Regionalization of American and Asian car industry, more than globalization

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The automobile sector is often presented as the archetypal global industry. In this view, the car business is one of the main drivers behind the homogenization of the world, both because of firms' internationalization strategies (mergers-acquisitions, establishment of facilities in emerging countries, world cars, international division of labour, and so on) and also as a result of the social practices such firms enact via their organization of work and at the lifestyle (automobile civilisation) level.

The present chapter is an attempt to deconstruct a representation that neglects, as we have seen in the previous chapters, the heterogeneity of firms and spaces; the great diversity of the strategies being pursued; and the inherent contradictions of the competitive process. We will use and test the analytical approach of productive and geographical trajectories of car industry firms, that we have elaborated from the first and second international programs of GERPISA (Boyer and Freyssenet, 2000 b, 2002: Freyssenet and Lung, 2000).1

Growth modes, profit strategies and productive models

An analysis of carmakers' trajectories and performances over the course of the 20th century has allowed us to renew our understanding of the two essential conditions that are a prerequisite for profitability. The first is the relevancy of the "profit strategy" to the "growth mode" that typifies the countries in which the firm is deploying its activities. The second is the "company government compromise" that exists between a firm's principal protagonists, a meeting of the minds that enables players to implement means that are coherent with the profit strategy being pursued - in other words, to invent or adopt a "productive model" (Freyssenet et al., 1998, Boyer and Freyssenet, 2000 b, 2002).

1 The present paper draws from the findings of the GERPISA’s first and second research programmes (Boyer and Freyssenet, 2000 b, 2002; Freyssenet and Lung, 2000), both of which were co-directed by Michel Freyssenet, working together with Robert Boyer and Yannick Lung, respectively. The authors have benefited greatly from the discussions that have taken place within the GERPISA international network, but accept full responsibility for any errors that may have persisted in the present text.
Profit strategies are combinations of profit sources in compatible proportions. Basically there are six sources of profit: economies of scale, diverse offerings, quality, innovation, productive flexibility and permanent cost reduction. Until now, there have been no examples of firms exploiting all of these profit sources simultaneously and with the same level of intensity. This is due to the contradictory nature of the sources’ preconditions and means of implementation. For this reason, firms must choose amongst possible combinations of profit sources, unless they can invent ways of overcoming contradictions as General Motors was able to do during the Inter-War period when it created compatibility between volume and diversity. Today five different profit strategies can be observed in the automobile sector. They are called "volume", "volume and diversity", "quality", "permanent cost reduction", and "innovation and flexibility".

Profit strategies do not all possess the same degree of relevancy in time and in space. Their appropriateness depends on the market and labour factor structures that characterize the different national modes of growth. These growth modes are not infinite in number and several countries may at any point in time be applying the same one (Boyer and Saillard, 1995, 2001). They are divided into three main categories: growth modes with a national income distribution that is "nationally co-ordinated and moderately hierarchised"; growth modes with a "competitive" type of distribution; and growth modes with an "inegalitarian" type of distribution. These categories are subsequently subdivided according to the main driver of the growth: investment, consumption or export. The success of an internationalization policy is therefore predicated first and foremost on the relevancy of the firm's profit strategy to the growth mode(s) of the new countries which it is entering (Boyer and Freyssenet, 1999; Freyssenet and Lung, 2000).

Profit strategies cannot be implemented with just any available means. Each has certain requirements that the firm's players must satisfy through a product policy, productive organization and employment relationship that are coherent and acceptable to them. The creation of an acceptable type of coherency between these various means infers the building of a "company government compromise" between the firm’s main players (executives, shareholders, banks, employees, labour unions, suppliers, and so on). The means used to implement one and the same profit strategy can therefore differ from one another if this is needed to satisfy the aforementioned requirements. As such, the firm's protagonists do possess some room to manoeuvre during the development of their own compromise. In case of an internationalized company, it is possible to have a variety of compromises, depending on the host country. Nevertheless, the firm’s subsidiaries must each be in control and in charge of their own production systems and markets. This is not the case when they are part of one and the same regional or global industrial complex and deliver their output to markets that change depending on the current economic situation.

The liberalization of capital international movements and the deregulation of labor market

The two main changes at the turning point of the 90s were the liberalization of capital international movements and the deregulation of labor market in some countries. The liberalization of capital movements was one of the key elements of the american economic growth during the 90s. It was the origin of the destabilization of the previously most performant countries (Japan, Germany and Sweden) and of the temporary imput-

ous increase of the so-called emerging countries. The American economic growth enabled the American carmakers to become again profitable. The destabilizing of the countries characterized by a “co-ordinated and export-oriented” growth mode (Japan, Germany and Sweden) made their automobile firms less competitive. The impetuous increase of emerging countries created the hope of a new development of world car market. The free movement of capitals engendered also two speculative bubbles: the first concerning precisely the emerging countries, the second the so-called "new economy", mainly in USA. The bursting of the bubbles of the emerging countries in 1997, of the new economy in 2001, stopped the world growth and revealed the weakness of some Korean, Japanese and European carmakers. This situation caused a new wave of mergers and alliances in the car industry.

With the deregulation of labor market, the second main changes above mentionned, the national income distribution became more "competitive". But this type of distribution was not developed at the same degree and the same enlargement in all countries of the Triad. “Competitive” distributions of income, through the economic and social disparities that they engendered, also gave birth to a second automobile market for pickup trucks, minivans, recreational vehicles and other conceptually innovative means of transport. This second market has become just as large as the market for saloon cars in USA.

It is in this context that commenced the rearrangement of a world space that had been split up into several tendencies: the generalisation of trade liberalisation; the constitution of regional spaces; and the reaffirmation or affirmation of nations, whether “emerging” or not. None of the scenarios of global space reshaping will be exclusive of the others, except through an accident of history. In order to avoid economic and political instability, generalized free trade presupposes worldwide rules and means to make them respected. However, it could be thought that these rules would require many years before being part of a sufficient and satisfactory agreement for all parties. Neither are there enough countries who are powerful enough to impose them on others in a foreseeable future. This is why the countries who already maintain major trade exchanges seek (mainly or by default) to make up free trade zones, the rules of which being less difficult to work out and the immediate benefits easier to spread to a limited territorial scale. In this case either a satellitization of emerging countries by powerful industrialized countries, as is already the case in NAFTA, or accords between emerging countries who dispose of certain autonomy will be seen, as the Mercosur countries are attempting to do. These free trade zones will either be steps to worldwide free trade, or if the latter is revealed to be utopian or impossible, towards the formation of regional economic and political poles. The scenario of a multi-polar world made up of countries grouped together according to region whose economic growth would once again be self-centered and regulated would also only be possible partially in the best of cases. The formation of such political and economic poles is a long and winding path with many potholes, as the experience of European Union construction has shown. In a medium term, one or two of these poles are possible.

In the end the preceding trends will not stop the fact that independent nations last and expand either because they make up regions by themselves, or continents through the size of their population and natural resources; or because of their very independence they fill the role in the international economic system that other countries do not wish to see disappear. In these conditions, what are the chances for different profit strategies possible for automobile firms?

A utopian globalization at the core volume strategy

The "volume" strategy emphasizes a single source of profit: economies of scale, that is, mass production for as long as possible in constantly growing markets, with a reduced number of models that are specific to each major market segment. It can only be durably relevant under two conditions: the market must be in an extension mode (either because it is in an initial equipment phase or else because it is homogenizing) and comprised of two or three homogenous segments; or the labour factor must be copious and capable of being mobilised for repetitive production.

These conditions presuppose a growth mode that is consumption-based as well as a type of income distribution that is either nationally co-ordinated and highly egalitarian or else clearly stratified into two or three stable and numerically equivalent sections. As one can see, these conditions are very restrictive. No growth mode that has ever been seen in a capitalist economy has ever durably satisfied them. For these reasons, up until now the volume strategy has only been profitable during relatively short-lived initial automobile equipment phases, that is before the demand has diversified. This was the case for Henry Ford with the Model T during the 10s, and for Volkswagen with the Beetle (Jürgens, 1998).

The policy of world cars, one per major market sector, each having its own platform, would regain pertinence in a world where the parties are converging toward the same forms of competition and the same mode of income redistribution. This being improbable as seen above, does it necessarily mean that it is totally unthinkable? It can be viable under two conditions. The first is sufficient freedom of exchanges between main countries so that customs duties and exchange rate variations do not prevent worldwide concentration and specialization of production sites, an essential element of a strategy for economies of scale. The second is that a fraction of the customers on the main markets privileges low sales prices and only average quality.

From the mid 1980s Ford tried again to implement a "volume" strategy with its world cars policy, but unsuccessfully. The Korean carmakers' highly ambitious internationalization drives of the early 1990s aimed at this strategy. This involved one or two entry-level vehicles to target both emerging and industrialized countries (in the latter, these cars were marketed to low income households as a bottom of range models) - two markets where a low price could offset a comparatively low quality. Korean price levels for new cars are often equivalent to the prices of a top-quality second hand car. This low price is obtained by using a strategy that is primarily volume-oriented, and thus geared towards expansion into new markets (Chung, chapter 8). The sudden rise in the Korean automobile firms' production capacities during the 1990s also helped bring about their decline - no independent Korean carmakers have survived now that Renault has taken over Samsung, Daimler-Chrysler Hyundai and GM Daewoo.

The "volume and diversity" strategy: a global commonalization of platforms and a regional differenciation of models, under certain conditions

As three European (Freyssenet, Shimizu and Volpato, 1992), two American and one Japanese automobile firms (GM, Ford, Nissan) are pursuing the profit strategy we called "volume and diversity". Internationalization and commonalization are the two indispensable conditions for the volume and diversity strategy, when the market in-
crease slightly. But the internationalization can concern only the countries where the
commonalization is commercially acceptable. The current change of the structure of
several markets limits this acceptability.

**Characteristics, conditions and requirements**

This strategy combines two sources of profits that would at first glimpse appear to be
contradictory - volume and diversity. What General Motors invented during the Inter-
War period was a way of overcoming this contradiction by designing different marques' car models on the basis of a single platform (at the time, the chassis) and by setting up a productive organization and employment relationship that made it possible to manage ostensible diversity (body, internal fittings and equipment) in an economic manner. During the 40s GM achieved to elaborate a productive model, the Sloanian model, that became for many managers the "one best way" until the 70s. The volume and diversity strategy thus precludes specific models as well as models that are conceptually innovative and which are not compatible with many parts being commonalized with models from the traditional product range.

This requires a growing and moderately hierarchised market as well as a copious, polyvalent and promotable workforce. In actual fact, if the potential clienteles are to accept this superficial differentiation and deep-seated commonalization, there cannot be any excessive economic and social differentiation between the various social categories, and social and professional mobility must have attained a certain level. Growth modes that feature a national income distribution which is "nationally co-ordinated and moderately hierarchised" are the ones that best fulfil such conditions. This is why a volume and diversity strategy was the most pervasive (albeit not the only) strategy during the post-war boom years. It ran into difficulties when the market entered into a product renewal phase in the countries where firms were pursuing this strategy. The indispensable economies of scale could no longer be obtained thanks to an extension of the market.

However, they could be achieved by penetrating those markets that found themselves in an initial equipment phase, or else thanks to mergers and alliances with other firms. Still, certain pre-conditions had to be fulfilled for this to occur. Internationalization, for example, had to involve moving into countries that possessed the same types of growth mode, and designing local models that shared the same platforms, as those that could be found in the country of origin. The “volume and diversity” strategy would thus be fully pertinent in the framework of a world where car owners would globally have basically common expectations and would only differentiate regionally on secondary aspects. Mergers and alliances had to quickly lead to a commonalization of the relevant marques’ platforms. Carmakers who had developed a volume and diversity strategy during the post-war boom years, found it difficult to make this change (Freyssenet, Mair, Shimizu and Volpato, 1998).

At the contrary of Volkswagen, the only carmaker that succeeded in finding a profitable way to implement durably the "volume and diversity" strategy after 1974 and to implement the Sloanian model under these new conditions, GM, Ford and Nissan failed to do it, as Fiat in Europe. In the 90s, they tried unsuccessfully to commonalize their platforms at a global level and to differentiate them at a regional level.

Ford: an unsuccessful trans-regionalisation

From the mid-1980s onwards, Ford pursued a strategy that was based on the concept of centres of excellence, delegating and dividing the responsibility for the renewal of its models and main mechanical systems between three poles, according to the set of competencies that each had acquired: Ford North America for large cylinder vehicles (V6 and V8 engines); automatic transmissions; and electronic components; Ford Europe for small and medium-sized cars; for four-cylinder engines; and for manual transmissions Mazda, in which Ford has a 25% stake, and with which the Company had started up a production of small subcompact cars for the North American market (with the Escort being renovated in such a way as to approximate the 323). In addition, the Japanese partner was central to Ford's Asia-Pacific activities, a region in which most of the cars being sold under Ford's blue badge were in fact superficially changed Mazdas: the 121, the 323, and the 626 (Bordenace, Lung, chapter 3).

The structuring of Ford's space had been directly based on K. Ohmae's Triad concept. In the Southern Hemisphere countries (markets that had not as of yet “emerged”), Ford arranged local collaborations, most particularly with VW in the Autolatina joint venture that had grouped the American and German companies' activities in Argentina and in Brazil. Again, the idea was to benefit from projected regional integration (Mercosur) by rationalising all of the two carmakers' activities.

These initiatives were subsequently altered or abandoned en route. The Ford 2000 project, first announced in 1993, has been an attempt to overcome Ford's regional structures (Ford Europe in Europe and NAAO in North America) through a global integration of activities. It is true that the initial results of the global platforms concept that had been developed as an extension of the poles of responsibility strategy have been unsatisfactory, certainly as pertains to the small car market. The Escort (Lynx in North America), developed on the Mazda 323's platform, has not achieved the results that had been hoped for; and Europe has assumed responsibility for the development of the platform of Focus that replace the Escort on both sides of the Atlantic. In the lower mid-range, the first transatlantic (global) platform to have been designed in Europe has given birth to the Mondeo, and to its equivalent(s) in North America (the Contour/Mystique) - where it has not been as successful as expected. Finally, the upscale model that was supposed to be developed in North America to replace the Scorpio, or at least its design, has turned out to be stillborn. The Ford Scorpio will not be replaced by a top of the range Ford Europe product: instead, a Lincoln, a Volvo or a top of the range U.S. Ford model will occupy this segment. In addition, Ford has not obtained the success it was hoping for in producing/assembling its small European model, the Fiesta, in Brazil or in India. In South America, Autolatina’s break-up has meant that where hybrid Ford-Volkswagen models had previously been involved, each of the partners will now be refocusing on its own core product ranges. However, the two carmakers have been unable to benefit from the opportunities that have been created by the Brazilian market’s takeoff, itself due to the advent of the popular car. In India, Ford’s products have also been too expensive, and the American carmaker has ended up developing a model that is more basic, and which specifically targets the emerging markets. As for Mazda, Ford has effectively taken control by raising its stake to 33.3% - however, the Japanese firm’s recovery is occurring without any input from Ford, and it can even be said that the two companies are in the process of breaking off relations: witness the abandonment of the Ford U.S. products that had been developed on a Japanese platform (the

Pride/121, the Escort/323, and the Probe/626); the much too small production of the 121, supposedly derived from the European Ford Fiesta, and so on. The very idea of having Mazda run Ford’s presence in Asia-Pacific has now been put in doubt. The role of a Japanese partner in Ford's global strategy, 25 years after the agreement was first signed, has still not been clearly established.

All in all, the outcome of Ford's internationalization strategy, as implemented over the past decade, has been far from brilliant. Market share in Europe has slumped; Mazda has continued to decline in Japan and across the world; and a market leading position has been lost in both the Australian and the Brazilian markets. Far from generating additional profits, Ford's international activities have damaged the Group's profitability (Jetin, chapter 2; Bordenave and Lung, chapter 3).

Ford’s record earnings are essentially due to two explanatory factors: the Group's financial activities; and its light trucks sales on its domestic market (Froud et al., 2000). In an environment such as the one that it is now facing, Ford's executives have had to take strong actions, re-creating Ford Europe, and cutting costs dramatically. The race to globalize has been a failure, and regionalization is again becoming the core of the American firm's policy.

**GM: a partial attempt to make worldwide platforms and regional models**

This strategy presupposes, on the condition of similar automobile use, a income redistribution mode organized along a moderately hierarchical level in each of the spaces so that the limited differentiation between models will be accepted by buyers, and on the other hand, that real income gaps between concerned countries will also be moderated. It would hence be necessary that the formation of regional poles according to growth and regulated redistribution modes prevails, and that these poles evolve economically and socially in a parallel manner. Yet, both between poles as well as within them, the differences in income is rising and the cultural differences becoming deeper. Is it possible to invent a new form of commonization which would allow them to get over this difficulty? As observed at GM, the worldwide reorganization implied in this strategy provokes internal tension: regional subsidiaries, who designed and manufactured their range up to then refused to lose control of their product policy.

A certain cross-flow began to take place between the two sides of the Atlantic, and the newer platforms (first launched in 1996) have finally reached maturity. This should allow the Group to devise specific models for its three market categories: North America, Europe and the emerging countries. The design of a platform to build a medium-sized car (the Epsilon) appears to have achieved the results that had been hoped for; a dozen or so models are going to be developed from this base, and they will marketed starting in 2001. It should however be noted that someone along the way, GM has abandoned its global small car Delta project platform, the Group having decided to fall back on less ambitious local solutions (Bordenave and Lung, chapter 3).

The increased number and intensity of GM's alliances has also created new problems. The American' manufacturer’s greater stake in Japanese carmakers such as Suzuki, Fuji Heavy and Subaru have provided it with access to Southeast Asia (in an approach reminiscent of Ford’s with Mazda). In addition, this will help GM to broaden its portfolio of models (adding small city cars, for example), especially in the emerging markets. Cross shareholdings between GM and Fiat should lead to a rationalization of Fiat's and Opel's activities in Europe, with mechanical systems (mostly engines), pur-
chasing, and even platforms being shared in an effort to devise a range of specific models for the Groups’ various marques. In the United States, GM is used to creating a range of models for its different marques (Buick, Cadillac, Oldsmobile, and so on), and a question must be raised as to the reasons for this policy’s lack of success in Europe. In any event, these alliances cast doubts over the role of GM’s German subsidiary, Opel, which finds itself in the emerging countries in direct competition with its Japanese cousins (where it had been market leader); and which is now a rival of its Italian cousin (Fiat) in the European market.

The Nissan failure

Since the seventies, Nissan try to develop a volume and diversity strategy. But because historic management particularities, the competition with Toyota and early international policy, Nissan has produced a very diversified classical model range, with a mechanic perfection and reliability, but also with a rather bland style and especially few shared parts. It privileged the costly path of flexible automation and generalized and sophisticated computerization, unlike its competitor Toyota, instead of truly involving workers in these tasks (Hanada, 1998). These two orientations are grounded in the longlasting power wielded by methods and concept engineers working at Nissan and also in social difficulties that have never really been solved. The ground that Nissan was progressively losing to Toyota and Honda in Japan was thus largely compensated by exports, up until the day when their competitive advantages no longer sufficed or disappeared (Jetin, chapter 2, figure 2.10). The straw that broke the camel's back came with the prolonged recession in Japan and the heavy debts of the group's banks (Kumon, chapter 6).

Explicitly, the alliance with Renault aims at commonalizing the platforms of the two firms. Apart from being difficult to do that, this product policy appears contradictory with "innovation and flexibility" orientation of Renault (Freyssenet, 2002).

The dilemma for the "volume and diversity" firms

The introduction of "competitive" modalities of national income distribution as generated a second market. General Motors, Ford, and Nissan, as the European carmakers pursuing the same "volume and diversity" strategy (Fiat, PSA and Volkswagen), unsurprisingly copied the conceptually innovative models that Chrysler, Renault and Honda launched once they felt secure that these models would be a durable success. This copying has even allowed General Motors and Ford to become profitable again, in an environment of economic recovery.

But the “volume and diversity” carmakers are still faced with a dilemma. The models they have copied have become mundane, and will no longer offer the same sorts of profit margins in the future. Moreover, such models do not create economies of scale that are significant enough to compensate for the fact that their profit margins are lower than is usual with a novelty product – a consequence of firms’ difficulty in commonalizing their platforms with the platforms of traditionally hierarchised cars.

Is it now the turn of the “volume and diversity” carmakers to take up the gauntlet of conceptual innovation, so as to benefit from the considerable rent it offers for a while? Some of these manufacturers seem to be interested in this possibility, and have been allocating the task to one of their marques. It remains that since the birth of the automo-

bile industry, no one has ever succeeded in carrying out two different profit strategies for a significant period of time. The requirements are far too contradictory.

Still we should envisage the possibility that the current coexistence between the “competitive and decentralised” distribution of income that tends to dominate in the private sector and the “co-ordinated and moderately hierarchised” distribution that is mainly preserved in the State sector might last. Are carmakers now facing the challenge of having to create compatibility between sources of profit that would on the surface appear to be incompatible (that is, “volume and diversity” vs. “innovation and flexibility”)? Has the time come for a major new strategic invention? Is it possible that modular vehicle design will enable economies of scale whilst allowing for the design of new vehicle types involving varying combinations of basic modules? The other path is to auto-center the growth of regional zone and to develop again a general "coordinated and moderately hierarchised" income distribution.

The "quality" profit strategy: a national-based production and a globalized distribution

During a long time, one of the important characteristics of european car industry was the presence of independant top-of-the-range and luxury carmakers, called “specialist” manufacturers as opposed to “generalist” manufacturers who target a wider market. Their profit strategy was the "quality" strategy. They were located only in the country of origin and they exported a large part of their cars. Since the end of nineties, many of them paradoxally decided to be integrated into large automobile groups, specially american, when the international market of top-of-the-range dramatically increased.

Characteristics, conditions and requirements

Here the word quality means not only reliability and finishing, but also and above all the social distinctiveness that the product’s style, utilisation of certain materials, emphasis on finishing and marque-related prestige offers in the opinion of a privileged clientele that looks for such factors and which is in a position to pay for them. This strategy induces those firms that have adopted it to specialize in the top-of-the-range, or in recent times in the upper part of each market segment. Earnings basically stem from the profit margins that the product and the top-of-the-range customers allow for - the high price also acting as a means of distinction and social tiering, above and beyond any material justification.

A quality strategy is the one that features the greatest relevancy in time and in space. There are very few societies in which a small well-off section of the population is not ready to pay a high price to possess those products that can symbolise their economic and social position. For this reason, the top-of-the-range market has from the very outset been international in nature, and the specialist carmakers the most commercially internationalized during a long time (Freyssenet, Shimizu and Volpato, 2002).

Furthermore, a “quality” strategy infers the availability of a workforce that is for the most part highly skilled (and which is reputed as such). Certain aspects of quality can in fact only be obtained by using the services of traditional professional workers (or inversely, of technicians and even engineers who are graduates of the top universities) to manufacture parts in small series on highly sophisticated machinery. The reputation of a
top-of-the-range brand is often related to the renown of its country of origin or of the region in which it is established, when this is famed for the personnel’s seriousness and professionalism. In general, a “quality” strategy is enhanced when the workforce is forced to maintain the national output’s international specialization, notably so as to be able to continue benefiting from the high salary levels, social protection systems and stable employment perspectives that are enabled by a production of specialized products that remain without rivals.

For these reasons, regarding the market or labour, the “co-ordinated and specialized export-oriented” growth mode (Germany and Sweden) is the one that affords the greatest visibility to the “quality” strategy.

In growth modes that feature a co-ordinated and moderately hierarchised national income distribution, the top-of-the-range clientele is not totally cut off from other types of customers. So the specialist carmakers have found it difficult since the War to put together a "productive model" that is durable, meaning one that can continually find the right balance between large series production methods and others that emphasise the product's "hand finishing" and customised qualities (Ellegard, 1995; Freyssenet, 1998).

Competitive distribution modes do not stand in the way of this strategy. It allows many actors to seek their fortune, yet at the same time it is less stable. It relies on the availability of workers who can be skilled but less attached to their firm. In the modes that feature a highly inegalitarian type of distribution, top-of-the-range clients are basically the only customers for new vehicles, and they are very devoted to the marque’s international renown and to demonstrations of their own wealth.

The sea change of international top-of-the-range market since the nineties

With income distribution having become more “competitive”, the top-of-the-range segment tended to become more heterogeneous. Demand for very top-of-the-range saloon cars (which had become marginal products) rose again. Above all, “top-of-the-range” demand cropped up for small and medium-sized cars and for recreational vehicles.

These developments have presented the “specialist” manufacturers with a new situation. On one hand, if they are to cover the new top-of-the-range sub-segments they must make substantial increases in their design-related spending, productive capacities and distribution network. On the other, they must fight off ambitious “generalists” who also want to benefit from the new situation. To cope, they have adopted a variety of different paths. Now theirs trajectories are completely diverging (Freyssenet, Shimizu and Volpato, 2002).

Some of them, Saab, Aston Martin, Jaguar, Volvo, Land Rover have ultimately opted to be integrated into an American automobile group pursuing the volume and diversity strategy: General Motors for the former, Ford for the four last brands. By so doing, they hope to avail themselves of the resources they need. For these prestigious marques, which automobile groups are ready to spend considerable amounts of money on the market remains a global one. In fact, it is precisely because of this homogeneity of the market, and of the brand’s image, that firms feel they can justify the investments that they have been making (the goodwill they have been paying). GM’s global platform, with its code name Epsilon, should help with its development of one Saab model, two Opels, and several American models (ranging from Chevrolet to Saturn) that are going to hit the market starting in 2001. However, the logic of this “volume and diversity”
strategy that General Motors has been pursuing risks that the top-of-the-range cars will lose their essential “quality”, that is, their specificity (Bordenave and Lung, chapter 3). Ford grouped in a separate entity, entitled Premier Automotive, all of the marques involved in its corporate "quality" strategy: Lincoln, Aston Martin, Jaguar, Volvo and Land Rover. The objectives are the rationalized purchasing of components; shared R&D investments (that is, Volvo's safety competency) and the “commonalization” of a certain number of electronic or mechanical components; and even the sharing of platforms. Although the commonalization seems to be limited to cars of top-range, the risk isn't so different than the risk taked by GM. The consumers of top-range car require very specific cars, included, and even may be above all, in invisible parts.

Industrial history is full of paradoxes. The paradox that we are focusing on at present is that the main “specialist” carmakers have been either losing their independence; or else thinking that they must change their strategy at the very moment that the international market for top-of-the-range products is most likely to launch them on a new phase of expansion. But the history isn't finish. Some brands can become again independent.

**Permanent cost reduction strategy and Toyotian model: very restrictive conditions to succeed**

*Characteristics, conditions and requirements*

In this strategy, costs are to be cut in all circumstances and at all times. To a certain extent, the other profit sources are no more than a complement, and even then only when they are feasible, useful and compatible. Cost reduction will always remain the prime objective when a firm envisages any situation, as no outcome is ever taken for granted. The strategy consists of lowering return costs by constant savings drives, both internally and by the suppliers. It requires to plan strictly the production and to avoid to take risk as running into debt, or conceptually innovative products, volatile markets, merger or acquisition, productive internationalization, and so on.

It is particularly well-suited when national growth is driven by the export of day-to-day products and when the redistribution of competitiveness gains is done in a co-ordinated and moderately hierarchised manner. Employees are subject to external competitiveness constraints and the volume and structure of national demand is sufficiently predictable to avoid any unforeseen and costly variations in production.

For these same reasons, this strategy, which Toyota has been pursuing since the 1950s, is not as robust as it would appear. This is because it is so demanding. The strategy struggles when sudden changes occur (related for example to shifts in demand levels or in currency parities) - changes that can in one fell swoop ruin the patient and continual efforts required of employees and suppliers, who might then be inclined to curtail their participation in the cost reduction drive, as was the case at Toyota in the early 1990s (Shimizu, 1999; Fujimoto, 1999).
Toyota, the unique company that invented a productive model to implement permanent cost reduction strategy

The Toyotian model is characterized first of all by the offer of well-equipped basic products in each market segment – products that are made without any excessive novelties so as to avoid costly diversity and/or the risks that are inherent to any innovation. In addition, and as far as possible, these products are turned out in increasing quantities (Lung et. al., 1999). A just-in-time productive organization reveals any problems that can prevent continuous and regular flows, since this would be a source of wastage. The employment relationship and the subcontractor network induce employees and suppliers to contribute to the cost-cutting effort, the former by a wage system in which pay is predicated on the realization of the targets that are set in this area, the latter by a choice that revolves around their commitment to the application of the same production methods as the manufacturer itself. The company government compromise in the Toyotian model focuses on the firm’s longevity, job guarantees for employees and profit-sharing with subcontractors.

The Toyotian company governance compromise can only survive under two conditions: employees must continue to accept a reduction in their standard times and an improvement in their performances whilst carrying out a parcellised type of work under severe time constraints (and working a great deal of overtime); and suppliers and subcontractors must continue to lower their prices. The requirements of the strategy and the difficulty in building a productive model to satisfy them are so daunting that Toyota has always been extremely prudent in its internationalization efforts (Boyer et al., 1998).

The constraint productive internationalization of Toyota

Toyota first faced the difficulty of reproducing its model in United States when it was obliged to establish facilities in that country (an obligation imposed by the government to all Japanese carmakers during the 1980s to able to continue to increase their sales on american market). Toyota finally consented after a long period of hesitation and after having taken a number of precautions (Shimizu, 1999). Its first step was to develop a joint venture with General Motors, called NUMMI, which took over a plant that GM had been preparing to shut down. Toyota used this experience to test whether it would be possible to come to an agreement with the UAW automobile workers labour union. The UAW, which turned out to be more co-operative than Toyota had expected, accepted its work time and wastage reduction principles in exchange for the firm’s commitment to avoid dismissals, maintain an equitable wage structure, and discuss its production plans, schedules and workforce allocations with the union. Nevertheless, Toyota was unable to transplant its wage, career development and scheduling systems to the US. It also had to trim its assembly lines, in the sense that it had to introduce buffer stocks to loosen the constraints caused by just-in-time (Mishina, 1998). This system, born at NUMMI and copied in Toyota’s other US transplants, did not feature the self-regulated and cumulative dynamics of the Toyotian model (Boyer et al., 1998). Toyota was very cautious also in its product policy. It produced only two models in the compact car segment: Corolla and Camry.
The labour and market changes of 90s and the limits of Toyotian model

It was back in Japan that the Toyotian model ran into the limits of its social acceptability. The company governance compromise that had spawned the model crumbled in the late 1980s. This took on the form of a work crisis in 1990, before the burst of the "speculative bubble" (Shimizu, 1998). Toyota’s management team was forced to change its wage and promotion systems; eliminate overtime at the end of an eight-hour workday; and reintroduce buffer stocks along its manufacturing and assembly lines. Toyota could no longer rely on its operators to reduce their own standard times, and this task would henceforth be delegated to specialized teams. Average monthly wages would be slightly modulated to reflect the realization of materials and tools savings targets that the work teams would devise themselves. The two day shifts were to work one right after the other, making it impossible to extend the workday through overtime. Annual working hours dropped. Assembly lines were split into segments, separated by buffer stocks so as to return a modicum of autonomy to the work teams (Shimizu, 1995, 1998, 1999; Fujimoto, 1999).

The structural changes in the automobile markets is also a big challenge for Toyota. The executives clearly saw that the traditional type of demand (hierarchised, stable and broken down into four major contiguous segments) was losing ground in all of the Triad countries to a type of demand that was more heterogeneous and volatile in nature. They understood that this trend would create problems for the group’s cautious and traditional product policy. Unsurprisingly, Toyota began to copy those conceptually innovative models that were most likely to be commercially durable. It launched with success recreational vehicles and large pickups. In 1999, 40% of its sales in the United States were in the lights trucks market. But the executives know that copying probably isn't enough. The rising demand for innovative products forces Toyota to take risks that are in contradiction with its strategy. In the late 1990s, it launched the first hybrid motor vehicle, the Prius, as well as a vehicle that was specifically targeted at young urban residents. Will it be able to durably assume the risks that are inherent to this type of innovation, without taking anything away from its previously satisfied priority a permanent reduction in costs? Honda’s example demonstrates the extent to which an “innovation and flexibility” strategy requires a specific utilisation of a firm’s financial, material and human resources. The challenge that it seems to want to meet is to create compatibility between cost-cutting and innovation, just like General Motors once overcame the contradiction between volume and diversity.

In Europe, Toyota encountered both labour and market difficulties. As in United States in 80s, Japanese carmakers were obliged to establish plants in Europe in 90s. Toyota choosed Great Britain. But since the beginning its English subsidiary didn’t succeed to be profitable because insufficiently attractive products, labour instability and big exchange rate variation. With the opening of a new assembly plant in France in 2001 and the creation of a joint-venture with PSA in Czech in 2005, Toyota tries to offer products more adapted and to have the advantage of monetary stability in the euro zone..

For the moment, Toyota keeps the same policy of growth. Although it had the financial means and the opportunity, it didn't try to buy or control an other carmaker at the end of 90s, as Daimler, Ford, GM or Renault. It prefers an internal growth with help of a progressive internationalization in which a regional configuration (in Europe, North America and Southeast Asia) is articulated together with a locally adapted product.
range, even as it spills over into other regional markets. This organizes a division of labour at an intra- and inter-regional level without weakening a central pole's authority.

Innovation and flexibility strategy: a necessary specific regional policy

Carmakers who arrive late in the automobile sector and who are trying to carve out space for themselves amongst firms with already established market positions often choose to pursue an “innovation and flexibility” strategy. It was the case of Honda in the 1960s. The relevancy of the “innovation and flexibility” strategy has been reinforced by certain countries’ recent tendency to develop a “competitive” distribution of national income.

Characteristics, conditions and requirements

This strategy consists of designing products that respond to new expectations and/or emerging demands; manufacturing them massively and immediately if actual orders match forecasts; or inversely abandoning them rapidly and for as little cost as possible if they fail commercially. Profits actually stem from an innovation rent that is derived from commercial relevancy - as long as this innovation is not copied. The best way of delaying this outcome is to be able to satisfy the market segment that has been created in as a short a period of time as possible.

An innovation and flexibility strategy is reinforced when the needs or lifestyles of the social categories that are being targeted change periodically, or when new categories emerge, with people who are distinct at an economic and social level. This is generally what occurs in those growth modes that are marked by a "competitive" type of national income distribution. It is the reason why this strategy, which had become the bane of many carmakers during the post-war boom years, has again become a winner, as witnessed by the good performances of Honda, Chrysler (before its merger with Daimler) and Renault (Boyer and Freyssenet, 2000, 2002).

The firms pursuing this strategy must be financially independent. They must be entirely free to assume the risks that are inherent to conceptual innovation. They must also be free of any medium/long-term commitment to their suppliers so as to be able to change production rapidly if need be. They must have at their disposal an easily re-convertible production tool and a workforce that enables innovativeness both at the product and at the production process level. Lastly they must also possess an extremely in-depth knowledge of which customer expectations are unsatisfied and unexpressed, so as to be able to offer innovative vehicles that are commercially appropriate.

For this strategy to succeed, the regionalization and heterogenization of demand would have to prevail over globalization and homogenization. This hypothesis may suit the producers which remain concentrated on a single region, taking advantage of their detailed knowledge of their markets just as producers which internationalize ensure that they have the means to understand consumer expectations in the regions in which they invest. In these cases, regional design offices do more than simply restyle base models, they modify them in response to local desires, and they may even design specific models. Regional subsidiaries have a broad autonomy because they have to detect emerging local requirements. To do so, they rely heavily on local managers, designers, engineers and distributors. The function of the company at the global level is to take responsibility

for financial control, distribution of investments, particularly to new regions, and ensuring that knowledge drawn from experience is circulated.

**The Hondian model**

Up until now, the Hondian model, inaccurately mixed together with the Toyotian model in the lean production concept, best fulfilled the demands of an innovation and flexibility strategy. Honda was able to make great strides forward during the post-war boom years, despite the fact that this era was hardly favourable to a strategy of this nature. From the very outset, Honda looked to the international marketplace for types of clientele that would be interested by what it was offering. It set up an internal system to detect and foster innovative personalities, and a design organization that gave them a chance to express themselves. Its production system, which had a very low level of automation, can be quickly re-converted, thanks primarily to a workforce whose responsiveness is enhanced by the firm’s wage and career development systems. Honda has always refused to be a member of a keiretsu and to tie its own development to government policy, whatever this may be. The Hondian model is based on a company government compromise that stresses individual promotion, expertise and the quality of work life in exchange for the responsiveness and inventiveness that give birth to the firm's performances (Mair, 1994; Freyssenet and Mair, 2000 a).

**Honda: the regionalization of design and production**

Honda's late entry into the passenger car market translates its attempt to base its growth on a significant North American presence (Shimokawa, chapter 7). The first Japanese carmaker to have built an assembly plant in the United States, today Honda owns a very well-balanced productive apparatus (a styling centre, Product and Process design activities, mechanical systems factories and assembly plants serving its production requirements, a distribution network). In the mid-1990s, regional divisions were set up and allocated the task of co-ordinating all of these activities in North America, Europe and Asia. These divisions were required to act in such a way as to support the local production of models that had been specifically designed for a regional market, but which shared platforms and other systems with models from other regions. This was a clearly affirmed regionalization initiative, and was translated by the famous neologism "glocaлизation", coined by Honda's chairman, along with another rather successful slogan: "Think Globally, Act Locally".

The productive model invented by Honda helped the company to cope with the various difficulties that it faced in the early 1990s: tensions in the labour market; and the failure of several of its models. Although Honda, like the other Japanese carmakers, lacked in manpower during the late 1980s (as a result of the explosion in domestic demand that was one outcome of the speculative bubble), unlike Toyota no doubts were raised about it production system. In part, this was certainly due to its better working and employment conditions; and also to a mobility that was primarily based on employees’ personal competency.

Honda’s severest difficulties were related to the failure of several of its models. The company had believed that the rapid enriching of certain sections of the population (one result of the speculative bubble) would durably orient demand towards sporty and/or luxury cars, and it therefore built up the number of models it offered in this category.
For as long as the speculative bubble lasted in the Triad countries, this appeared to be the right choice. In 1990, Honda’s worldwide output was twice what it had been in 1979, reaching 1.94 million units. The company had become the world’s eighth largest carmaker, moving ahead of Chrysler and Renault. Half of its cars were sold in North American, 35% in Japan, 9% in Europe and 6% in the rest of the world. A half a million Hondas were being manufactured overseas.

However, once the speculative bubble burst and recession erupted in Japan, Honda’s product policies were brutally invalidated. Realising the errors it had made regarding qualitative changes in demand, Honda reacted without delay. Whilst preparing to launch its own models, it began to market Land Rovers in Japan, as well as a restyled off-road Isuzu vehicle. The successful launch of a recreational vehicle (the CR-V) in 1996, and of a mini-van in 1997, contributed strongly to the resurgence in its sales. Its domestic output went back up to 1.31 million units in 1999, close to its historical peak of 1990 – despite the fact that its domestic market was still stagnating. That same year, Honda’s global output reached 2.33 million vehicles.

Until now, Honda has kept well away from any acquisitions or mergers. To further its development, it would have to be able to pursue its strategy in each of the world’s regions, meaning that it would have to design, with these regions in mind, models that satisfy the expectations of their new population sections. It might decide to do this on its own or by arranging an alliance with a manufacturer that has shown itself capable of doing this, that is, who is already pursuing the same strategy. Honda has chosen to follow the first path, one with which it has already been successful in North America.

The regional future of innovation and flexibility strategy

The most competitive redistribution of income in many countries today can favor the emergence of new strata or the modification of demand in existing categories. It must however not lead to social instability through excess competition, preventing truly new expectations to form. The “innovation and flexibility” strategy thus implies very fine attention to qualitative changes in different markets, but also markets vast enough so that new demand represents sufficient volume. The scenario of the making up of regional poles adopting a competitive mode of income redistribution is favorable to this profit strategy, as it offers both innovative demand and necessary volume. In this hypothesis, a builder implementing the “innovation and flexibility” strategy would not necessarily need to spread itself out on a worldwide basis and be perfectly profitable on a regional scale. It could be thus for Honda, Chrysler and Renault, each being the “innovation and flexibility” firm in its region of the world. A global firm pursuing this strategy is nevertheless conceivable. But it would be necessary for it to be able to design and produce innovative vehicles adapted to the new social strata which appear in the different spaces, as Honda achieved to do it in USA in 70s and 80s, and not to content itself to trying to sell innovative models elsewhere designed in its home zone.

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2 Honda was industrially and financially linked with Rover since its establishment in Great Britain. The surprise sale of Rover by British Aerospace to BMW in 1994 closed the possibility to develop four-wheel drive cars

Conclusion

Although a logic of production (economies of scale) has induced automobile manufacturers to extend their area of commercialisation on a global scale, it is in their articulation with a market, their getting into sync with a demand, that they have incorporated the regional tier as a level at which they can achieve a certain coherency. Except for the prestige automobiles, there are limits to the homogenization of global demand, and the failure of Ford’s attempt to integrate its activities globally shows that automobile firms should be looking for more appropriate strategies – and above all, for models or innovative forms of organization that are better adapted to a particular regional space. It is not at all certain that the real challenge is to be the first to globalize- mono-regional strategies (such as the one that PSA has pursued), bi-regional, multi-regional, even trans-regional strategies, all can be relevant at a certain time, and in a given space.

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