IS THE RISE OF EMERGING COUNTRIES AS AUTOMOBILE PRODUCERS AN IRREVERSIBLE PHENOMENON ?

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Trade revues[1] are rife with predictions that new countries are making a grand entrance onto the automobile industry's global stage, and this is also a recurring theme in the strategic plans made by automobile companies (car and component makers) Despite disappointment in the recent growth rates of the Central European (Turkey), American (Mexico, Brazil) and, lately, Southeast Asian markets, most observers today still appear to consider that the rise of the emerging countries is unstoppable. However, similar breakthroughs have already been widely announced on several different occasions, and even though they never really materialized, the top international experts (Altshuler, et al 1984) have often been somewhat too quick to agree with these forecasts. It could thus be worthwhile to ask whether or not the emergence of new automobile countries is a reversible phenomenon. After having described the recent rise the emerging countries, and after having analysed the factors involved, this paper will explore the uncertainties associated with expectations for growth in these markets.

[1] The monthly revue *Automotive Emerging Markets*, first issued in 1997 by the group Financial Times Automotive, attests to this effervescence.

ANNOUNCING THE RISE OF THE EMERGING COUNTRIES

First of all, it is important to determine whether there has really been an emergence of new countries in the global automobile industry. To do this, one must first study recent developments (since the early 1990's), and then take into account growth forecasts for the early 21st century. Above and beyond a general approach, analysis of a more disaggregated variety allows for some analytical fine tuning by distinguishing between the different modes of international insertion applicable in each of these countries. Finally, the rush by car and component makers to these emerging countries must still be explained - everyone agrees that, despite the target markets' very real potential, this could soon result in the appearance of excess production capacities.

The Rise of New Automobile Zones during the 1990's

In general, since the early 1990's, it has been possible to observe a stagnation of car production in the industrialised countries, and a concomitant increase in the emerging countries (Table 1). Globally, production in the traditional automobile countries (United States and Canada, European Union and Japan) has dwindled, although this statement should be relativised by the fact the none of these zones is at the same phase of the economic cycle: Japan has been in a recession since 1992 (production dropped by 3 million vehicles between 1990 and 1996); Europe has gone through a period of stagnation; and North America has been experiencing recovery (production having increased by 2.6 million vehicles over the same period).

In any event, unlike predictions for the new players, the most optimistic forecasts for the traditional car making countries expect growth to trend only slightly higher (1 or 2% p.a.).

Table 1. - Motor Vehicle Production by Continent

	1990	1996	Change	Index (100 in 1990)
World	48 601	51 504	2 903	106,0
Triad	40 724	40 213	-511	98,7
European Union	15 597	15 625	28	100,2
USA & Canada	11 640	14 242	2 602	122,4
Japan	13 487	10 346	-3 141	76,7
Rest of the World	7 877	11 291	3 414	143,3
Latin America	1 835	2 750	915	149,9
Mexico	*821*	*1 219*	*398*	*148,5*
Brazil	*914*	*1 804*	*890*	*197,4*
East and Central Europe	2 788	1 827	-961	65,5
Russia & Ukraine	*1 917*	*1 042*	*-875*	*54,4*
Asia-Oceania*	3 036	5 823	2 787	191,8
Korea	*1 322*	*2 813*	*1 491*	*212,8*
China	*536*	*1 456*	*920*	*271,6*
India	*364*	*686*	*322*	*188,5*

* Except Japan
Sources: OICA. Unit: 1.000's vehicles

On the other hand, outside of these three zones, the "Triad", there has been a remarkable increase: production in the Rest of the World jumped by 43% from 1990 to 1996, corresponding to the assembly of nearly 3.5 million extra vehicles. However, this significant increase has not been across the board - for the most part, it has taken place in only a few countries :

- In the oldest emerging countries, where there was already a car industry in the 1970's and 1980's, trends involved either continued growth (South Korea), or recovery (Brazil). During the period under study, these two nations doubled their production, assembling 2.4 million extra vehicles.
  If one also counts Mexico, where production doubled between 1988 and 1996, these three countries by themselves represented three quarters of the growth achieved by emerging countries;
- New and major players appeared in Asia: China, and to a lesser extent, India, or even Thailand;
- There were advances in certain countries in Central Europe (Poland, Czech Republic), as older production units were replaced little by little by new models produced in factories

which had been either totally retooled, or else created from scratch on green field sites;

- Finally, there was one situation of sudden transition, involving the collapse of state-owned industries in Russia and in Ukraine (Sintserov, 1997).

Certainly, the forecasts contained in Table 2 demonstrate large increases in demand, especially for passenger cars . This augurs well for future sales, justifying car companies' investments in these countries. Nevertheless :

- Only a relatively limited number of countries are in the process of emerging; their progress is offset by the collapse of several other counties; and there are large areas of the planet which aren't even affected by the global trend (Africa, the Far East);
- The expected future growth is predicated on the supposition that the emerging countries will not stray from the path to which they have been committed since the early 1990's. However, not only is it possible that there will be policy changes, it is unavoidable, given the innate contradictions of the process of globalisation (Freyssenet, Lung 1996). The best proof of this are crisis situations, either on a local (Mexican Peso) or on a regional (the financial crash in South East Asia) scale.

  In fact, seeing as vehicle sales plummeted by 40% in Thailand in 1997, and by 70% in Mexico two years earlier, one can hardly call these forecasts realistic, much less self-fulfilling prophecies

Table 2. - World Passenger Car Sales Forecast in Emerging Markets

	1995	2000	2005	2010
Emerging Markets	5 652	8 048	10 601	13 128
Latin America	1 437	1 888	1 948	2 441
Brazil	1 130	1 554	1 570	1 948
Eastern Europe	1 559	2 393	3 201	3 554
Russia	688	976	1 195	1 265
Pacific Rim	2 656	3 767	5 452	7 133
Korea	1 152	1 534	1 747	2 253
China	320	635	804	1 603
India	394	528	1 150	1 450

Source : *Automotive Emerging Markets, n°2, 1997. Unit: 1000's cars*

Different Modes of Integration in the Emerging Countries

Because of past events, and in light of what is being forecast for the future, the whole group of nations covered by the term "emerging countries" seem to be a relatively heterogeneous category whose long term outlook for growth largely depends on the modalities of their insertion into the international economy. Indeed, the strategy a company adopts depends on what it perceives to be the main issue:

- Integration of the periphery, that is, areas which lie outside of the Triad pole,
- Participation in particular forms of regional integration, or
- Building the foundations for a national automobile industry capable, over the long run, of competing with the traditional car making countries.

Three different types of trajectory can be differentiated by such an approach.

The Emergence of New National Automobile Industries

The first scenario involves the creation of a national automobile industry which benefits from the transfer of technology by multinational companies. Inspired by the Korean model, this perspective assumes the local market has become large enough to absorb production. Nevertheless:

- on one hand, though it may be necessary to implement an export strategy to help support a nascent national automobile industry, the national market itself remains the prime objective - see the examples of South Korea and, earlier on, Japan (Bélis-Bergouignan, Lung, 1994);

- on the other hand, foreign automobile companies (car and component makers) will not set up locally, or accept to transfer their technology, unless such a presence gives them privileged access to major markets. This can only be the case in countries featuring a large population and a small rate of car ownership, but which are committed to economic take-off, i.e. nations which are of continental size such as China and India, even Russia.

The Japanese, and, especially, the Korean experiences in creating an automobile industry show how very important it is to stick wilfully and conscientiously to an appropriate industrial policy, especially to encourage the transfer and appropriation of the foreign technologies which will enable local companies to develop, little by little, their own competencies. In the automobile industry, this orientation requires that particular attention be paid, once the [foreign] car makers have arrived, to the components industry, and that foreign investment be carefully controlled so as to ensure an effective transfer of technologies. This must be associated with a policy of training the local labour force, reinforcing the skills set available in all strata of local industry, and consolidating the State's means for intervention. Today China is the country which best satisfies these criteria, but things are not as clear in Russia (due to that country's social disintegration) or in India, which has seemingly committed itself to the path of liberalisation, but which has done so within its own particular context, keeping such a strict control over the process of deregulation that it is easy to imagine a reversal of this policy.

On the other hand, in the aftermath of the Asian crisis, there has been a loss of credibility for the so-called "national" policies of small countries like Indonesia. And even before this, Ukraine had been obliged to give up its wild dream of becoming a new player on the automobile industry's global stage, and has now had to satisfy itself with less ambitious projects.

Systems of Pericentral Regional Integration

The situation in Brazil is like in other nations of continental size, with the difference that Brazil is integrated into a specific regional organisation, MERCOSUR. This scenario can also be envisaged on a CIS-wide scale for Russia. Regional integrations of this type, involving only emerging countries (MERCOSUR, ASEAN, CIS), allow for a division of labour to develop between the various members of the region. Companies integrate the management of their various entities throughout the area, and this generates a flow back and forth of goods and information. In the ASEAN zone, specific agreements on the car industry led to the building of such configurations (Lecler, 1998). In MERCOSUR also, the trend has been towards regional division of labour between Argentina and Brazil.

These types of integration are the result of national commercial policies, and yet they have the particularity of being implemented by foreign multinational companies. In a liberalised context, this paradox makes it questionable whether such configurations are viable: will MERCOSUR be able to resist the attractiveness of the free trading North American pole, and will ASEAN be able to resist pressure from the IMF and the WTO. Moreover, above and beyond questions over the political willpower of a given government, there is the issue of its ability to play on rivalries between the companies trying to get established locally in order to increase their own autonomy. Back in the days when everyone was rushing to the emerging countries, the governments may well have been in a favourable situation - but if excess capacities do appear, it is very possible that the balance of power may in the future revert to what it had been before (cf. above).

In this case, the relevance of strategies geared towards regional leadership must be questioned. They were a success in Brazil, which, within the framework of MERCOSUR, had a conflicting relationship with Argentina - and they could be reproduced in other pericentral areas, i.e. in South Africa against the rest of the African continent, or in Turkey with respect to the Middle East. But the Triad's centripetal forces probably won't leave much room for configurations like these.

Peripheral Integration

A third configuration corresponds to the integration of the new emerging countries into the centre, that is, into the Northern regions. Within NAFTA, this is clearly shown by the example of Mexico: the Mexican automobile industry is nowadays totally oriented towards North America, which absorbs three quarters of its production, whereas it had previously been oriented towards a protected domestic market (Carrillo, 1998). In certain respects, Mexico has reproduced the breakthrough achieved by the Spanish automobile industry in Europe in the 1970's (Layan, 1996). This is also the case for certain Central and Eastern European countries who have predicated the development of their automobile industry on their relations with the European Union (Balcet, Enrietti 1996). In Asia, although there are the two poles of Japan, and, more recently, of South Korea, the situation is less straightforward, despite the recent relocation of the components industry towards countries with low salary costs, whose competitiveness has recently been strengthened following the devaluation of their currencies.

Nonetheless, it is important to emphasize that this type of integration is not an example of a simplistic, centre-periphery type model, wherein low value-added activities are pushed out to the periphery. It is true that such tendencies do exist: thus 90% of the wire harnesses which are fitted on North American vehicles are nowadays assembled in the *maquiladoras* along Mexico's Northern Border. However, the competencies of the local labour force is such that hi-tech activities can also be relocated in this area, so that the country is not reduced to screwdriver mechanic status. Again, the example of Mexico is instructive: Delphi (GM's Component Division) built an engineering centre there, bringing together several hundred engineers and technicians with the goal of developing hi-tech components (Carillo, Huade 1997). The IMVP survey comparing the productivity of assembly plants had focused on the remarkable performance of the Ford factory in Hermosillo (Woomack, Jones, Roos, 1990), and on the launch of the new Beetle 2 at the VW factory in Puebla, as indications of these countries' great ability to serve their apprenticeship and to improve quality and productivity until international standards were matched.

The Oligopolistic Game Played by the Companies

Given the prospects for growth, one by one companies have been announcing that they will be setting up in the emerging countries. In many cases, total investment in production capacities has at any one time exceeded the most optimistic forecasts for market growth, especially when growth did not actually materialise. When this occurs, excess production capacities can suddenly appear, since, with their oligopolistic strategies, producers are quick to imitate their rivals, and they will announce that they are going to invest in production. One of many examples of this type of competition has been in Turkey, where in 1992/93, for a local market of some 300,000 vehicles, producers announced investments creating a yearly capacity of 1 million vehicles. The example of Vietnam is even more noteworthy: total yearly sales barely reach 2,500 vehicles, yet producers are jostling one another in order to invest there. Even in a country as large as Brazil, the market may not be big enough to generate a demand for new cars which is equivalent to the added capacity created by the assembly plants in which car makers have invested. Thus, it seems unavoidable, and even rather predictable, that excess production capacities will appear. Yet, car makers rush to the emerging markets, dragging the component makers along with them. It is not that they are blind - this is simply the logical result of competitive processes in an oligopolistic industry.

The positions in the principal automobile markets (European Union, North America, and Japan) are nowadays relatively stabilised, even if certain reversals of fortune may occur over the medium term. There is so much competition, especially in the European and North American markets, that most car makers are forced to start price wars which devastate their commercial margins. In this environment, vehicle production makes little or no money - it can even cause losses. The automobile groups only make a profit thanks to their presence in segments where there are still some protected market niches (i.e. light trucks for the "Big Three" in the United States), or else because of their financial activities (i.e. Froud, Haslam, Johal, Williams 1997). Manufacturing activities engender very low profits. Moreover, there is to be a thorough reorganisation of the sales networks - this has already been started in the United States, where new players have arrived on the scene, and it has been announced for Europe, where the privileged status of car distribution will soon come to an end (Jullien, 1998).

Given how saturated these markets have become, car makers can only survive if they drastically reduce their costs, and if they offer a wider and more diversified range of products. They have to aim for economies of scale and, at the same time, for economies of scope. The platform strategies announced by all the automobile groups (cf. Table 3) are an attempt to respond to these constraints by the production of global cars - these are products which share the same platform and the main mechanical components (commonalisation), but which can be adapted to the local market (Shimokawa, 1996).

This trend also affects first rank suppliers, who try to spread out costs and benefit from economies of scale and scope both by using complex components (which necessitate major investments in R&D) in car models produced globally, and sometimes by using the same components on different models (made by the same or by other car makers). The search for modularisation is an attempt to respond to the new market environment.

Table 3. - Platform Strategies

Automobile group	Brand	Current number	Planned number
Volkswagen	VW, Audi, Seat, Skoda	16	4
Ford Motor Company	Ford North America, Ford Europe, Lincoln, Mercury, Jaguar	24*	16*
General Motors	Chevrolet, Buick, Oldsmobile, Pontiac, Cadillac, Saturn, Opel, Saab	14	7
Nissan	Nissan, Infiniti	24	5
PSA	Citroën, Peugeot	6	3
Renault	Renault	5	3

* World-wide number of platforms of passenger cars and light trucks
Sources : *Companies, Press.*

Prospects for growth in the emerging countries offers car makers opportunities for profits which they cannot achieve in their domestic markets. By producing for these countries the same product, or a variation derived from the same model or from the same platform as in the industrialised countries, companies are hoping to take advantage of the commonalisation of components and platforms - by so doing, they hope to benefit from an increase in volume, from economies of scale and scope, and from a reduction of their costs in their domestic markets.

It is truly a global industry, as defined by Porter: the competitive position of a company in any one market depends on its position in the other markets. In this case, a company which is absent from the emerging countries, despite its vulnerability to their particular type of uncertainty , would be permanently penalised: it is very difficult to catch up with the first movers, and though the consequences of having decided not to set up in these countries might not be felt in the immediate future, they can be very costly over the long run. Moreover, staying away makes it easier for competitors to move into the new market and be in the privileged position of having an uncontested, dominant position: even if profits are not made in this new market, it may be possible to keep an already established competitor from improving profitability, and thus reinforcing its global position.

This is characteristic of an oligopolistic industry - companies end up doing the same as their competitors even if, for the sector as a whole, this competition results in a zero sum game.

UNCERTAINTY IN EMERGING COUNTRIES

Car makers are rushing to get established and to acquire a solid position in the emerging countries. They are making major decisions - yet, they are totally uncertain as to how these markets are going to evolve. This is an uncertainty of the “radical” kind, in Knight’s sense of the word, for the car companies are operating in a decision-making environment in which it is not possible to calculate any probable outcomes whatsoever - this obviously detracts from the reliability of forecasts made by specialised institutions. It's very unlike the traditional Triad markets, where there is a smaller margin of error. In the Triad zones, there is relatively little strategic uncertainty, as most behaviour involves mimicry - this allows a company to anticipate its competitors' reactions. The two factors which are most difficult to anticipate are politics, and increases in demand. Therefore, these are the unknowns which companies need to manage.

Political Uncertainty : Can the Liberalisation of Trade be Reversed?

It is necessary to take historical precedence into account, especially between the First and the Second World Wars. The internationalisation of the automobile industry is nothing new, having been one of the industry's main characteristics since its inception - at several junctures in the past, international trade has accounted for an even higher proportion of sales than it does today (Bardou, Chanaron, Fridenson, Laux, 1982). History thus reveals the ebb and flow of this kind of change, due in part to the economic, political and social tensions which it engenders (Hirst, Thompson, 1996). Since internationalisation in and of itself is incapable of creating the rules which might ensure its own growth and longevity, there were reactions against it - first the protectionist policies of the 1930's, and later (during the post-war boom), the national policies of "autocentric" growth, carried out against the background of the Pax Americana. Globalisation has never been fully achieved - it is neither irreversible nor unavoidable.

Uncertainty of this type, essentially political in nature, is still prevalent nowadays, both internally (relations with the local authorities) and externally (international exposure). With respect to internal uncertainty, one must take into account the socio-political context, as well as governmental instability. In addition, in numerous cases, corruption is a method of political regulation - and it can be difficult to deal with people who behave opportunistically. In small countries, the major multinational groups have some room for manoeuvre. For example, General Motors has been able to oppose the Philippine government's desire to create its own "national" automobile industry, and as an alternative solution, it has selected Thailand for building a new assembly factory designed to service the South East Asian market. However, the balance of power is reversed in the larger countries, and this can sometimes force the major car manufacturers into costly agreements. The problems faced by Chrysler, which believed it had won a project to construct a minivan factory in China only to be piped at the post by Mercedes in 1996, is only one of the many misadventures to which companies operating in certain emerging countries can fall victim.

With respect to external uncertainty, there is nothing irreversible about the latest wave of liberalisation, a trend which has dominated the final years of the 20th century, and which has brought about the negotiation of new rules governing international trade (World Trade Organisation). These rules seek to eliminate tariff and non-tariff barriers to trade, either immediately, or else after a transition period of variable length. They have resulted in the abandonment of import substitution policies, and in the reduction of tariff barriers and quotas in countries like Mexico, Brazil, and Australia, which have suddenly had to open their markets to international competition. The IMF has recently exerted pressure on the nations of South East Asia to force them to open their markets to foreign products - this implies the end of their national automobile policy, and could be a new step in the liberalisation of the automobile trade.

The trend seems obvious, but it varies amongst different countries (cf. a comparative study on India and Brazil by Humphrey, Mukherjee, Zilbovicius, Arbix, 1997), and it can be stymied in situations of crisis. An example is the 1995 decision taken by the Brazilian government, when faced with an aggravation of its external deficit due to a sudden increase in imports, to unilaterally increase tariffs on automobiles, first to 32%, and then to 70%, before adopting a system of quotas, including for its partners in MERCOSUR. Even though these measures were later watered down, after Brazil had bilateral talks with Argentina, and multilateral negotiations with the WTO, the situation was ambiguous, and other circumstances could easily lead to a reversal of the process of liberalisation (i.e. nationalist reactions, for example in Indonesia). The process of globalisation, being itself full of contradictions, can generate its own opposite.

Asides from political uncertainties which result from forces and processes that are greater than the automobile industry alone, manufacturers have to face up to the uncertainty of demand.

Market Uncertainty

Several times over the recent period, car sales in the emerging markets have suddenly dropped. A more precise definition of the nature of these markets is thus required.

Is Emerging Market Demand Volatile or Reversible?

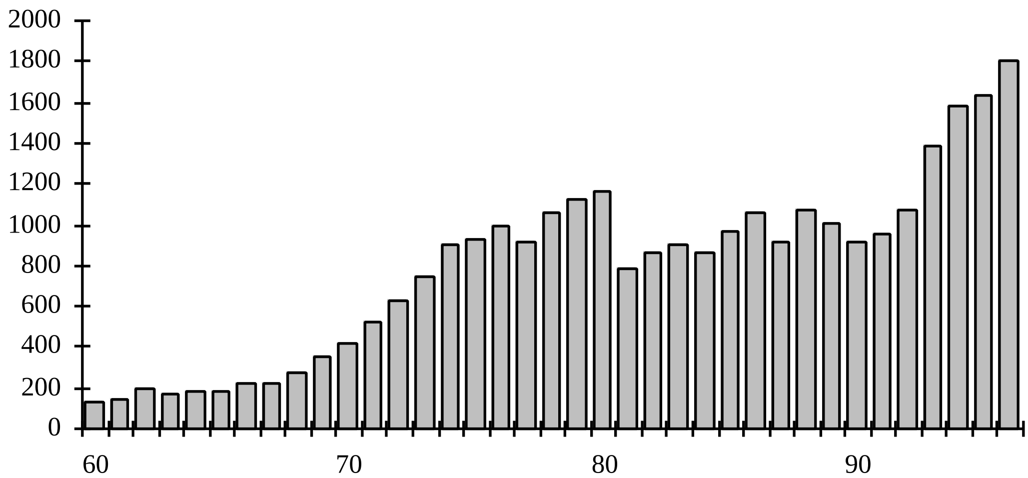
The first question concerns the general trend in these markets: is the demand simply very volatile, that is, is it likely over a short period of time to experience great annual variations, without there being any real reversal of the underlying trend?

Nowadays, this is the hypothesis which is usually adopted for the Asian markets: despite the sudden drop in demand, investments aren't being cancelled, they are simply being delayed. The influx of investments in Russia also attests to managers' expectations that, after the recent brutal drop in this country's income, long lasting growth will return .

In this hypothesis, it is necessary to be present in these markets so as to take advantage of the expansion phase, when demand suddenly accelerates - but it then becomes indispensable to adopt methods for the organisation of production so that business can be cushioned against large fluctuations in activity.

This flexible adaptation becomes possible when the labour force can be adjusted almost instantaneously (redundancies), yet such an individual solution only makes the situation more difficult, as it reduces income, thus amplifying macro-economic seasonal variations. This is a long way from the virtuous circle extolled in Fordism (Boyer, Freyssenet, 1998), where mass production and mass consumption are combined. Because of this, it becomes important that investments be kept to a minimum (see above).

Figure 1. - Production of Motor Vehicles in Brazil



Source : *ANFVA, OICA.*

The other hypothesis argues that growth in the emerging countries can be reversed: periods of overheating alternate with long periods of stagnation, or even of sharply lower demand. It would be mistaken to blithely reject such a scenario. The historical precedence provided by Brazil should not be forgotten: strong growth in the 1970's, followed by a period of stagnation (the "lost decade"), before activity picked up again (cf. Figure 1).

More recently, there is the Mexican example, where the level of sales reached in 1994 won't be seen again before 1999, at the very earliest. There could be a similar scenario in the countries of South East Asia, if the crisis there lasts. In order to evaluate these different hypotheses, it is necessary to delve into the particularities of demand in the emerging countries.

The Particularity of Demand in the Emerging Countries

Extreme market segmentation explains in part why it is so difficult to predict future demand for new vehicles in these countries. Historically, in the industrialised nations, a steady and stable increase in demand has been associated with the development of the middle classes - because of their purchasing power, their need for mobility, and due to the symbolic status of the car, households were led to spend a significant part of their extra income on the acquisition of motor cars (Fordism).

These same conditions are not found in emerging countries. First of all, households sometimes have access to a market for used cars, a useful alternative to high priced new vehicles. The used car market, which tends to be organised on a systematic, world-wide basis, is obviously crucial for the emerging countries. It should also be emphasized that the need for mobility can be satisfied otherwise than by privately owned cars. Transport can be collective, i.e. public transport and taxis, or individual, i.e. two-wheeled vehicles (Godard, 1997). This is all the more true since the lack of a modern road infrastructure in the emerging countries hinders the diffusion of private cars - this is unlike the industrialised countries, where the rapid motorization of households has been enhanced by the road network already built by the State.

Moreover, in nations of continental size, responsible for most of the growth in emerging country demand over the last few year (especially China and India), average income remains extremely low. The same models which are called entry-level in the European markets correspond to luxury vehicles in these markets - their quantity is limited, and their sales fluctuate. For example, in India, the so-called luxury models, equivalent to a Ford Escort, only represent 5% of total car sales (Mukherjee, 1997). Finally, new car sales are sometimes mostly destined for taxi companies or for government employees - and not for private ownership.In an environment like this, companies must put together adaptive strategies, like the one used in Brazil by foreign manufacturers with their successful “people’s car” (Laplane, Sarti, 1996). The presence of many manufacturers makes for more product variety, and consumers have become more demanding. The time when companies in protected markets could simply sell off obsolete products is long gone. Until recently, only obsolete models were being built and sold in the South (i.e. until not very long ago, the Renault 12 and the Ford Taunus were still being assembled in Turkey), and they were being manufactured with worn-out equipment that had been replaced in the core country factories. Nowadays, the new products being built in the emerging countries are the latest versions of the same basic models as in the industrialised nations, and they can even be versions which were specifically adapted and developed for the Southern countries (i.e. the Fiat Palio, the Asian car, the three-box version of the Renault Clio 2, etc.). Because of the low level of income in these countries (notwithstanding the recent rapid increase), and given the need to reach a significant sales volume in order to amortise investments, these models must be produced at a competitive cost (see above).

Another strategy consists of seeking niches of stability in these volatile markets. For example, the sale of light trucks (pick-ups), better adapted to these countries, could become particularly attractive. Above and beyond the product itself, all of this uncertainty must be reflected in the way in which production is organized.

Strategies for Managing Uncertainty in Emerging Markets

As demonstrated, car makers are now in a difficult situation: despite all the uncertainty which can affect their expectations of how demand will grow in the emerging countries, it is imperative for them to be present in these countries if they want to capture market share for whatever turnover does actually materialize. In the current environment, where governments have kept certain forms of protectionism, it is necessary to build an assembly plant, or at least a CKD plant, in order to gain access to the local market. Companies which are not present can be severely punished. For this reason, car manufacturers (who are still in charge of the way in which the automobile industry i.e. advancing and globalizing) can resort to different strategic options, depending both on the particular country under consideration, and on their own potential. Two main types of responses seem to predominate nowadays.

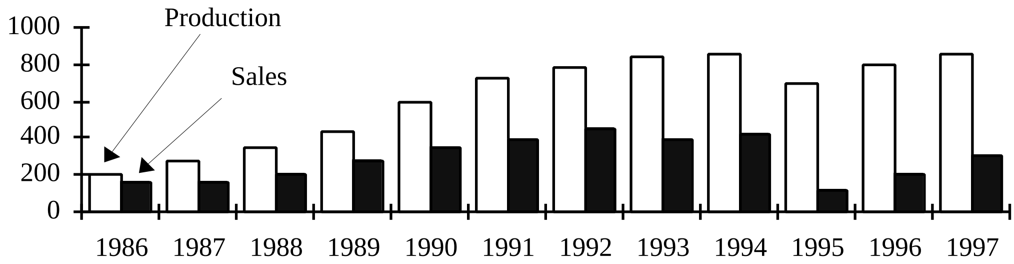
The Decoupling of Production and Sales

A first orientation consists of dissociating production and sales through the creation of productive capacities which are designed to supply markets elsewhere than in the country where the vehicles are being assembled. The issue becomes one of exporting production, in variable proportions, towards other industrialised and/or emerging countries.

This strategy is particularly adapted to areas on the periphery of the central, Triad zones. Mexico is the perfect illustration of this type of extroverted growth, and it is a perfect example of a textbook scissors effect: production and productivity grow at the same time as salaries and local demand collapse (cf. Figure 2).

Certain Central and Eastern European countries, like the Czech Republic, provide a less obvious illustration of this scenario, which assumes that local demand will grow, even if it does not match the increase in export-oriented production capacities.

Figure 2. - Sales and Production of Passenger Cars in Mexico (1986-1997)



Sources: *AMIA, OCIA. Unit: 1000s*

To a lesser degree, local production can acommodate great fluctuations (high volatility) of demand in the host country if market risks are spread amongst several emerging countries. This is the case in South East Asia and in South America, with their systems of regional integration, but such a strategy contains certain drawbacks because of the synchronicity with which regional crises tend to occur (the Tequila effect in 1995-96, the financial crisis in South East Asia in 1997-98). In addition to the issue of regional integration, companies can attempt to create links between entities located in the different emerging zones. By limiting the number of plants producing components which are sensitive to economies of scale, or by giving the responsibility for certain important tasks to particular poles of activity (for example, the development of specific models of vehicles adapted to the emerging countries), the issue becomes one of organising the flow of a number of products and services across a world-wide network (Humphrey, 1998). Given the many trade barriers which subsist between emerging countries, possibilities for creating organizations of this type at an international level are still limited. If the WTO continues to exert pressure in favour of even more deregulation by the year 2000, and given that this policy was strongly seconded by the IMF when it was called in to help in South East Asia, it should in the near future be possible to develop a strategy emphasizing the linkage of units in different emerging zones, especially since car makers have adopted strategies of global platforms and of commonalisation. This flexibility can also be attained by pushing variety management upstream, to the suppliers' doorstep.

The Reduction of Sunk Costs

A second strategic orientation consists of limiting the sunk costs associated with investment, so that the company can withdraw without suffering any serious financial damage if expected sales do not materialize. This problem is akin to the financial constraint which affects car manufacturers who have been encouraged to set up in numerous emerging countries, yet who do not have sufficient funds to finance their multiple investments[1]. Several different solutions, which

[1] The Korean car makers, especially Daewoo, had committed themselves to a strategy of all out investment throughout the emerging countries, but to do so, they had to take on a considerable amount of debt. The recent financial crisis revealed their vulnerability: they were forced to withdraw, and they even lost their autonomy.

can work in combination, can satisfy this orientation.

The classical response to this type of situation consists of adopting a strategy of getting set up step by step, and of using different means to attain this end. A frequent method consists of first establishing a plant for CKD or SKD vehicles, and of then transforming this into an assembly plant if sales attain the desired level. Moreover, with this strategy, it is possible to do a progressive learning, since assemblers can evaluate the local labour force's ability to adapt on the job (productivity, quality, involvement, etc.), and they can assess the capabilities of the national components industry's local suppliers. This strategy may be useful if production volumes are low, but it is also risky if demand takes off - it may become impossible to catch up with competitors who were quicker to build production factories with sufficient capacity.

Another solution involves financing investment through an association with a local partner. This offers two advantages: on one hand, there is a lesser commitment of financial resources, and on the other hand, the indigenous partner, especially because of its familiarity with the local economy (socio-political networks, suppliers industry, distribution system, etc.), can offer competencies which supplement the technology transferred by the foreign manufacturer. Car makers are very reticent about this type of arrangement, as they cannot control the way in which decisions are made, and are thus forced to agree to compromises which they often consider to suboptimal. Usually the manufacturers only resign themselves to solutions of this nature when they are forced to do so by rules governing foreign investment, and they try to get out of these restrictions as soon as possible (see the recent conflict over the control of the Indian company Maruti, or Peugeot's retreat from India and China). Car makers nowadays prefer another co-operative solution, one in which they associate with the components industry: the "industrial condominium" (Salerno *et alii*, 1998). Inasmuch as current forms of internationalisation are predicated on product convergence (global cars) and on the delegation of a growing part of activities to first rank suppliers (who take on the role of system integrators), procurement management tends to take place on a world-wide scale (global sourcing). Suppliers who have won contracts to conceive, manufacture, and assemble a subsystem (suspension, seats, lighting etc.) in the car makers' country of origin are often asked to follow their clients when they set up in the emerging countries. Outsourcing activities allows the manufacturer to build a new assembly plant with a smaller investment: a growing percentage of total investment is allocated to suppliers who are asked to relocate near the new assembly plant in the emerging country (follow sourcing). More and more, car makers are forcing their partners to submit to this requirement if they want to win business in the core countries. Inversely, certain suppliers are trying to improve their relationships with the car makers by taking it upon themselves to relocate nearer to the manufacturers' factories in the emerging countries, hoping in the end to become a supplier in their country of origin.

To reduce their own financial investment, the suppliers themselves can associate with local partners, but they must then guarantee that they can reach international standards of competitiveness (productivity, quality, logistics, etc.). Because of this, there is a trend towards the distribution amongst a group of companies (the manufacturer and the main suppliers) of the risks of uncertainty which are specifically found in emerging markets. This system of mutuality is coupled with a process of socialization, since the car makers' investments often benefit from large sums of public money[1]. Together, these elements reduce the sunk costs which the manufacturer would have had to assume if expected sales hadn't materialize, an outcome which otherwise could have led to his or her departure. By making it easier for manufacturers to withdraw, entry barriers are greatly lowered, and this explains in part why companies are hurrying to get established in the emerging countries. It's not their short-sightedness which is at stake: they are often aware that the sum total of their cumulated investments will create overcapacity, but they hope that it is their competitors who will pay the price. When this isn't the case, they make sure that they have a way out.

[1] The countries or regions which are likely to receive the new assembly plants are systematically placed in competition by the manufacturers. The national governments or local authorities are then forced to outbid each other to offer aids, subsidies, and other tax exemptions. A considerable proportion of the investment can be funded by the State (see the example of Brazil), and the capital which the manufacturer must sink into the project is reduced by as much.

CONCLUSION

It would be exaggerated to talk about the "mirage" of emerging countries, as their potential for growth is real, albeit not certain. However, it is important to relativise certain fabulous forecasts, and companies should be encouraged to define new methods for organizing themselves internationally in a way which enhances their flexibility - this trait will be necessary if they are going to adapt, in these markets, to economic problems which might be foreseeable, but which are difficult to ascertain with precision. In turn, companies' desire to cultivate an ability to adapt will certainly affect the way in which the automobile industry is organized in the industrialised nations.

The globalisation of the automobile industry is more than just the barely believable threat that operations will be relocated from the North to the South - it carries the seed for a renewal of the whole sector's organisation, transformations which will extend beyond the changes experienced in the 1980's, when Japanese methods of production were adopted. A new alchemy is being concocted for the organisation of production - and since this can be coupled with major technological changes (i.e. electric or hybrid vehicles), the landscape of the global automobile industry can be expected to experience a profound upheaval, even if this first occurs in the Triad nations, and not in the emerging zones.

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