 reports the average country/industry presence in 1987 and 1993 (columns 1 and 4, respectively) as well as the average number of entries and exits by the top 100 firms. As it can be seen, entries outperformed exits between 1987 and 1993, thus confirming a tendency for large companies to widen the scope of their operations across both member states and industries. However, more interesting insights may be obtained by looking at how entries and exits are actually distributed in the product/geographic space. We thus learn that, for the average firm, cross-border entries outnumbered exits in both the

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[5] Since in our empirical analysis special attention is paid to changes in home country diversification and primary industry multinationality, we have been forced to exclude non-EU multinationals. In fact, for these firms the

primary industry[6] and secondary activities, whereas an opposite pattern is revealed by diversification in the home country (HC-SI). As mentioned above, diversification and multinationality overlap in the foreign country/secondary industry output space. Therefore, in the following we will focus on entry and exit decisions in the primary industry abroad (FC-PI) and in secondary industries at home (HC-SI), where the actual trade-off between diversification and multinationality can be explicitly observed. Consistingly with previous evidence on output shares, Tables 4 confirms that, on average, multinational penetration in the primary industry, via new entries, i.e. by opening or acquiring a new plant abroad, has increased in all countries. On the other hand, Table 5 shows that de-diversification from secondary industries in the home country was a widespread strategy amongst the largest EU companies. Except for German (and Dutch) firms, exits outnumber entries for the average firm, thus revealing that the return to core business in the home country has occurred by reducing the output share as well as by closing plants in secondary industries. This also suggests that (pure) multinationality may have provided a substitute for (pure) diversification, at least for those companies which face country limits to growth.

The latter suggestion seems to be borne out (Table 6) if we look at the correlation matrix between entries/exits at home and abroad. Not only multinational penetration in the primary industry is negatively correlated with domestic diversification (r = - 0.076), it is also positively related with exits from secondary industries at home, thus confirming the suggested trade-off between multinationality and diversification. On the other hand, however, the positive correlation between cross-country entries in the primary industry and in diversified activities confirms that there is a tendency for the largest EU companies to grow via multinationality anyway (possibly revealing an urgency to escape from country limits and/or to establish multi-market and multi-country contacts with their rivals).

5.   Empirical Results

From the descriptive statistics presented in section 4, it emerges that EU leading firms have increased the degree of multinationality in their primary industry. This finding holds both if one looks

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notion of a home country/primary industry within EU boundaries is at best questionable.

at the changes in output shares between 1987 and 1993 and if one compares the number of country entries and exits. Analogously, with the exception of German firms, EU leading firms have decreased the degree of diversification in their home country. This empirical fact is suggested by the descriptive statistics on output shares and it is confirmed by the reduction in the number of industries between 1987 and 1993. Overall these results point out that: i) there is some evidence in favour of the "return to core" hypothesis, at least as far as home diversification is concerned[7] and ii) the prediction of a reduction in multinational activity in primary industry, motivated by the possibility of exploiting plant-level scale economies is not supported by the data.

However, for more convincing empirical evidence, a more rigorous approach to hypothesis testing is required. The starting assumption of the empirical work presented in this section is that European integration and, more in general, "globalisation" are associated with the toughening of price/product competition and that this association is stronger in industries where non-tariff barriers were important before the completion of the SEM program, i.e. the so-called forty "most affected" industries.

With this perspective in mind, we present four sets of exploratory econometric estimates where dependent variables are respectively: i) number of entries in foreign countries - primary industry (FC-PI), ii) number of exits from foreign countries - primary industry, iii) number of entries in home country - secondary industries (HC-SI), iv) number of exits from home country-secondary industries. Since by construction all dependent variables can assume only non-negative discrete values, we make use of the Poisson regression model for estimation purposes[8]. We then assume that dependent variables Y_1, Y_2,...., Y_n have independent Poisson distributions with parameters, λ_1, λ_2, ...,λ_n, respectively. Hence,

Prob $(Y_i=y_i) = \lambda^{y_i}e^{-\lambda_i}/y_i!$ (1)

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[6] The somewhat unexpected exit figure in the home country primary industry (second row) is due to four firms which apparently abandoned the industry which accounted for their largest EU share of output in 1987.

[7] From our previous empirical work, it emerges that it is more difficult to explain "home" diversification than "foreign" diversification . This is turn might suggest that "home" diversification has often no strong industrial logic.

[8] In the Poisson model the variance is assumed to be equal to the mean. For all equations we also estimated negative binomial models where overdispersion can be tested. For all reported equations the hypothesis of no overdispersion is not rejected by the data.

Assuming that λ_i are log-linearly dependent on the explanatory variables, we can write:

$$\ln\lambda_i = \beta_0 + \Sigma_j\beta_j x_{ij} \tag{2}$$

Maximum likelihood estimators of (2) are readily available in most specialised econometric packages[9].

In entry/exit in foreign countries/primary industry equations, basic explanatory variables can be summarised as follows:

$$\Sigma_j\beta_j x_{ij} = \beta_1 C_i + \beta_2 GR_i + \beta_3 MS_i + \beta_4 CR_i + \beta_5 SEM_i \tag{3}$$

where:

C^*_i = Number of countries (in logs) firm i was not present in 1987 in its primary industry. This variable is used only in entry equations;

C_i = Number of countries (in logs) firm i was present in 1987 in its primary industry. This variable is used only in exit equations;

these two variables capture the number of entry/exit options available to the firm. In the entry equation, it is expected to be positive if firms operating in a limited number of countries are more likely to enter new foreign countries than firms whose operations are already widely scattered throughout Europe. Analogously, in the exit equation it is expected to be positive if firms operating in a large number of countries are more likely to close foreign plants than firms operating in a small number of countries.

GR_i = 1991-1987 EU Growth Rate in firm i's primary industry. This variable measures expected growth prospects and is expected to enter positively in entry equations and negatively in exit equations.

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[9] For the ML estimates of (2) we used Limdep 7.

CR_i = 1987 5-firm Concentration Ratio in firm i's primary industry. Since in modern Industrial Organisation concentration is seen as determined both by the basic conditions of the industry and the stance of competition, in the present context this variable is used mainly as a single proxy for the initial conditions of the industry. Given that most industries were likely to be in disequilibrium (from local markets to an integrated market) in 1987, it might also be argued that an high level of EU concentration might be associated with industries already, at least partly, integrated in 1987.

MS_i = 1987 firm i's EU Market Share in its primary industry. This variable captures the position of firm i in its primary industry before the starting of the SEM program. For the purpose of this paper we are not interested in whether market share is a proxy for efficiency or market power or it simply reflects the fact that, ceteris paribus, firm i comes from a large EU country. Our working assumption is simply that firms with initial high market shares are better equipped to cope with increasing competition. As a consequence, if European integration makes multinational activity more necessary, we expect this variable to enter with a positive sign in entry equations, and with a negative sign in exit equations.

SEM_i = Dummy variable which takes the value of 1 if firm i's primary industry was identified as one of "1992 most affected industries", 0 otherwise. Obviously, this is our crucial variable, since it is then expected to capture the distinctive impact of the SEM program on firms' entry/exit decisions. As discussed in details in section 2, these variables cannot be univocally signed. In fact, a positive sign in the exit equation (and perhaps a negative sign in the entry equation) is consistent with the hypothesis that the abolition of non-tariff barriers has made multinationality less necessary, whereas a positive sign in the entry equation (and perhaps a negative sign in the exit equation) is consistent with the alternative "think European" view.

The first column in Table 7 reports the results of the basic foreign country/primary industry entry equation. Both C^*_i and GR_i are positive and significant as expected. On the contrary, CR_i is negative and significant, thus supporting the idea that an initial high level of concentration makes entries in new countries less likely. More relevant to the issues discussed in this paper, both MS_i and SEM_i are positive and significant. This in turn implies that: i) even within a sample of leading firms, being in a stronger initial position makes further entries in new countries more likely, and ii) firms operating in industries "most affected" by the SEM program are more likely to enter new countries. This result is consistent with the "think European" view that predicts an increase in multinational

activity as a result of more integration. To check whether this strong result is robust to changes in model specification, we included in the basic equation a proxy for the degree of economies of scale in the industry, EOS_i, both additively and interacted with SEM_i. The idea is that integration should favour trade and then discourage entry in new countries, especially in these industries where rationalisation advantages are expected to be large. This hypothesis is not borne out by the data, since both coefficients do not significantly differ from zero. Alternatively, it might be thought that this substitution effect is more likely to be detected in those industries where non-tariff barriers were high. We then split our "most affected" industries according to whether barriers were high, $SEMHIGH_i$ or moderate $SEMMOD_i$. Coefficients on both variables are negative and significant. Also, contrary to what the substitution hypothesis would predict, the coefficient is larger in absolute value (but not significantly larger) for firms operating in SEMHIGH industries than for firms operating in SEMMOD industries.

Table 8 reports the results for foreign countries-primary industry exit equations. Overall results are less satisfactory than the ones for entry. In particular, whereas G_i has the expected positive sign, both the growth rate, GR_i and CR_i are not significantly different from zero. However, the evidence on MS_i and SEM_i allows us to shed further light on the likely effect of integration and, possibly, competition on the level of multinational activity. Firstly, MS_i has a negative impact on exits. This finding is totally consistent and reinforces the results from entry equations. Not only being a strong leader encourages entry, but being in a weaker position makes exit a more likely strategy. Secondly, the coefficient on SEM_i is not significantly different from zero. Again, this result is not consistent with the prediction that the abolition of non-tariff barriers should make multinational production a less profitable strategy compared to trade. As for entry equations, we performed a number of experiments, by adding EOS_i or, alternatively, by splitting SEM_i on the basis of the strength of non-tariff barriers. Results are reported in the second and third columns of Table 8. The bottom line is that the overall picture remains virtually unaltered.

Finally, in Table 9 we report some regression results aimed at explaining home country - secondary industries entry/exit decisions. In the spirit of this paper, we are mainly interesting in testing whether changes in primary industry conditions also affect decisions in the product space. Accordingly, we used the same explanatory variables as in Tables 7 and 8 with the exception of C_i replaced by S_i, where:

S^*_i = Number of industries (in logs) firm i was not present in its home country in 1987. This variable is used only in entry equations.

S^*_i = Number of industries (in logs) firm i was present in its home country in 1987. This variable is used only in exit equations;

these variables are meant to capture the number of entry/exit options available to the firm.

The main results can be summarised as follows. Firstly, operating in a larger number of industries has a positive impact on both entry and exit decisions. Secondly, and more relevant to the issues discussed here, it is interesting to observe that MS_i has a positive effect (even if not very significant) in the entry equation and a negative effect (even if not very significant) in the exit equation, thus suggesting that being in a "strong" position in its primary industry makes firm expansion in other industries a more likely strategy. This might be attributed to the existence of limits to growth in primary industry. Alternatively, MS_i might be a proxy for the firm's general economic conditions. Finally, SEM_i enters with a negative and significant sign in the entry equation, this in turn providing suggestive evidence that an increase in competition in its primary industry deters the firm's new entries in other industries, at least in its home country. Unfortunately, a negative (even if not very significant) sign is also found in the exit equation, and this is something that is difficult to rationalise.

6.   Conclusions

Much current debate concerns how the completion of the internal market did (and will) affect corporate strategy within the EU boundaries. This paper offers a new perspective on these issues by providing empirical evidence on how the top 100 EU owned companies have adjusted their entry and exit decisions in the product/geographic space to the challenges of the SEM program, basically increased competitive pressure within a larger integrated market and a call for a fuller exploitation of scale and learning economies as well as comparative advantages. On the other hand, we also link our results to the world-wide debate on the reorganisation of the largest corporations whereby a dramatic increase in "globalisation" coexists with a "return to core business" trend, especially pronounced for US companies.

Preliminary evidence from descriptive statistics provides consistent support to the hypothesis of a substantial increase in the scale of multinational operations, both in the primary industry and in diversified activities. The "refocusing" trend is then not clearly borne out by the data, at least as far

as diversification in foreign countries is concerned, over the 1987-1993 period. However, what the data show for all but German companies, is a de-diversification trend within the national boundaries (as measured by a decline in the output shares produced in secondary industries in the home country as well as a relatively larger number of exits), which in turn would confirm that domestic diversification is usually less characterised by an industrial logic. As suggested by the econometric analysis, being in a strong position in the primary industry makes local diversification a more likely growth strategy, provided that the firm is not operating in an industry which is sensitive to the SEM program. This highlights limits to growth in the core business as a motivation for diversification at home, but only for firms which are not challenged by the increased competitive pressure enhanced by the European integrated market.

Turning to the most relevant issues of the paper, the econometric analysis of entries and exits in the primary industry allows us to confirm that European integration appears to have affected corporate strategies by making multinational activity more necessary to face increased competitive pressure. In fact, we find that entry in the primary industry in foreign countries is more likely for firms which happen to be operating in the 40 industries comprised in the list of the "most affected" by the SEM program, and for firms which are in a stronger initial position (i.e. the higher is their 1987 market share in that industry). Notably, this result appears to be robust when we extend the model to test for the most clear cut ex-ante expectation of the SEM program: that multinationality (new entries abroad) should be discouraged whenever production economies of scale are the greater source of efficiency gains. In short, our results are far more consistent with the "think European", which entails more pronounced multinational penetration, than with the "return to core country" hypothesis.

The impact of the SEM program over exit decisions is less clearly spelled out by the econometric analysis, as operating in either a "sensitive" or a scale intensive industry does not appear to encourage exits. Quite to the contrary, when we consider the interaction of the SEM program and economies of scale, we find very limited evidence that the "de-multinationalisation" hypothesis seems to apply to precisely those firms which are not operating in one of the "most affected industries".

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Table 1: Production shares (%)					
Year 1987	Mean	Std.dev	1st quartile	Median	3rd quartile
HC-PI share	47.7	24.8	28.4	46.6	60.4
FC-PI share	9.8	12.2	0.0	4.6	18.4
HC-SI share	34.9	22.0	18.3	36.5	51.1
FC-SI share	7.6	12.0	0.0	3.0	10.4
Year 1993	Mean	Std.dev	1st quartile	Median	3rd quartile
HC-PI share	38.6 (-)	24.6	21.3 (-)	34.2 (-)	56.1 (-)
FC-PI share	14.2 (+)	17.8	1.4 (+)	8.1 (+)	18.6 (+)
HC-SI share	34.9 (=)	23.4	16.7 (-)	31.8 (-)	53.5 (+)
FC-SI share	12.4 (+)	14.3	1.5 (+)	6.0 (+)	20.9 (+)

Legend:

HC: Home Country

FC: Other EU Countries

PI: Primary Industry (3-digit)

SI: Secondary Industries

(+) denotes an increase between 1987 and 1993; (-) denotes a decrease.

Table 2: Production shares (Mean values)				
Year 1987	HC-PI share	FC-PI share	HC-SI share	FC-SI - share
Germany [32]	51.3	5.3	38.4	5.0
U. K. [29]	48.5	9.2	35.4	6.8
France [21]	51.4	13.6	29.7	5.3
Italy [9]]	39.1	10.9	41.2	8.8
Holland [6]	21.9	24.1	26.3	27.7
Belgium-Lux. [3]	53.6	3.5	26.5	16.4
Year 1993	HC-PI share	FC-PI share	HC-SI share	FC-SI - share
Germany	40.4 (-)	7.8 (+)	44.7 (+)	7.1 (+)
U. K.	40.3 (-)	14.3 (+)	33.5 (-)	11.8 (+)
France	39.3 (-)	17.5 (+)	27.5 (-)	15.7 (+)
Italy	34.1 (-)	12.0 (+)	36.8 (-)	17.1(+)
Holland	14.4 (-)	35.0 (+)	23.6 (-)	27.0(-)
Belgium-Lux.	58.3 (+)	22.7 (+)	10.3 (-)	8.6(-)

Legend: as in Table 1

Number of firms in square brackets

Table 3: Number of entries and exits				
	1987	ENTRIES	EXITS	1993
Total	13.54	7.81	5.17	16.18 (+)
- HC-PI	1.00	.00	.04	.96 (-)
- FC-PI	2.15	1.21	.45	2.91 (+)
- HC-SI	6.51	2.33	2.74	6.10 (-)
- FC-SI	3.88	4.27	1.94	6.21 (+)

Table 4: Number of FC-PI entries and exits				
	1987	ENTRIES	EXITS	1993
Total	2.2	1.2	0.5	2.9 (+)
Germany	1.6	1.3	0.2	2.5 (+)
UK	1.5	0.8	0.6	1.8 (+)
France	3.0	1.8	0.5	4.3 (+)
Italy	2.0	1.2	0.7	2.6 (+)
Holland	5.5	1.2	1.0	5.7 (+)
Belgium	1.7	2.3	0.0	4.0 (+)

Table 5: Number of HC-SI entries and exits				
	1987	ENTRIES	EXITS	1993
Total	6.5	2.3	2.7	6.1 (-)
Germany	6.2	3.4	1.5	8.1 (+)
UK	6.3	2.1	3.4	5.0 (-)
France	5.6	1.2	3.0	3.9 (-)
Italy	13.3	3.4	6.0	10.7 (-)
Holland	3.7	0.5	0.5	3.7 (=)
Belgium	3.7	1.0	2.3	2.3 (-)

Table 6: Correlation matrix						
	FC-PI entries	FC-PI exits	HC- SI entries	HC - SI exits	FC - SI entries	FC - SI exits
FC-PI entries	1					
FC-PI exits	-0.089	1				
HC- SI entries	-0.076	-0.109	1			
HC - SI exits	0.018	-0.038	0.189	1		
FC - SI entries	0.215	0.059	0.230	0.185	1	
FC - SI exits	-0.099	0.213	0.051	0.112	0.191	1

Table 7 - FC-PI Entry Decisions			
Poisson Regression - Maximum Likelihood Estimates			
Dep. Variable	Equation 1	Equation 2	Equation 3
C^*_i	1.091 (2.819)	1.111 (2.686)	1.067 (2.766)
GR_i	0.146 (2.231)	0.147 (2.122)	0.133 (2.002)
CR_i	-3.638 (4.263)	-3.731 (4.187)	-3.536 (4.116)
MS_i	4.737 (1.935)	5.240 (1.943)	5.024 (2.014)
SEM_i	0.773 (3.391)	0.595 (1.179)	
ES_i		-0.042 (0.103)	
$SEMHIGH_i$			0.903 (3.244)
$SEMMOD_i$			0.684 (2.676)
ES_i*SEM_i		0.217 (0.380)	
Log likelihood	-134.2	-134.1	-133.9
Restricted Log likel.	-155.3	-155.3	-155-3
Chi squared	42.2 [10]	42.4 [12]	42.8 [11]

(*) Country dummies included in all equations

Legend

C_i^*: Number of countries firm i was not present in 1987 in its primary industry.

GR_i growth rate in firm i's primary industry between 1987-1991.

CR_i: 1987 5-firm EU concentration ratio in firm i's primary industry.

MS_i: 1987 firm i's EU market share in its primary industry.

SEM_i: dummy variable equal to 1 if firm i's primary industry was identified as one of 40 "most affected" industries to the SEM program, 0 otherwise.

ES_i: dummy variable equal to 1 if firm i's primary industry is characterised by relevant economies of scale, 0 otherwise.

$SEMHIGH_i$: dummy variable equal to 1 if firm i's primary industry was identified as very sensitive (high non-tariff barriers) to the single market, 0 otherwise.

SEMMOD$_i$: dummy variable equal to 1 if firm i's primary industry was identified as moderately sensitive (moderate non-tariff barriers) to the single market, 0 otherwise.

Table 8 - FC-PI Exit Decisions			
Poisson Regression - Maximum Likelihood Estimates			
Dep. Variable	Equation 1	Equation 2	Equation 3
C$_i$	1.545 (4.451)	1.726 (4.010)	1.493 (4.275)
GR$_i$	-0.093 (1.000)	-0.100 (0.951)	-0.050 (0.468)
CR$_i$	-0.224 (0.175)	-0.030 (0.024)	-0.471 (0.352)
MS$_i$	-17.484 (2.711)	-17.354 (2.732)	-16.528 (2.595)
SEM$_i$	-0.160 (0.464)	0.449 (0.722)	
ES$_i$		0.836 (1.588)	
SEMHIGH$_i$			-0.503 (0.873)
SEMMOD$_i$			0.002 (0.004)
ES$_i$*SEM$_i$		-1.115 (1.549)	
Log likelihood	-67.9	-66.4	-67.6
Restricted Log likel.	-92.9	-92-9	-92.9
Chi squared	50.1 [10]	53.2 [12]	50.6 [12]

(*) Country dummies included in all equations

Legend: as in Table 7

S$_i$: Number of countries firm was present in 1987 in its primary industry

Table 9 - Regression Results: HC-SI Entry/Exit Decisions		
Poisson Regressions - Maximum Likelihood Estimates		
Dep. Variable	Equation 1 - Entry	Equation 2 - Exit
S_i^*	-4.187 (4.227)	
S_i		1.298 (11.438)
GR_i	0.022 (0.477)	0.051 (1.235)
CR_i	-0.776 (1.400)	0.518 (1.120)
MS_i	2.888 (1.493)	-2.661 (1.421)
SEM_i	-0.311 (2.058)	-0.203 (1.510)
Log likelihood	-216.5	-138.0
Restricted Log likel.	-251.9	-269.6
Chi squared	70.9 [10]	263.3 [10]

(*) Country dummies included in all equations

Legend: as in Table 7

S_i^*: Number of industries firm was not present in 1987 in its home country

S_i: Number of industries firm was present in 1987 in its home country

Appendix 1 - List of Firms in the Sample

	Name	Nationality
1	ABF	UK
2	ACEC - UNION MINIERE SA	BL
3	AEROSPATIALE	FR
4	AKZO NV	NL
5	ALCATEL ALSTHOM CGE	FR
6	ALLIED LYONS	UK
7	ARBED groupe SA	BLUX
8	AVIONS MARCEL DASSAULT BREGUET	FR
9	AXEL SPRINGER VERLAG AG	GER
10	BARILLA G. & R. F.LLI SPA	IT
11	BASF AG	GER
12	BASS	UK
13	BAT INDUSTRIES	UK
14	BAYER AG	GER
15	BAYERISCHE MOTOREN WERKE AG	GER
16	BERTELSMANN	GER
17	BOSCH-SIEMENS HAUSGERATE GMBH	GER
18	BP	UK
19	BRITISH AEROSPACE	UK
20	BRITISH STEEL	UK
21	BSN	FR
22	BTR	UK
23	CADBURYS SCHWEPPES	UK
24	CARL-ZEISS-STIFTUNG	GER
25	CIR SPA	IT
26	COATS VIYELLA	UK
27	CONTINENTAL GUMMI-WERKE AG	GER
28	COURTAULDS	UK
29	DAIMLER-BENZ AG	GER
30	DALGETY	UK
31	DEGUSSA AG	GER
32	DEUTSCHE BABCOCK AG	GER
33	DSM NAAMLOZE VENNOOTSCHAP	NL
34	ELF AQUITAINE	FR
35	ENI	IT
36	FAG KUGELFISCHER GEORG SCHAFER KGAA	GER
37	FERRUZZI FINANZIARIA SPA	IT
38	FIAT SPA	IT
39	FREUDENBERG	GER
40	GEC GENERAL ELECTRIC COMPANY PLC	UK
41	GLAXO HOLDINGS	UK
42	GRAND METROPOLITAN	UK
43	GROUPE BULL-Compagnie des machines BULL	FR
44	GRUNDIG GRUPPE AG	GER
45	GUINNESS	UK
46	HANSON	UK
47	HEINEKEN	NL
48	HENKEL KGAA	GER
49	HERAEUS HOLDING GMBH	GER
50	HILLSDOWN HOLDINGS	UK

	Name	**Nationality**
51	HOECHST AG	GER
52	HOESCH-KRUPP FRIED. KRUPP AG	GER
53	ICI	UK
54	ING. C. OLIVETTI & C. SPA	IT
55	IRI	IT
56	ITALMOBILIARE SPA	IT
57	KLOCKNER-HUMBOLDT-DEUTZ AG	GER
58	KLOCKNER-WERKE AG	GER
59	LAFARGE-COPPEE	FR
60	L'OREAL	FR
61	LVMH	FR
62	MAN AG	GER
63	MANNESMANN AG	GER
64	MATRA -HACHETTE (MARLIS)	FR
65	METALLGESELLSCHAFT AG	GER
66	MICHELIN	FR
67	NORTHERN FOODS	UK
68	PECHINEY	FR
69	PHILIPS	NL
70	PILKINGTON	UK
71	PIRELLI SPA	IT
72	PSA PEUGEOT CITROEN HOLDING	FR
73	PWA AG	GER
74	REED-ELSEVIER	UK
75	RENAULT	FR
76	Rheinisch-Westfalisches Elektrizitatswerk AG RWE	GER
77	RHEINMETALL BERLIN AG	GER
78	RHONE-POULENC	FR
79	RMC	UK
80	ROBERT BOSCH GMBH	GER
81	ROLLS ROYCE	UK
82	ROYAL DUTCH/SHELL	NL
83	SAINT-GOBAIN	FR
84	SAINT-LOUIS GROUPE	FR
85	SCHNEIDER	FR
86	SIEMENS AG	GER
87	SMITHKLINE BEECHAM	UK
88	SOLVAY	BL
89	THOMSON	FR
90	THORN EMI	UK
91	THYSSEN AG	GER
92	TOMKINS - ex RHM	UK
93	UNIGATE	UK
94	UNILEVER	NL
95	UNITED BISCUITS	UK
96	USINOR-SACILOR	FR
97	VALEO	FR
98	VIAG CONTINENTAL CAN EUROPE AG	GER
99	VOLKSWAGEN AG	GER
100	ZAHNRADFABRIK FRIERICHSHAFEN AG	GER

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