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## ***Cahiers du GRES***

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**Ford of Europe, 1967-2003**

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### Ford Europe, 1967-2003

#### Résumé

*L'analyse des résultats économiques et financiers de Ford Europe depuis la création de cette structure de coordination en 1967 permet de distinguer deux périodes. Dans un premier temps, jusqu'à la fin des années quatre vingt, Ford a fortement profité de l'intégration réussie de ses activités européennes. Dans un second temps, depuis 1990, le constructeur a connu des revers de fortune sur le vieux continent. Des facteurs explicatifs de cette évolution générale sont recherchés dans l'histoire de la gouvernance de Ford Europe, de ses stratégies de produits et de sa gestion des moyens industriels de 1967 à 2003. Il est avancé qu'après l'épuisement de la dynamique favorable de l'intégration continentale, Ford Europe a été plongé dans une crise d'identité en raison d'une transformation profonde de son contexte opérationnel résultant des stratégies de globalisation de Ford Motor Company.*

**Mots-clé :** Ford, industrie automobile, Europe, firmes multinationales, intégration régionale, stratégies de globalisation

### Ford of Europe, 1967-2003

#### Abstract

*The analysis of economic and financial results of Ford of Europe since the creation of this coordination structure in 1967 allows us to distinguish two periods. In a first time, until the end of the eighties, Ford took a strong advantage from the successful integration of its European activities. In a second time, since 1990, the automaker got some reversal of fortune on the old continent. Explanatory factors of that general evolution are searched in the history of the Ford of Europe's governance, of its products strategies, and of its management of industrial resources from 1967 to 1993. We defend the idea that after the exhaustion of the favourable dynamic of its continental integration, Ford of Europe has been experiencing an identity crisis which was linked to a radical change of its operational context resulting from the globalisation strategies of Ford Motor Company.*

**Keywords:** Ford, Automobile Industry, Europe, Multinational Firms, Regional Integration, Globalisation Strategies

**JEL :** F23, L62, M21, L20

The European Continent remains the most crucial field for the Ford Motor Company's international expansion. Hence, the history of Ford's industrial strategies in Europe provides a critical case for the understanding of trajectories of "multinationalization".<sup>1</sup> The creation of Ford of Europe in 1967 was an important step in this history: attempting to achieve regional integration. A Study of Ford of Europe can examine how that integration has been implemented in matter of organization, products, and industrial resources; it can show what paths of changes integration has favoured, and what commercial and financial returns it has produced. But, if the creation of Ford of Europe's organizational structure fitted a particular epoch in the course of Ford's multinationalization, a new aim of a worldwide integration or globalisation has since been pushed to the fore. Such a change has noticeably altered the situation of Ford of Europe within Ford Motor Company. A study of its more recent developments must also consider how the shift towards globalisation has influenced European activities, what practices it has changed, and how regional and global logics of integration can be reconciled.

Ford-Europe's foundation was an organisational innovation designed to integrate Ford's activities at a Continental level. This was a major change, even though there was nothing particularly new about the issues being addressed. To truly understand what occurred, we need to re-situate the event in the context of Ford's history in Europe.<sup>2</sup> The firm first set up industrial operations in England in 1911, followed in the 1910s and 1920s by moves into a number of other European countries, including Germany in 1925. Note first of all that these initial efforts involved little more than the assembly and marketing of *Model T* cars that had been shipped over from the United States in kit form. Local manufacturing operations increased shortly thereafter, however, first in England and then in different countries on the Continent. The need to rationalise production in Europe was first made concrete in the "1928 plan" that envisaged giving England a leading role in this respect, with a major industrial complex being built at Dagenham, supposedly to feed assembly plants in other European countries. The generalisation of protectionist attitudes during the 1930s crisis curtailed this project and led both to the reinforcement of a national manufacturing logic and also to the affirmation of three main locations for Ford in Europe. These coincided with Ford's leading markets in this region: England; Germany; and France. Commercially and industrially, the latter location was the most vulnerable, having revolved around an association with a local carmaker for a while, an alliance that would break down shortly before the War. Conversely, the two other national locations would translate into a durable consolidation of Ford's geographic structure in Europe, one that would centre on two major national companies that still exist today: Ford Motor Company Ltd. in Britain; and Ford-Werke AG in Germany. Vehicles manufactured in the 1930s at Dagenham and Cologne were based on the same design work, one that had been mostly carried out in the US. Yet aside from this one factor

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<sup>1</sup> For a presentation of the multinational firms' global strategies, see by M.C. Bélis-Bergouignan, G. Bordenave, and Y. Lung "Hiérarchie et Multinationalisation, une application à l'industrie automobile", *Revue d'Economie Politique*, n°104, 1994; and "Global Strategies in the Automobile Industry", *Regional Studies*, Vol. 34, n°1, 2000.

<sup>2</sup> For Ford's history in Europe from the beginning up until the 1960s, the best reference book is by Mary Wilkins and Franck Hill, *American Business Abroad, Ford on Six Continents*, Wayne State University Press, Detroit, 1964. See also the chapter on Ford's strategy and evolution in Europe by Steven Tolliday.

the local versions were quite distinct and had almost nothing in common. The approaching War merely served to reinforce the two major European subsidiaries' reciprocal autonomy, with the American parent company maintaining a direct leadership role, in contradiction with the "1928 plan" that had envisaged allowing the English subsidiary to act as its second in command.

The Anglo-German split peaked in the aftermath of the Second World War. After a five-year period during which both industrial apparatuses had been requisitioned to serve the two opposing camps' war efforts, there was a progressive re-launching of civilian activities, first in England and then in Germany. In 1945, Henry Ford II (the grandson of the Company's founder) took worldwide control and tried to drive Ford's overall recovery. Things had been going very badly, as FMC had lost a lot of ground to its direct American rivals, GM (which had become the industry leader during the 1920s) and even Chrysler (which in the late 1930s had moved ahead of Ford in the US market). The Europe that Henry Ford II visited in 1948 was going to have to play an important role in this recovery drive, especially given the major contribution that this region could make to automobile industry expansion. Ford's pre-War experiences here had demonstrated how difficult it was to succeed by simply transferring American products abroad, and it was only because FMC had resigned itself in the 1930s to the development of custom-made European products that it was able to maintain a presence in this part of the world (although Ford could not prevent European manufacturers from overtaking it in the mean time). Europe required specific products that were adapted to the local demand for cars that were smaller and consumed less fuel than their American counterparts. What was noteworthy and quite novel was that Ford wanted to apply this local product principle to its big national subsidiaries, the result being that British and German automotive product ranges differed from one another. In France on the other hand it was basically impossible for Ford to apply the same sort of policy. The best it could do in this latter country was to offer a relatively large-sized car, and soon Ford was unable to maintain any presence at all in France, departing in 1954 after selling its production unit to Simca. In 1953 Ford was offering a diversified five-model product range in Britain. These models were the inexpensive Popular and the lower mid-range *Prefect* that was an extension of pre-War product lines, supplemented by three new vehicles: the *Zephyr-Zodiac*, a top-of-the-range tandem that had come out in 1950; and the *Anglia*, a new small car that hit the market in 1953. Over in Germany, the new Fords started to appear under the generic name of the Taunus, starting with the *12M* in 1952 and adding the more upmarket *15M* and *17M* later on in the decade. Whereas the British commercial positioning covered the entire spectrum of the family car market, the German positioning was more mid- and upmarket, since Ford did not want to vie directly with Volkswagen on the small car segment. The American parent company continued to make a major contribution to the design of all these models, especially in Germany, where the strengthening of local engineering skills was a slower process.

All in all, the industrial configuration that Ford developed in Europe in the immediate aftermath of the Second World War was characterised by a bipolar organisation based on two large national subsidiaries in Britain and Germany. With specific products for each subsidiary, Ford's organisation into two separate poles was now complete. This configuration can be described as multi-domestic to express its emphasis on national territorial embeddedness. Of course, it should not be forgotten that the overall entity was marked by the American parent company's close control over its European subsidiaries. Nevertheless, the British and German companies' reciprocally autonomous *modus operandi* were noteworthy. By acting in this way Ford was following in the footsteps of GM (with its two subsidiaries Vauxhall and Opel) and manifesting at this point in time the deeply held belief that its activities should be closed tied to the European national framework. It is difficult to ascertain

to what extent Ford was forced into this decision. With a centralising culture that emphasised cost-cutting, Ford always seemed to lend a great deal of importance to standardisation and rationalisation. Henry Ford I himself had often said that this was his paramount concern, notably in the early years when he was predicating (undoubtedly for far too long) the firm's entire international expansion drive on its single product strategy. As we have seen, the "1928 plan" also translated the desire to unify Ford's European activities under the aegis of its British subsidiary. It thus seems more appropriate to analyse Ford's multi-domestic configuration in Europe following the Second World War as a pragmatic adaptation to the constraints of the moment rather than as the expression of a particular development philosophy. The still pervasive effects of wartime dissensions, the high degree of commercial protectionism and the European States' major involvement in economic reconstruction are all factors that undoubtedly had a considerable impact on this situation.

It was in an effort to supersede this bipolar structure and to set up an integrated European *modus operandi* (with respect to products, manufacturing and marketing) that Ford of Europe was established in 1967. Two decades had elapsed since the end of the War and the environment was very different now. Clearly the main consideration was the 1958 opening of the European Common Market, which included the Federal Republic of Germany, France, Italy, the Netherlands, Belgium and Luxembourg. Britain was not yet a member but there was already talk about its joining, and the same was true for Denmark and Austria. Europe was in the process of emerging as a unified market marked by a free circulation of goods. Ford quickly recognised the full development potential of this emerging Europe. It was clear that the Company had a lot to gain here, especially since, with two entities in Britain and Germany it suffered from a very expensive duplication of resources. Ford Motor Company Ltd. and Ford Werke AG competed directly with one another in many European export markets, often operating via distinct distribution channels. A unification of Ford's product ranges and a sharing of its design, manufacturing and distribution resources at a European-wide level would generate considerable economies of scale for the firm.

Our presentation of Ford of Europe's history from 1967 to 2003 will come in three sections. In the first, we undertake a global examination of Ford's development in Europe throughout this period. This will be based on general quantitative data mainly found in Ford Motor Company annual reports. This section will also allow us to assess the importance of Ford of Europe within the Ford group worldwide and within the European automobile industry. We will also study how Ford of Europe's traditional economic performance indicators varied over time. Lastly, this initial section will help us to peruse these indicators and distinguish between two sub-periods in the life of Ford of Europe: an initial period from 1967 to the late 1980s, characterised by good economic performance; and a second period from 1990 to 2002, marked by mediocre economic performance. The second section of our presentation will focus on the initial sub-period. It will show how Ford of Europe successfully fulfilled various aspects of its Continental integration mission and enhanced its competitiveness, thus gaining some major commercial and economic advantages. Our third section will focus on the second sub-period. In particular, it will defend the idea that since the early 1990s Ford of Europe has been experiencing an identity crisis within the global firm. We will detect the constituent elements of this crisis, thus explaining in part the various problems to be observed in recent years as well as the various recovery measures that Ford has tried to implement.

## **1. An overview of Ford of Europe's development between 1967 and 2002**

Before studying how a number of Ford of Europe's main indicators have changed over the years, we should first specify the limitations of our approach. These pertain to the nature and the scope of available data. FMC annual reports provide data for the whole of the Ford group, with the main statements containing a geographical breakdown that distinguishes Europe from the rest of the world. However, this data on Europe comes from Ford and not from Ford of Europe. This divergence stems from the presence in Ford's consolidated perimeter of other companies, in particular European automakers that have not been placed under the aegis of Ford of Europe, yet which have been asked to cooperate and coordinate with Ford of Europe even as they pursue their own distinctive brand policies. This is a clear limitation since it means examining Ford of Europe's situation using data that for the most part does not specifically isolate Ford of Europe. There are two reasons however why this handicap is only a relative one. The first is that during much of the period under study the divergence between Ford of Europe and Ford was negligible. As regards the automobile business alone, this differential only really arose in the late 1980s, with Ford's 1989 purchase of Jaguar following its 1987 acquisition of Aston Martin, the craft production carmaker. Moreover, the divergence has only started to accelerate in the past few years, with the large-scale purchases of Volvo Cars in 1999 and of Land Rover in 2000.<sup>3</sup> The second reason is that even if the other brands in the Ford group now represent a significant proportion of the firm's overall European activity, Ford of Europe is still the dominant party in this part of the world. Vehicles bearing the Ford brand name account for 80% of the Group's European sales and 70% of its output in this region.<sup>4</sup> To start out we will consider Ford's vehicle sales and market shares in Europe. We will then study variations in its total sales, employment levels and earnings.

### **A. Ford's vehicle sales and market share in Europe**

Vehicle sales and market share constitute a natural grouping, since both indicators expressed in vehicle units including cars and trucks.<sup>5</sup> Trucks have traditionally represented a higher share of sales in North America than in Europe due to the importance of pick-up trucks in Ford's domestic market, this being a type of vehicle that is almost totally absent in the European market. In fact, such vehicles have become particularly popular in the US over the past few years, rising from 25-30% of total Ford sales in the 1970s to more than 60% by the late 1990s. Much of this came from the sale of hybrid vehicles like SUVs. In Europe, small commercial vehicles have only represented about 10% of total sales, the gap with North America being accentuated by the fact that in the Old World hybrid vehicles are classified as cars. As for bigger commercial vehicles, they have never represented more than a marginal

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<sup>3</sup> The vehicle sales of Mazda in which Ford has only a minority stake are not included in Ford's vehicle sales and all subsequent data concerning Ford. Ford had established cooperation agreements with Mazda (then called Toyo Kogyo) in the early 1970s. It took a 25% interest in this company in 1979. This would be raised to 34% in 1996.

<sup>4</sup> Estimates for 2001, based on data that is external to Ford (CCFA, OICA, Automobile News Europe). The difference between the two percentages stems in part from the other (more deluxe) brands' strong extra-European export orientations, notably towards North America.

<sup>5</sup> Ford long produced and sold farm tractors, almost from its beginnings until the 1991 sales of this business to Fiat Geotech. These tractors are not included in the data being used here. They only account for about 1 to 2% of all vehicles sold.

percentage of Ford's total sales. Medium-sized commercial vehicle production activities were totally shut down in Europe in the 1980s, and in North America Ford sold off its truck business in 1997. As such, the vehicles that Ford sells in Europe are mainly passenger cars. European sales have experienced good long-term growth, making a good account of themselves in comparison with the firm's overall performance, though recent changes in Ford's market shares in Europe have been somewhat unfavourable.

### **a. The strong long-term growth of European sales**

In 1967, the year Ford-Europe was founded, Ford had just had two good years in Europe, with output having hit a record 1 million units for the first time. Ford's sales in Europe exceeded 2 million units in 2001, again for the first time ever. Nevertheless, growth between these two dates was inconsistent, as demonstrated in Figure 1 which shows annual changes in Ford Group vehicle sales in Europe, in North America, in the rest of the world and in the world as a whole.<sup>6</sup>

European sales growth has been characterised by fluctuations that were less pronounced than in North America, but it has also been subject to (and manifestly primarily influenced by) the overall European business cycle. In addition to a 1967-68 slowdown, followed by an early 1970s recovery phase during which sales levelled out at 1.3 million units, Ford's European sales growth also suffered badly in 1974-75 from the first oil shock. Subsequent growth was again very strong, with sales reaching another high plateau (1.6 million units) in 1977-79. The second oil shock caused a limited but durable fall in sales to a lower level (1.4 million units), but the latter half of the 1980s was positive with sales reaching a new high plateau (1.8 million units) in 1988-91. The 1992-93 recession that accompanied the end of the German reunification boom and the restrictive monetary policies being pursued in Europe at the time was very painful. Recovery was slow and it was not until the late 1990s that Ford was again able to reach and surpass the level it had first hit 10 years previously. The Company was helped in this respect by its acquisition of Volvo Cars and Land Rover, firms that would henceforth be consolidated in its sales totals. However, these purchases could not completely obfuscate the lack of progress being made by Ford's own brand at a time when general trading conditions were improving in Europe.

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<sup>6</sup> Note the discontinuity in this series in 1986. This was the year when data was first collated using point-of-sale figures, whereas factory sales (i.e., point-of-manufacturing figures) had been used previously. Nevertheless, given the level of geographical aggregation we are considering here, it is not unjustified to construe this data as being approximately equivalent, depending on the point-of-sale. There was little difference before 1986 since vehicles were to a very largest extent manufactured on the European continent, where they were then sold. In other words, import-export activities were relatively insignificant.

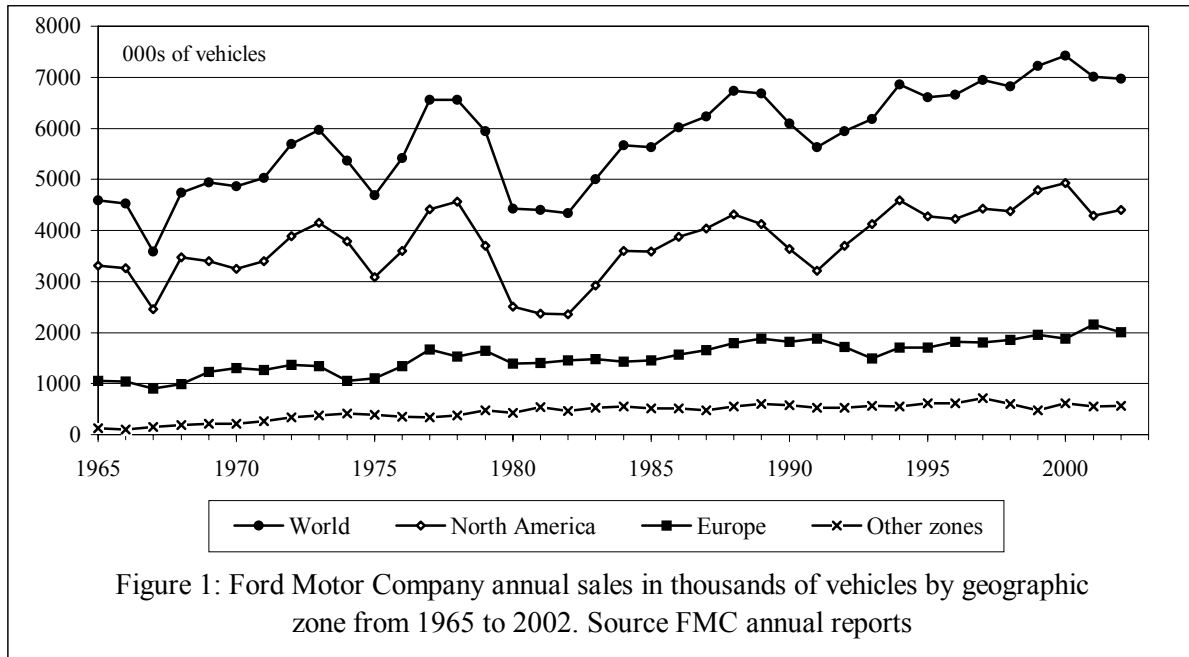


Figure 1 shows how important Europe is to Ford. Clearly North America is more crucial, since to a very large extent this is where the firm’s overall state of health is determined. But Europe is its second most important business centre, far ahead of Asia, Latin America and Africa combined. Europe’s share of world sales has fluctuated across a relatively wide range, from 20.1% in 1974 (when it was strongly affected by the first oil shock) to 34% in 1982, at a time when the American parent company was scraping the bottom of the barrel. We can however identify an overall trend by breaking this era down into three sub-eras derived from this chronological analysis, based on average annual sales over the course of these periods.

<b>Table 1: Average annual sales by zone by period</b>					
Periods	In 000s of vehicles annually			Share of world total	
	Europe	North. Am.	World	Europe	North Am.
1965 - 1979	1,256	3,583	5,127	24.5 %	69.9 %
1980 - 1991	1,601	3,378	5,502	29.1 %	61.4 %
1992 – 2002	1,828	4,376	6,785	26.9 %	64.5 %

*Source: FMC annual reports*

By excluding cyclical fluctuations in this manner, we discover a steady upward trend in average sales growth in Europe, one that contrasts with the U-shaped trend in North America. In this latter region, 1980-91 was a difficult period during which average sales levels were lower than they had been during the preceding period. Ford’s European presence is what



enabled the global firm's average sales to grow over this period in time. As a result, Europe's share of world sales rose sharply, while North America's fell back. On the other hand, with the rapidly rising average sales of the most recent era North America has renewed its dynamism, whereas progress in Europe has been slower despite the takeover operations taking place towards the end of the period. The recovery in the American proportion of total world sales went hand-in-hand with the fall in Europe's - although this swing of the pendulum did not entirely offset Europe's relatively greater importance to the firm since the foundation of Ford of Europe. This conclusion is corroborated if we calculate average annual growth rate trends over 1965-2002. European sales rose at an average annual rate of 1.8% over this period, compared with less than 1% in North America and 1.3% annually for Ford across the world.

**b. The downward trend in Ford's market share in Europe over the recent period**

Ford is one of the six large generalist automakers to occupy a dominant position in Europe. Market shares for these six groups are relatively similar, although the differentials did increase between 1985 and 2002, as shown by Figure 2. Note that the groups are depicted in this chart in their 2002 configuration, which evens out the impact of merger and acquisitions on market share. In 1985, the combined brands that the Ford group consolidated in 2002 (Ford, Jaguar, Volvo, Land Rover, Aston Martin) were European market co-leaders alongside the VAG group of brands (Volkswagen, Audi, Seat, Skoda), accounting respectively for 14.3% and 14.2% of all car and small commercial vehicle registrations in Western Europe. Note additionally that Ford was only operating its own brand at this time, and that it achieved a 12.1% market share with this, putting it in second spot behind the two VAG brands (VW and Audi), which amounted to 12.8%. Since then, the VAG group's consolidated market share has risen by nearly 4 points whereas the Ford group's share (which was relatively stable up until 1996) has fallen by more than 2 points.

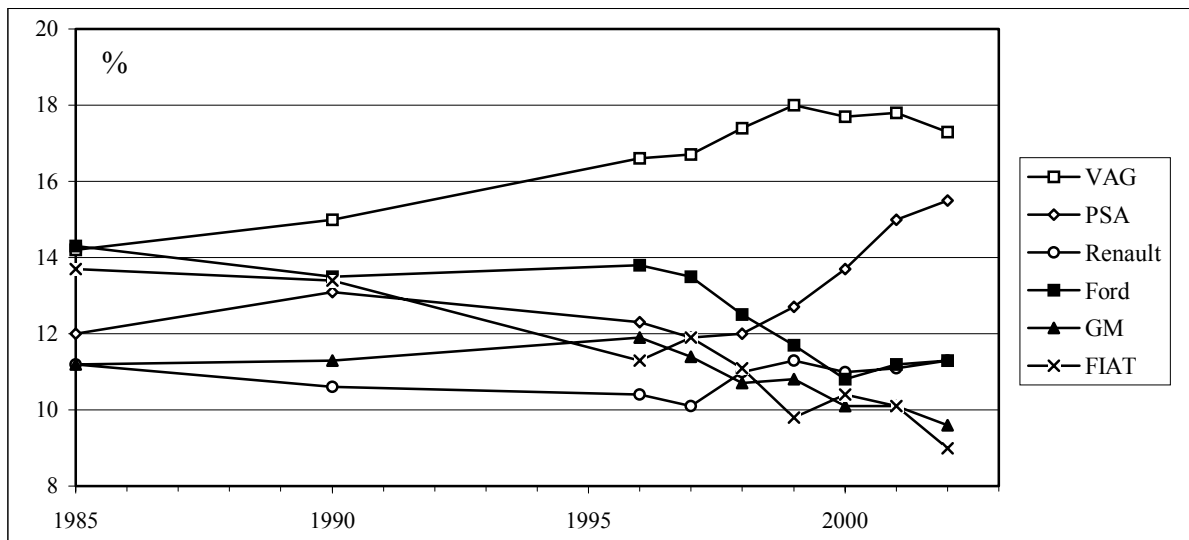
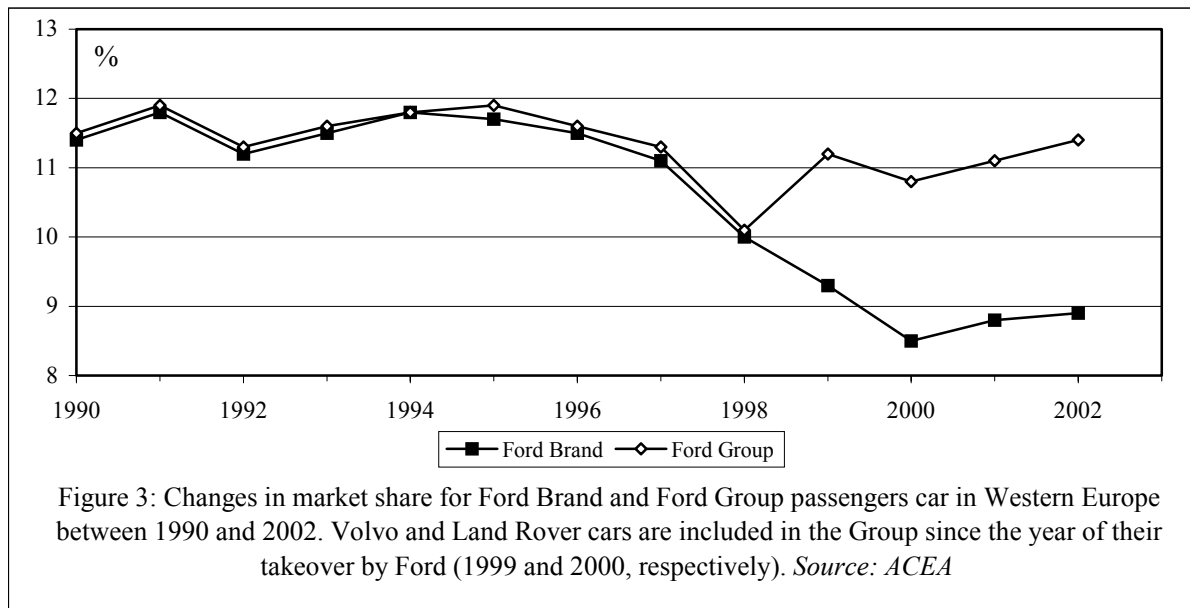


Figure 2 : Changes in market share (cars and light commercial vehicles) of the six leading carmaking groups in Western Europe (17 countries) between 1985 à 2002. The group structures are constant at their 2002 consolidated perimeter. Source : CCFA and ACEA

Analysis of market share data expressed to reflect changes in group structure reveals that to a large extent this fall in market share took place before the takeover of Volvo in 1999 and that of Land Rover in 2000 - meaning this drop was mostly focused on the Ford brand itself.<sup>7</sup> This is illustrated in Figure 3 which compares the changes in European market shares for Ford brand and Ford group passenger cars between 1990 and 2002. The Ford group structure was not constant over time and this Figure shows the effects on the group's market share of the acquisitions of Volvo Cars and Land Rover.<sup>8</sup> The market share of the Ford-brand fell below 9% since 2000 from more than 11% in the first half of the 1990s.

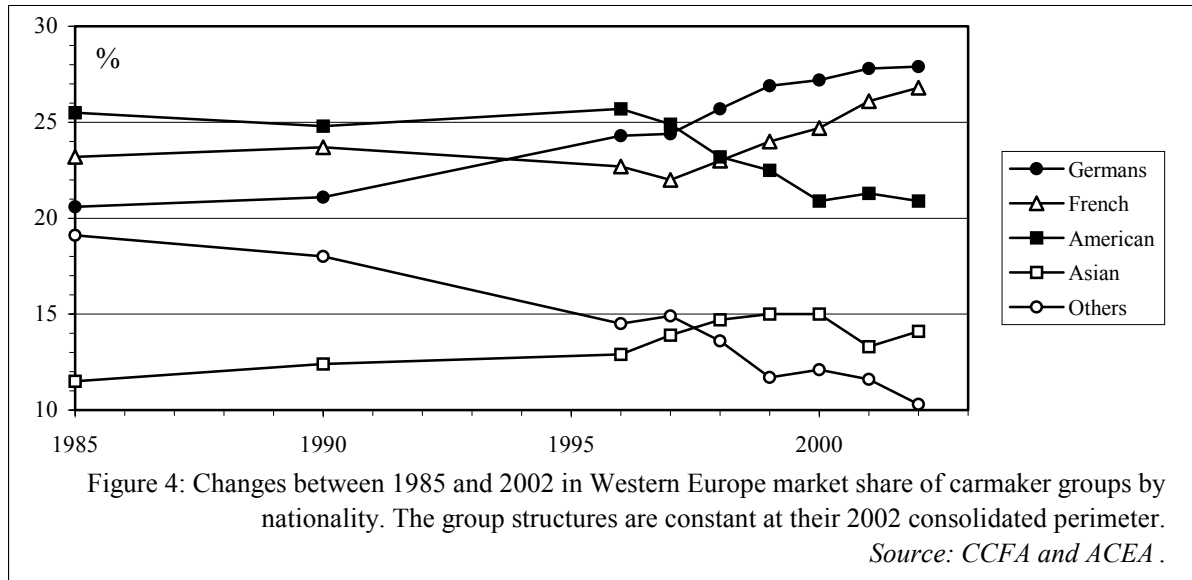


Despite a falling market share in Europe, the Ford group was still in third place amongst Europe's six leading carmakers with 11.3% of all 2002 registrations, equal to Renault (single brand) but some distance behind PSA (Peugeot and Citroën, 15.5%) and VAG (17.3%) groups. It is noteworthy that in Europe Ford has higher sales than its big American global rival GM (whose European brands are Opel, Vauxhall and Saab). It is also noteworthy that like Ford, GM also experienced a fall in its European market share - albeit to a lesser extent. In 2002 GM had market share of 9.6%, in front of the Fiat group (Fiat, Alfa-Romeo, Lancia, Ferrari, Iveco), which experienced a sharp drop. In terms of Ford and GM's rivalry, Ford's continued advantage in terms of the number of vehicles sold in Europe stems in part from its better positions in the light commercial vehicle segment, where it had a 2002 market share of 10.6% versus GM's mere 6.5% of all European registrations. For passenger cars the gap between two firms was much lower than in 1985, with Ford's market share now reaching 11.4% and GM's 9.9%, versus a 1985 differential of two points in Ford's favour. In absolute numbers for 2002 light commercial vehicle registrations, Ford sold 191,000 units and GM 117,000. For passenger cars the figures were 1.637 million for Ford and 1.431 million for GM. All in all, Ford and GM's late 1990s market share in Europe has experienced similar negative trends - in a market that was changing fast, characterised by deregulation access and

<sup>7</sup> Ford Motor Company annual reports published the following market shares for the 19 countries of western and central Europe: 12.2% in 1995, 10.3% in 1998, 10% in 2000, 10.7% in 2001, and 10.9% in 2002. The share of Ford-brand vehicles is 8.7% in 2002 for these countries.

<sup>8</sup> The little gap between Brand and Group market shares before 1999 represents Jaguar. Imports of Ford-US cars and Aston Martin are included in Ford Brand.

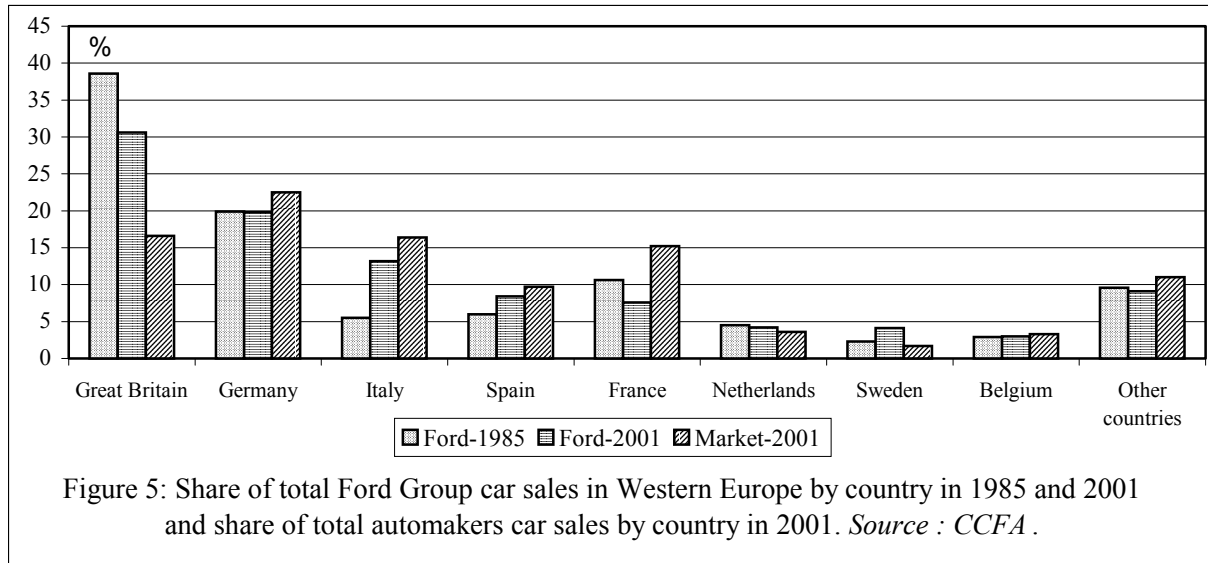
a rapid advance by German and French carmakers in recent years, as shown in Figure 4.<sup>9</sup> The rise of the Asian carmakers is a strong but contained phenomenon, whereas the Italian and English manufacturers have fallen quickly behind. The Americans have lost ground as if they were the ones to have suffered the brunt of the Asians' rise and taken less advantage of Italian and British weakness than the Germans and French.



We will revert in the third section to Ford's lower market share in Europe, at which time we will see that the firm possesses strengths it can use to curtail this negative development. To extend and conclude our current analysis we should now look at the geographic distribution of Ford's sales in Europe so as to monitor its positions in the region's main national markets. Figure 5 shows a breakdown of the Ford group's passenger car registrations in 1985 and 2001, as well as the share that each national market represented in all carmaker sales.<sup>10</sup> This allows us to ascertain via a comparative approach whether Ford is "over-represented" or "under-represented" in a given market. On the face of things, Ford's leading market in Europe is Great Britain, which still accounts for more than 30% of Ford's European car sales - although it must be said that this percentage is lower than in 1985. Long the market leader in Britain, Ford group's UK share still exceeds 20%, although this too is lower than in 1985. Note that Ford's economic dependency on the British market can be relativised by the fact that it is less significant than VAG's dependency on the German market, PSA and Renault's on French market or Fiat's on the Italian market.

<sup>9</sup> By German carmakers we mean VAG, Daimler-Chrysler and BMW-Mini; by French carmakers PSA and Renault; by American carmakers Ford and GM; by Asian carmakers all Japanese and Koreans; and by the other carmakers mostly Fiat and Rover.

<sup>10</sup> As with the data above, the groups are depicted with a constant structure as per their 2001 configuration.



Ford’s second biggest market in Europe is Germany which accounts for 20% of total sales, even if Ford is relatively under-represented in the German market with a relatively stable market share of 9-10%, fourth behind VAG, Daimler-Chrysler and GM. Next is Italy where Ford made good progress between 1985 and 2001, not only in share of sales but also in market share.<sup>11</sup> Ford’s fourth market is Spain, whose share as a percentage of the firm’s total sales rose but where the Company’s domestic market share was lower than in 1985. In 2001 France represented a smaller percentage of Ford’s sales than it did in 1985, to the point of being overtaken by Italy and Spain as a result of the recent fall in the group’s French market share. None of the other European markets accounted individually for 5% of Ford’s total sales, although the firm’s over-representation in the Netherlands and Sweden should be noted, with its good position in the latter country clearly being connected to Volvo’s presence in the Ford group.

TABLE 2: Distance between country distribution of automaker car sales vs. country distribution of total car sales

	GM	VAG	Ford	Renault	PSA	<i>Fiat</i>
1985	22.8	51.8	36.5	na	89.1	209.7
2001	5.4	16.9	21.8	44.9	45.8	135.5

The distance is calculated as a khi-two distance. The lower the value, the closer the automaker’s breakdown of sales by country is to the total sales breakdown by country. Groups are consolidated as per the date that the calculation was made.

*Sources : FoE for 1985; CCFA for 2001.*

<sup>11</sup> See the chapter by G. Volpato.

Table 2 provides a statistical measure of the distance between the country breakdown of the different automakers' car sales and the country breakdown of all automakers' car sales. These distances have diminished for the six leading automakers between 1985 and 2001, reflecting the effects of European integration (which attenuated the over- and under-representations by which they had previously been characterised). In 1985, the two American companies (GM and Ford, in that order) were seemingly the most European of all carmakers insofar as they were the least geared towards any one national market. In 2001 GM continued to occupy the top spot from this point of view, but the VAG Group had by now come between it and Ford, whose poor 2001 performance in France meant that it was patently under-represented in the large French market. Together with the acquisition of Volvo (leading to an over-representation in the Swedish market), these elements explain why even though Ford was more European in 2001 than it had been in 1985, VAG now surpassed it in terms of European homogeneity.

## **B. Total Sales, Employment and Earnings for Ford in Europe**

Before dealing with Ford's profits in Europe, we will first supplement the above car sales data by looking at changes in indicators pertaining to total revenues and jobs.

### **a. Ford's automobile sales turnover and financial revenues in Europe**

The rise in its European vehicle sales over time led to a significant rise in Ford's automobile turnover in Europe. Starting in 1986, data from Ford Motor Company annual reports makes it possible to distinguish between two of the firm's different business activities: the automobile sector and financial services. Indeed, it was mainly from this date that Ford's financial sector was strengthened via several major acquisitions whose effect was to beef up Ford-Credit, its long-standing sales and network finance subsidiary.<sup>12</sup> This allows us to calculate total sales (or total revenues) figures for the group as a whole. We do this by adding automobile turnover to financial service revenues. Before 1986, the only number available was automobile turnover, which also included small numbers from other industrial activities that were sold off in the latter half of the 1980s.<sup>13</sup> However, in addition to this distinction between automobile turnover, financial revenue and total revenue, two problems must be considered relating to the way in which these USD-denominated figures have been expressed. On one hand, there is the inflation-driven drop in the value of the monetary yardstick being used; on the other, fluctuations in the dollar's value versus other European currencies will lead to an over-estimation of European turnover whenever the dollar was low, and to an under-estimation whenever it was high. The first problem can be dealt with by discounting the data so that it is expressed in constant 1996 dollars.<sup>14</sup> To cope with the second one, we have developed an implied USD exchange rate index that is specific to Ford in Europe, and

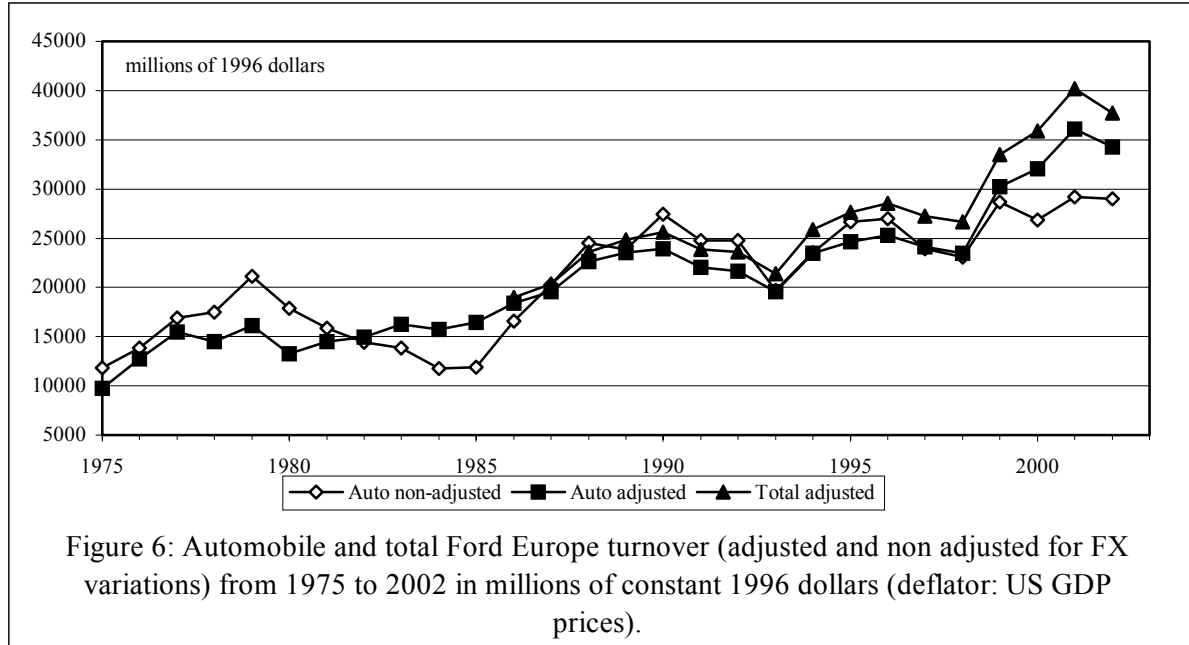
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<sup>12</sup> For a detailed description of these acquisitions, some of which have been resold since, see G. Bordenave, "Globalization at the Heart of Organizational Change: Crisis and Recovery at the Ford Motor Company", in M. Freyssenet, A. Mair, K. Shimizu, G. Volpato (eds), *One best way? Trajectories and Industrial Models of the World's Automobile Producers*, Oxford University Press, Oxford, 1998. Note also that Hertz, a global automobile rental company, is part of this list of acquisitions. For more of a European focus, see Y. Lung in the present volume.

<sup>13</sup> Aerospace activities, Rouge Steel works, farm tractors; see G. Bordenave (1998).

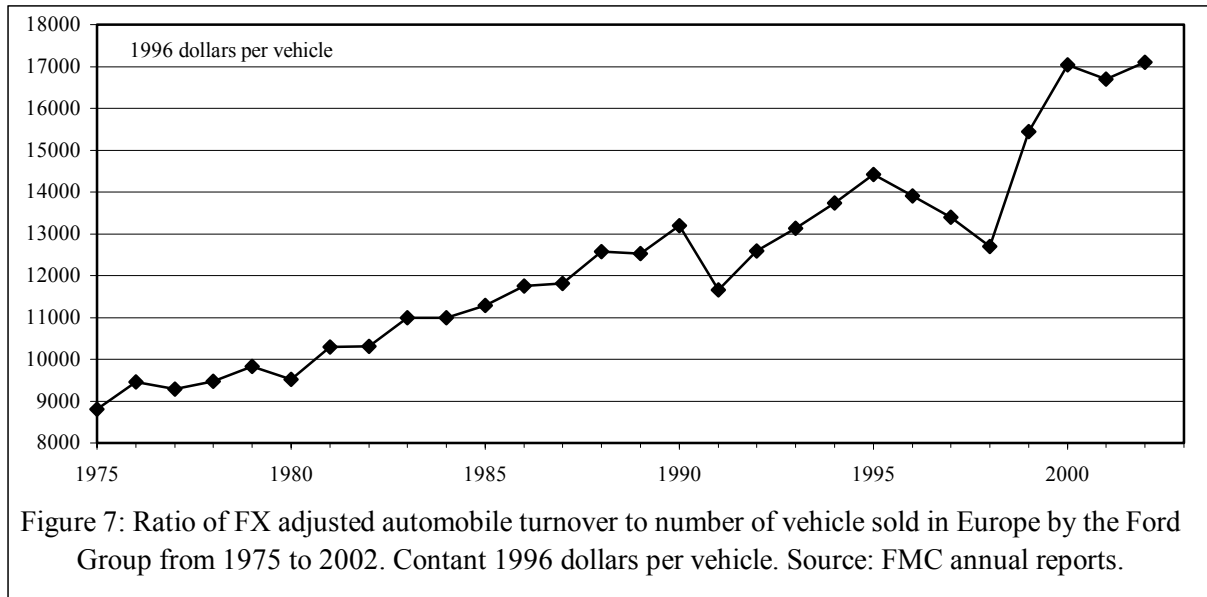
<sup>14</sup> The price index used here is the implied US GDP deflator (source: BEA, US Department of Commerce).

subsequently adjusted turnover data by this index.<sup>15</sup> Figures that are not adjusted for foreign exchange will also be considered inasmuch as the accounting reality of a multinational group is such that USD fluctuations have to be processed as if they comprised external environmental data. Figure 6 shows the turnover data we have just described for Ford in Europe.



The long-term trend towards a rise in Ford’s turnover in Europe appears quite clearly, with fluctuations that can be attributed in part to variations in the value of the USD, as demonstrated by comparing adjusted and non-adjusted total automobile sales figures. From 1975 to 1990 growth in foreign exchange-adjusted automobile turnover was relatively strong and steady, averaging 4.6% as an annual trend. On the other hand, from 1990 to 1998 growth was much more limited and volatile and fell to an annual trend of 1.2%. The main cause of the rapid sales growth from 1999 onwards was that year’s acquisition of Volvo, and the purchase of Land Rover one year later. These operations largely offset the 2000 spin-off of Visteon, Ford’s equipment making subsidiary. When we look at sales figures that are not adjusted for foreign exchange, the strength of the USD against the euro and the British pound over the course of the later period more or less obfuscates the rapid growth in turnover. Note finally the growing differential between automobile turnover and total revenues, indicative of the financial services’ ever-greater proportion of total group revenues. This proportion may have remained higher in North America, but Europe has also been part of the general trend. Between 1990 and 2002 financial services represented on average 17.5% of the firm’s global revenues. In Europe, the average proportion was 9.7%. Concluding this point, we revert to the link between automobile turnover and vehicle sales numbers, with Figure 7 shedding light on this relationship by comparing foreign exchange-adjusted automobile turnover with the number of vehicles sold in Europe.

<sup>15</sup> This index is built by weighting the dollar’s average annual exchange rates for the various European currencies (source: OECD) by the corresponding countries’ proportions of Ford’s total vehicle sales in Europe.

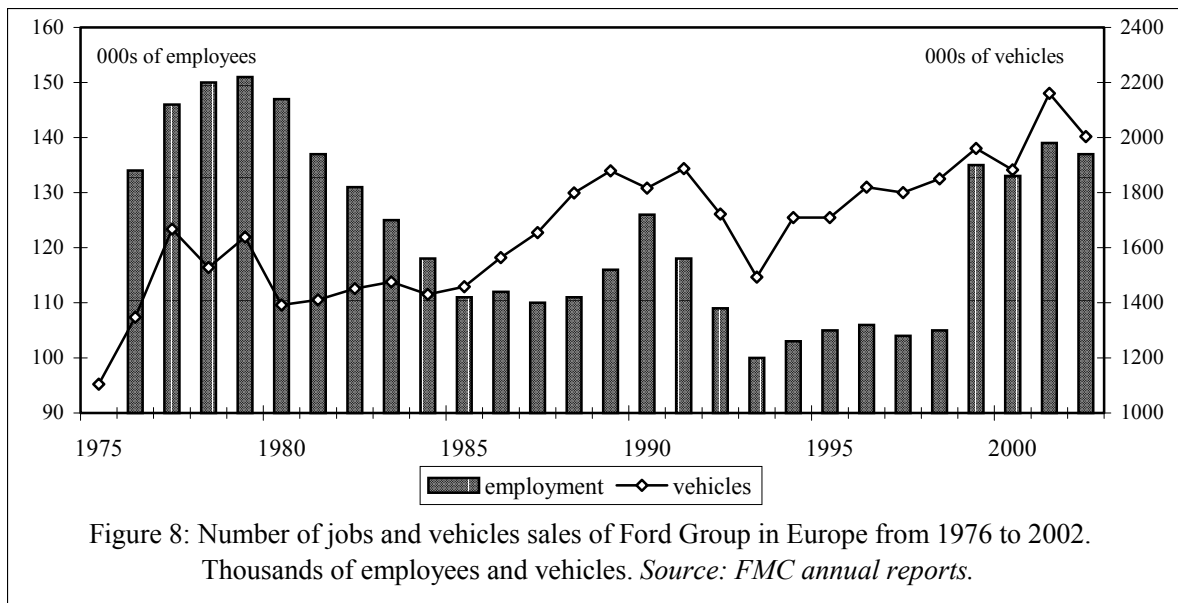


There are many economic elements underlying this ratio (which is an average price indicator for vehicle sales) and they can be difficult to separate from one another. Clearly these include cost and profit margin considerations, but at a more basic level they also refer to product mix effects. All automakers are part of this general trend towards a higher ratio (meaning higher vehicle sales prices). It reflects constant improvement in vehicle quality and equipment. By comparing this ratio change profile with some (approximately) equivalent productivity and earnings profiles we discuss below, it can be hypothesized that Ford Europe was probably defending its operating margins in the 1980s by allowing its prices to rise regularly. On the other hand, the up and down profile between 1990 and 1998 suggests a much more aggressive pricing behaviour, one that was based on productivity gains and which very probably had the effect, to a certain extent at least, of squeezing margins. As for the ratio's spectacular jump upwards from 1999 onwards, this should first and foremost be analysed in the light of Ford's shift towards the top-of-the-range in Europe in the wake of its Volvo and Land Rover takeovers. This sudden shift is indicative of a major change in the Ford Group's positioning in Europe. Whereas it had once been exclusively geared towards family vehicles and people's cars, it was now forcing its way into the deluxe vehicle segment.<sup>16</sup> This is one of the factors that we will be entitling Ford Europe's "identity crisis" in our third section

<sup>16</sup> In fact, this entry dates from the Aston Martin and Jaguar takeovers back in the late 1980s, although the 1999-2000 acquisitions lent a decisive dimension to this policy, coinciding with a renewal and broadening of Jaguar's product range.

**b. Employment and productivity of Ford in Europe**

FMC’s annual reports include combined employment figures for all activities, hence numbers for both the automobile and the financial services businesses. These are sensitive to variations in the Company’s consolidated perimeter. Figure 8 provides this data for 1976-2002 in Europe. By juxtaposing figures representing changes in number of employees with vehicle sales in Europe, this chart highlights productivity gains. This remains little more than a vague image, however, in part because of the employment data’s very wide scope and also due to the fact that sales data are not the same as production data, even if the gap between the two remains relatively small due to significant Continental integration and because of the trends’ relative stability.<sup>17</sup>



Ford had 90,300 employees in Europe when Ford of Europe was first founded in 1967. This reached a record high of 150,700 employees in 1979 and subsequently fell steadily before levelling out at 110,000 employees from 1985 to 1988. This was followed by a new rise (in part due to the acquisition of Jaguar) to 126,300 in 1990. A rapid correction brought staff numbers back down to 99,500 in 1993 before a subsequent slight increase to 105,300 in 1998. The acquisition of Volvo drove levels above the 135,000 mark in 1999, where they remained in 2002. Europe’s share in Ford’s total global staffing numbers was around 32% over this long period of time (1976-2002). It rose sharply in 1999-2002, exceeding 37% due to the acquisition of Volvo and Land Rover, both labour-intensive firms. Analysis of changes

<sup>17</sup> Given that vehicle imports into Europe, the sale of vehicles manufactured by other carmakers or conversely the manufacturing of vehicles on behalf of other carmakers all remain marginal activities, the difference between production and sales is mainly due to export activities and to variations in stocks of finished products. The recent acquisition of Volvo and Land Rover and the expansion of Jaguar (all brands that tend to export more out of Europe than Ford itself does) are likely to increase this gap. Comparisons between production data (source: OICA) and sales data (source: Ford) put this at 255,000 vehicles on average over 2000-2001, or 11% of output. Annual variations (stemming in particular from fluctuations in inventory) can be strong but the trend is towards a more stable differential, to the point that sales change trends remain an acceptable approximation for production change trends.



in employment levels and in the number of vehicles sold clearly suggests that major productivity gains were achieved, not only in the 1980s but also during the 1990s and up until 1998. The 1999 interruption in this series (following the Volvo and Land Rover acquisitions) precludes any conclusive view of this trend.

TABLE 3: Employment, production and productivity of body and assembly manufacturing units of Ford brand vehicles in Europe in 1979, 1985 and 1998					
	1979	1985	1998	Annual rate of growth	
				1985 / 1979	1998 / 1985
B & A employees	68,900	50,900	40,600	- 4.9 %	- 1.7 %
Vehicles produced	1,398,200	1,396,400	1,714,200	0 %	+ 1.6 %
Vehicles per employee	20.3	27.4	42.2	+ 5.1 %	+ 3.4 %
<i>Sources: Ford of Europe documents for 1979 and 1985; for 1998, EIU Motor Business Europe (1999) and based on data emanating from FoE.</i>					

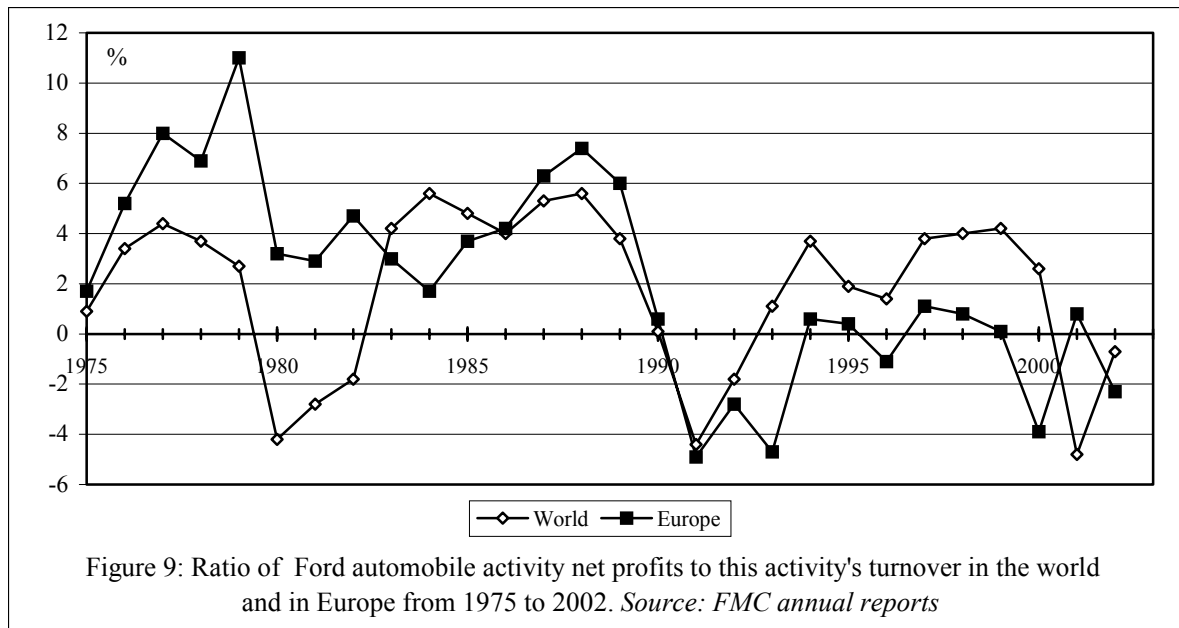
To further specify our approach to the apparent productivity of labour, we can refer to detailed employment data available for certain periods and which gives us information on the number of employees involved in body unit and final assembly operations (and on these functions alone) in the Ford brand's seven big production sites in Europe.<sup>18</sup> By considering these sites' vehicle output in a given year, we can calculate a per capita number of vehicles on a relatively homogeneous basis (Table 3). The apparent productivity of labour measurement that we have devised in this fashion remains very approximate since it has not been adjusted to reflect capacity utilisation, variations in integration rates, variations in product mix or working hours. The values in this table show that the sharp reduction in employment over 1979-1985 was indeed accompanied by strong gains in productivity. In many respects, this era was decisive for the entire firm since it was a time when robotics and production information technology was first introduced and many Japanese-inspired organisational practices adopted.<sup>19</sup> We will have an opportunity below to discuss this but for the moment suffice it to say that the initial productive efficiency drive continued over time, albeit at a slower pace.

### c. Lower Ford profits in Europe in the 1990s

The distinction available from 1986 onwards between revenues from Ford's automobile and financial businesses also applies to the firm's after-tax earnings.

<sup>18</sup> These sites will be presented in the second section below. They do not cover Ford brand vehicle manufacturing in Europe in its entirety due to the residual presence of small assembly units.

<sup>19</sup> For the whole firm and its recovery during this era, see G. Bordenave (1998).



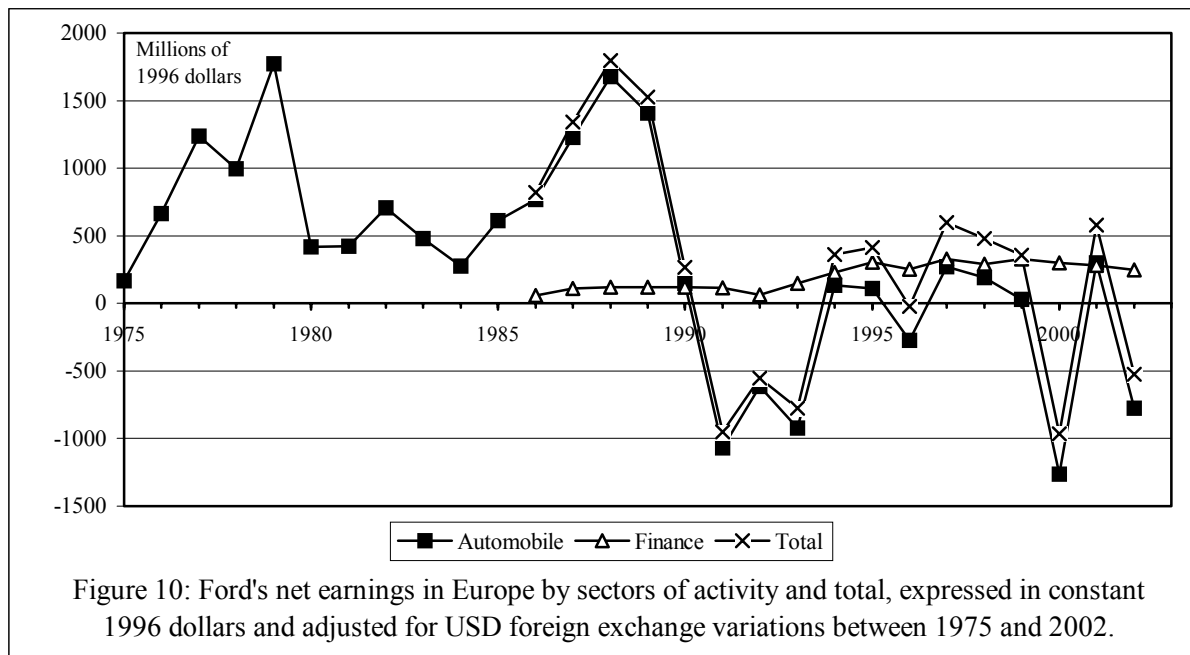
We will therefore focus first of all on changes in automobile activity profits before taking a second look at what financial sector profits contributed to total earnings.<sup>20</sup> Figure 9 shows the changes in the ratio of net automobile profits to this activity's total turnover for Europe and for the whole of the world, from 1975 to 2002.<sup>21</sup> Analysis of this chart clearly demonstrates an opposition between the two periods (1975-1989 and 1990-2002) in terms of Ford's profitability in Europe. From 1975 to 1989 Ford enjoyed a profitability in Europe that can be described as extremely high when compared with the overall profitability of Ford itself (which was strongly galvanised as a result of European profits) - and above all if we consider the tricky patch that many Western carmakers were experiencing at the time. Ford Europe got through the first oil shock better than its parent company did in North America. European profits got as high as 11% of total sales. This ratio never fell below 1.7% and averaged 5.1% over the course of the period. In comparison, the average value of this ratio for the firm as a whole was 2.6% and only 1.8% for the rest of the firm without Europe (meaning mainly North America). This is because the firm's operational heartlands, North America, went

<sup>20</sup> Note that for reasons of annual comparability the profit data we are using does not account for four exceptional events that affected Ford's earnings in the 1990s. In 1992, a charge of \$6,883 million for Ford retirees' health insurance fund increased by this same amount the current loss of \$1,534 million that we are using for the world automobile activity. In 1998, a capital gain of \$15,995 million realised on the spin-off of the "The Associates" financial subsidiary increased by this same amount the current profit of \$1,364 million that we are using for the world financial sector. In 2000, a book loss of \$2,252 million on the spin-off of the Visteon automobile component subsidiary reduced by this same amount the current profits of \$3,624 million that we are using for the world automobile activity. In 2002, a change in accounting principle reduced by \$1,264 million the current profit of \$284 million that we are using for the whole Company (to a loss of \$980 millions). The net impact of these four exceptional events on the Group' total earnings was a positive one. Expressed in constant 1996 dollars it amounted to \$4,754 million or, if diluted over the 1990-2002 period, to \$366 million a year - a sum that should be added to the average annual total worldwide current profit of 2,675 million 1996 dollars that we use for this period (see Table 4).

<sup>21</sup> From 1975 to 1985 and due to a lack of other data the ratio is total revenues to total turnover. Because of financial activities' relative insignificance over this period of time, the ratio remains largely comparable with that of the automobile activity itself over 1986-2002.

deeply into the red in 1979-1982, with losses exceeding 10% of total sales in 1980. For the firm as a whole, European profits strongly offset the effects of this weakness. American profitability recovered sharply however, even surpassing Europe (which stagnated somewhat during the first half of the 1980s). However Europe was once again Ford's most profitable zone anywhere in the world from 1986 to 1989. All in all, this initial era (1975-1989) was an excellent one for Ford of Europe.

The second era (1990-2002) opened with sharp fall in the ratio of European profits to total sales, followed by three years of losses. Recovery from this was fragile and Ford-Europe experienced loss-making years again in 1995, 2000 and 2002. During best year of this period (1997), profits only represented 1.1% of total sales, much less than their worst score had been at any time during the previous era. The average ratio over this period of time was negative (-1.2%). However, it was positive for the firm as a whole (0.9%) and even more positive for the rest of the firm without Europe (1.4%) due to North American profitability from 1993 until 2000, which reached 5 to 6% in 1996-1999.<sup>22</sup> As such, the contrast between the two eras we have highlighted was significant for Ford in Europe. European profits fell in the 1990s in a manifest and durable manner.



Compared to Ford's poor automobile profitability in Europe over 1990-2002, consider now what the financial services sector contributed to total European profits. Figure 10<sup>23</sup> helps us to visualize this contribution. As before, the pre-1986 automobile series on this chart actually corresponds to total earnings, with both types of profits being largely assimilated at the time. To begin the analysis of Figure entirely corroborates the opposition between the two periods and the fact that 1990 was a watershed year in terms of Ford's automobile

<sup>22</sup> Note on the other hand that the average ratios for the whole of the firm and for the rest of the firm without Europe were both lower than they had been during the preceding era, dragged down by losses in North America in 1991, 1992, 2001 and 2002.

<sup>23</sup> Representing data in constant 1996 dollars and adjusted for USD foreign exchange variations as per the aforementioned principle for the presentation of turnover figures.

profitability in Europe - something also highlighted by the previous chart. As for the specific issue of financial services profits, the chart shows that they were always positive and grew consistently. These profits tended to offset the automobile activity's poor profitability over this period in time (1990-2002), meaning basically that the firm was balanced in terms of its total profits in Europe. This observation is confirmed by Table 4.<sup>24</sup>

Automobile losses in Europe were almost entirely offset by financial services profits over 1990-2002 and average total profits were only slightly negative (-\$60 million) during this time. Europe appears to have contributed a whopping 50.6% to the firm's profits between 1975 and 1985, and still accounted for 26.1% during the latter part (1986-1989) of Ford-Europe's glory years. In both Europe and United States, this latter sub-era was a time of economic boom, meaning that it cannot be used to benchmark the profit levels reached during the Table's other eras (which include both expansion and recession phases). Note the financial service sector's already significant contribution to Ford's global earnings (17.5%). Over 1990-2002 this would become paramount, reaching the heights of 56.1%.<sup>25</sup> Ever since Ford started supplying 1986-2002 data in a broken down form, financial services have contributed all told upwards of 41.4% of world profits and 68.5% of European profits. The mediocrity of automobile profits in Europe means that despite a financial sector in this part of the world that is smaller than in North America, Europe is more reliant on this sector to ensure its profitability.<sup>26</sup>

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<sup>24</sup> The table's data is expressed in constant 1996 dollars but has not been adjusted for variations in the USD exchange rate. As indicated in a preceding footnote, these are current profits that do not take four exceptional events into account. For the 1990-2002 period and for world data, re-integrating these events would cut average automobile profits to \$367 million, bringing financial sector earnings to \$2,674 million and total earnings to \$3,041million.

<sup>25</sup> This preponderance is related to the fact that despite a few boom years in the latter half of the 1990s, American automobile earnings of this era were hit by 4 years in the red (1991, 1992, 2001 and 2002) as mentioned in a previous footnote. If for the purposes of our chronological breakdown we were to emphasize a business cycle logic when defining our periods of time, and more specifically the American cycle (given this country's primacy for the firm), it would be legitimate for us not to include the years 2001 and 2002, years of recession heralding the onset of a new cycle. Over 1990-2000, average annual automobile, finance and total profits for the whole of the firm hit \$1,988 million, \$1,602 million and \$3,590 million in constant 1996 dollars, respectively (excludes exceptional events). Financial services' share of total profits over the course of the cycle was therefore around 44.6%, still a significant total.

<sup>26</sup> For an extensive analysis of the Ford's financialization see J. Froud, C. Haslam, S. Johal and K. Williams "Ford's New Strategy: A Business Analysis of Financialization" in M. Freyssenet and Y. Lung (eds), *The World that Changed the Machine: The Future of the Auto Industry for the 21<sup>st</sup> Century?*, Proceedings of the Eighth International Colloquium of GERPISA, Paris, 2000 (also in *Actes du GERPISA*, n°31, April 2001).

TABLE 4: Ford's average annual net earnings in Europe and across the world broken down by sector of activity, in millions of constant 1996 dollars

Periods	Europe			World		
	Automobile	Finance	Total	Automobile	Finance	Total
1975-1985	na	na	780	na	na	1,540
1986-1989	1,304	103	1,407	4,438	947	5,384
1990-2002	- 284	225	- 60	1,173	1,502	2,675
1986-2002	89	196	286	1,941	1,371	3,312

NB: data on the breakdown in the automobile and finance categories was only available from 1986 onwards. Deflator – US GDP prices. *Source: FMC annual reports.*

Our initial section has been an attempt to pursue a global and mainly quantitative vision of the history of Ford's past 30 years in Europe rather than to focus on Ford of Europe itself. This is due to the nature of the data that is available. Our efforts do however lay the foundation for the following two sections, which will be more specifically geared towards Ford of Europe. This first section has helped us to justify the choice of periods we have used for the purposes of our study. The opposition between the golden years of the 1970s-1980s and the troubled years of the 1990s is based on the convergence of various observations relating both to commercial and also to economic and financial performance. Of course, the watershed between the two periods will vary depending on the indicators being used. The choice of 1990 as the date when the second era opened is tantamount to emphasizing a profitability criterion. Based on the quantitative data we have already accumulated and pursuing a more qualitative type of complementary approach, it now behoves us to try and understand how and why Ford of Europe, after years of successful development, fell victim to more difficult times.

## 2. 1967-1989: Ford of Europe's success in its continental integration mission

With the creation of Ford of Europe (FoE), Ford expected to turn a significant profit on the integration of its European activities. We have already seen that over the period 1967-1989 Ford was not disappointed in this respect. Of course, the positive outcomes it achieved were not solely due to the creation of one particular structure. Ford's success also (and in fact primarily) stemmed from the efficient way it worked to take advantage of the opportunities that the European environment offered. One way to account for this is to categorise Ford's achievements into three areas: organisation; product; and means of production. The first refers to the implementation of the FoE structure itself, i.e., the transition from the mere vision of the future to a concrete organisation. These initial organizational choices turned out to be highly operative and subsequent changes to them would be marginal at most. In contrast, constant change and renewal define products and production. With respect to products, FoE's mission was both to unify and also to extend the Company's European range. With respect to

the means of production, its mission was to both coordinate and transform manufacturing facilities, R&D efforts and sales channels.

## **A. Ford of Europe: a managerial structure of coordination**

In the introduction to this chapter we discussed the backdrop to Ford-Europe's foundation in 1967 by situating this event in a historical perspective. Ford's main aims were to end the internal competition between its German and British entities; take full advantage of a European Common Market that would probably grow to encompass other countries (including Britain); generate economies of scale; and commonalise resources. Towards this end, Ford came to the conclusion that it needed to create a specific organisational structure: FoE.<sup>27</sup> We will try to analyse the creation of this structure first before honing in on the way it was managed.

### **a. The creation of a specific structure**

When analysed after the fact, Ford's decision to unify its European activities clearly seems to have been the right decision. By the same token, in all likelihood this action was not nearly as obvious and easy to formulate *ex ante*, since it constituted a clear break with existing practices that were all the more entrenched inasmuch as up until that point they had helped Ford to benefit from strong growth in the European markets. Becoming aware of the usefulness of a particular change is one thing, putting together the elements of solution is another. Yet this is what Ford had to do to convert its early vision into a solid and defensible plan. John Andrews, for 7 years head of Ford Germany, is reputed to have been the father of the FoE project.<sup>28</sup> His plans are said to have been examined at a work meeting held in Paris in June 1967 in the presence of Henry Ford II (accompanied, amongst others, by Robert Stevenson, executive vice-president in charge of international operations). Following this meeting, the chairman and chief executive officer (CEO) of Ford Motor Company decided in favour of the creation of Ford of Europe Inc. and Andrews became its first chairman.

FoE was a management structure - not an ownership structure. Its purpose was to totally coordinate all of Ford's activities in Europe, meaning all of the national companies that managed, owned and took legal and fiscal responsibility for Ford's industrial and commercial assets in each of their respective countries. However, these national companies were not to become subsidiaries of FoE. Instead they remained 100% holdings of the parent company, Ford Motor Company. Ford was clearly forced to adopt this underlying national company-based organisation for reasons relating to legal and State borders - although this choice was also justified at a commercial level given that each of the distribution networks needed to be managed as close as possible to its respective market. Some of these companies were purely commercial in nature. Others were industrial as well, if a production facility was present on that particular national territory. Ford Motor Company Ltd. and Ford Werke AG were the two main national companies found in this latter configuration, but not the only ones. It may seem self-evident that organising FoE into national companies was the right choice until such time as Europe became a completely integrated economic and political entity, but we can still have

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<sup>27</sup> See also the chapter on Ford's strategy and evolution in Europe by S. Tolliday

<sup>28</sup> This affirmation comes from a book written by Dennis Hackett and ordered by FoE in 1978 to celebrate the Ford Motor Company's 75th anniversary: *The Big Idea, The story of Ford in Europe*, Ford of Europe, Brentwood, 1978. We will be borrowing a number of historical elements from this publication, relating to FoE's first decade of existence.

questions about the decision to leave each of these national subsidiaries attached to the American parent company. And how should the ensuing dissociation between the organisation of managerial functions and the organisation of property rights be analysed? This may in fact be related to Ford's past experience in Europe. In our introduction, we mentioned Ford's inconclusive experience with the "1928 plan" to allow its English subsidiary to assume a leadership role in Europe. The idea had been for the subsidiary to launch a public rights issue and to take majority holdings in Ford's other national companies in Europe. But after the War one of Henry Ford II's first and paramount decisions on Europe was his 1950 decree that the American parent company should take direct control over all European national companies. By creating Ford of Europe, he perpetuated this approach worldview and turned his back completely on the modalities of the "1928 plan" – whose only surviving element was the philosophy of continental integration (an idea that had been premature in 1928 but whose time had now come due to the advance of free-trade in Europe). With regards to the two large national subsidiaries in Britain and Germany, the goal became that of creating a situation in which they could work together. The means chosen towards this end were to avoid giving one or the other of these entities a hegemonic position, since this could have created major frictions fostered by the two subsidiaries' past competition in third markets.<sup>29</sup> And although the American parent company did want to integrate its European activities, this had more to do with the geographic scale of its operational outlook than with any desire to take a back seat or to delegate to its coordination entity any significant margin for strategic autonomy. Ford's power over its European subsidiaries was very extensive, as it would be over Ford of Europe. Henry Ford II often crossed the Atlantic in the company of his top managers, who would come along to supervise operations, visit plants and preside over important meetings. He would continue to act thus until he retired in 1979 as Ford Chairman and CEO – and his successors would do the same. With its bibles of procedures and instructions, the firm would acquire a reputation in control matters, often demonstrating a proclivity for efficiency achieved via the rigorous and centralising methods it had inherited from Henry Ford I, its founding father. Ford of Europe was well and truly an extension of the Fordian values of integration and centralism.

### **b. Managing Ford of Europe**

Great Britain inherited FoE headquarters, which were located at Warley, Brentwood (Essex), very close to London. This was a logical choice, given that Great Britain was Ford's European place of birth, its first market and its first production centre. As a supervisory and coordination centre FoE was a lean structure in staffing terms. Its borders were somewhat blurred, however, as it created an organisational chart encompassing all Ford personnel in Europe. For example, operational managers with European coordination responsibilities continued to report also to their respective national companies (British or German) and work out of their own countries. This double reporting and spatial distribution principle created intensive communications needs that had to be dealt with from the very outset (although spectacular developments in communications technology would make things much easier later on). Given how important this factor was for Company operations, Ford Europe early on, created its own small airliner to help people to shuttle back and forth on a daily basis between its various sites.

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<sup>29</sup> It is no coincidence that a manager from Ford Germany was pushing the FoE project. Although the British subsidiary's significant output advantage had already started to erode quickly, it could have used this fact (or its glorious past) to justify being awarded hegemony over all of Europe.

Ford of Europe was headed by a chairman who reported to the American parent company's executive vice-president in charge of international automotive operations. Looking at FoE's organisational chart in the late 1970s, we can see that this chairman was assisted by a vice-chairman charged with more specific "public affairs" responsibilities. This latter position was not always filled over the course of the period in question, however.<sup>30</sup> Four support departments reported directly to this upper echelon: legal and administration; industrial relations; finance; and public affairs - each run by a FoE vice-president. Further down the hierarchy, at the operational division level, we find a president who was in fact No. 2 in the European hierarchy. Reporting to him were four vice-president's in charge of manufacturing, sales, product development and commercial vehicles. Each of the four main operational divisions had its own support staff units. The manufacturing division, for example, had a purchasing unit, run by an FoE vice-president; a manufacturing planning unit; a product quality unit; and a plant engineering unit (the latter three each being headed by a director). At the line level below these divisions, we find the operational groups and their support staffs. For example, three such groups were found in the manufacturing division: body and assembly operations; power-train operations; and general services (a sibylline-named entity that managed FoE's different small components factories). Each of these groups had two support teams at its disposal: industrial relations; and finance. The sales division (whose support units included sales and marketing, industrial relations and European services) included four groups: Ford Motor Company Ltd.; Ford Werke AG; European sales operations; and Parts distribution operations. Note that the two main subsidiaries' respective specificities were maintained in counterpoint to the European sales group, which oversaw any other national companies that had dealership and agent network responsibilities to manage. Note also the existence of a small isolated group in charge of export operations outside of Europe, an entity that reported directly to the President of FoE and not to the vice-president in charge of sales. The product development division (also with industrial relations and financial support units) included three groups: car product planning; car engineering; and design. Lastly, the commercial vehicles division (also with industrial relations and financial support units) included three groups: truck manufacturing operations; truck sales and marketing; and truck product development. This general organisational chart would change over time but during the course of the period under study did not undergo any major alterations. The same cannot be said about the 1990s.

Traditionally, FMC annual reports list the names of the company officers comprising the firm's global senior management. In the 1970s and 1980s this list's overall structure remained very stable. Senior management was classified into four subgroups. At the very top there was the Office of the chief executive, usually with three members in the 1970s and four in the 1980s.<sup>31</sup> Unsurprisingly this entity housed the chairman and CEO of FMC itself, and all of its other members were executive vice-presidents. The second subgroup was comprised of those executive vice-presidents who did not work in the chairman's office. They varied in number from three to eight over the course of this period. Then came the vice-presidents' subgroup, whose numbers tended to fall over time, from more than forty during the 1970s to ca. thirty in the late 1980s. The final subgroup included around 30 other officers and operating

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<sup>30</sup> This vice chairman's position was filled from 1976 to 1980, and then from 1984 to 1989, by one and the same person, Walter. L.A. Hayes (who became the parent company's vice-president for Public Affairs during the interim period). In other words, the position seems to have been custom-made for him.

<sup>31</sup> The Chief Executive's Office had five members from 1979 to 1981, following H. Ford II's retirement in 1979.



executives. In this “who’s who” of Ford VIPs, it is interesting to monitor the role reserved for Ford of Europe. In the 1970s and 1980s, FoE’s chairman, president and vice-chairman (whenever this latter position was filled) were cited - as well as the four vice-presidents in charge of FoE’s aforementioned four operational divisions. Note however that from 1986 onwards, the vice-president in charge of commercial vehicles was no longer mentioned. The reason appears to be Ford’s decision to shed its unprofitable heavy trucks activity by building a joint venture with Iveco. All in all, anything from five to seven Ford-Europe managers appeared regularly on the global firm’s list of senior managers.

In terms of the individuals involved, note the rapid turnover in FoE chairmen and presidents (Table 5). On the other hand, greater stability did reign at the operational division vice-president level.<sup>32</sup> The golden road to a chairman’s position seems to have involved first working as president, although there were a few exceptions to this rule. The job of FoE chairman can be described as “political”, both in corporate governance terms and also with regards to the career paths that senior managers had to pursue to reach the highest levels. These top positions included becoming chairman and CEO of FMC itself, during those interim periods when no Ford family member had assumed this role, i.e. from 1979 (when Henry Ford II retired) to 2001 (when William C. “Bill” Ford Jr. took over).<sup>33</sup> Note that the position of FoE chairman actually provided its occupant, at the end of his/her term, with direct access to the rank of executive vice-president, often with responsibility for automotive operations in North America (NAAO) or else for international operations.<sup>34</sup> Furthermore, looking at individuals’ positions before arriving at the steppingstone of FoE president or directly becoming its chairman, we see that this sometimes involved responsibility for operations in Latin America or Asia-Pacific. This indicates that working as FoE chairman was part of an initiatory trajectory that Ford imposed on its senior managers to help them acquire frontline knowledge of the firm’s different geographic activity zones across the world. This largely explains the rapid turnover in FoE chairmen and presidents and suggests that FoE had limited strategic autonomy within the Ford group, and that Europe’s main orientations were analysed and decreed in the US.

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<sup>32</sup> Note especially the length of time William J. Hayden spent as vice-president in charge of manufacturing operations.

<sup>33</sup> The only FMC chairman and CEO during this interim period not to have been FoE chairman was Donald E. Petersen, who occupied these top positions from 1985 to 1989.

<sup>34</sup> In certain cases, however, the individual would leave the firm immediately thereafter. One example was Robert A. “Bob” Lutz, FoE’s longest-serving chairman (1979-1981 and 1984-1985). Lutz’s two stints were interrupted by an interim period during which Edward J. Blanch (formerly President) took over, with Lutz having become executive vice-president in charge of Ford’s international operations. Of course, this latter position was eliminated when Lutz returned to Europe and re-established after he left Ford, joining Chrysler at a later date. There is also the example of Lindsey L. Halstead who had quite a long term (1988-1991) as FoE chairman and who finished his career at Ford.

TABLE 5 : Ford of Europe chairmen, 1967-1992 including preceding position and highest subsequent position in FMC			
Name of Chairman	Dates in office	Previous position	Highest subsequent position working for FMC
John S. Andrews	1967-1968	general manager, Ford-Werke AG	Retired as chairman, he died shortly after
Stanley J. Gillen	1969-1970	President of FoE	na
Paul Lorenz	1971	President of FoE	na
Philip Caldwell	1972	na	FMC chairman and CEO (1979-1984)
William O. Bourke	1973-1974	President of FoE	Executive vice-president, Ford North American Automotive Operations
John Mac Dougall	1975-1976	President of FoE	Executive vice-president, Ford International Automotive Operations
Harold A Poling	1977-1978	President of FoE	FMC chairman and CEO (1990-1993)
Robert A. Lutz	1979-1981	President of FoE	Executive vice-president, Ford International Automotive Operations
Edward J. Blanch	1982-1983	President of FoE	No apparent FMC function
Robert A. Lutz	1984-1985	Executive vice-president, Ford International Automotive Operations	Executive vice-president, he left FMC in 1986
Kenneth Whipple	1986-1987	Vice-president, Corporate Strategy	Executive vice-president & President, Ford Financial Services Group
Alex Trotman	1988	President of FoE	FMC chairman, President and CEO (1994-1998)
Lindsey L. Halstead	1989-1992	Latin American & Asia-Pacific Automotive Ops	Retired as chairman
The dates in office are assessed at yearend. na = data lacking at beginning of period. For 1993-2003 see Table 8. <i>Source: FoE and FMC annual reports.</i>			

To conclude this section, we compare some similarities and divergences between Ford and GM. Like Ford, GM had problems in Europe, with its English subsidiary Vauxhall Motors Ltd. and its German company Adam Opel AG - two firms living separate lives as regards their products and manufacturing operations, and which in fact competed with one another in third markets. One difference from Ford was the fact that the gap between GM's two subsidiaries was wider and in reverse order (the German Opel being much larger than the English Vauxhall). GM only created a GM-Europe coordination structure in 1987, some 20

years after Ford.<sup>35</sup> Of course, this does not mean that it waited until then to enforce the same sort of European integration strategy as Ford. The difference is that GM achieved that integration via Opel's hegemony, with Vauxhall's vehicles (with the exception of a few variants, including right hand steering) becoming little more than relabelled Opel cars. The creation of GM-Europe can be interpreted as a manifestation of the desire to better control the GM Group's German subsidiary and to exploit its Opel products in the rest of the world. GM's less centralising tradition is reflected in its different approach. This is a constant that would continually arise in the head-to-head confrontations between Ford and GM: reciprocal imitation and convergence in the ends employed, but achieved using divergent means.

## **B. The unification and expansion of Ford's European product range**

Right after Ford of Europe was created, the immediate priority was to take the Group's product plans for Great Britain and Germany and to merge them into a single plan featuring shared products. This raises questions as to the appropriateness of the decision to extend the product range in a direction that the two subsidiaries and American parent company had previously viewed with more than a little scepticism: the small car segment. Of course, the end result would be a major project (and huge success) for Ford: the *Fiesta*. Starting in the late 1970s and until the late 1980s, FoE's activity would be characterised by efforts to derive maximum advantage from its newly widened and temporarily stabilised product range, which it would occasionally renew by introducing new models. We will broach these various aspects by focusing on passenger cars, before concluding with a fourth section that deals more specifically with commercial vehicles.

### **a. Unifying the European product range**

At the time that FoE first began operations, Ford Great Britain offered an extended product range that went from the *Anglia* (which was in need of renewal) to the *Zephyr/Zodiac* tandem at the upper end, via a mid-range composed of the *Corsair* and the *Cortina*, these being the British subsidiary's signature product(s). The German product range was broken down, from bottom to top, into the different variants of the *Taunus* (the 2-door or 4-door); the *12M/15M*; and the *17M/20M*. British automobiles had rear-wheel drive whereas the Germans used front-wheel drive. The Germans were in great need of renewing their lower range, but British were further ahead with their plans for this segment. Hence FoE's decision was that the first car in the unified product range would be the British one. This was to be the first in a long line of *Escorts*, a car launched in 1968 and manufactured jointly in Great Britain and Germany to serve all European markets. German manufacturing of the Escort was carried out at Genk in Belgium, at a plant reporting directly to Ford Werke AG. Genk underwent accelerated tooling benchmarked to the British programme since initially no plans had been made to make the Escort on the Continent. In Great Britain, manufacturing was done at Halewood.

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<sup>35</sup> GM-Europe was based in Zurich, Switzerland. GM would subsequently (from 1992-1997) create on this site another structure with responsibility for all of its international operations. For a comparison between GM and Ford, see G. Bordenave and Y. Lung, "The Twin Internationalization Strategies of US Automakers: GM and Ford", in M. Freyssenet, K. Shimizu, G. Volpato (eds), *Globalization or Regionalization of the American and Asian Car Industry?*, Palgrave-MacMillan, London and New York, 2003.

Of course, the Escort became a definite success that would ultimately contribute greatly to Ford's expansion in Europe – as would the arrival of a new item in the product range, one that was born out of an old project the firm had postponed until that point. Indeed, Ford's designers had been thinking about creating a European adaptation of the *Mustang*, given this sports coupe's enormous success in North America. What Ford did was to concretise this project by launching the *Capri* in 1969, taking the risk of entering the peculiar so-called specialty car niche. The Car was manufactured at Saarlouis. This product innovation would be crowned with success, notably in Germany where the car ended up capturing a 3.5% market share. After this the unification drive continued without interruption, and from the early 1970s onwards it was the mid- and upper-ranges' turn to be renewed. This time the British and German teams had had time to practice working together and to cooperate fully in product development matters. First came the renewal of both the *Cortina* and the *Taunus 17M*, core items in the two product ranges and vehicles locked in head-to-head competition in third markets. Although the maintenance of separate names (the *Cortina [Mark III]* and the *Taunus*) was considered preferable, henceforth the cars would only differ in minor details, with Ford trying to stress continuity to its customers. The basic version of this car (manufactured at Dagenham and Cologne) was a rear wheel drive 4-door. The Germans also produced a 2-door coupe version, this being a very popular design in their market. The new cars were launched in 1971. A final point in this forced march towards unification was the 1972 renewal of the top-of-the-range. This time the cars' names were changed, becoming the *Consul* and the *Granada*, although once again variations between the German and the English models were minor. The few remaining differences can be viewed as signifying that the unification drive was not complete and that another generation of models was needed before differences could be totally erased. However, these variations were very minor in comparison to the situation in 1967. The basic elements defining an automobile product's underlying structure, i.e., body, engine and transmission, would henceforth be the same on both sides of the North Sea. In reality, these were the same products and car models. At most one could say that different versions varied in their manufacturing, and that this was justified by the markets each was serving.

### **b. Major project and a big success for Ford in Europe: the Fiesta<sup>36</sup>**

Europe is a Promised Land for small cars. An American manufacturer is likely to hesitate about approaching this market segment since it differs so greatly from the product norms to which it is accustomed. "Small cars, small profits" is a maxim that highlights this malaise. Furthermore this is an old tale, one that had already cropped up in the interwar period and which arose time and again after 1945. Not that Ford didn't offer small cars in Great Britain or even in Germany<sup>37</sup> in the immediate aftermath of the War, but whenever the time came to renew a product there would be a spontaneous shift up-range, especially if we compare Ford's products with those being offered by certain native European competitors.<sup>38</sup> Small Ford cars were still relatively large. Plans in this area never got past the drawing board, or even past the prototype stage. FoE felt it needed a class B (mini-segment) car to round out its product range. Its first European study in this area kicked off in late 1969. A pre-project

<sup>36</sup> For detailed developments on this topic, see D. Hackett (1978) and E. Seidler: *Opération Fiesta, autobiographie du projet Ford Bobcat*, Edita, Lausanne, 1976.

<sup>37</sup> In Great Britain this was the *Popular* first of all, copied from a pre-War model, followed by the *Anglia*; in Germany this was the *Taunus 12* and *12M*.

<sup>38</sup> Austin-Rover with its famous *Mini*; Fiat with the *500*; Volkswagen with its world renowned *Beetle*; Renault with its *4CV*; and Citroën with its idiosyncratic *2CV*.

took shape in 1971 with parent company involvement and even approval from Henry Ford II himself. Progress was slow, however, with Ford seeking assurance that the project would in fact be viable, notably via advanced marketing research (and before making any decisions as to production location). In 1973, when the first oil shock broke out, the project moved past the pre-programme stage to become an actual programme. The B-car project had been altered in the meantime to become the *Bobcat* project. This was a major initiative, since not only did it involve entering a product range that targeted a mass segment but also because it intimated a need to increase production capacities in Europe. The originally envisaged production scale was 400,000 units a year, rising later to 500,000 units following the decision to export the car to the United States in reaction to the first oil shock. The initiative would in fact be a chance for Ford to seriously re-orient its European industrial geography – and to return to Southern Europe.

In 1972 Ford persuaded the Spanish government to ease its protectionist laws. The new legislation would often be referred to as the “Ford law”. In the wake of this change Ford made a big investment in Almusafes, a small town near Valencia where it built a large body and assembly facility supplemented by an engine manufacturing plant.<sup>39</sup> It also decided to build a second transmissions plant on the Bordeaux site, amongst both to supply the Valencia factory and to complement the automatic gearbox production plant that had just opened in 1973 (and whose output was to be exported to the United States). The initial plan was to produce the car at Ford’s Saarlouis (Germany) plant and at the new Valencia plant. A little later the car would also be manufactured at Dagenham. The first full prototype came out in October 1974, series production was finally initiated at Saarlouis in March 1976 and 6 months later at Valencia. The *Fiesta* was put on the market at various times between September 1976 and early 1977, depending on the country involved.

Ford spent \$1 billion on this programme, roughly equivalent to \$2.5 billion today. This heavy investment in plants, production equipment and R&D was worthwhile, with Ford sales (and profits) skyrocketing between 1976 and 1979. Of course, some aspects of the programme disappointed, for example exports to the United States did not last very long. Nevertheless the car’s arrival was timely for the European market’s B class, given the recurrent oil shocks. The *Fiesta* found a lasting place for itself in this segment. Through this introduction, Ford had made sure that its product range would cover all of Europe’s main market segments.

### **c. Product range management and renewal in the 1980s**

Having achieved an overall equilibrium, Ford of Europe’s product range management began to focus on introducing technological innovation whenever models came up for renewal. The Company also began to offer an increasing number of basic model versions and variants. Cars were renewed over ca. 12-year cycles that included more or less in-depth intermediary modernisations that also provided opportunities to offer new versions and options. In 1980 a new *Escort* came out. This renewal was simultaneous with the launch of the American *Escort* and allowed Ford to portray this product, in its advertising images, as a world car - although in industrial terms this was not really the case. Both cars’ external design

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<sup>39</sup> In March 1974 Henry Ford II came to Almusafes to inaugurate construction work and was given an enthusiastic reception from the local population. The building and tooling of the Valencia plants had to be completed within a very short period of time (initial groundwork having only begun in January 1974). Series production was finally kicked off in October 1976, in the presence of Henry Ford and King Juan Carlos.

had resemblances but in reality they had nothing in common, having been developed separately on both sides of the Atlantic. This programme led to the creation of a new production site, the Bridgend engine plant in Wales. In 1983, the *Escort* was supplemented by a car built upon the same platform and sharing almost all of the same components. This was the *Orion*, which differed from the *Escort* because of its body structure. Whereas the *Escort* was a 3-door or 5-door hatchback, the *Orion* was a 4-door notchback. With this notchback variant, Ford was catering to a specific preference for this type of design in certain countries, notably in Great Britain and in Southern Europe.

In 1982, a year before the *Orion* came out, the *Taurus/Cortina* tandem was laid to rest. Any residual differentiation between these two models when they were replaced by a single vehicle called the *Sierra*. This was an innovative product using rounded forms that incorporated learning from advanced aerodynamic studies. After a slow but steady start, it would become market leader in its category in the mid-1980s. It would also be broken down into a number of 4-door and 5-door, estate and even pickup truck versions. One very well equipped version, assembled by the German firm W. Karmann GmbH, would be exported in small quantities to North America under a special name: the *Mercur*. In 1985 it was the turn of the top-of-the-range to be renewed. The *Consul/Granada* tandem became the *Scorpio/Granada*. A different name continued to be used in Germany and in Great Britain, but the cars were identical. This was the first series-produced vehicle to offer ABS braking.

TABLE 6: The Ford European Car Range in the mid-1980s

Model name	Market segment	Launch year	Body type	Nr. of engines	Nr. of versions	Production in 1985
FIESTA	B mini	1976 refresh: 1984	coupe (3 doors)	4 + D 0.95 to 1.6 L	18	355,000
ESCORT	C lower medium	1980 refresh: 1986	coupe / sedan (3/5 doors) estate, conv.	4 + D 1.1 to 1.6 L	42	441,000
ORION		1983 refresh: 1986	sedan (4 doors)	3 + D 1.3 to 1.6 L	9	118,000
SIERRA	C / D upper medium	1982	coupe / sedan (3/5 doors) (*) estate	4 + D 1.6 to 2.8 L option: 4wd	48	322,000
SCORPIO/ GRANADA	D / E full size/ luxury	1985	sedan (5 doors) (*)	3 + D 1.8 to 2.8 L option: 4wd	14	100,000 (**)

Abbreviations: conv: convertible; D: diesel ; L: liter; 4wd: 4 wheel drive. (\*): a (4-door) notchback version would be available later; (\*\*): with previous models. The number of versions takes into account the combinations of bodies, engines, transmissions and internal layouts that were available on the French market. The *Capri* is not included because it had come to the end of its cycle in 1985 without renewal.

Sources: French automotive press and Ford.

The Table 6 shows that the firm had come a long way from its famous beginnings as the purveyor of a single model. But a great distance had also been travelled since the 1960s and 1970s. Ford had learned to manage significant complexity by adopting a combinatory approach using a variety of vehicle elements derived from a shared source. For instance, its generic models could be broken down into a number of body versions, each of which would reuse a number of shared parts. These separate versions could then be further broken down

into seven engine families and five transmissions families that were developed alongside of them. In other words, commonalisation made it possible to generate both economies of scale and economies of scope. Now, the know-how that is involved in the production of differentiation is predicated on an advanced standardisation of mechanical subsystems and body elements. In this sense, the break with early Fordism was less far-reaching than it first appeared. It is noteworthy that rival product offers were also based on relatively similar principles, i.e., Ford's competitors were also offering countless versions of their models. From this point of view, there was nothing exceptional about Ford's stance.

A number of qualitative elements complemented the quantitative aspects of this product range. Ford enjoyed a good reliability image in comparison to its rivals. Its products offered the most up-to-date technological advances: engines that consumed less fuel; five gear transmissions; ABS braking; early forms of embedded electronics. Sometimes Ford acted as pioneer in technological matters. For example, in the late 1980s it started to use its Bordeaux site to manufacture a new continuous variation automatic gearbox. Ford was beginning to acquire a taste for cutting-edge technology and coming out with more sports versions<sup>40</sup> of its cars than other carmakers (an effort leveraging Ford's leading role in European motor sports). All in all, in the mid-1980s FoE had a balanced product range that was diversified and attractive. The best proof of this is that Ford was Europe's No. 1 carmaker in 1984. It only stayed top for a year but continued afterwards to rival the two other market co-leaders, Fiat and VW-Audi. Of course, its profits, albeit sufficient, had fallen from the record earnings of the late 1970s. When the new Chairman took office in 1986<sup>41</sup> he said that he wanted "to achieve a better balance between market share and profitability", thereby inferring that Ford had pursued until then an aggressive pricing policy. And as we have seen he was successful in this respect, inasmuch as Europe earnings did rise sharply from 1986 to 1989, without any great drop in market share. 1989 also saw the total renewal of the *Fiesta*. Although the car had been modernised, its sales had eroded slowly over the course of the 1980s. The *Fiesta* was now being offered in a 3-door or 5-door version in an attempt to access a more family-oriented clientele. This focus was also reflected in its design, which became more traditional in shape. In short, FoE's act that closed out this golden years era was to renew the car that had been its most important success - a highly symbolic gesture.

#### **d. FoE's attempts to refocus its commercial vehicle sector on its strengths: light commercial vehicles**

Even before FoE was created to unify the group's European product range, Ford was offering a common vehicle in the region's different markets. This was a light commercial vehicle called the *Transit* van, the product of an American concept. Launched in 1965, the *Transit* was manufactured in Great Britain and Germany, although there were small mechanical variations between the two. From the very outset the *Transit* gave Ford a solid and durable position in the light commercial vehicle segment. In fact, the *Transit* name is the longest lasting of all Ford's European products. Still around today, it has been the key name for Ford vans in Europe since 1965.

Ford has produced trucks in Europe since the interwar years. Indeed, truck manufacturing was the prime means to restart business in Germany after WW2. When FoE

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<sup>40</sup> The *Fiesta XR2*, the *Escort XR3i*, the *Escort Turbo RS*, the *Sierra XR 4X4*, the *Sierra RS Cosworth*, the *Scorpio 2800i 4X4*.

<sup>41</sup> K. Whipple, who would only stay one year in Europe.

was founded, trucks manufacturing was mainly the British subsidiary's responsibility – an acquired position that led to a concentration of the truck business (part of the heavy commercial vehicles segment) in Great Britain. This contrasted with the British and German shared manufacturing of the *Transit*. The European truck business was based on American R&D activity for reasons pertaining to critical mass and this market's narrow and highly differentiated nature. Rounding out the commercial vehicles sector were light commercial vehicles derived from cars, which tended to be produced in Great Britain as well.<sup>42</sup> The *Transit* family dominated sales volumes in this commercial vehicles group. Its strong diffusion in Europe basically matched the trajectory followed by Ford car sales. After the *Transit*'s renewal in 1985 sales really shot up and surpassed the 150,000-unit mark. Sales of commercial vehicles derived from the *Fiesta* and the *Escort* were not as evenly distributed, although they were substantial, reaching ca. 40,000 units in the mid-1980s. As for heavy trucks, Ford renewed its product range in 1981 by introducing the *Cargo* family, vehicles ranging from 6 to 32 tonnes. In the mid-1980s sales of this vehicle class reached 10,000 to 15,000 units. However, in investment terms and because of its small size, this business line was not very profitable. Moreover, Ford's rivals in this area quickly concentrated into a few major groups. In 1986 Ford decided to shed this business, joining Iveco (a Fiat group subsidiary) in a joint venture in which it held a minority stake, with Ford bringing its truck products plus its Langley plant into this company. In other words, Ford chose to refocus on its strength (the light commercial vehicles sector) where it had strong commercial and industrial relationships with its car activities (whereas the truck business was much more specialized<sup>43</sup>).

### **C. Managing and modernising the European means of production**

Mainly concentrated in Great Britain and Germany at first, Ford-Europe's production activities began to move southwards with the initiation of the *Bobcat-Fiesta* programme. This integration of resources at a Continental level was unsurprisingly accompanied by changes in the distribution of manufacturing allocations whenever a model was to be renewed. A key aspect of any integration drive that takes place at a multinational level is the search for cost and competency-based localisation advantages. These changes in the different sites' manufacturing allocations constitute what can be called the shifting geography of Ford's production in Europe. A major trend would emerge progressively over the course of the period under study and be confirmed subsequently – Ford's withdrawal from final vehicle assembly operations in Great Britain. As such our first point focuses on the shifting geography of Ford's production in Europe. Our second point will be the other major concern that arose during this era (the very early 1980s) - the introduction of new technology and new management methods. Clearly means and management were always being improved but the transformations that took place at this time raised serious questions about a number of previously well-entrenched principles of industrial organisation.

#### **a. Ford's shifting production geography in Europe**

Counting all of Ford's industrial and service entities in Western Europe, we come up with something like fifty locations during the 1980s, including R&D centres, final product

<sup>42</sup> Using the most common classification, small commercial vehicles derived from cars and the *Transit* family should be categorised as light commercial vehicles and not heavy commercial vehicles, which include trucks. If we say that three separate categories exist, the *Transit* can be treated as a medium commercial vehicle.

<sup>43</sup> Ford also shed its heavy truck activities in North America over the course of the following decade.



plants, components factories, spare parts distribution centres and the different national company headquarters. Here we will be paying particular attention to industrial production in the strictest sense of this term, including the factories and the R&D centres. There were 22 such sites in the mid-1980s, with one site sometimes including more than one unit.

First of all, one peculiarity that FoE had maintained since its birth was to preserve R&D at two large yet geographically distant sites. One was Dunton (Essex) in Great Britain, the other Cologne-Merkenich in Germany. It is important also to mention the test centre at Lommel in Belgium plus the Ghia styling studio at Torino in Italy. Of course, the Dunton-Merkenich duality should be viewed as an inheritance from the past, when two separate British and German subsidiaries had coexisted. The Dunton and Merkenich teams were supposed to work closely together and towards this end FoE developed dedicated means of communication. Videoconferencing facilities were set up from the mid-1980s onwards, with Ford subsequently applying all major ICT advances. Dunton seemed interested in vehicle kinematics or electronics and Merkenich was more focused on vehicle bodies or plant engineering. This collaboration was partially related to the way in which responsibilities were being subdivided but it also translated into major joint development initiatives, notably at the final product level. In addition Europe benefited from the fundamental research that was being undertaken in the United States. Every now and again pundits would discuss the possible concentration of Ford's R&D resources in Germany. The Company always denied these rumours. A few staff members were shifted around, but never to any great degree. Around 3,000 persons were working at Dunton and 2,000 at Merkenich in the late 1970s.

With respect to manufacturing, what we first observe is the multiplicity of sites. We will be focusing on the main ones, where vehicles were assembled or where engines or transmissions were manufactured (Table 7). The main sites encompassed several units and were multi-production in nature. Three major complexes emerged: the historical British and German complexes (the later including Genk); and a third one that was the child of the Southern expansion drive, to wit, a Franco-Iberian complex.

In 1985 the British and German complexes were quite similar in size, each employing more than 30,000 manufacturing operatives. The Table shows Great Britain lagging behind Germany in employment (if the main sites alone are considered). This was counter-balanced however by those smaller sites that are not depicted in this Table and which were more numerous in UK. These included Langley (trucks), Swansea (mechanical parts), Leamington (foundry), Basildon, Enfield and Belfast (components) in Great Britain, but only Dueren, Wuelfrath (mechanical parts) and Berlin (plastic parts) in Germany. The Franco-Iberian complex was smaller, employing fewer than 15,000 operatives. Besides the Valencia and Bordeaux sites, smaller sites included the CKD assembly plant at Azambuja in Portugal for *Transit* vans and the Charleville plant in France (which turned out construction equipment<sup>44</sup>).

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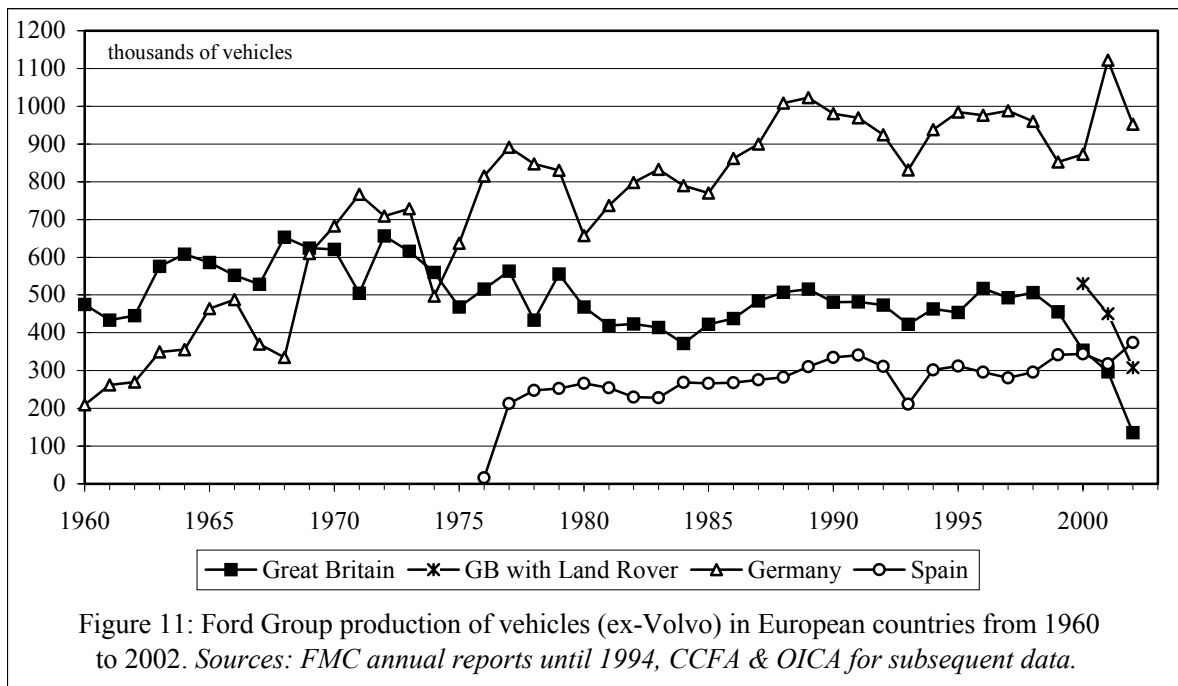
<sup>44</sup> This plant was left over from Ford's 1972 acquisition of the Richier Company. Its output of earthmoving machines was roughly similar to that of the farm tractor unit located at Basildon in Great Britain and at Antwerp in Belgium. These tractor activities were sold during the latter half of the 1980s. Ford continued to manufacture components at Charleville.

Manufacturing location	Date opened	Products 1985	Employment 1979	Employment 1985
DAGENHAM (Great Britain)	1931	Body & Ass.: Fiesta, Sierra Power Train: engines	B&A: 12,100 PT: 6,600	B&A: 8,300 PT: 3,200
HALEWOOD (Great Britain)	1962	Body & Ass.: Escort/Orion Power Train: transmissions	B&A: 11,500 PT: 2,500	B&A: 8,200 PT: 1,600
SOUTHAMPTON (Great Britain)	1953	Body & Assembly: Transit	B&A: 4,800	B&A: 2,900
BRIDGEND (Great Britain)	1980	Power Train: engines		PT: 1,800
COLOGNE (Germany)	1930	B&A: Fiesta, Scorpio, Capri PT: engines, transmissions	B&A: 13,500 PT: 6,600	B&A: 7,800 PT: 5,100
SAARLOUIS (Germany)	1970	Body & Ass.: Escort/Orion	B&A: 7,700	B&A: 7,500
GENK (Belgium)	1964	Body & Ass.: Sierra, Transit	B&A: 11,500	B&A: 9,500
VALENCIA (Spain)	1976	B&A: Fiesta, Escort/Orion Power Train: engines	B&A: 7,800 PT: 1,800	B&A: 6,700 PT: 1,300
BORDEAUX (France)	1973	Power Train: transmissions	PT: 3,800	PT: 3,200
Dagenham, Halewood, Cologne and Genk also manufactured components and intermediate products. <i>Source: FoE</i>				

These product allocations included the new ones that were decided upon during the latter half of the 1970s following the launch of the *Fiesta* and the renewal of the *Escort*. The latter was no longer produced at Genk but instead at Saarlouis, and the former moved from Saarlouis to Cologne, with Valencia now adding the *Escort* to its existing *Fiesta* production activity. Dagenham, which had been turning out an upper range vehicle (the *Granada*), lost this activity when it was pulled into the *Fiesta* production network. Therefore, and as had been the case with the *Capri*, the top-of-the-range model (which by 1985 had become the

*Scorpio/Granada*) was now being manufactured in a single location (Cologne). All other models were either assembled on two sites (for the *Sierra* and the *Transit*) or three (for the *Fiesta* and the *Escort*). Many have suggested that what Ford was seeking to attain with these “multi-sourcing” practices was a modicum of security in case of localised disruptions in output. However, scale considerations may well have been more important to Company, as witnessed by the concentration of top-of-the-range activities on a single manufacturing site. This trend towards production concentration would be strongly confirmed during the following era, as we will see. It raises the question of where production tends to concentrate. Nevertheless, one feature stands out: the diminution in the number of Ford vehicles being assembled in Great Britain, and the concomitant rise on the Continent.

Figure 11 shows changes in Ford Group (ex-Volvo) vehicle assembly quantities in Great Britain, Germany and Spain over 1960-2002. Besides from annual fluctuations reflecting business or product renewal cycle considerations, we note the dominant position acquired by Germany in the latter half of the 1970s, which it would continue to consolidate thereafter. Note Great Britain’s fall over the course of the 1970s and 1980s as well as its sudden plunge in the late 1990s. Finally, note Spain’s rising fortunes from 1976-1990, as well as its stabilisation at this level thereafter. It would appear that there is nothing new about Ford’s progressive withdrawal from assembly activities in Great Britain, even though this has accelerated in recent times.



This gives us good reason to start analysing this fundamental trend in the firm’s production geography. FoE’s multinational presence meant that it could act to exploit whatever static and dynamic localisation advantages it perceived. From a static perspective, this related to the different locations’ comparative manufacturing costs; productivity and labour costs; supply and logistics costs (both upstream and downstream); and tax regime. From a dynamic point of view, the firm could use the power it derived from its potential for geographic mobility to create emulation between its factories, either to get them to compete with one another or else to use as a bargaining chip when negotiating State funding. Like other multinational firms, Ford take advantage of these possibilities. For example, during the

1970s and 1980s it would often publicise the particular difficulties it was facing in Great Britain when discussing its production activities in this country. The British press widely echoed these comments, which mainly focused on local workforce performance, flexibility and reliability when compared to Ford's Continental factories. Performance would be specifically measured via hourly productivity or manufacturing quality comparisons that the firm organised and diffused amongst its various sites to establish a sort of internal benchmarking system.

This data, some of which trickled into the public domain via the press, tended to demonstrate (especially in the final assembly sector) that the British sites' performances were much lower than the German or Spanish ones. Flexibility refers to a workforce's capacity for adapting to business cycle fluctuations and above all to desired work organisation changes that might modify the nature of the tasks being undertaken. The numerous grades in the British labour system have often been portrayed as a handicap that impeded the introduction of new technologies and/or any modification of the division of labour in the workshops. Lastly, the reliability of the British workforce, meaning its capacity to fulfil production plans without any major disturbance, has also been highlighted, notably because the British sites had a greater propensity towards conflict than their Continental colleagues did. In the 1970s especially, Ford not only faced a number of official strikes in Britain but also had to cope with an endemic predisposition to professional demarcation micro-conflicts.<sup>45</sup> Although things did improve on this latter score over the following decade, Ford still suffered two official strikes in 1988 and 1990, industrial actions that greatly disrupted its output.

A significant episode in Ford's increasing scepticism towards the British productive space was its 1987 abandonment of plans to build an electrical and electronics components plant in Dundee Scotland due to the fact that it was unable to prevent more than a single union organizing at this new entity. Ford wanted a single union to deal with, as had been the case for the Japanese transplants. British unions, which were very divided on this question, finally refused to exempt Ford from the conditions that prevailed in its other production units. In the end, the plant was built at Cadiz in Spain. Note also that the British Isles were also hit by the plant closures that Ford decided upon in the early 1980s: the Dagenham foundry and forge; the Cork (Ireland) assembly plant; and the Amsterdam truck assembly plant. Of course, this observation does not lend itself to any particularly systematic conclusion. For the Amsterdam facility at least, output was clearly going to be repatriated to Great Britain (to Langley). Note also that Great Britain remained highly involved in the manufacturing of subsystems and components, as illustrated by the 1980 opening of an engines plant at Bridgend. As we can see, Ford may have emphasized work-related considerations to try to influence British workers' behaviour but other elements also figured in its production location policy. Problems of scale, the cost of Britain's island geography and British scepticism about the European Community (and later about the Euro) have also played against the country. On the other hand, the fact that this was the firm's leading market may have softened the delocalisation

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<sup>45</sup> In Great Britain Ford inherited a whole history of turbulent labour relations and had to confront powerful local shop stewards as well as umbrella trade unions representing many different professions, something that made it difficult to bargain efficiently at a centralised level. An abundance of literature has been written on these topics, including: H. Beynon, *Working for Ford*, Penguin Books, London, 1984; D. Mardsen, T. Morris, P. Willman, S. Wood, *The Car Industry, Labor relations and Industrial Adjustment*, Tavistock Pub., London, 1985; S. Tolliday, "Ford and "Fordism" in Postwar Britain", in S. Tolliday, J. Zeitlin (eds), *The Power to Manage ?, Employers and industrial relations in comparative historical perspective*, London, 1990.

efforts, as they could have damaged its commercial image there. In the period under study, Ford's visible withdrawal from final assembly operations in Great Britain was a real factor but one that was only relative in scope. It would however accelerate over the course of the 1990s.

### **b. The introduction of new technologies and of new organisation and management modes**

Both the global employment data analysed in section 1 and the detailed per-site data found in Table 7 in the preceding section demonstrate the magnitude of the adjustments in Ford-Europe staff numbers between 1979 and 1985. The overall fall in manufacturing employment was something like 30% between these two dates. This occurred at all sites. The drop was well above average at the two big historical centres of Dagenham and Cologne; about average at Halewood; and below average at Valencia, Genk and especially Saarlouis. A fall of this magnitude was more than just a simple adjustment of staff numbers to the slower trading conditions that followed the second oil shock. It resulted from an in-depth restructuring of Ford's productive processes, reflecting the Company's application of new technologies and changes in its work organisation. Staff numbers fell in similar proportions in North America at the same time. This shows that the productive organisation modernisation drive was basically homogeneous and simultaneous on both sides of the Atlantic. It should not be forgotten that this was an era when Ford's North American operational core was in dire straits. A rigorous cost-cutting restructuring plan was being implemented. Besides traditional capacity adjustment measures, this plan included innovative elements inspired from observations of Japanese management and organisation practices. Indeed, it was at this time that the firm, strongly motivated by its need for recovery, started to adopt methods that would later be referred to as "lean production".<sup>46</sup> In fact, Ford preceded most Western carmakers in this respect. Our main concern is not to ascertain whether these transformations constituted a total break with the firm's former industrial organisation model or if they involved a canonical model that all carmakers would share in.<sup>47</sup> What is clear is that these were major changes and that Ford-Europe did not escape this transformation process.

Within FoE, a campaign to increase awareness of the new practices was given the evocative title of "*After Japan*". This campaign included organised trips to Japan for a number of managers and was based on a broad diffusion of performance assessments comparing Ford's European plants and the sites of its Japanese associate, Mazda. These comparisons showed considerable gaps in productivity and quality. Many subsequent developments can be viewed in the light of these new perspectives. At the workshop level first of all, a major effort was made to reduce the number of indirect employees, and this translated into a broadening of the tasks fulfilled by direct operatives whose prime concern was initial equipment maintenance and (above all) manufacturing quality. For this purpose, Ford introduced SPC Statistical Process Control, a tool that raised its direct employees' awareness of quality by putting them in a position where they themselves had to control their own output. It also tried to raise employees' general involvement, often by introducing quality circles into its

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<sup>46</sup> See J.P. Womack, D.T. Jones, D. Roos, *The Machine that Changed the World*, MacMillan, New-York, 1990.

<sup>47</sup> See various contributions on this subject in M. Freyssenet, A. Mair, K. Shimizu, G. Volpato, (eds) *One Best Way? Automobile Firms Trajectories and the New Industrial Models*, Oxford University Press, Oxford, 1998; and in R. Boyer and M. Freyssenet, *The Productive Models*, Palgrave-MacMillan, London and New York, 2002.

European plants. But quality circles would be mainly developed at Ford's Continental plants since the British trade unions were generally hostile to them.

More generally, Ford tried a more cross-departmental management approach, a so-called "wall deconstruction" process that it had inherited from traditional Fordism. This was manifested at several levels: fewer professional grades; de-compartmentalisation of functions; establishment of cross-departmental problem-solving teams; senior executives' increased awareness of participative management.<sup>48</sup> The importance of a cross-departmental approach was especially highlighted in the product development area by Ford's attempt to get its product-development and manufacturing departments and its suppliers to cooperate from a very early stage, to solve problems before they arose, cut costs and shorten delays.

The final big area where Japanese influence manifested itself was supplier relationships. It was clearly deemed essential that suppliers make a strong contribution to the reduction in costs and to the improvement in quality. In the mid-1980s FoE's external purchases amounted to more than half of its revenues (i.e., its integration rate was lower than 50%). The vast majority (95%) of these purchases took place in Europe. Ford created a Q1 certification for its suppliers, subsequently extending this to its own factories. Obtaining a Q1 award meant complying with a certain number of organisational and outcome criteria whose fulfilment was considered necessary if a firm wanted to remain one of Ford's suppliers. Ford was trying both to reduce the number of suppliers it was working with and also to develop more stable and in-depth relationships with them by means of long-term contracts. Suppliers found themselves operating under the precepts of the just-in-time sourcing strategy that Ford was also beginning to systematically apply in an attempt to reduce inventory levels. Between 1980 and 1986 manufacturing stocks dropped from 13.9 to 8.1 days of production.

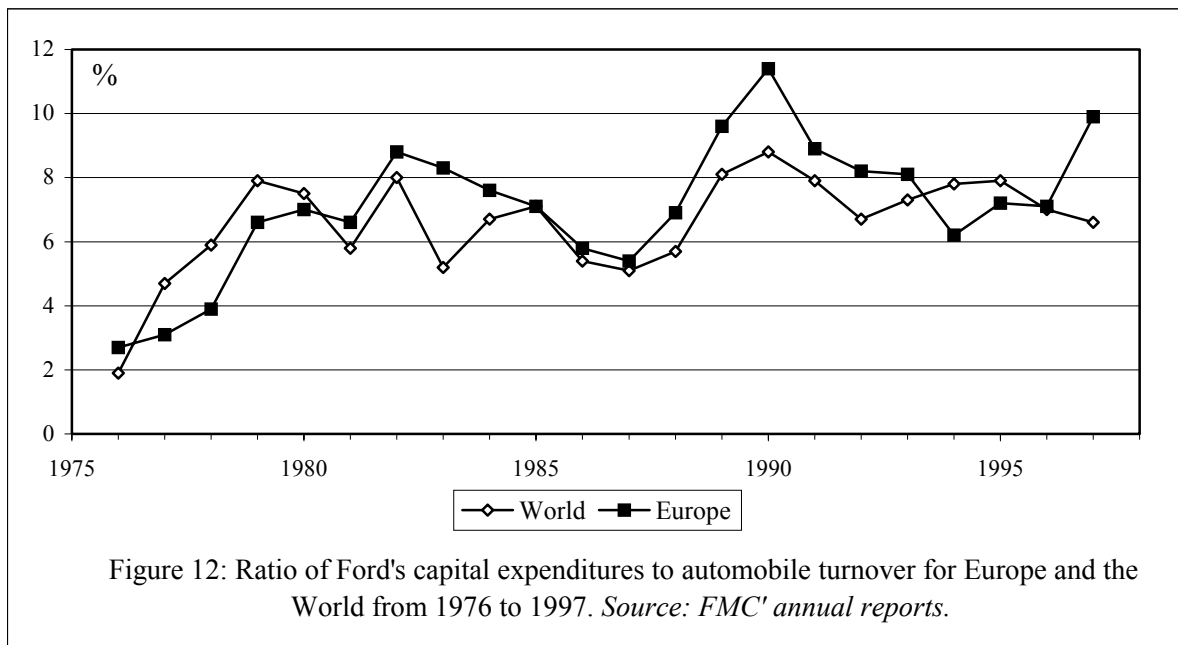
Altogether, the sum total of these new practices was uneven and steady at best. But they were not the only change levers that the firm tried to implement. The use of new technology was also to play a major role in the transformations that characterised the 1980s. This involved a massive implementation of IT in workshops and offices. Ford always lent a great deal of credence (and had a lot of faith in) technology, often operating at the cutting edge of innovation application. This was an area where the firm was very happy to publicise the new high-performance processes it was using. The most spectacular production resource to make a massive entry into its workshops was robotics, which took over the body shops' handling, welding and painting operations. FoE stated that it had installed 1,300 robots in 1986, two-thirds of which were involved in body shop and painting functions. On the *Scorpio*, the range's most up-to-date car at the time, 91% of all welding was automated, including 65% in flexible automation. In other areas robotics was not nearly as widely diffused, notably in final assembly where for the vast majority of operations it is difficult to replace the human touch. A few robots could also be found in the transmission and engine plants but the new equipment that Ford used in its machining activities mainly involved CNC machine tools. The first flexible automated sub-assemblies also appeared. These processes allied various machine tool groups with different handling and transfer devices controlled by central computers with a view towards optimising machine operations. Such technologies enabled a substitution of

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<sup>48</sup> On this latter point, see the book written by a Ford consultant, R. T. Pascale, *Managing on the Edge*, Simon and Schuster, New-York, 1990; as well as one specifically devoted to Europe by K. Starkey and A. McKinley, *Strategy and the Human Resource. Ford and the Search for Competitive Advantage*, Blackwell Publishers, Oxford, 1993.

capital for labour and also contributed to a lowering of costs inasmuch as they could be rapidly re-programmed to satisfy manufacturing scope and to keep the machines running for longer periods of time. They also improved manufacturing quality by integrating self-control mechanisms; and ameliorated working conditions by replacing difficult tasks and helping to redefine the direct operatives' jobs, which became more geared towards control, maintenance and management.

The needed for a reasonable mastery over these new technologies promoted some major workforce re-skilling initiatives that forced Ford managers to choose between the external market (hiring already skilled persons) and the internal one (staff training). Sometimes these technologies could be quite disappointing and create problems of excess or inappropriate capacity. Nor could they be applied economically in all areas. Nevertheless, they would henceforth be key to the firm's investment plans. IT also had a major impact on engineering and design work (as with CAD/CAM technologies first used to design the *Sierra*). Lastly, IT also made a significant contribution to management, notably when coupled with telecommunications, something that allowed for a progressive installation of interconnections between FoE's different sites; with its suppliers; and with its distribution network. FoE's introduction of these new technologies would translate into upward trends in overall investment – to the same extent as in the United States, if we refer to the ratio of capital expenditures to automobile turnover contained in Figure 12.



Ford-Europe tried to use these new technologies and the new Japanese benchmarking-inspired organisation and management practices to modernise its processes even as it was renewing its products. This was a necessity to ensure the Company's competitiveness in an environment that had forced Ford to considerably increase the variety of models it offered. This new environment, marked as it was by extreme variety and coupled with the need for quality, would create new problems that to a certain extent cancelled out the simplification and standardisation advantages derived from the unification of the British and German product ranges. New themes began to arise in the late 1980s: less complexity; more "commonalisation". FoE counted 36 million theoretically possible manufacturing combinations in the mid-1980s if all variables are crossed: models, versions, options, a market's own specifications, multi-sourcing and subsystem and component varieties. It stated

aim was to bring this figure down to below 100,000 by the end of the decade. There were 27,000 different types of (pre-painted) “bodies in white” alone. The aim was to divide this by more than 10. In actual fact Ford was re-formulating its recurring preoccupation with simplification and standardisation, showing that these issues can never be definitively solved given the permanent contradiction between carmakers’ desire to differentiate their product range to be as close as possible to their markets and yet at the same time keep costs under control. These themes would remain entirely topical during the 1990s.

One conclusion has emerged. The initial mission to integrate the firm’s activities in this region was a success. The coordination structure that Ford set up was able to organise an Anglo-German co-habitation around a reunified product range and shared industrial and commercial resources. This does not mean that the original national identities disappeared completely. In fact they were wilfully preserved in certain areas, specifically with the continued double localisation of R&D activities in Great Britain and Germany. In other areas this was less the case, with the beginning of a relative withdrawal of final manufacturing activities from Great Britain to the benefit of Germany, which had a number of comparative productivity and quality advantages to offer. But FoE did not just fulfil its founding missions. At the time of the big *Fiesta* project it also crafted the deployment of Ford’s industrial apparatus towards Southern Europe, a move that signalled the Company’s durable embedding in the B segment. Ford-Europe also played a full part in the technological and organisational renewal that became a feature of the European and global automobile industry in the 1980s. All in all, the shift in Europe from a multi-domestic organisation based on separate countries to a multi-regional organisation existing on a Continental level was very profitable to Ford.<sup>49</sup> Ford was able to leverage the benefits derived from a multinational presence that was being managed in integrated manner at a Continental level. Ford’s good commercial and financial performances during this period bear witness to its success.

### **3. The identity crisis of Ford of Europe as part of a global firm (1990-2002)**

After successfully carrying out its regional integration, the question for Ford in the late 1980s became how to garner advantages through integration at a higher level, i.e., worldwide. This would become a major focus during the 1990s. Remember that our periodisation of Ford of Europe’s activities focuses on the contrast between the Company’s commercial and economic performance over the period preceding 1990 versus the subsequent era. Profitability was much lower over this latter period (close to zero on average) and the firm’s progress slowed down despite the acquisitions it made in the late 1990s. Furthermore, Ford’s market share was crumbling in Europe, particularly towards the latter half of the 1990s. It is true that the general environment during this second period was less favourable. The macroeconomic conditions of the preceding era had clearly been strongly affected by the two oil shocks, but average growth was remained higher than during the 1990s, when it would suffer from restrictive monetary policies. The automotive market was also a theatre of increased competitive pressures, notably due to the progressive lifting of protectionist barriers against

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<sup>49</sup> A similar regional integration trend took place in the other regions of the world. This began in the early 1960s when United States and Canada were integrated to make the North American zone. Mexico would join this zone in the early 1980s, before NAFTA was even created. Similarly Ford tried to manage its Latin American activities in an integrated manner, and attempted the same thing with its Asia-Pacific zone activities. See the book by Isabel Studer-Noguez, *Ford and the global strategies of multinationals : the North American auto industry*, Routledge, London, New-York, 2002.



Asian producers. With the new technologies and new management and organisational practices that it introduced Ford may have seemed to be acting as a first mover but most other European carmakers soon caught up.

The gap between generalist and specialist carmakers started to disappear in Europe, with competition becoming increasingly focused on concepts like innovation and differentiation as a result of the increasing success of “niche” cars that conveyed new concepts and which were often hybrids of previously existing forms. Against this general backdrop Ford decided to pursue its own profit strategy, one whose main foundations can best be described as volume and standardisation.<sup>50</sup> Of course, this does signify that the firm had turned its back on the idea of product differentiation but instead that it was trying to achieve this end by placing greater emphasis on volume and standardisation, in other words, by pushing as far as possible both a policy of sharing platforms amongst a number of different models and the advanced standardisation of subsystems like components. From this standpoint, over the period under study what Ford was trying to achieve was to take advantage of its worldwide presence through the pursuit of a globalisation strategy. Its challenge would be to make the transition from a multi-regional organisation to a trans-regional one, the ultimate goal being to integrate its management at a global level.<sup>51</sup>

Ford’s globalisation would not be without consequences for its regional entities, starting with Ford of Europe. With globalisation Europe has become a less relevant strategic echelon, and Ford of Europe’s *raison d’être* has been undermined. Even though the American parent company seems to have continued to exert a relatively tight control over Ford-Europe, globalisation has reaffirmed the firm’s unity and the concentration of its strategic decision-making powers at its Dearborn centre in the U.S. The issue of FoE’s problematic insertion into the globalised firm dominated most of the others.

We will examine Ford’s organisation; products; resources. On the first point, we will see how Ford of Europe was trying to find a place for itself in the worldwide organisation. On the second, we will focus on changes in FoE’s product range (world cars versus European vehicles). In the third, we will discuss the rationalisation of resources as well as the European recovery plan in 2000.

### **A. FoE’s search for a role in the global organisation**

Ford’s worldwide presence and its relatively centralised management system put it in a position where it could convert globalisation into an industrial and organisational reality on the lines of the model used in business schools and universities as a preferred form of international organization for firms operating in a general context of free-trade from the late 1980s.<sup>52</sup> Ford would follow this path with great resolve and the 1994 announcement of its “Ford 2000” plan can be analysed as a sort of radical culmination of this approach. This plan

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<sup>50</sup> This characteristic strategy of the first Fordist model has continued to dominate at FMC, even if has been amended so as to better mesh with the notion of diversity (thus moving closer to GM’s strategy). See Robert Boyer and Michel Freyssenet (2002).

<sup>51</sup> See M.C. Bélis-Bergouignan, G. Bordenave, and Y. Lung (1994 and 2000).

<sup>52</sup> On this topic see for example M. Porter, “Competition in Global Industries: A Conceptual Framework”, in Porter M.E. (Ed) *Competition in Global Industries*, Harvard Business School Press, Boston, Mass., 1986. Specifically with respect to Ford see C. Dassbach, *Global Enterprises and the World Economy: Ford, General Motors and IBM, the Emergence of the Transnational Enterprise*, Garland Publishing, New York, 1989.

was tantamount to a straightforward dissolution of FoE as an intermediary coordination entity into a globalised organisational structure. Yet Ford apparently went too far down this road and would be forced to revitalise FoE towards the end of decade, although this reverse step should not be construed as a return to square one.

### a. FoE dissolution into the “Ford 2000” reorganisation

The first tangible sign of Ford’s commitment to a global approach can be seen in the centres of responsibility strategy it initiated under Donald Petersen as CEO in 1987. This was not a new organisation but instead a competency allocation principle whose double objective was the creation of jointly run high-volume products and the avoidance of any duplication in the field of R&D. Mazda, Ford’s Japanese associate, was deemed to be the centre of competence for small cars; FoE for medium-sized vehicles, 4-cylinder engines and manual transmissions; and the American parent company for big cars, V6 and V8 engines, automatic transmissions, electronic control and air conditioning systems. This division of tasks, which sought to utilise know-how wherever it was strongest, was not designed to be systematically applied to all items in the aforementioned product categories, but only some of them. The strategy had a major effect in its most readily applicable aspect, i.e., splitting intermediary product-related tasks between America and Europe. A more modest target was set for final products, given the difficulty of designing world cars that can be adapted to all types of market. Two cars were involved in this phase. The strategy was halfway successful when the *Escort* was renewed in 1990 - halfway since even though Mazda was very involved in the renewal of the American *Escort*, which was based on the *Mazda 323* platform, Europe also renewed its own version of the *Escort* within Europe.

On the other hand, the 1993 launch of the *Mondeo* under the responsibility of the European medium-sized cars centre did fit in with the spirit of the centre of responsibility strategy. The *Mondeo* was truly a world car, designed in Europe but manufactured and sold across several continents. Below (in our examination of changes in the European product range) we will provide further details on these launches in Europe, but for the moment the impact of this centres of responsibility strategy needs to be highlighted so that we can better understand Ford’s decision to tune its organisational structures to its new strategy.

In March 1994, Alex Trotman, the new chairman, President and CEO, announced that the “Ford 2000” re-organisation plan would come into effect on 1 January 1995.<sup>53</sup> The plan created at the top of the FMC organisation a unified global structure with responsibility for the automotive business - Ford Automotive Operations (FAO). This was to be run by a President with the title of FMC executive vice-president, to whom the Heads of the main globalized functions (product development, marketing, sales and services, manufacturing), all of whom would be Group Vice-Presidents, would directly report.<sup>54</sup> At the level immediately below, the structure would be managed via sub-functions, with R&D notably being split into three “Vehicle Centers” specialised by type of vehicle: the Small and Medium Car Vehicle

<sup>53</sup> Late in 1993 Alex Trotman succeeded Harold A. Poling as chairman and CEO of FMC. In addition he would carry the title of President, a cumulation that was quite new. It should be noted that Trotman was British and had spent most of his career in Europe, where Dagenham recruited him in 1955 as a simple parts expeditor.

<sup>54</sup> One of Trotman’s innovations was to create the new category of group vice-presidents, ranked between executive vice-presidents and vice-presidents. He also introduced the rank of vice chairman and got rid of the Office of the chief executive.

Center; the Large and Luxury Car Vehicle Center; and the Truck Vehicle Center.<sup>55</sup> These “Vehicle Centers”, each run by an FMC Vice-President, were the direct heirs of the centres of responsibility approach - the former was based in Europe, whereas the latter two were located in USA. Mazda was no longer considered party to this process, and global R&D was split up between the American and European poles. Within the global organisational structure a small number of Vice-Presidents retained geographical attributions, but it is significant that no one was specifically designated for North America.

FoE still had a chairman in 1995, and it was specified that he would report to FAO’s President, with the position of FoE President no longer being filled in 1994 and 1995. Similarly, FoE’s three main functional positions (product development, sales and marketing, manufacturing) disappeared from the list of Ford Motor Company VPs in 1994.<sup>56</sup> In 1996 it was the turn of the FoE chairman position to disappear. In fact, henceforth it would be the President of FAO, based in the United States, who would directly supervise Ford-Europe’s activities. This coincided with the arrival of Jacques Nasser, the future successor of A. Trotman, as President of FAO. On the other hand, the Head of European marketing and sales reappeared among the list of Ford vice-president that year. In 1997 the position of FoE President was re-established but not that of chairman. This would continue to be the case until 1999, when Ford began to question the organisation derived from “Ford 2000”. All in all, the underlying logic of “Ford 2000” was to give the main operational functions total pre-eminence over the geographic divisions, thus affirming the Company’s global unity. In principle, this meant that intermediary geographic coordination entities like FoE were obsolete and no longer of any use. But it also implied that the decision-making centres would be very far from the European operational units, and that there would be an informational and decisional overload at the American strategic summit. These elements were liable to generate dysfunctions – which is why Ford did not persist with this organisation and deemed it necessary to restore FoE as an intermediary echelon of coordination.

### **b. FoE’s renaissance in Ford’s new organisation**

One of Jacques Nasser’s first actions after becoming Ford’s President and CEO<sup>57</sup> on 1 January 1999 was to get rid of Ford Automotive Operations, the unifying structure created by his predecessor to oversee all worldwide automotive activities. The consequence was an upward push of many of the geographic attributions into the list of “company officers”. In Europe, the position of chairman was re-established, and FoE returned to its traditional management structure of a chairman and a President. The elimination of the Vehicle Centers was accompanied by the return of a vice-president in charge of FoE product development. This function clearly built on the role filled previously by the vice-president in charge of the Small and Medium Car Vehicle Center, but it was more than this since R&D functions relating to European commercial vehicles was relocated to Europe - functions that under “Ford 2000” had been assumed by the Truck Vehicle Center in the US.

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<sup>55</sup> The second Vehicle Center was initially divided into two units: the Large Front Wheel Drive Center and the Rear Wheel Drive Center. The third one was also divided into Commercial Truck and Light Truck. All in all there were a total of five Vehicle Centers, including the original one.

<sup>56</sup> But the FMC vice-president in charge of the Small and Medium Car Vehicle Center provided continuity with the vice-president once responsible for FoE product R&D - especially since it was the same person (R. Parry-Jones).

<sup>57</sup> Note that he did not carry the title of chairman. In fact, at the time William Clay Ford Jr. was chairman of the board of directors of FMC.

William Clay Ford Jr.'s arrival at the head of the Company on 30 October 2001 was accompanied by relatively major managerial changes and numerous redefinitions of attributions.<sup>58</sup> More specifically as regards Europe, in early 2003 the chairman's position was once again unfilled. The previous chairman David Thursfield, who had combined this function with that of President, continued to supervise European operations from his new position as Ford's executive vice-president for international operations in the USA. In parallel, the newly named President also filled the newly created position of FoE Chief operating officer (COO). Lastly, note that in 2002, the position of vice-president in charge of FoE manufacturing was again to be found on the list of "company officers", alongside vice-presidents in charge of the two other major functions that had also been restored to this list.

TABLE 8 : Ford of Europe Chairmen from 1993 onwards

Name of Chairman	Dates in office	Previous position	Highest subsequent position working for FMC (as of 1 April 2003)
Jacques Nasser	1993	Ford of Australia President	FMC President and CEO, (1999-2000)
Albert Caspers	1994-1995	FoE vice-president, Manufacturing Operations	No apparent FMC function
Position not filled (*)	1996-1999	-	-
Nicholas V. Scheele	2000	FoE President	FMC President and COO
David W. Thursfield (**)	2001-2002	FoE President	FMC executive vice-president, International Operations and Global Purchasing
(*) : directly run by President of Ford Automotive Operations, based in US: J. Nasser (1996-1998). Starting in 1997 the function of FoE President, which has been not filled since 1993, was re-established. This position was successively occupied by J. Donaldson (1997-1998), N. Scheele (1999) and D. Thursfield (2000-2001).			
(**) : D. Thursfield accumulated the functions of FoE chairman and President in 2001, with the title of FMC Group vice-president. From December 2002 he assumed his new functions, at the centre, directly supervising FoE out of the U.S., where he held the title of FMC executive vice-president. As of the date of writing (April 2003) he has still not been replaced as FoE Chairman. In 2002 the position of FoE President COO was created. It is currently occupied by Martin Leach, previously Head of product development at FoE.			
The dates in office are at yearend. <i>Source : FoE and FMC annual reports</i>			

The 1990s may have been a roller coaster in terms of Ford's attempts to fit its European activities into its new organisational structure with the Company first trying to deny or minimise the specific need for a European coordination echelon, before ultimately becoming extremely aware of its importance. However this does not mean that we should analyse this

<sup>58</sup> The transfer of power occurred in a relatively tense atmosphere due to Ford's heavy losses in North America that year. Bill Ford took over as chairman and CEO and brought in a new President, COO and a vice-chairman.

process as a simple return to square one. Tableau 8 provides a summary of the uncertainty surrounding the position of FoE chairman and attests to the firm's trial and error approach towards finding a place for Europe in its global organisation - an approach that Ford still pursues. Ford has obviously not turned its back on a global *modus operandi*. Although geographically defined positions did reappear in the organisational structure, big functional positions like manufacturing and quality, product development and global purchasing, which are by nature global integrators, are now positioned very high up in the organisational structure and filled by Executive vice-presidents or Group vice-presidents. As such, what has occurred was not a return to a multi-regional *modus operandi* but instead the search for a compromise between multi-regional and trans-regional logics.

Another reason why FoE did not revert to its previous configuration is the (new) fact that Ford has created within the European framework a parallel entity called the Premier Automotive Group (PAG). PAG, founded in 1999 following the takeover of Volvo Cars, runs all the Ford Group luxury brands in Europe. We have deliberately chosen not to go into any detail here on this new Ford's division, which has become so crucial to Ford's business in Europe.<sup>59</sup> What is clear is that for FoE the presence of PAG at its side is very significant. Operating in the same geographic zone, FoE and PAG will have to cooperate with one another and think about joint development. The presence of two distinct entities can generate rivalries and requires some difficult judgement calls. Having to get along with PAG can only make it harder for FoE to find a role and identity for itself inside the global firm. We should therefore consider that in the current state of affairs, the issue of Europe's role within Ford's organisational structure has not yet been stabilised. In particular, it remains dependent upon upcoming product choices relating to the divisions between global and regional platforms.

## **B. Changes in FoE's product range: world cars and European vehicles**

Ford's commitment to globalisation has basically coincided with its emphasis on the platform concept, in other words on the idea of producing several models derived from an initial model that constitutes the basic matrix or platform. In and of itself this is not a new idea, especially for a carmaker like Ford, long accustomed to producing sister vehicles destined for its different North American divisions.<sup>60</sup> The same underlying approach can lead to a given model being broken down into a variety of versions, i.e., 3-door, 4-door, 5-door, estate or convertible - a policy that FoE practiced widely in the 1980s, as discussed above. The aim is to produce differentiation at the lowest possible cost by cutting development and manufacturing costs, seeking to reconcile volume and diversity. Models derived from one and the same platform always share a number of components and subsystems, and often certain parts or body units (and assembly lines). One major variable is the extent of this sharing. If it is excessive, there will be fewer economies of scope. If it is insufficient, economies of scale are cut short. Ford's initial globalisation drive had prioritised the search for economies of scale. Its dynamics were therefore based on applying a world car concept in those market segments where this seemed feasible, notably in the European midrange that could feed into the American bottom-of-the-range.

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<sup>59</sup> The PAG's brands are Aston Martin, Jaguar, Volvo and Land Rover. For a while PAG also included the American make Lincoln in its portfolio, but this was taken away in 2002. See the chapter by Yannick Lung.

<sup>60</sup> For Ford, these divisions are Ford, Mercury and Lincoln. It often occurs that the same basic car is offered with minor differentiations by at least two divisions, notably Ford and Mercury.

What remained unresolved was the question of reciprocity, in other words whether the American midrange could feed into the European top-of-the-range. In short, Europe was very involved in globalisation, but this did not affect its entire product range. Part of the European range remained specific to its local territory, raising the question of how such a range could be broadened to keep abreast of new trends in rapidly changing markets. The spectacular development of new niches like minivans, sport utility vehicles, super mini-cars and hybrid family-commercial vehicles continually called for new products. Moreover, in response to its eroding market share, Ford visibly tried very hard around the year 2000 to accelerate the renewal of its European product range.

#### **a. FoE's product range enriched by the entry of new vehicles**

The *Fiesta*'s renewal in 1989 closed the curtain on the first of our sub-periods. The second opened with the *Escort*'s renewal in 1990 – an event that was also specific to FoE, since, as we have seen, Europe had been excluded from Ford's cooperative arrangements with Mazda when the American *Escort* was being renewed under the auspices of the centres of responsibility strategy. The factors that may have affected this decision to work outside of the centres of responsibility strategy include the distance from Mazda and the competency-related competition between FoE and its Japanese associate. As a result, the European *Escort*, like the *Fiesta*, became a regional and not a global platform. Yet adapted versions of these European cars were manufactured and sold in Latin America, one of Ford's older practices being to rely on its European products to supply peripheral markets. But it is exactly these markets peripheral nature that precludes our qualifying this approach as being truly global, since the firm's main market (North America) was not affected. The early 1990s in Europe also saw the renewal of the *Transit* van, followed by the launch of the *Tourneo*, a windowed version thereof specialising in passenger transportation. In this commercial vehicle sector, Ford also offered the *Courier*, a new entry derived from the *Fiesta* platform. This light commercial vehicle, bearing some resemblance to small estate cars, could be added to the usual list of car derivatives. Amongst these, note the specific destiny of the European *Escort* van that Ford chose as the basis for its experimental *Ecostar* electrical vehicle, whose first versions were tested in Europe and North America in 1993. A further specifically European action was the 1994 rejuvenation of the *Scorpio* as a top-of-the-range item.

In final product terms, the major effort of globalisation commenced with the *Mondeo*, marketed in 1993. In Europe this car replaced the *Sierra* in the C/D mid to upper range segment. This was Ford's first car since the Second World War that truly deserved to be called a world car inasmuch as it was simultaneously sold and manufactured in the firm's two main zones of activity, Europe and North America. Note that this was a car designed in Europe. One year after its local launch and manufacturing debut at Genk, two *Mondeo* variants were launched in the United States, the *Ford Contour* and *Mercury Mystique*. North American production was done in Kansas City. Within the framework of a staggered launch calendar, a European team was given the special mandate of transferring its experience to the American plant. This original mechanism for organising the transfer of experience was to be reused time and again. The car would also be exported to other markets (notably Asia-Pacific, including Japan), thus remaining true to its global calling. The programme cost \$6 billion in total, a sum that included the development and manufacturing of new engines and transmissions. This was considered very expensive, especially since, despite the car's good reception in Europe, it had greater difficulties in the USA, where it was considered too European, too big to be included in the small car segment but too small to become a core element in the intermediate segment. Annual world sales were around 600,000 units, although

Ford had planned for 800,000. The replacement of this car in the year 2000 with a 2001 model therefore became a specifically European affair.

Although (as we have seen) Ford renewed its product range during the first half of the 1990s, such actions were also a reflection of its need to enter new and fast-growing segments that had already been invested by some of its competitors. The first of these segments (in chronological terms) was the one for 4-wheel drive sport utility vehicles (SUV). In 1990 Ford came to an agreement with Nissan for the shared development of this type of vehicle, which each party would sell in its own name but which would be manufactured by Nissan in Barcelona from 1993 onwards. This was to become the Ford *Maverick*. The second was the minivan segment. In 1991, together with the Volkswagen Group (VAG), Ford created a joint venture called AutoEuropa to develop and manufacture this sort of vehicle from 1995 onwards in a plant to be built at Setubal in Portugal. This would become the Ford *Galaxy*. For both products, Ford decided to share risks and ensure sufficient scale through an association with another carmaker.<sup>61</sup> Ford opted also for European solutions instead of American ones - the only US contribution to Europe's niche operations during the first half of the 1990s was the small volume imports of the *Probe* sports coupe, a car Ford manufactured jointly with Mazda at Flat Rock (Michigan).

One segment that FoE finally decided to penetrate was small cars, more specifically the super-mini A segment. This time around it used its own in-house resources. In 1996, and expanding upon its rejuvenation of the *Fiesta* in 1995, it developed a smaller car called the *Ka* using its B platform. This was given an original design that featured sharp angles (the so-called "new edge") and contrasted with the relatively conservative shape of its other European products. Elements borrowed from this design would appear in later models, affirming a style that was steadily extended to the entire range. One year on, in 1997, Ford further enriched its product range with a small coupe called the *Puma*. Classified as a specialty car as the Capri once had been, this was also derived from the *Fiesta* platform.

All in all, a major effort was carried out to enhance the product range with new models and also to penetrate new segments. From its central configuration based on four models for the traditional market segments (the *Fiesta* [mini], the *Escort* [lower-medium], the *Mondeo* [upper-medium] and the *Scorpio* [full-sized/lower luxury] - all of which were broken down into several body versions), the product range rose to eight models, having been enhanced by the *Ka* (super-mini), the *Puma* (specialty), the *Galaxy* (full-size minivan) and the *Maverick* (sport utility vehicle). We can add to this list the *Courier*, a hybrid product between a commercial vehicle and a car, which supplemented the *Transit* van and its multiple versions. The firm only invested these market segments after its rivals' trailblazing efforts. Also Ford was not present in certain niches like small minivans derived from car platforms. Although it enjoyed a good brand image in Europe because of its reliability and quality, in terms of the novelty of its vehicle concepts Ford did not act as a first mover in Europe.

### **b. An accelerated introduction of models at the dawn of the new millennium**

For Ford of Europe, the new century began with increasingly frequent new model introductions. This can be analysed as a response to its eroding regional market share. In May

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<sup>61</sup> The counterpart joint vehicle models in these cooperative arrangements with Nissan and VW were the Nissan *Terrano* and the VW *Sharan* and SEAT *Alhambra* (SEAT belonging to the VAG Group).

2000 Ford announced its intention to undertake 45 product actions in five years and published a European recovery plan for industrial restructuring. These model introductions included model renewals plus new product range entries. The overall state of the product range in early 2003, depicted in Table 9 below, also needs to take account of imports and product range exits.

Model Name	Market segment	Year launched	Body type	Available engines	Nr. of versions	2001 Output
<i>KA</i>	super-mini	1996 (lmc: 2002)	3-door	petrol: 2 (HP: 70 & 95)	5	136,800
<i>STREETKA</i>	specialty	2003	Convertible (2-door)	petrol: 1 (HP: 95)	1	na
<i>FIESTA</i>	mini	2002	3 or 5-door	petrol: 3 (HP: 68 to 100) diesel: 1 (HP: 68)	25	311,900 (previous model)
<i>FUSION</i>	mini	2002	5 door	petrol: 2 (HP: 80 & 100) diesel: 1 (HP: 68)	9	na
<i>FOCUS</i>	lower medium	1998 (lmc: 2001)	3, 4 or 5-door & estate	petrol: 5 (HP: 75 to 173) diesel: 3 (HP: 90 to 115)	35	588,300
<i>MONDEO</i>	upper middle	2001	4 or 5-door & estate	petrol: 5 (HP: 110 to 220) diesel: 3 (HP: 90 to 130)	29	349,600
<i>GALAXY</i>	minivan (full size)	1995 (lmc: 2000)	5 door	petrol: 2 (HP: 115 & 145) diesel: 3 (HP: 90 to 130)	8	53,900
<i>MAVERICK</i> (imported)	sport utility vehicle	2001	5-door	petrol : 2 4wd (HP: 124 to 197)	na	imported
<i>RANGER</i> (imported)	pick-up	2002	2 or 4-door	diesel: 1 2 & 4wd (HP: 109)	3	na
<i>TOURNEO CONNECT</i>	light van	2003	5-door (combispace)	diesel: 1 (HP: 90)	3	na
<i>TRANSIT CONNECT</i>	light van	2003	5-door 2 wheelbases	petrol: 1 (HP: 115) diesel: 2 (HP: 75 & 90)	7	na
<i>TOURNEO</i>	van	2000	5-door (minibus)	diesel: 3 (HP: 85 to 125)	4	data missing
<i>TRANSIT</i>	van	2000	different commercial derivatives and minibuses	diesel: 5 (HP: 75 to 125)	49	data missing

Abbreviations: lmc: last minor model change; HP: horsepower; 4wd: 4 wheel drive; na: not available. Number of versions: main versions available on the French market according to French automotive press



(“L’Argus”). Theoretically feasible versions (counted as body x derivative x engine/transmission) are far more numerous for *Focus* (68), *Mondeo* (101), *Galaxy* (17), *Transit* (176) according to Ford websites. Production data: *Automotive News Europe*.

1998-2002 witnessed the replacement of the *Escort* by the *Focus* (1998) and the renewals of the *Transit* (2000), *Mondeo* (2001) and *Fiesta* (2002) – i.e., all of Ford’s high-volume models. The *Ka* was rejuvenated in 2002. These renewals constituted a major shortening of product life cycles compared with earlier practices. Although the *Mondeo*’s renewal remained a purely European operation, the *Focus* (which replaced the *Escort*) was a world car. Repeating a scenario that was identical to that of the *Mondeo* in 1993, this car was designed, manufactured and launched in Europe before being produced and sold in North America a year later. In North America, it was manufactured at Wayne (Michigan) and at Hermosillo (Mexico). World sales were higher this time, reaching ca. 1 million units in 2000 and making the *Focus* the best-selling car in the world. Its style, borrowed from the “new edge design”, broke with the *Escort* design. It also served to inspire the new *Fiesta*’s style.

This very active renewal policy was extended through a number of related new models. The *Fiesta*’s renewal in 2002 was accompanied by the introduction of a new type of vehicle that was derived from the same platform and called the *Fusion*. With this Ford had an original concept in the sense that it was offering a slightly raised vehicle akin to a small 4 X 4 (without being one) in an attempt to capture a clientele attracted to the 4 X 4 style but unable to afford access to this segment.

In 2003 FoE broadened its range of commercial vehicles by introducing the *Tourneo Connect* and the *Transit Connect*, light vans that are smaller than the *Transit*. The first windowed versions are to be used for passenger transportation whereas the second metal-covered ones are commercial in nature. The *Tourneo Connect* allows Ford to enter the new and rapidly expanding segment of hybrid commercial and leisure vehicles, sometimes called “combispace”. Again in early 2003, FoE introduced a small convertible derived from the *Ka* and called the *Streetka*, made in Italy by Pininfarina and also typifying a “niche” type vehicle that targets a specific clientele. The *Streetka*’s launch was accompanied by a new and more powerful version of the *Ka*, featuring the same driving system. This version of the *Ka* was sold as the *Sportka*. Lastly, Ford announced that in late 2003 it will come out with a new derivative from the *Focus* platform, to be called the *Focus c-max*. This vehicle will help Ford to enter yet another new hybrid segment, one that emerged in the mid-1990s - minivans derived from cars, a segment sometimes called “multipurpose vehicles” (MPVs). All in all, the firm has clearly made major efforts over the past few years to position itself in all of Europe’s most promising market segments.

Besides these introductions and replacements, the 2003 product range also includes the *Galaxy*, the large minivan that first came out in 1996. One change relating to this vehicle was that in 1999 Ford withdrew from its AutoEuropa joint venture with VAG - after which it temporarily had to buy the *Galaxys* that VAG was continuing to produce. The replacement model will be entirely internalised in terms of its design and manufacturing. The name *Maverick* was re-used, although in actual fact the collaboration with Nissan, which had begun in 1993, had come to end in 1998. Starting in 2001, the old *Maverick* was replaced by a vehicle imported from US. The vehicle sold in Europe as the *Maverick* was the *Ford Escape* which shared its platform with the *Mazda Tribute*. Import volumes are relatively small and the *Maverick* is not offered in all European markets (not in France for instance). During this entire period small quantities of various American vehicles were imported, notably towards the end of the decade with the *Ford Explorer* and *Mercury Cougar*. At the time of writing

(early 2003), the main import on offer is the *Ford Ranger* pickup truck. The design of the vehicle is American but Europe imports models are made in Thailand in a Ford-Mazda JV. Ford has been trying to take advantage of its strong competency regarding this type of vehicle, which is very popular and sells at high volumes in the American market (although in Europe it has only attained a niche vehicle status).

Turning to product range exits, the 2000 shutdown of *Courrier* production was decided without any direct replacement. Although in 2003 Ford has introduced new vehicles in this hybrid commercial segment. The small coupe *Puma* was terminated in 2002 as the new *Fiesta* was launched. The *Streetka* (launched in 2003) is partly meant to be a successor to the *Puma*, even if it is not based on the same vehicle concept (since the *Streetka* is a convertible and not a coupe, and because it is positioned further upscale in finishing and price terms).

In 1998 Ford stopped producing the *Scorpio*, its top-of-the-range sedan, without seeking to replace it. Throughout the early 1990s pundits had speculated about how the European top-of-the-range would be affected by Ford's globalisation strategy, based on a logic in which a American platform would become the foundation for the *Scorpio*'s replacement. In the end Ford decided to do something quite different by amputating the European model that was supposed to attack the "full-sized/luxury" segment, where it had struggled to turn a profit in face of strong competition from specialist carmakers. Moreover, the "full-sized" dimension of this segment has been cannibalised by the rise of minivans and sport utility vehicles - and Ford might have felt that it now had a presence in this "luxury" segment because of Jaguar, a branch that it later consolidated under the PAG banner, together with Volvo and Land Rover. Still, by leaving this segment Ford was making a decision that was different from the other generalist carmakers in Europe. The risk was that Ford's product range would appear truncated in the eyes of customers who wanted to move upmarket yet remain loyal to the brand. Ford probably gave careful consideration to this possibility before coming to a decision. The issue of FoE's presence at the top-of-the-range is an interesting one since it is the Achilles heel of the controversial positioning taken of Ford's historical subsidiaries in Europe compared to the new group brands held in PAG.

Two points are crucial. On the one hand, Europe has played a major role in the firm's globalisation strategy. Two world cars have been designed in Europe (the *Mondeo* and the *Focus*) and integrated into the American product range. Yet Europe's product range did not benefit from any reciprocal models. Globalisation was first and foremost seen as a way to enrich the North American product range. On the other hand, Ford did make an unprecedented effort over a short period of time, at the dawn of the millennium, to renew itself and to introduce new models in Europe. Through its very active product policy the firm confirmed that it definitely wanted to remain competitive in Europe and return to a stronger regional position. Its actions regarding the industrial resources it was willing to use, which we now examine, was also part of this same intention.

### **C. The rationalisation of industrial resources and a recovery plan for the new century**

Operating in the 1990s with a weakening of its commercial position and low profitability in Europe, Ford had to respond by reforming its industrial base alongside its new product policy. At first industrial plant improvement and restructuring were nothing more than an extension of previous ways of doing things, although they also had to take account of the major environmental change that followed the fall of the Berlin wall. But in the late 1990s, alongside its accelerated product replacements, Ford undertook a series of interlinked

measures aimed at a vigorous production capacity restructuring. In particular, it announced a recovery plan in the year 2000.

### **a. Managerial development and geographic restructuring of production**

In the 1970s and 1980s, FoE (influenced by Japanese practices) had made a number of major changes to its management methods and principles. In many ways, these practices were a search for a way to continually raise the efficiency of Ford's resources. FoE's choice to go down this road was a logical one. Systematic attempts to cut costs in different areas were conducted under the auspices of cross-departmental groups that met to discuss such matters. Ford continued to largely rely on external and internal benchmarking in an attempt to set itself quantified objectives. A further improvement in its tools came with the 1999 introduction in Europe of a statistical method to decrease process variability and waste and to raise consumer satisfaction. This "Consumer-Driven 6-Sigma" methodology was experimented by Ford in Europe before being adopted in North America and it had previously been applied in non-automotive companies such as Motorola and General Electric.

Also in 1999, Ford had its plants ISO 14001 certified (integrating environmental protection norms) before asking its main suppliers to obtain this same certification. Particular emphasis was also placed on rationalising joint product and industrial method design processes, involving close cooperation with component and industrial equipment suppliers. One symbol of this quasi-integration of certain suppliers was the "supplier park" concept widely practiced at the time. This involved setting certain suppliers up on the same sites as Ford's own final assembly plants. These suppliers not only had responsibility for manufacturing certain sub-assemblies but they also directly supplied Ford's assembly lines, without any delays or stocks. FoE's four major continental vehicle assembly sites became "supplier parks". It also continued to increase the flexibility of its plants, with equipment investment of \$645 million at Cologne to prepare the launch of the new *Fiesta* in 2002, including state-of-the-art flexible process technology covering both bodywork and final assembly. The ability to shift very quickly from one model or version to another (the *Fiesta* 3-door, the *Fiesta* 5-door, the *Fusion*) became an internal benchmark at FoE, which began to think about moving all its plants to a comparable level of flexibility. Moreover, the active benchmarking of Toyota and Nissan's British and French transplants became a factor in Cologne's introduction of the latest Japanese organisational innovations, such as fractioning the final assembly line into five segments separated by small buffer stocks to enable a partial shutdown in case any problems arose; lengthening cycle times to 79 seconds; and breaking down manufacturing responsibilities amongst smaller teams with 1 manager for 6 employees instead of 1 for 20 as was the case previously.<sup>62</sup>

Lastly, the major development of the 1990's was the rapid and widespread use of the Internet at a European and global level, involving "B2B" (supplier/dealer) and "B2C" customer deals. Potential clients were systematically offered access on a country-by-country basis to each of the Group's brands. Each of Ford's European national websites provided information on the product range offered in that particular country and included a category called "build you own (car)" that offered a choice of all available specifications (body,

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<sup>62</sup> Automotive News Europe, Sept. 2002.

versions, engines, transmissions, colours, furnishings, options), replete with the corresponding price calculations and information about the closest dealer location.<sup>63</sup>

Besides technical and organisational modernisation of its resources, FoE also adjusted its operations at a spatial level. Ford took a dislike to the idea of maintaining final vehicle assembly operations in Britain, and this became a fundamental trend of the 1990s.

The decade opened with the announcement that the car succeeding the *Sierra* in 1993 (the *Mondeo*) would be assembled on a single site, Genk in Belgium. Dagenham lost out on this manufacturing task and was converted into a single platform assembly site (for the *Fiesta*). In the mid-1990s, it was the turn of Halewood to come under fire, with rumours that the car that would succeed *the Escort* in 1998 (the future *Focus*) would not be assembled there. For a while there were fears that all assembly activities would disappear from Halewood. In the end, Ford decided to allocate to this site (from 2001 onwards) the manufacturing of a Jaguar entry range model called the *X-type* - with residual production of the *Escort* being continued until 2000. The Halewood assembly unit thus left FoE's orbit in 1999, entering PAG with a smaller format and lesser capacity. FoE's withdrawal from production in Britain would extend even further following the recovery plan of 2000 (see below)

The November 1989 fall of the Berlin wall was a major challenge for automakers. The opening of new territories in Eastern Europe raised two major issues, one commercial and the other industrial. FoE responded quickly to the former by setting up a number of dealerships and by developing sales networks in the new countries of Central and Eastern Europe (including Russia). The firm invested in national sales companies in Central Europe's main countries (Hungary, Poland and the Czech Republic), copying organisational models it used in Western Europe. As regards industrial considerations, several automakers had driven strongly into the new territories, acquiring local carmakers or setting up new final assembly plants. Ford remained relatively circumspect on this point, although in 1992 it did build a small components plant in Hungary, followed by two others in the Czech Republic and in Poland - units that now belong to Visteon. As regards final assembly it was only in 1995 that Ford opened a small assembly plant at Plonsk in Poland for *Escorts* and *Transit* vans that were shipped over in kit form. The following year it did the same thing near Minsk in Byelorussia. These were small-scale actions to service neighbouring markets. Capacity in Poland was for 30,000 units; in Byelorussia for 10,000. In sum, at an industrial level Ford's commitment to Eastern Europe was extremely cautious. A major factor in this attitude was that Ford did not want to add to what it already saw as an over-capacity in Europe – an assessment reaffirmed in its 1999-2000 recovery measures. In fact, these recovery measures would actually undermine several recent locational decisions.

### **b. An inventory following the 1999-2000 recovery measures**

The 2000 recovery plan focused on in-depth product renewal efforts and an adjustment of European capacities. Two small European assembly plants were closed, a relatively older

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<sup>63</sup> On innovations that pertain more specifically to distribution networks or after-sales services, see the chapter by B. Jullien.

one at Azambuja in Portugal<sup>64</sup> and the recently opened works at Plonsk in Poland. In addition, employment adjustment measures were taken at Genk and Ford decided to sell VW its share in the AutoEuropa joint venture that had been manufacturing the Galaxy in Portugal.

The most symbolic aspect of this plan was the complete shutdown of final vehicle assembly operations at Dagenham 2002, just as the new *Fiesta* was launched. With this decision an important page in Ford's history in Europe was turned. Dagenham may not have been the Company's actual industrial cradle in this part of the world (this was Trafford Park, Manchester), but ever since its first vehicle rolled off the lines on 1 October 1931 the Thames-side site had been the regional standard-bearer and symbol of FMC's presence in Europe. Of course, Dagenham was not going to disappear, given Ford's simultaneous announcement that it would compensate the site with investments to preserve its stamping and wheel plants and above all develop the capacities and resources of its engine factory which would become Ford's only diesel engine production site in Europe. Dagenham would therefore have a role to play in manufacturing new generation diesel engines calling upon "common rail" combustion technology developed jointly by Ford and PSA Peugeot-Citroën after a 1998 agreement between the two firms. Plans were for the relocation of 240 diesel engine specialist engineers from Dunton to Dagenham. Henceforth, however, Great Britain will no longer assemble any *Ford* brand cars. Ford's only remaining assembly activity in the UK would be in Southampton and involve light commercial vehicles. Ford's stressed other types of investments in Britain, like the creation of a Ford Design Centre in the heart of London or the repatriation of 360 jobs following the transfer of commercial vehicle engineering activities from the US to Britain. Shutting down Dagenham's assembly activities led to a net cull of 1,400 jobs, after accounting for potential reclassifications to the site's other growing activities. To facilitate dismissed employees' re-entry into the job market Ford offered an Employee Support Programme that it funded to the tune of \$12 million.

The May 2000 plan also included an announcement that Ford would found a 50/50 joint venture with the German equipment maker, Getrag GmbH. This joint-venture was to take charge of Ford's entire manual transmission production activity in Europe, including its three manufacturing units at Bordeaux, Cologne and Halewood, as well as this activity's related engineering personnel, operating out of the Merkenich R&D centre. This affected 3,700 employees, who had produced a total of 1.72 million transmissions in 1999. It was specified however that staff members working at the time of the joint-venture's founding could remain Ford employees. Along with the June 2000 worldwide spin-off of Visteon, this was a disintegration of great magnitude. As Ford of Europe's re-focused on its core automobile business it was restricting itself to the production of engines and bodies and to the assembly of final products. Finally, less sweeping but just as symbolic was the announcement that Ford would close its Byelorussia assembly plant immediately, only three years after having opened it. With this decision vehicle assembly in Eastern Europe fell to zero – although this was in fact a temporary state of affairs, since Ford had in the meantime (June 1999) agreed a plan with the Russian government to open an assembly factory near St. Petersburg. This plant, which had a capacity of 25,000 vehicles (*Focus* cars destined for the local market) and employed 400 persons when it opened in July 2002.<sup>65</sup>

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<sup>64</sup> The Azambuja plant dated from 1963 and was used to assemble Transit commercial vehicles that were shipped over in kit form. It employed 350 persons and turned out about 10,000 units. GM ended up acquiring this plant.

<sup>65</sup> Ford was hoping to be able to rely on this unit to make progress in a Russian market where it had sold fewer than 5,000 units in 2001. See the chapter by J.J. Chanaron.

TABLE 10: Ford of Europe's Main Manufacturing Facilities (2002)

Site	Type of plant	Products 2002	Employment 1998
COLOGNE (Germany)	B&A Engine Ford/Getrag Trans. JV	Fiesta, Fusion Petrol 4.0L V-6 (North America) Manual transmissions	7,400 1,750 1,450
SAARLOUIS (Germany)	B&A	Focus	6,650
GENK (Belgium)	B&A	Mondeo, Transit (Transit to be phased out, Galaxy planned)	11,150
VALENCIA (Spain)	B&A Engine	Ka, Fiesta, Focus and Mazda2 Petrol: Duratec HE 1,8L & 2,0L	5,850 1,650
SOUTHAMPTON (Great Britain)	B&A	Transit	1,850
KOCAELI (Turkey)	Ford Otosan B&A	Transit, Transit/Tourneo Connect	Not open yet
DAGENHAM (Great Britain)	Engine	Diesel: 1,8L to 2,5L and petrol	1,800
BRIDGEND (Great Britain)	Engine	Petrol: Zetec SE 4-cyl 1,25L to 2,0L and Jaguar V8	1,400
HALEWOOD (Great Britain)	Ford/Getrag Trans. JV	Manual transmissions	1,100
BORDEAUX (France)	Transmission Ford/Getrag Trans. JV	Automatic transm. (North America) Manual transmissions	2,100 1,100

B&A: Body and Assembly.

*Source: FoE*

The St. Petersburg plant has been given a merely local role - unlike the new plant inaugurated in April 2001 at Kocaeli in Turkey. This latter unit, which required an initial investment of \$650 million and is part of the Ford Otosan joint-venture<sup>66</sup>, is destined to become a cornerstone of FoE's light commercial vehicle production and at full capacity will employ up to 4,000 persons. The May 2000 plan intimated that the Company was considering a reallocation of its vehicle and engine manufacturing tasks and debating the future role of Genk. Two years later, major investments (possibly for up to \$900 million) were sheduled for Genk to render this plant more flexible by focusing it on at least two products (the replacements for the *Galaxy* minivan and for the *Mondeo*, and possibly for the *Focus* as well). The *Transit* is no longer to be produced at Genk, and will be transferred instead to Kocaeli in Turkey, with Southampton remaining the *Transit's* secondary manufacturing site. This restructuring will lead to a loss of 1,400 jobs at Genk, the same number that were lost at Dagenham. The role delegated to the new Turkish factory in Kocaeli can be best analysed in the light of the *Transit* and its derivatives' paramount economic importance to FoE. It was the best-selling light commercial vehicle in Europe in 2001, all brands combined. Overall, the recovery measures taken from 2000 amounted to an in-depth restructuring of FoE's industrial apparatus (Table 10).

Things have changed greatly since the 1980s, with a complete cessation of Ford car assembly activities in Britain, Ford Otosan's integration into the European manufacturing

<sup>66</sup> Ford Otosan is a joint-venture between Ford and the Koc Group. See the chapter by L. Duruiz.

network, new JVs running the manual transmission plants, and the spin-off of all of the group's components units. The impact is visible in Table 11, which shows FoE's per-country employment in 2002. Britain, which accounted for 61% of FoE's European jobs in 1967 at the time Ford of Europe was founded, had shrunk to 22.1% by 2002 (if we only include Ford jobs in the strictest sense of this term, excluding employment at the group's other automobile brands or in service companies like Hertz). Conversely, Germany, which in 1967 accounted for 37% of Ford's jobs in the European region, still constituted 39.1% of all European employment in 2002, and even more if we include jobs at Genk in Belgium, a unit that is directly controlled by Ford Werke AG.

COUNTRY	Employment	%
United Kingdom	14,995	22.1%
Germany	26,730	39.4%
Belgium	9,675	14.3%
Spain	7,246	10.7%
France	3,841	5.7%
Turkey (Ford Otosan)	4,117	6.1%
Other (including Russia)	1,234	1.7%
TOTAL	67,838	100%

*Source: FoE*

All in all, over the course of its lifetime Ford Europe has become increasingly German, at least in terms of the human and industrial means at its disposal. The effect of the Company's 1999-2000 recovery plan was to accentuate this already longstanding trend. It is interesting to note that David Thursfield, FoE's latest Chairman, chose to work out of Cologne instead of Warley/Brentwood. By operating in this fashion, Ford of Europe is acting more and more like GM-Opel, i.e., positioning itself as a German manufacturer. The 1990s were a troubled decade for FoE, but the firm did not sit on its hands. Even as it was sought to make its product policy more dynamic, it also tried to improve and restructure its resources. This restructuring took on a territorial dimension, based on an accentuated productive embeddedness in Germany, undoubtedly Europe's leading automotive territory. By so doing, FoE reopened the debate about its real identity, torn as it is between its two main European roots - a problem that was FoE's *raison d'être*.

## Conclusion

In the end, three identity-related problems befell FoE over the course of the period under study: Europe's problematic role in Ford's globalisation drive; its difficulty in positioning itself with regards to the new PAG brands; and the re-emergence of the original dilemma of Anglo-German co-habitation. FoE was founded for the purpose of integrating Ford's activities on the European Continent and has fulfilled its mission with success, contributing very positively to the global firm's expansion and profits over 1967-1989. At the same time, Ford Europe's economic and financial performances were less satisfactory from 1990 onwards. Deteriorating general trading conditions in Europe and increased competition may be explanatory factors, but it was also an era during which FoE was experiencing an identity crisis that may have also been damaged its results. Born in a relatively simple strategic environment, nowadays Ford of Europe finds itself immersed in a much more complex one. The deep transformation of the Ford Motor Company itself has generated this

change in context. The Ford Group's external growth and globalisation drive has moved FoE away from its role as a subsidiary with clearly defined geographical competencies to that of a resource centre whose contribution has to be defined along the lines of global optimisation logic. It is no surprise that this transition has caused adaptation problems and required some difficult judgement calls. In brief, at least two questions have been raised. The first is how to manage tension between global and local levels.<sup>67</sup> Although globalization appears to be a strong trend, resources and know-how are in fact sustained by their local roots. The danger to be avoided is therefore that the global plane weakens the local one - a risk that can be exacerbated when varying local resources appear to be in competition with one another. The problem will recur with the future development of FoE's relationship with Mazda, whose competencies are similar in nature to its own, and with the internal question of how to maintain equilibrium between FoE's British and German operations.<sup>68</sup>

Our second question relates to productive models and conditions of profitability.<sup>69</sup> This is a field where each and every firm will dance to its own music, building itself according to the vagaries of its own personal history. Merger operations are always problematic because they force different models to live together. The viability of such mixtures is never easy to manage. Ford's transformation into a luxury car producer alongside its traditional activity as a generalist manufacturer has forced it to reconcile highly dissimilar profit logics in one and the same geographic space. The firm will be challenged to find a proper balance between the autonomy of each of its brands - whilst getting them to cooperate industrially with one another. The answers to these questions will be crucial to Ford of Europe's future.

In 2003 FMC celebrates its centennial having maintained a presence in Europe almost since the outset. Over the past 36 years Ford Europe has been a crucial instrument towards this end. It so happens that this anniversary is being celebrated in a difficult context, in which the firm has had to implement several recovery plans in the US and in Europe in order to restore its commercial position and profitability. Its vigorous actions raise hopes for a return to fortune in the not too distant future drawing on Ford's accumulated experience of how to survive unfavourable circumstances. Europe will have a role to play in restoring the world's number two automaker to health.<sup>70</sup>

## Bibliography

- Bélis-Bergouignan M.C., Bordenave G., Lung Y. (1994) "Hiérarchie et Multinationalisation, une application à l'industrie automobile", *Revue d'Economie Politique*, n° 104.
- Bélis-Bergouignan M.C., Bordenave G., Lung Y. (2000) "Global Strategies in the Automobile Industry", *Regional Studies*, Vol. 34, n°1.
- Beynon H. (1984) *Working for Ford*, Penguin Books, London.

<sup>67</sup> On this topic see M. Freyssenet, K. Shimizu and G. Volpato (eds) *Globalization or Regionalization of the American and Asian Car Industry?*, Palgrave-MacMillan, London and New York, 2003.

<sup>68</sup> On the relationship Ford-Mazda, see the chapter by Y. Lung. On Ford UK versus Ford Germany issue from a UK perspective, see the chapter on the history of Ford UK by S. Tolliday.

<sup>69</sup> See R. Boyer and M. Freyssenet, 2002.

<sup>70</sup> Translation from French by Alan Sitkin.



- Bordenave G. (1998) "Globalization at the Heart of Organizational Change: Crisis and Recovery at the Ford Motor Company", in M. Freyssenet, A. Mair, K. Shimizu, G. Volpato (eds), *One best way ? Trajectories and Industrial Models of the World's Automobile Producers*, Oxford University Press, Oxford, 1998.
- Bordenave G., Lung Y. (2003) "The Twin Internationalization Strategies of US Automakers: GM and Ford", in M. Freyssenet, K. Shimizu, G. Volpato (eds), *Globalization or Regionalization of the American and Asian Car Industry?*, Palgrave-MacMillan, London and New York.
- Boyer R., Freyssenet M. (2002) *The Productive Models*, Palgrave-MacMillan, London and New York.
- Dassbach C. H. A. (1989) *Global Enterprises and the World Economy: Ford, General Motors and IBM, the Emergence of the Transnational Enterprise*, Garland Publishing, New York.
- Freyssenet M., Mair A., Shimizu K. and Volpato G. (1998) *One best way ? Automobile Firms trajectories and the New Industrial Models*, Oxford University Press, Oxford
- Freyssenet M., Shimizu K., Volpato G. (2003) *Globalization or Regionalization of the American and Asian Car Industry?*, Palgrave-MacMillan, London and New York.
- Froud J., Haslam C., Johal S., Williams K. (2000) "Ford's New Strategy: A Business Analysis of Financialization" in M. Freyssenet and Y. Lung (eds), *The World that Changed the Machine: The Future of the Auto Industry for the 21<sup>st</sup> Century?*, Proceedings of the Eighth International Colloquium of GERPISA, Paris.
- Hackett D. (1978) *The Big Idea, The story of Ford in Europe*, Ford of Europe, Brentwood.
- Mardsen D., Morris T., Willman P., Wood S. (1985) *The Car Industry, Labor relations and Industrial Adjustment*, Tavistock Pub., London.
- Pascale R.T. (1990), *Managing on the Edge*, Simon and Schuster, New-York.
- Porter M (1986) "Competition in Global Industries: A Conceptual Framework", in Porter M.E. (Ed) *Competition in Global Industries*, Harvard Business School Press, Boston, Mass.
- Seidler E. (1976) *Opération Fiesta, autobiographie du projet Ford Bobcat*, Edita, Lausanne.
- Starkey K., Mc Kinley A. (1993), *Strategy and the Human Ressource. Ford and the Search for Competitive Advantage*, Blackwell Publishers, Oxford.
- Studer-Noguez I. (2002) *Ford and the global strategies of multinationals : the North American auto industry*, Routledge, London, New-York.
- Tolliday S. (1991), "Ford and "Fordism" in Postwar Britain", in Tolliday S., Zeitlin J.(eds), *The Power to Manage ? , Employers and industrials relations in comparative historical perspective*, London.
- Wilkins M. and Hill Frank E. (1964) *American business abroad, Ford on six continents*. Wayne State University Press, Detroit.
- Womack J.P., Jones D.T., Roos D. (1990) *The Machine that Changed the World*, MacMillan, New-York.

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