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Bruno Jetin

► **To cite this version:**

Bruno Jetin. Strategies of internationalization of Automobile firms in the new century: A new leap forward?. The Second Automobile Revolution. Trajectories of the World Carmakers in the 21st century, 2009. <halshs-02043401>

HAL Id: halshs-02043401

<https://shs.hal.science/halshs-02043401v1>

Submitted on 21 Feb 2019

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HAL Authorization

To quote this chapter book:

B. Jetin (2009). "Strategies of Internationalisation of Automobile Firms in the new century: a new Leap Forward?" In M. Freyssenet M.(ed.) *The Second Automobile Revolution. Trajectories of the World Carmakers in the 21st century*, Basingstoke and New York: Palgrave Macmillan, 468 p.

Strategies of internationalization of Automobile firms in the new century: A new leap forward?

Bruno Jetin. Centre d'Économie de Paris Nord (CEPN) and IRD (DIAL).

Introduction

The automobile industry presents a paradoxical situation. It has a century old tradition of internationalization. Together with electronics/electrical equipment and petroleum exploration and distribution, it dominates the list of the top 100 largest transnational corporations ranked by their foreign assets established by UNCTAD, with 12 automobile firms in 1990, and still 11 firms in 2005. But despite this strong presence, these automobile firms were initially much less internationalised than the average.

In 1990, the transnational index (TNI) calculated by UNCTAD ¹ was only 36% in the motor vehicle industry against 51% for all industries, well below the TNI of electrical and electronics, petroleum, and chemicals. One of the reasons was that the largest firms such as GM and Ford despite their strong presence in Europe and Latin America realised at the time the bulk of their activities in the USA which was and still is the biggest automobile market of the world. Japanese firms had started to produce abroad but were still relying a lot on direct exports. At the other extreme, Swedish firms were long ago highly internationalised because of their very narrow domestic market but accounted for a small share of world production.

Previous studies (Freyssenet, Shimizu, Volpato, 2003, Lung, Van Tulder, 2004) had acknowledged this situation. During the nineties which saw the emergence of the globalization process, no automobile firm had been able to build a significant presence on every continent at the same time, but only on one or two (Jetin 2003). Firms lack financial capacity to invest everywhere; cannot extend their portfolio of products to fit each consumer needs; don't have the necessary manpower to organise, produce and sell efficiently and sometime lack the necessary political connections to develop profitable activities everywhere. They have to make choices between a determined set of countries and continents. Usually, the region of origin is

on the top list of priorities at the point that at the end of the nineties, regionalisation was better suited than globalisation to describe the process of internationalization at this stage. The question remained whether “regionalisation was a substitute for globalisation or an intermediate step towards its realisation” (Y. Lung, R. Van Tulder, 2004, p 4). Now the situation seems to be changing. By 2005, the TNI for the 11 automobile firms listed in the UNCTAD ranking reached 56%, close to the all industries average of 60%. This means a 55% increase from 1990 to 2005, against an 18% increase for the all industries average. These firms seem to have made a real leap toward globalization.

The first purpose of this chapter is to analyse this internationalization push by extending the sample to 22 major automobile firms and carefully assessing their geographical reach to check if there is a real globalization process. We use a statistical approach that tries to measure the degree of internationalization of automobile firms for the period 2000-2005². In so doing, we refer to the analytical framework of the “productive models” (Boyer, Freyssenet 2002) according to which there are two conditions to sustainable profitability: (1) A relevant profit strategy and (2) the establishment of a “company government compromise” which establishes a coherency between certain requirements that the firm’s players (executives, shareholders, banks, employees, trade unions, suppliers, the State) must satisfy. Because this “company government compromise” is first established at the national level, and continues to play a vital role for the firm’s survival, we still consider the national level as the starting point of our investigation. We then turn to the regional level to assess the relative importance of intraregional and extra-regional activities of the firm. The implicit assumption is that a global firm must develop an important part of its activity outside its region of origin.

The second purpose of this chapter is to study the profit that firms make abroad. Due to data availability this second part will be limited to American and Asian firms. But this is still sufficient to provide answers to some questions: Do firms succeed in making big profit abroad, or do they register losses, or in other terms is producing and selling abroad a bonanza or a curse? We do not pretend to judge definitely if a profit strategy linked to a productive model is successful or not because a lot of different factors are involved in explaining the year on year profit and loss. The following chapters that analyse in-depth some of the firms under review will bring more comprehensive explanations. But at least we will provide some indications. On the long-term, a successful profit strategy should materialise in substantial profits.

To start with, we present two features linked to the internationalization process: Mergers and acquisitions and the trend towards increasing concentration at the world level.

1. An unstable world oligopoly

The automobile industry has long been a highly concentrated industry. But this does not mean there is a linear trend toward an ever-increasing concentration of world production. Indeed the evolution is more complex. The world production share of the top twenty firms does show an increase from 91% in 1985 to 96% in 1999. But in 2006 it came back to 92% thanks to the emergence of new competitors from China and India (author's calculation based on CCFA data). The biggest firm's share reveals a steady decline from about 20% of world production in 1985 to 13% in 2006. But the ten biggest firms' share has increased from 73% in 1985 to 82% in 1999 and then decreased to 79% in 2006. This contrasted evolution can be explained by two major facts: the impact of the wave of cross-border mergers and acquisitions by the end of the nineties and the emergence of new competitors.

In the nineties, the search for economies of scale and scope at the world level, access to new markets and the need to diversify the portfolio of products has led firms to increase their size either by giving priority to internal growth (e.g. Volkswagen and Toyota), or to mergers and acquisitions (e.g. BMW with Rover, Daimler with Chrysler in 1998, Ford with Volvo in 1999 and Rover in 2000), by building a network of partnerships supported by stake ownership (GM with Isuzu, Subaru and Suzuki), or by unprecedented form of alliance (Renault group with Nissan in 1999). This resulted in a higher degree of concentration of world automobile production in the top ten firms noted above. Since 2005, most of these cross-border mergers and acquisitions have failed while less spectacular national acquisitions (for instance Toyota with Daihatsu and Hino, or Hyundai and Kia) and cross-border acquisitions (Renault with Dacia and Samsung motors, or GM with Daewoo) have proved successful together with pure internal growth strategies like Volkswagen, PSA and now Honda.

This explains the small decline of the production share of the top ten firms from 82% in 1999 to 79% in 2006. It is expected that the sale of Jaguar, Land Rover and Volvo cars by Ford, and most of all, of Chrysler by Daimler, will reduce further the top ten's share closer to its 1985 level (73%). Among them, three firms (PSA, Honda and Hyundai) that have pursued successfully an endogenous growth have increased their weight.

Whatever the strategy pursued, there is a clear tendency towards higher volumes of production. In 1985, there were three firms (GM, Ford, Toyota) producing between 4 and 9 million units per year at the world level, representing 42.2% of world production that year (author's calculation based on MVMA and CCFA data). Since 1999, there are six firms in this volume range, two of them - GM and Toyota - producing around 9 million units. These six firms control 60% of world production down from 65% in 1999. In 1985 and 1999, there were no firms producing from 3 to 4 million units. In 2006, there were three (PSA, Honda and Hyundai) with a share of 16% of world production.

Below the three million units, the number of firms has either stayed the same or has declined. The combined share of world production of these smaller firms amounted to 16.1% in 2006 down from 48.7% in 1985. In the automobile industry where economies of scale give a decisive competitive advantage, this means that smaller firms will have either to specialise further in segmented products (BMW or Subaru) or increase dramatically their production volume.

New competitors have chosen the second option: One Indian, Tata (Telco), and two Chinese firms (Chana Automobile and FAW Group) are now part of the top 20 world producers, along with one Russian, Avtovaz. Other Chinese producers are following closely. If the Indian, Chinese and Russian markets maintain a high growth or stabilise at a high level, these local producers will probably increase their volume of production and be able to contest the dominance of foreign producers in their home markets. Growth in their home market will probably be not enough to reach an efficient minimum level of production and this explain why Indian and most of all Chinese firms have already starting buying foreign firms and exporting massively as a first stage before direct investment abroad like Tata Motors in Thailand for instance. If these strategies prove successful, the consequence will be a further decentralisation of world production and a much more competitive market structure blocking the way to a stabilised world oligopoly that could share the world market and enjoy high profit margins.

2. A higher degree of internationalization.

The largest automobile firms are now more internationalized. Table 1 describes this internationalization push by presenting four indicators of internationalization and our own calculation of the TNI for 22 major automobiles firms for which data is available. Automobile firms do not always produce cars only but also other manufactured products (motorbikes, marine and aircraft engines, train) and services, in particular financial services. The process of internationalization involves this whole set of activities and not only automobile. In some cases like Fiat and Man, this aspect is especially important because these industrial groups are highly diversified and don't published independent financial reports for their automobile branch. When automobile firms belong to an industrial conglomerate, like most Japanese producers, but publish independent financial reports, we have used them to trace more precisely the automobile segment. Our approach combines several indices that reflect different aspects of the internationalization process. The first indicator measures the proportion of "total revenues"³ realised outside the country of origin. This makes it possible to assess the firms' degree of what we call "commercial internationalization". It allows us to break world sales and revenues down by place of sale regardless of where the product or service was produced (with the exception of Hyundai where the location of production is the only criteria available). Three other indicators are related to different aspects of the productive process and define what we call the degree of "productive internationalization". The second focuses on automobile production in itself. It measures the proportion of complete vehicle

production carried out outside the country of origin. The third indicator measures the proportion of workforce employed outside of the country of origin and the fourth, the proportion of total assets owned outside of the country of origin. To give a synthetical view of the degree of internationalization of automobile firms, we present UNCTAD's transnational index, the average of commercial revenues, workforce and total assets indices and what we call the "global" index which also includes the automobile production indices. One may consider the 50% level as a qualitative threshold beyond which a firm can be considered as truly global in the sense that foreign activities have gained more importance than the national ones.

Table 1: Degree of internationalization of automobile firms, 2000-2005					Synthetical Index of internationalisation	
Firms	COMMERCIAL REVENUES	AUTOMOBILE PRODUCTION	WORKFORCE	TOTAL ASSETS	GLOBAL	UNCTAD
AMERICAN FIRMS						
Ford	37	51	53	39	45	43
General Motors	29	53	47	32	40	36
Navistar	15	30	n.a	14	n.a	n.a
Paccar	51	55	n.a	56	n.a	n.a
AVERAGE	33	52	50	36	43	40
EUROPEAN FIRMS						
BMW	75	30	25	64	48	55
DaimlerChrysler	84	74	50	75	71	70
Fiat Group	67	46	53	59	56	60
Man	73	38	35	33	45	47
PSA	66	46	37	43	48	48
Renault	63	44	39	35	45	46
Scania	94	79	58	30	65	61
Volkswagen	72	62	48	50	58	57
Volvo	92	84	63	63	76	73
AVERAGE	76	56	46	50	57	57
JAPANESE FIRMS						
Honda	79	57	52	69	64	67
Isuzu	60	53	10	18	35	30
Mazda	65	27	8	18	29	30
Mitsubishi	71	51	36	41	50	49
Nissan	70	52	37	47	52	51
Subaru	54	19	52	23	37	43
Suzuki	58	43	36	34	43	43
Toyota	65	39	35	50	47	50
AVERAGE	65	43	33	38	45	45
KOREAN FIRM						
Hyundai	34	6	8	12	15	18
NOTES : The Global Synthetical Index is an average of Commercial Revenues, Production, Total Assets, and Workforce Indexes. The UNCTAD's Synthetical Index is an average of Commercial Revenues, Workforce and Total Assets Indexes. The American average is calculated with Ford and GM only. For details, see the statistical annex.						

With an average of 57%, European firms appear as the most globalised, in front of Japanese firms (45%) and American firms, (43%) which are on equal footing. These results are strongly influenced by some structural features such as the weight of the country of origin in the world economy. The USA being by far the biggest market of the world, it is logical that its relative importance for American firms should be high and the relative importance of foreign markets low. The relatively low level of internationalization of Ford and GM reflects also their incapacity to get a dominant share in Europe although they have been producing there for more than 80 years. The competition from local firms in Europe, Japan and in emergent countries is a

natural limit to the level of internationalization that a firm can reach. Nonetheless, internationalization has progressed. The global index has increased from 36% to 43% for American firms, from 51% to 57% for European firms, and from 42% to 45% for Japanese firms between 1995-99 and 2000-05 (author's calculations and Jetin, 2003). A closer look at commercial and productive internationalization reveals contrasted situations.

Commercial internationalization

On average, the commercial internationalization of American firms has increased rather from 26 % in 1995-99 (see Jetin 2003, p 15) to 33% in 2000-05 (see table 1, first column). Paccar, an American truck producer which has successfully bought Leyland trucks and DAF is the most internationalised (51%) due to its strong presence in Europe Mexico and Australia. GM and Ford are still very dependent on the US market but a closer look to the geographical breakdown of their sales and revenues along time shows that things are changing (see table 2).

Period	USA	North America	Europe	Latin America	Asia/Pacific & Africa	Latin America & Asia/Pacific & Africa	Total outside North America
GM							
1995-1999	71	77	18	4	1	5	23
2000-2004	73	80	15	3	2	5	20
2005-2006	63	72	17	4	7	11	28
Ford							
1995-1999	69	75*	20	n.a	n.a	5*	25*
2000-2004	65	71*	23	n.a	n.a	5*	29*
2005-2006	53	59	30	n.a	n.a	11	41
Note: * estimation based on the hypothesis of a 6% share for Canada and Mexico. Source: Author's calculations based on financial reports data. Figures have been rounded.							

For both firms, the importance of the USA and even North America is clearly decreasing, especially during 2005-2006 due to a decline in absolute numbers and market share to the benefit of foreign competitors. In GM's case, this decline is compensated by a strong progress in emergent countries especially in Asia/Pacific where the share of sales and revenues has jumped from 1 to 7% from 1995-1999 to 2005-2006. The relative share of Europe has remained the same. In Ford's case, the US' and North America's shares have plummeted. For the first time in its secular history Ford is on the verge of making this decline is partially offset by a progress in Europe whose turnover has increased from US\$ 32 billion in 2000 to US\$ 50 billion in 2006 thanks to both Ford brand and "Premier Automobile Group" (PAG, Aston Martin, Jaguar, Volvo and Land Rover). The sale of these brands in 2006 and 2007 will be probably followed by a return of Europe's share to its historical level of around 20%.

The case of European firms is different. They were already realising more than half of their sales and revenues outside their country of origin. Still, their commercial internationalization has increased from an average of 72% in 1995-1999 to 76% in

2000-2005. The detailed geographical structure of European firms for the most recent period is presented in table 3. We can see that for all firms except DaimlerChrysler and Volvo, Europe still represents a very high share, in the range of 60% (BMW) to 85% (PSA) of total net sales and revenues in 2005-2006 but with a downward trend. Without Chrysler, Europe's share in Daimler's turnover would have reached 48% instead of 32%, which is the lowest share of all European firms but stress the ongoing importance of the regional market. This is in fact quite similar with the share of North America for Ford (59%) and GM (72%) for the same period. If we consider the region of origin as the new domestic space of the firm, and globalisation as expanding outside the region of origin, then we can conclude that globalisation is far from being achieved. For some firms like Man, Scania or Volkswagen, there is even a kind of stagnation as if a threshold was being reached. Fiat is a special case. As a diversified industrial, Fiat Group has increased its commercial internationalization from 63% in 1995-99 to 72% in 2005-2006. But the automobile branch has suffered a severe crisis over the period and, as a consequence, its commercial internationalization has decreased from 59% in 1995-1999 to 55% in 2000-2004. As far as geographical diversification is concerned, all firms, except the French ones and Scania, have a foothold in North America where they realise between 13% (Fiat) to 29% (Volvo Trucks). In the Fiat's case again, this is mainly due to CNH-Case New Holland's turnover, its agricultural and construction equipment branch. Daimler since the split with Chrysler in 2006 returned to more common standards. North America now accounts for 28% of Daimler's turnover instead of 51% for DaimlerChrysler (see table 3). Six among nine European firms are present in South America but only Fiat and Scania realise at least 10% of their sales there. Likewise 7 European firms have a presence in Asia/Pacific but only 3 (if we include Volvo trucks) realise 10% of their sales and revenues there. Africa accounts for 5% (Man) or less. In general, the importance of the Asia/Pacific region is growing under the influence of China, while that of South America is declining.

Japanese firms present an intermediate level of commercial internationalization. On average, it has increased from 57% in 1995-1999 to 65% in 2000-2005. Even if it remains below the European level (77%) Japanese firms are filling the gap with an increase of 14% against 7% for European firms. This is a big change for a number of Japanese firms, including Toyota, which sold around half of their production abroad at the end of the nineties. Honda with 79% is still the most internationalised of Japanese firms followed by Mitsubishi and Nissan which have reached the 70% level after a leap between the two periods. In the case of Mitsubishi, the reason is due to a fall in Japanese sales after several quality scams shook consumers' confidence, while in the Nissan's case it is due to a stabilisation in Japan and a strong progression of foreign sales.

Table 3: Geographical structure of European Firms net sales in %							
Period	Country of origin	Europe	North America	South America	Asia/Pacific	Africa	Other countries
BMW							
1995-99	28	68	18		9		5
2000-04	26	58	28		10		3
2005-06	23	60	24		12		4
Daimler-Benz (1990-96) DaimlerChrysler (1997-2006), Daimler ()							
1995-96	37	65	19	4	8		4
1997-99	19	35	56	3	4		3
2000-04	16	32	56	2	5		5
2005-06	14 (22)	32 (48)	51 (28)	2	8 (12)		6
Fiat Group, Fiat Auto ()							
1995-99	37 (41)	76	7	12		6	5
2000-04	34 (45)	73	13	7		5	7
2005-06	28	68	13	10		5	10
Man Group, Commercial vehicles ()							
1995-99	33	67	15		13	6	
2000-04	27	68	14		13	5	
2005-06	27 (30)	73	7		14	5	
PSA							
1995-99	39	93					7
2000-04	34*	89		3			8
2005-06	33*	85		4			10
Renault							
1995-99	42	85	10		4	1	
2000-04	37	84					16
2005-06	34	80	5		6		9
Scania							
1995-99	10	75		16	5		5
2000-04	7	79		9	6		5
2005-06	6	76		12	6		6
Volkswagen							
1995-99	35	74	10	10	4	2	
2000-04	28	70	18	5	6	1	
2005-06	27	72	14	6	6	2	
Volvo trucks							
1995-99	10	56	29	6	6		3
2000-04	8	56	28	3	8		5
2005-06	6	52	29	5	9		5
Note: "other countries" means all countries for which detailed data is not available. In the case of BMW for instance, it means South America and Africa. For DaimlerChrysler it means Africa, and so on. Source: calculated by the author based on company reports.							

Toyota, which was one of the least internationalised firm by the commercial criteria at the end of the nineties (54%) now realises 65% of its sales and revenues

outside Japan in line with the increase in the Japanese average. The geographical breakdown (see table 4) reveals that only Isuzu (63%) and Suzuki (55%) are focused on Asia, which is explained by their stronghold in respectively Thailand and

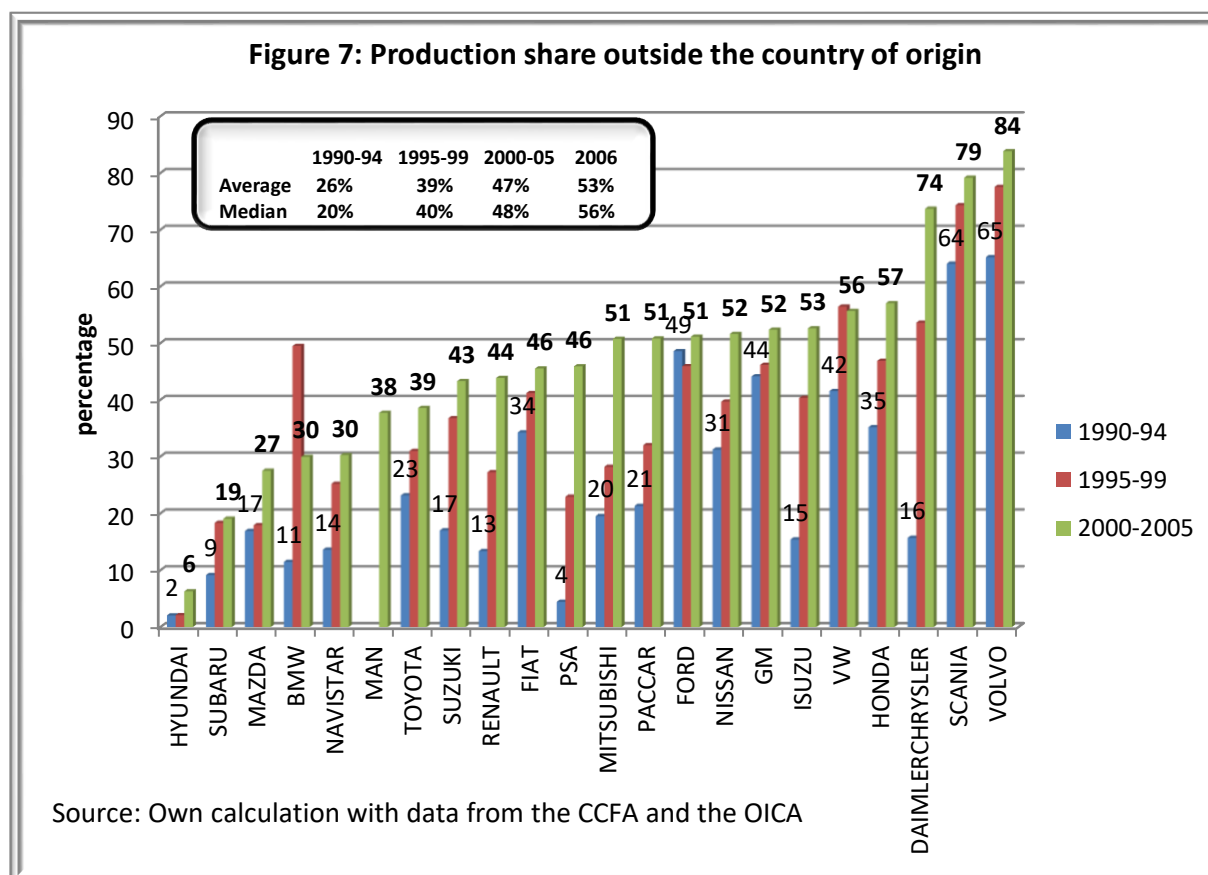
Table 4 : Geographical breakdown of Asian firms sales and revenues, in %						
Years	Japan	Asia	Total Asia	North America	Europe	Other countries
HONDA						
1995-1999	30	n.a	n.a	46	12	12
2000-2004	22	n.a	n.a	54	9	15
2005-2006	16	11	27	55	11	7
ISUZU						
1997-1999	38	8	46	36	n.a	18
2000-2004	39	16	55	28	n.a	17
2005-2006	29	34	63	14	n.a	23
MAZDA						
1997-1999	37	n.a	n.a	32	17	13
2000-2004	36	n.a	n.a	33	17	15
2005-2006	29	n.a	n.a	30	24	17
MITSUBISHI						
1997-1999	43	8	51	22	14	13
2000-2004	30	10	40	26	21	12
2005-2006	23	10	33	19	29	18
NISSAN						
1997-1999	38	n.a	n.a	38	15	8
2000-2004	32	n.a	n.a	42	14	12
2005-2006	23	n.a	n.a	42	17	18
SUBARU						
1997-1999	44	n.a	n.a	44	7	5
2000-2004	47	n.a	n.a	42	6	6
2005-2006	40	n.a	n.a	42	9	9
SUZUKI						
1997-1999	50	10	60	13	21	6
2000-2004	43	16	59	17	19	5
2005-2006	32	23	55	15	23	7
TOYOTA						
1997-1999	42	n.a	n.a	37	9	13
2000-2004	36	n.a	n.a	37	11	17
2005-2006	27	9	37	37	13	13
Note: When data for Asia are non available (n.a) they are included in "other countries", otherwise "other countries" exclude Asian figures.						
Source: author's calculations based on company reports						

India. To the contrary of American and European firms which are still very dependent on their region of origin, Japanese firms are usually more dependent on extra-regional markets, in particular North America. Five among nine sell more in value

terms in North America than in Japan. Honda is the most extreme case which now realises 55% of its sales and revenues in North America against 16% in Japan. Only three firms (Mazda, Mitsubishi and Suzuki) realise more than 20% of their turnover in Europe, although the European share is increasing for all Japanese firms.

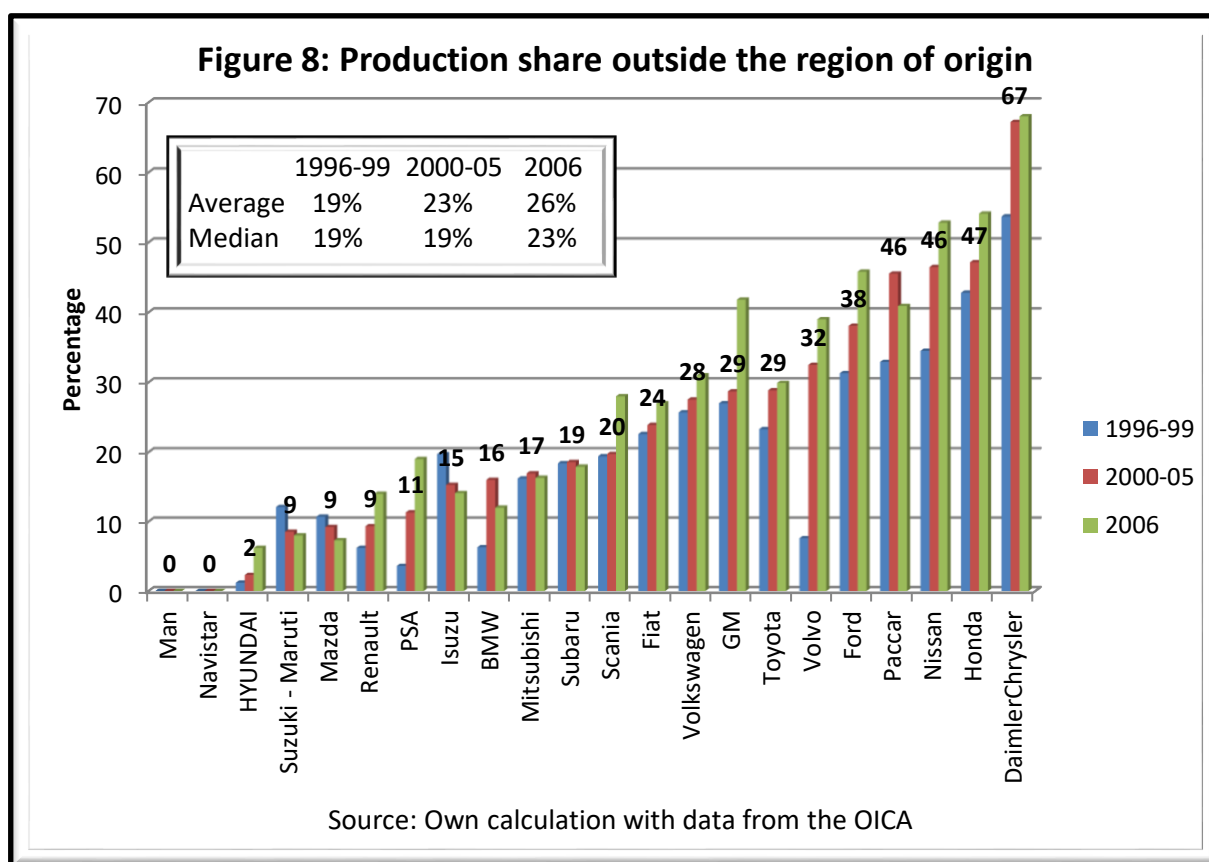
A major step in productive internationalization

Productive internationalization is decisive since it materialises foreign direct investment which has been a landmark of globalisation since 1985. The automobile industry has a long experience in international production starting in the 1920's either to bypass protectionism, to increase economies of scale or to be close to customers. But despite this historical tradition, international production had registered modest progress in the nineties and had remained limited in scope (B. Jetin, 2003, p 20). The years 2000 introduce a breakdown in this respect. Figure 1 reveals that in 1990-94, the (simple) average share of international production amounted to a modest 26% and half of the sample produced up to 20% abroad.



Yet on the period 2000-05, the average share of international production had reached 47% and the median 48%. In 2006, the last year available, the international production has passed the symbolic threshold of 50% and half of firms produce 56% or more abroad. Of course, firms like Scania, Volvo and DaimlerChrysler push the scores upward for specific reasons. But even if we take them out of the sample, the trend is confirmed. The average share is 42% and the median 46% for the period

2000-05 up from respectively 22% and 18% for the period 1990-94. The biggest firms are driving this increasing productive internationalization. Toyota from 23% in 1990-94 to 39% in 2000-05, Honda from 35% to 57%, Nissan from 31% to 52%, Renault from 13% to 44%, PSA from 4% to 46%, VW from 42% to 56% and even GM from 44% to 52%. This does not mean that automobile firms have turned footloose, or that the majority of them have become fully global. As is well known, there is a debate about the real meaning of the term “global”. In the present case, does the push in production outside of the country of origin means that automobile firms produce a significant share of their total production in every continent where there is a viable demand? To answer this question, we have calculated the production share of firms outside their “region of origin” in a broad sense⁴. Figure 2 presents the results.



On the whole, the production share outside the region of origin is much smaller although it has increased recently from an average of 19% in 1996-99 to 23% on the period 2000-05 and to 26% in 2006. But the median shows that half the sample produces 19% or less outside its region of origin in 2000-2005 and 23% in 2006. This means that with a few exceptions, automobile firms are still more regionalised than globalised as far as international production is concerned. This is especially the case of Hyundai (2% outside of Asia), of the two French firms, (around 10% outside of Europe), and small Japanese producers (Suzuki, Mazda, Isuzu and Mitsubishi, Subaru) with less than 20% outside of Asia. Among the top five firms, Volkswagen, GM, and Toyota were producing around 30% outside their region of origin on the period 2000-05, and Ford 38%. Paccar, Nissan, Honda produce close to 50% and

DaimlerChrysler, 67% until 2006. If we anticipate the sale of Chrysler by Daimler from 2007 to 2006 and consider the existence of two separate firms, Daimler's share of production outside Europe falls to 33% and Chrysler's share outside the Americas amounts to a meagre 3.5%. The average share of the sample falls to 23.5% and the median remains constant to 19%.

In sum, for the whole sample, the progress of international production outside the region of origin appears limited. For Japanese firms, this is explained by the fact that the most dynamic emergent markets where growth is concentrated are localised in Asia, their region of origin. Other promising markets, like Russia, Turkey and Iran are just emerging now, and some (Iran) are difficult or impossible to access for some firms for political reasons. So their combined impact on international production is still reduced. In the meantime the most striking feature is the skyrocketing increase of foreign production in China that reached 3.6 millions of units in 2006 up from 529 thousands of units in 2000 (Source: OICA, 2006). Foreign production in China is now superior to foreign production in South America, (3 millions of units in 2006) which used to be the most important market from emerging countries (Author's calculations based on OICA). India and Turkey are following with a foreign production of around 1 million of units each. But India is considered as the new bullying market of the future bound to reach the size of the Chinese market if growth promises are fulfilled. The foreign production in Russia and Iran is still very small and concentrated in a few hands, but again some firms have announced big investment plans in these two countries.

Japanese firms have benefited the most of the Chinese market with a production of 1.2 million units, followed by American (976 thousands) and European (873 thousands) firms (Author's calculations based on OICA). The only Korean firm surviving, Hyundai-Kia, achieved an astonishing production of 521 thousands units in 2006. These Chinese outcomes have a powerful impact on firms. For instance, in the GM case which is in decline in its home market and where it has posted huge losses (see above more details on profit), the Chinese market is an unexpected life-belt that will help it to survive. But not all firms present in China are as successful. In 2006, among nine European firms, only Fiat (51 thousands), PSA (202 thousands) and most of all Volkswagen (620 thousands) are producing in China. GM (including GM Daewoo) is producing 842 thousands units but Ford only 134 thousands. The Japanese producers are more equally present: Honda leads with a production of 371 thousands units, then Toyota (327 thousands), Nissan (218 thousands), Mazda (151 thousands) and Suzuki (134 thousands).

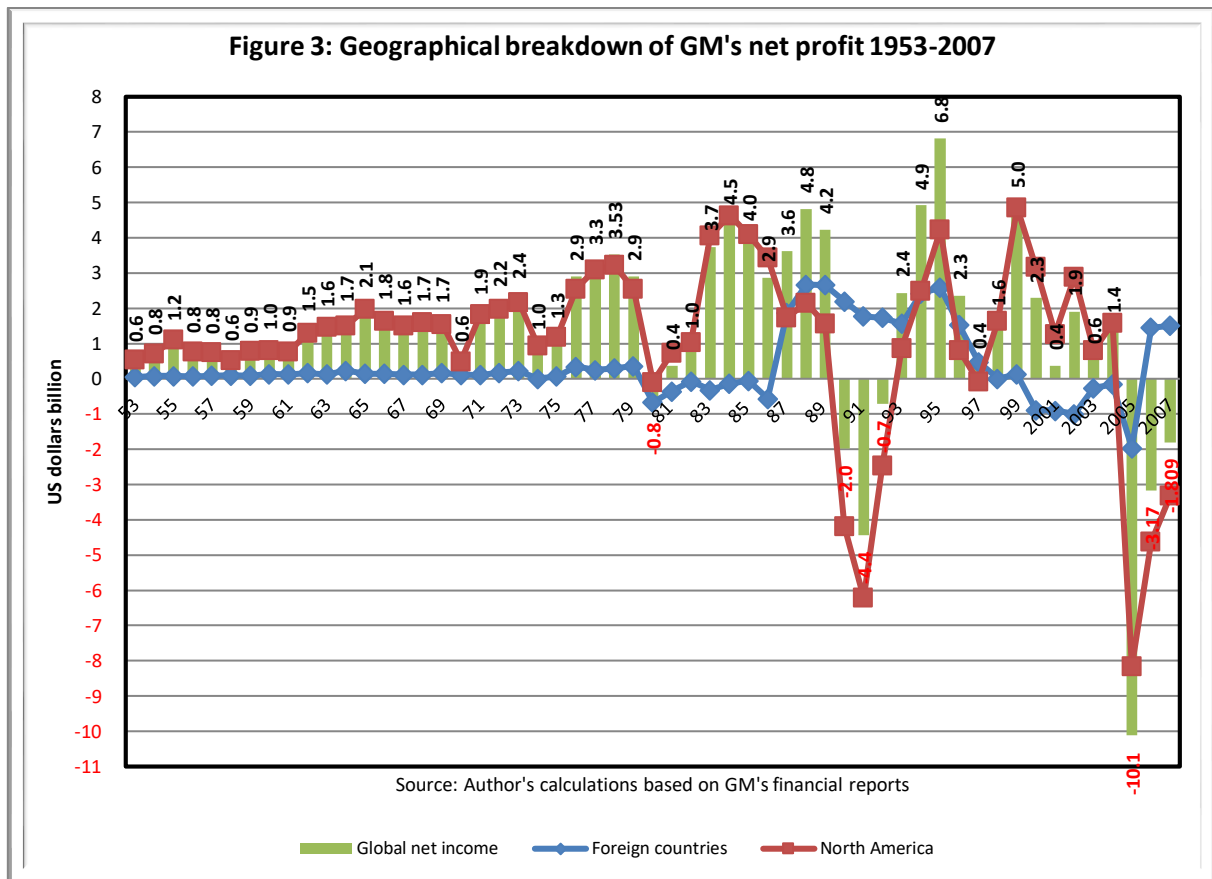
With the exception of China, foreign production in the "other Asian countries" and in India is overwhelmingly Japanese or Korean. In the "other Asian countries" (Asia without China and India), Japanese firms produce 2.1 million of units against 194 thousands for GM and Ford and only 6 thousands almost exclusively produced by Renault-Samsung (Author's calculation based on OICA). In India, Japanese and Hyundai-Kia produce 1.067 million of units against 79 thousands for American and

European firms together. This gives a clear picture of what we call the “regional effect”.

On the contrary, European (1.7 million of units) and American firms (1 million) are very strong in Latin America, which has traditional ties with Europe and the USA, while Asian firms are weak (280 thousands). European firms produce 8.4% of their international production in Latin America two times the share of their production in China (4.3%) while for American firms Latin America and China have now the same relative weight (6%) which was not the case in 2000. There will be probably a new rebalance in favour of China and India as numerous new plants in construction in these two countries will be achieved soon. To finish with, foreign production in Turkey has doubled its size, and has a more balanced presence of European, American and Asian firms. Foreign production has also increased a lot in Russia although quantities are still small (from nearly 0 in 2000 to 182 thousands in 2006) and has almost doubled in Africa. But up to 2006, there were no Asian producers and only one European producer (Renault) in Russia, and no more American producers in Africa. In Iran, there is only one European (PSA, and soon Renault) and one Japanese producer (Mazda). So there is still a potential of growth for international production in these emergent countries provided that their economic growth is confirmed, which is far from certain. To give just an idea of the impact of emergent countries on automobile firms, it is worth noting that the international production of all automobile producers in these countries has grown from 4.9 million in 2000 to 11.9 million of units in 2006: an increase of 7 million, almost the size of the Chinese market that year.

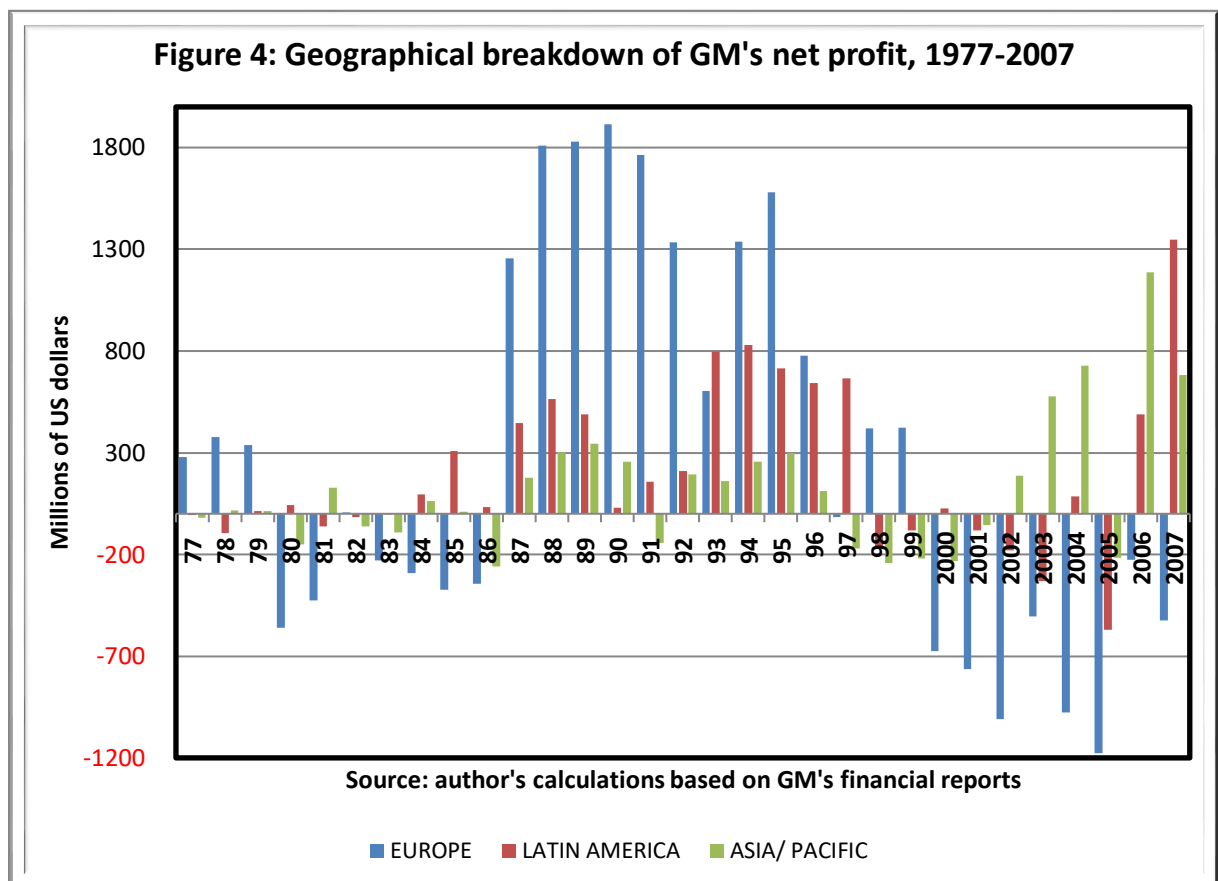
The evolution of international profit

Profit stemming from international operations can be an additional source of profit, can be sometimes vital for the firm’s survival when domestic loss soars, and is necessary on the long-term to maintain sustainable foreign subsidiaries. In this section, we compare American and Japanese firms since European firms have stopped publishing data on the geographical breakdown of their global profit since the end of the nineties thanks to the adoption in the EU of the IFRS standards. One should be cautious in the interpretation of this data. “Fiscal optimisation” leads firms to underestimate their profit in countries where taxes are high and overestimate them in countries where taxes are low. “Creative accountancy” is also used sometimes to hide losses. The evolution of account standards along time in each country and firms’ discretionary decision to change the way they present their profit adds to the difficulty of establishing long-term data series. Nevertheless, the data presented here fits broadly with the known facts about firms’ performance. It sketches more or less faithfully the evolution of domestic and foreign profits and their relative contribution to world profit. To start with, figure 3 shows the evolution of GM national and international profit.



GM's world profit has remained positive since the end of world war two until the end of the eighties. It was not affected by the first post-war worldwide recession of 1974-75, and only briefly by the second one in 1980. Up to 1980, North American profit contributed typically in the range of 90% and foreign profit the remaining 10%. It changed hereafter, national and foreign profit evolving no more in a complementary but symmetrical way. For instance, foreign subsidiaries made an average loss of US\$ 300 million from 1980 to 1986 while GM in North America made an average profit of US\$ 2.5 billion. The problem being that until 2005-2006, the bulk of production and sales being located in North America, foreign profits were unable to offset North American losses given their magnitude. Such was the case during the third worldwide recession of 1990-92 and again in 2005 when GM registered the worst world net loss of its long history: US\$ -10 billion. North American net loss was US\$ -8.2 billion and foreign net loss, US\$ -1.8 billion. The highest net profit ever registered by foreign subsidiaries was US\$ 2.66 billion in 1989, and again 2.59 billion in 1995. Even if foreign subsidiaries had made such a record net profit in 2005, it still would not have been enough to offset North American net loss. Still in 2006 foreign net profit (US\$ 1.4 billion) proved insufficient again, even if it offset in part a North American loss of US\$ 4.6 billion which narrowed the world loss to US\$ -3.2 billion. The same scenario happened in 2007 although loss in North America narrowed to US\$ -3.3 billion and foreign net profit increased to 1.5 billion thanks to huge profit in China and Latin America. It is noteworthy that since the eighties foreign profits are very unstable as if GM was unable to secure regular profit abroad, although not all economies are as

cyclical as the USA. A closer look at the geographical breakdown of GM foreign net profit (see figure 4) shows that the period 1987-1996 was exceptionally profitable not only in Europe (with profit ranging from 1.3 to 1.8 billion dollars) but also in Latin America at the beginning of the nineties (with US\$ 800 million in 1993-94) and to a lesser extent in Asia, Pacific and Africa (with profit close to US\$ 300 million). By contrast, the years 2000-2006 reveal a structural weakness of GM Europe with systematic losses of 800 millions on average. Only GM Asia-Pacific-Africa⁵ shows a spectacular turnaround with growing profit reaching US\$ 1.2 billion in 2006 and US\$ 557 million in 2007. This mainly reflects the huge profits made in China where GM has ventured successfully. Added to the US\$ 500 million of profit that GM made in Latin America in 2006 and the record US\$ 1.3 billion in 2007, it is on average 1.5 billion per year that comes to the rescue from the emerging countries. Whether GM can sustain this performance in emerging countries and return to profitability in Europe is an open question, but in any case foreign profit can be of great help for a financially distressed company but is not a solution in itself to the structural problems GM has to face in North America.



Ford is in a worse situation (see figure 5). Until the end of the seventies, it had enjoyed stable domestic and foreign profit, with a predominant share for domestic profit. Ford stayed rather unscathed from the first worldwide recession (1974-75), its world profit staying positive, in the tune of US\$ 300 million, with a rather equal share of domestic and foreign profit. But Ford's North American operations got in the red

during the second worldwide recession (1980-81) while foreign operations turned an exceptionally high profit in 1979 (US\$ 1.4 billion) that more than offset North American losses (-US\$ 208 million). But this is the only case of this kind and usually foreign profits are not high enough to compensate for domestic losses when these are huge. Worse, after six golden years of combined growing domestic and foreign profits from 1983 to 1989, Ford's foreign operations entered in a long period of almost 15 years of losses and meagre profits. World profit depended almost exclusively on North American operations and Ford was capable to accumulate huge profit during the long period of growth of the US economy. This dependence on the home market for profit is a critical problem since Ford was never able to recover from the bubble burst in 2000 and make profit once the US economy entered in a new cycle of growth from 2001 to 2006. In 2006, Ford registered an incredible loss before income tax of US\$ -15.9 billion (net loss of US\$ -17.2 billion) and had to set a financial rescue plan. To pay the interest of the debt contracted, Ford has to sell its "Premier Automobile Group" which by the way was never profitable. During the crisis episode, foreign operations were also in the red and added to the problem.

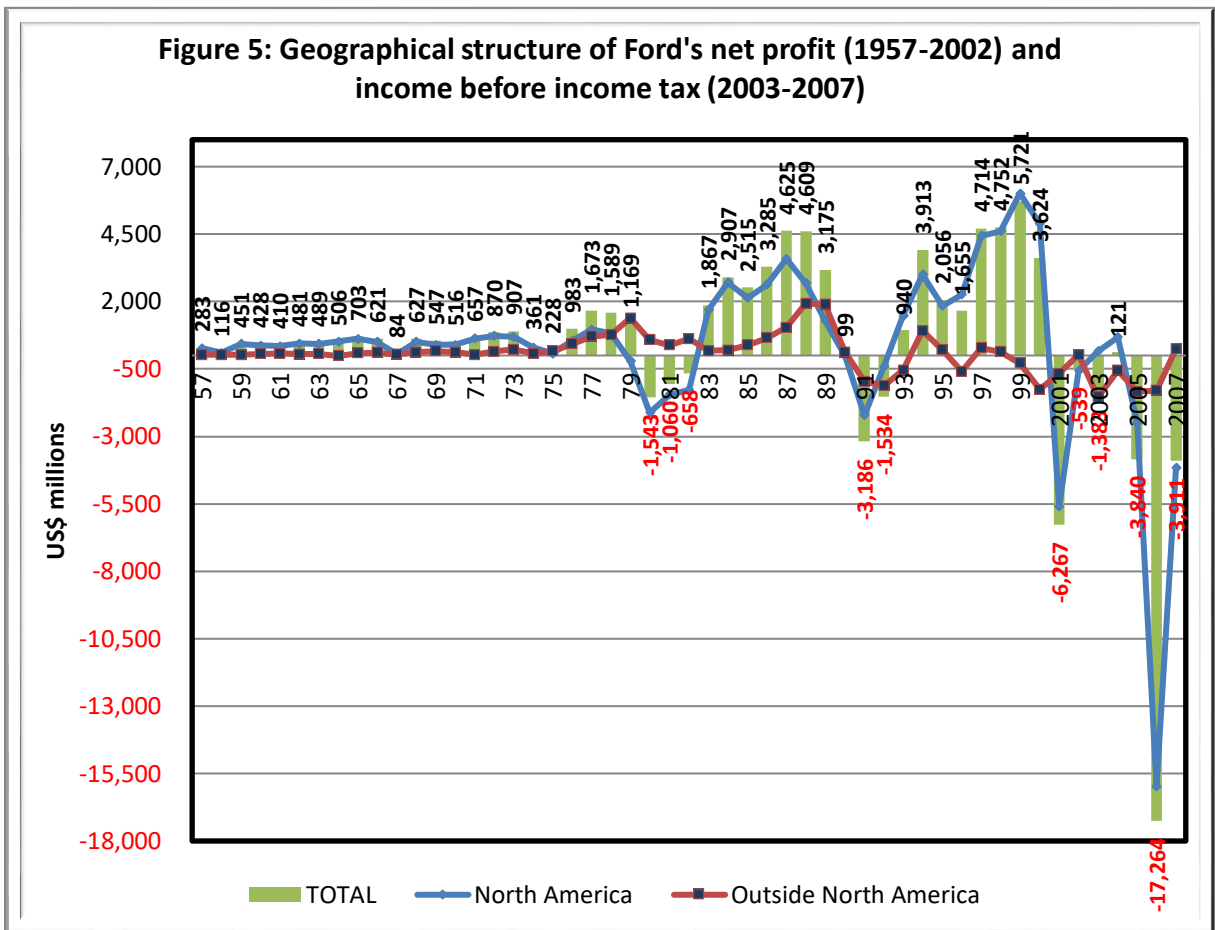
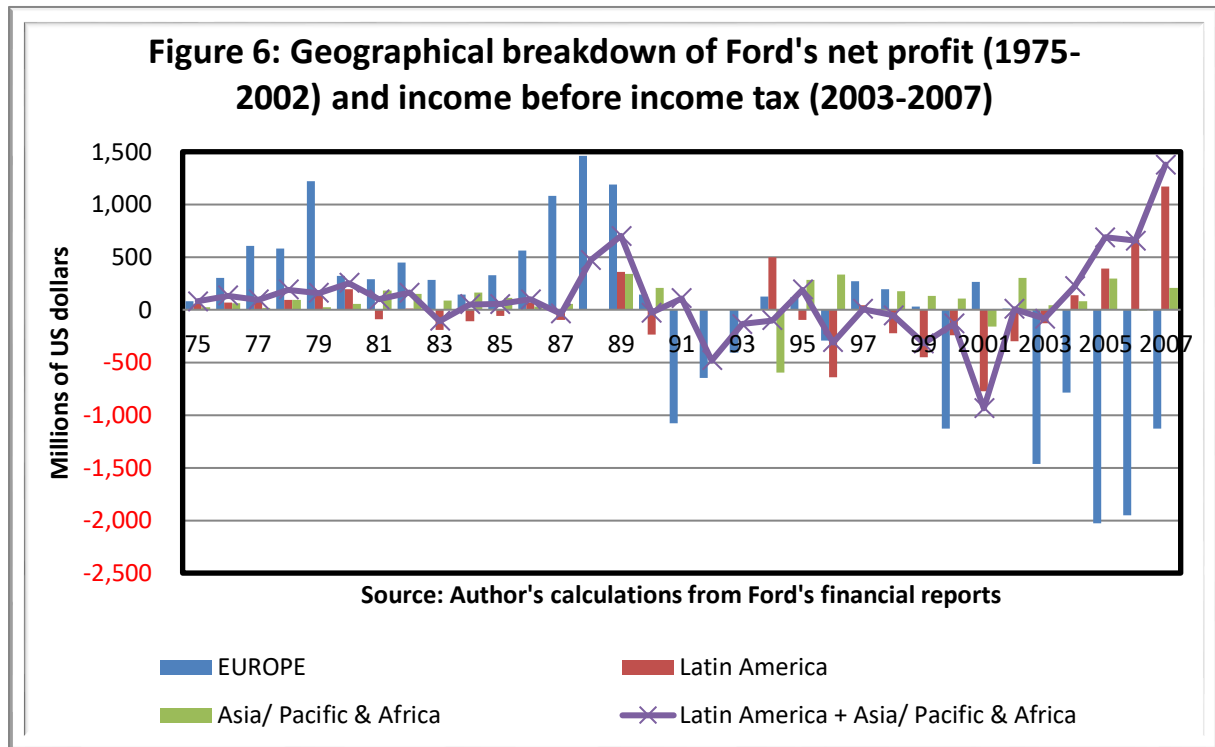


Figure 6 presents the geographical breakdown of Ford's foreign profit and loss⁶. Ford Europe was more profitable than GM's at the end of the seventies and like GM enjoyed a golden age during the second half of the eighties with European

net profit of 1 to 1.5 billion dollars. But this successful period was shorter than GM's one and since 1991, Ford Europe is losing money almost every year. The crisis deepened in the years 2000 with losses between US\$ -1.5 and -2 billion, PAG being the main but not exclusive responsible. Latin American subsidiaries were also seldom profitable except a short-lived period at the end of the eighties. Except for the year 1995, Ford was not able to make profit like GM when growth returned in Latin America during the first half of the nineties.



Latin American subsidiaries returned to profit lately in 2004 after almost a decade of loss. Like GM, Ford, registered a record profit of US\$ 1.2 billion in 2007. On the long-term, Ford in Asia/Pacific and Africa has performed slightly better, and this is mostly explained by the return of Mazda to profit since 2003 in which Ford has a 33% stake that are consolidated in Ford's results. From 2001 to 2006, the Ford brand in Asia & Africa made only a marginal profit of US\$ 42 million in 2005 and 2 millions in 2007, and losses for the rest of the period. Even combined with Mazda's profit, the amount remains modest, the highest profit registered in the region being around US\$ 300 million, far from GM's record profit in the region (1.2 billion in 2006). On the all, foreign results in emerging countries have been deceptive for Ford unless the 2004 announces a new era of profitability. On balance, foreign operations have been more of a burden than a bonanza with an accumulated loss of around US\$ 11 billion from 2000 to 2007.

Such is not the case for most of Japanese firms that have managed to turn foreign operations into a sustainable source of profits. Figure 7 presents the operating profit of Japanese firms in Japan from 1994 to 2006 and figure 8 the operating profit realised by the same firms abroad⁷. One can see that the Japanese big three

(Toyota, Honda, Nissan) have been successful on the period on both markets. Toyota's performance is astonishing. Its foreign operating profit reached US\$ 6.67 billion in 2006 up from US\$ 428 million in 1994, overtaking Honda in 2003 and increasing the gap with Nissan which from 2000 to 2002, had very closed scores. It is also remarkable that Honda's foreign operating profit already contributed to 56% of its world profit in 1994-99, and yet increased to 64% in 2000-06. It reflects both a successful internationalization but also an overdependence. In Nissan's case, the phenomenon is more recent and less pronounced. Yet during the period 2000-2006, foreign operating profit contributed to 53% of Nissan's world profit and 60% on the most recent period of 2003-2006. Toyota is still much more dependent on the Japanese market. In 1994-99, Japanese operating profit contributed to 80% of world profit and foreign profit to the remaining 20%. In 2000-06, foreign profit's share had increase to 32%.

The situation is more contrasted for the "small five" Japanese producers. These firms have unstable results both at home and abroad and some of them like Mitsubishi had to be rescued from bankruptcy by a bail off from its main shareholders. Among them, only Suzuki and to a lesser extent Mazda are really successful at home and in their foreign operations (see figures 9 and 10). Suzuki which was making most of its profit in Japan at the start of the period, despite its long presence in Asian countries like India, has recently enjoyed a steady progress in its foreign profits which reached US\$ 590 million in 2006 which amount to 50% of its world profits up from 14% in 1995-99. Suzuki has benefited from its good positioning in the motorbike market and the cheap entry level small passenger car in Asian emerging countries. This success has decided Suzuki to embark in a new plan of investment in Asia, North America and Europe with the ambition to develop new models in the middle segment of passenger cars.

Mazda seems to have overcome its long standing difficulties of the nineties. With the exception of 2000, when it registered an operating loss of US\$ -120 million, Mazda has improved its profit both in Japan, where it amounted to US\$ 1 billion in 2006 and abroad where it reached a record level of US\$ 343 million the same year. On the whole period of 2000-2005, Japanese operating profit contributed to 73% of Mazda's world profit and foreign profit 27%.

Mitsubishi is still struggling to recover from a 45% drop in sales in 2003-2004 in the USA that costs him US\$ -1.1 billion in 2003 and US\$ -691 million in 2004 that explain most of the abyssal fall of foreign profit that appears clearly on figure 10. But it has also to regain Japanese consumers' confidence after the 2004 announcement of products defects cover-up during 25 years that cost Mitsubishi US\$ -.685 million that year. Subaru has also a fragile situation due to its specialisation on niche products (all-wheel drive car) sold mainly on the North American market. Its future lies on its capability to launch new successful cars in this narrow segment of the market that is also supplied by competitors.

The common problem to these smaller Japanese producers is that their productive internationalization is more reduced than that the big three. As a consequence they are more exposed to adverse currencies fluctuations mainly between the yen and the US dollar. Their small size adds the problem of reduced economies of scale.

Figure 7: Operating income of the Japanese "big three" in Japan

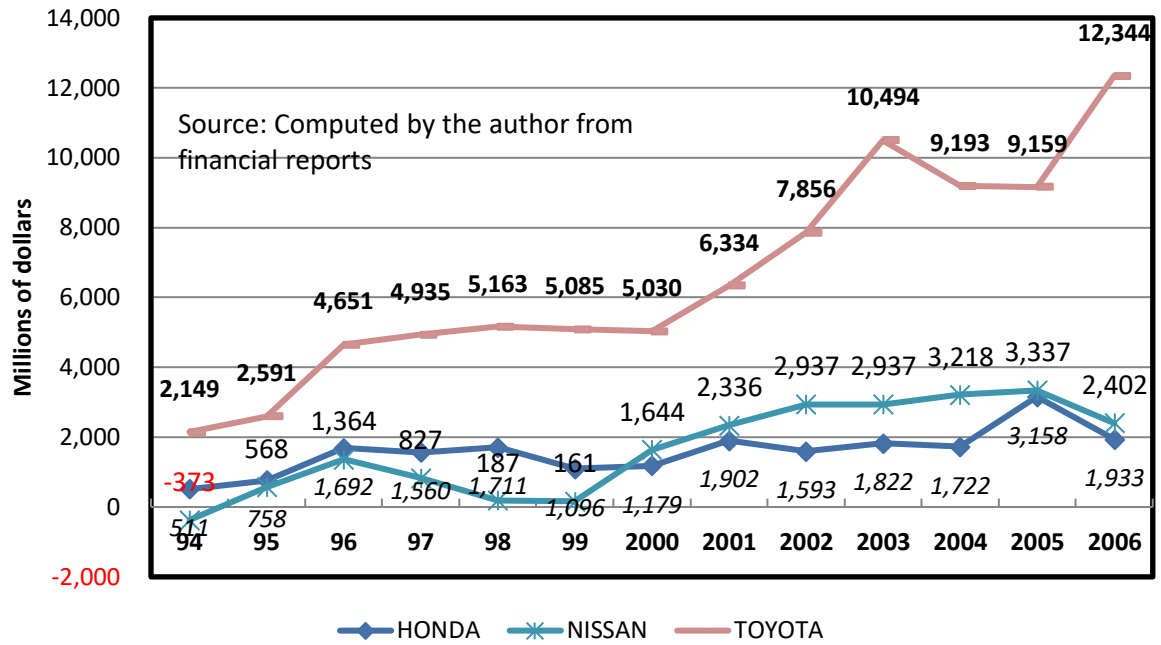
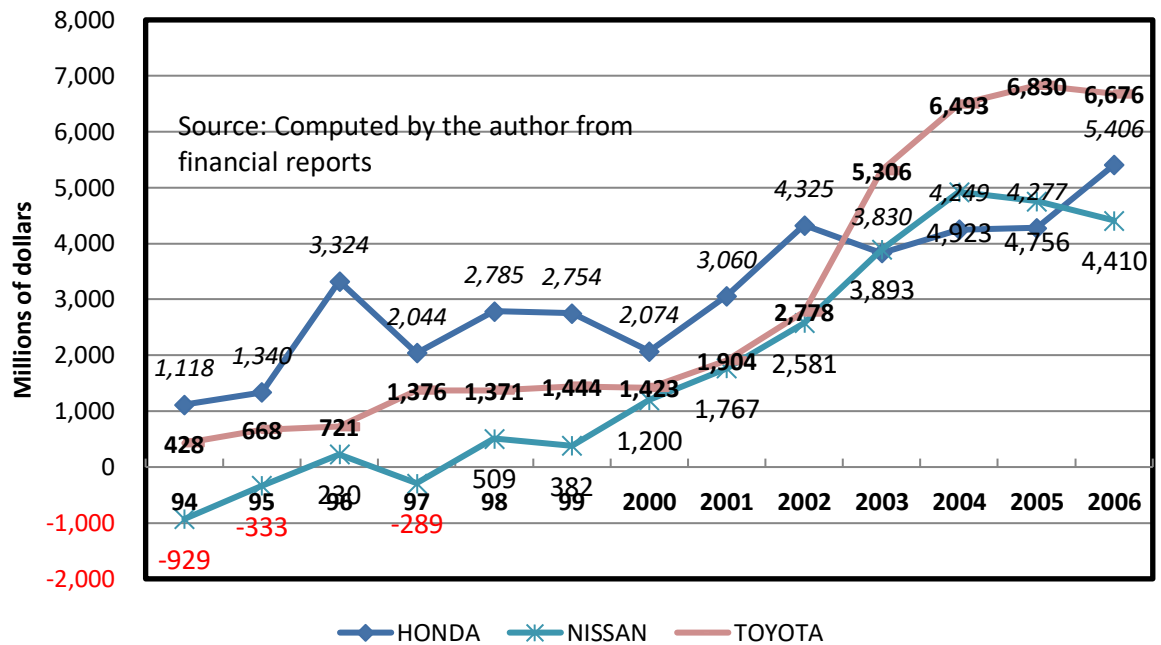
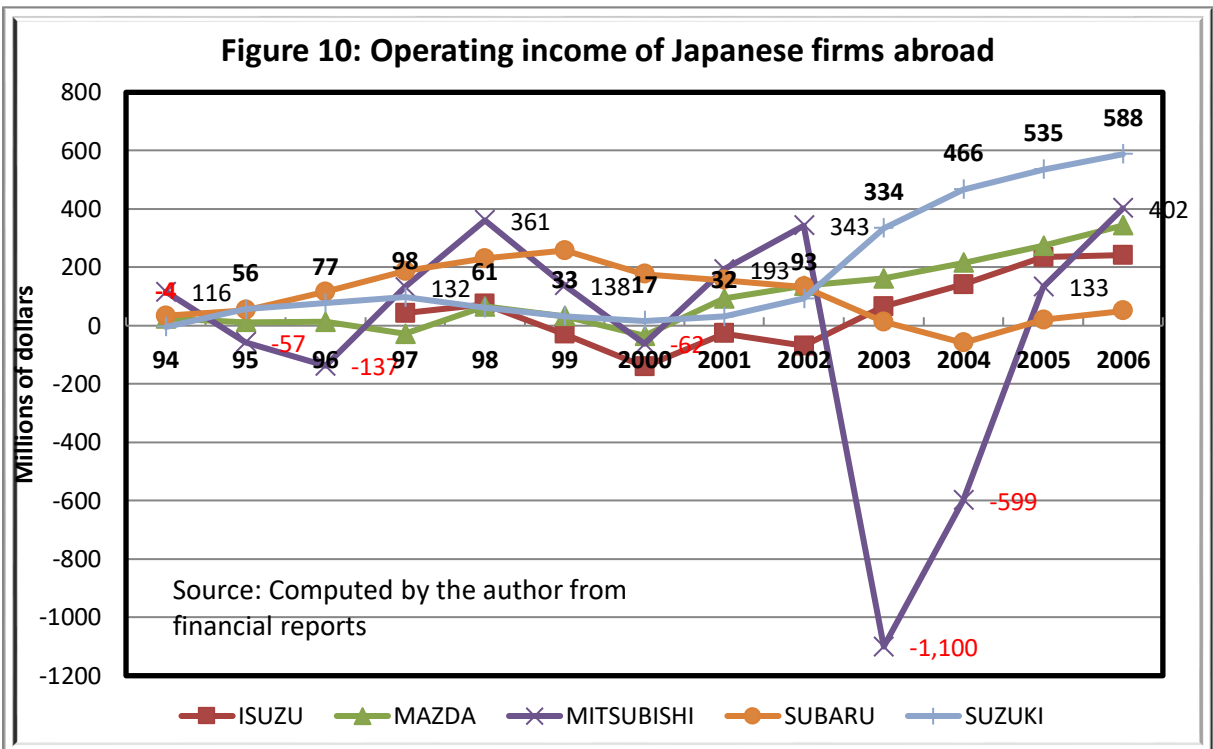
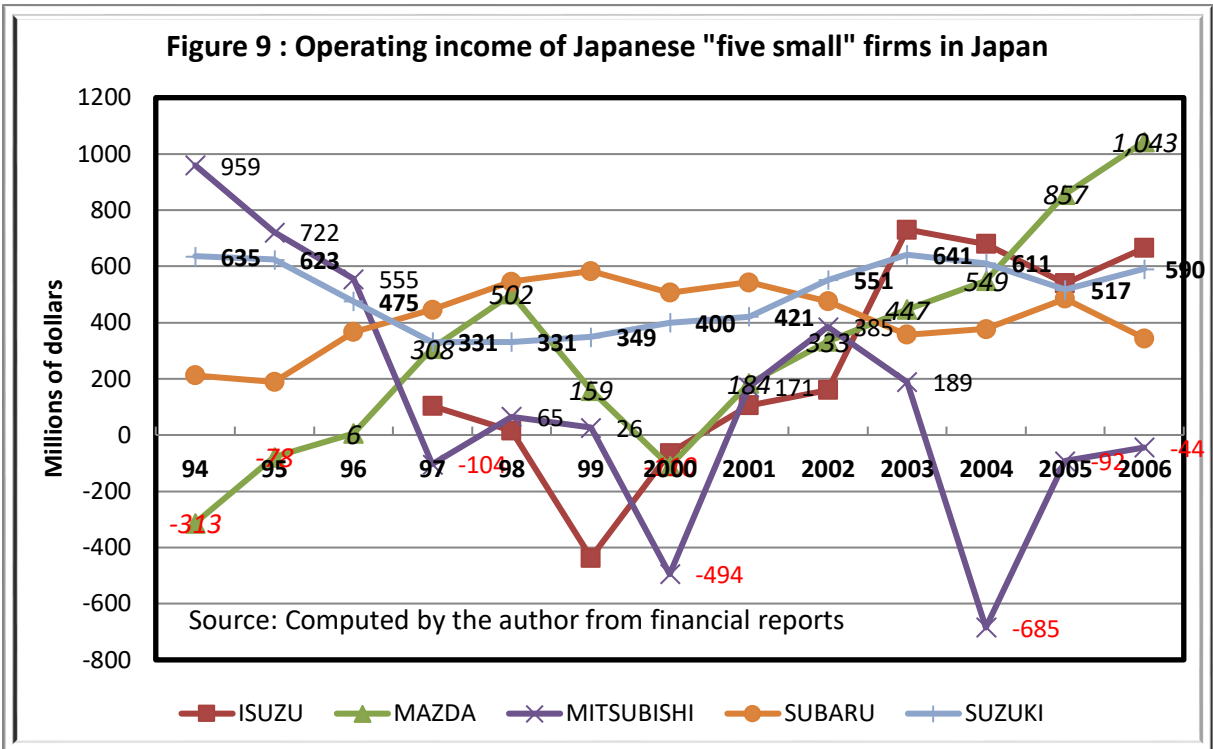


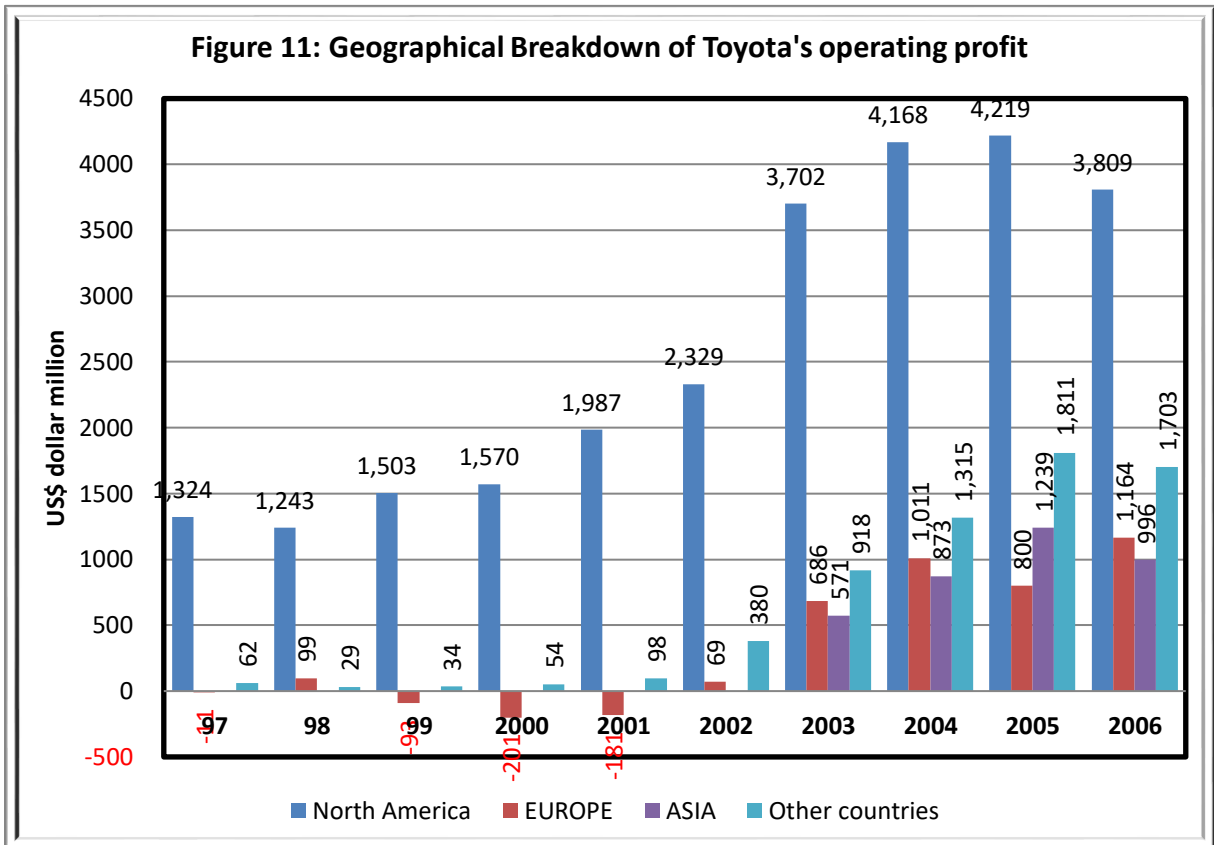
Figure 8: Operating income of the Japanese "big three" abroad





The geographical breakdown of the “big three” operating profit reveals that thanks to greater geographical diversification, the dependence on the North American market is still very high but decreasing. At the end of the nineties, Toyota made almost all of its foreign profits in North America, with Europe making losses and “other countries”⁸ bringing a very small profit (see figure 11). Things started to

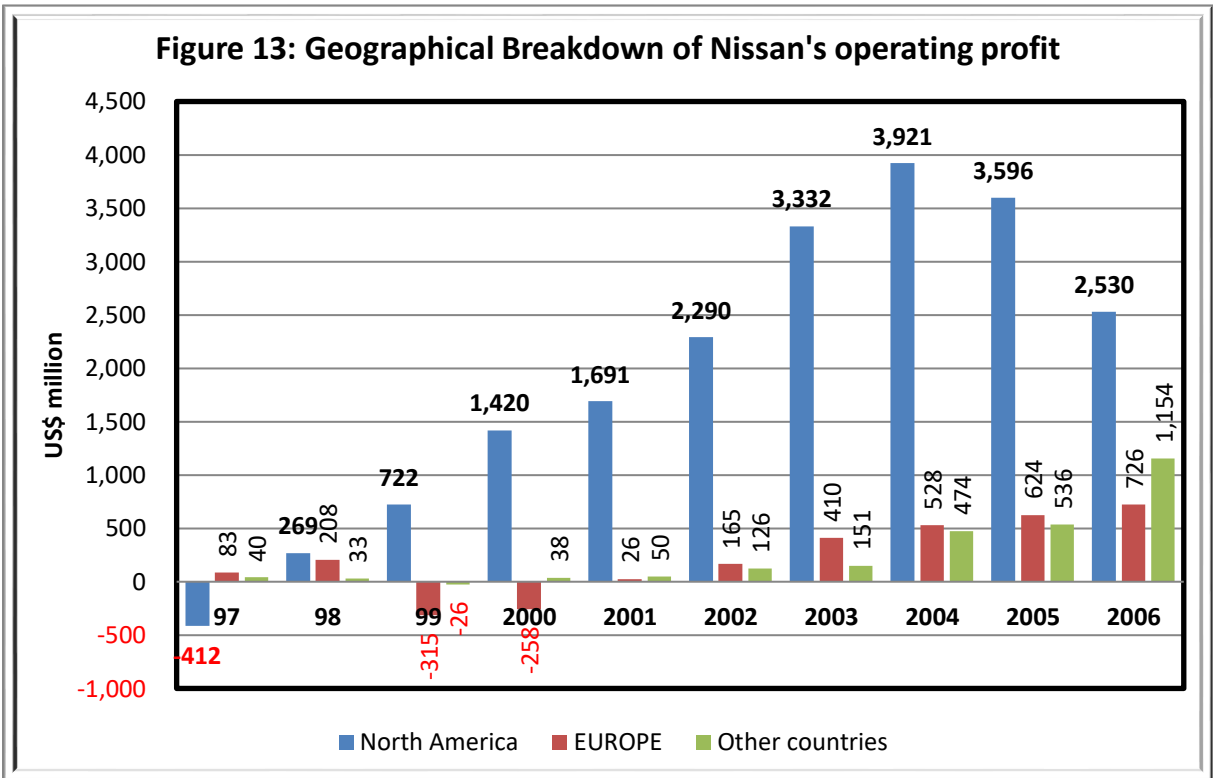
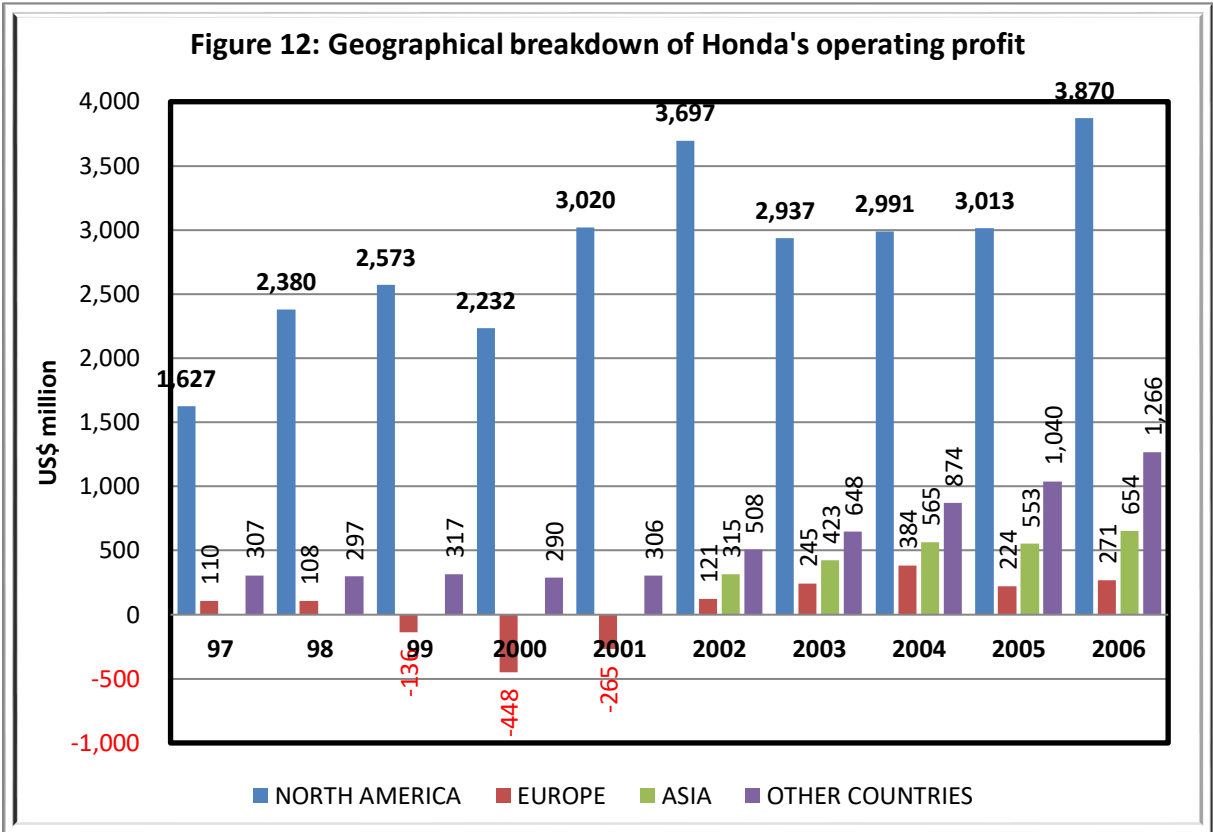
change recently. Since 2002, profit in Europe reached US\$ 1 billion in 2004 and 2006. In “other countries”, operating profit reached the stunning level of around US\$ 1 billion in 2003, US\$ 1.8 billion in 2005 and US\$ 1.7 billion in 2006. One can see on figure 11 that this is due primarily to the huge profit made in Asia, and in particular but not exclusively China. In 2005, profit in Asia alone reached US\$ 1.2 billion which leaves US\$ 572 million in the rest of the world, Latin America and Africa. Over the period 2003-2006, Toyota made 24% of its world profit in North America, around 5.5% in Europe and in Asia and 3.1% in the rest of the world. There seems to be a process of rebalanced of world profit as a consequence of Toyota’s greater variety of commercial and productive internationalization.

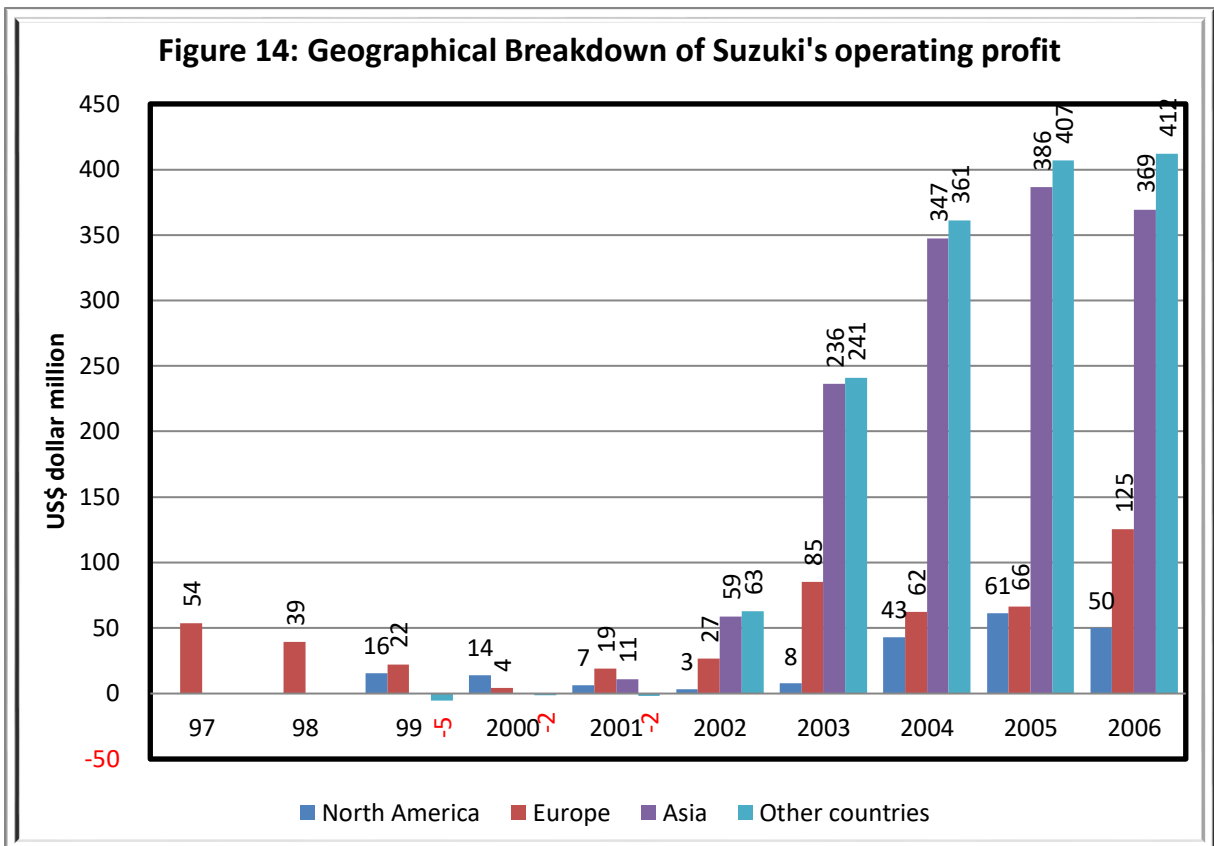


Honda is also very dependent on its North American operating profit which still amounted to 54% of world profit in 2000-2006 (see figure 12). Honda also suffered operating losses in Europe at the end of the nineties of even greater magnitude than Toyota before making profit in the year 2000 that nonetheless never reached US\$ 500 million. Like Toyota, “other countries” have turned a growing profit that exceeded the US\$ 1 billion range in 2005 thanks to buoyant operating profit in Asia that accounts for half of the success. Honda made close to US\$ 1 billion of operating profit in Asia in 2006 after US\$ 1.2 billion in 2005.

Nissan made a strong recovery on the North American market (figure 13). Its operating profit reached a peak at US\$ 3.9 billion in 2004, but contrary to Toyota and Honda, Nissan was not able to secure these good results in the subsequent years. Nissan’s operating profits in Europe rank between Honda’s and Toyota’s, but in

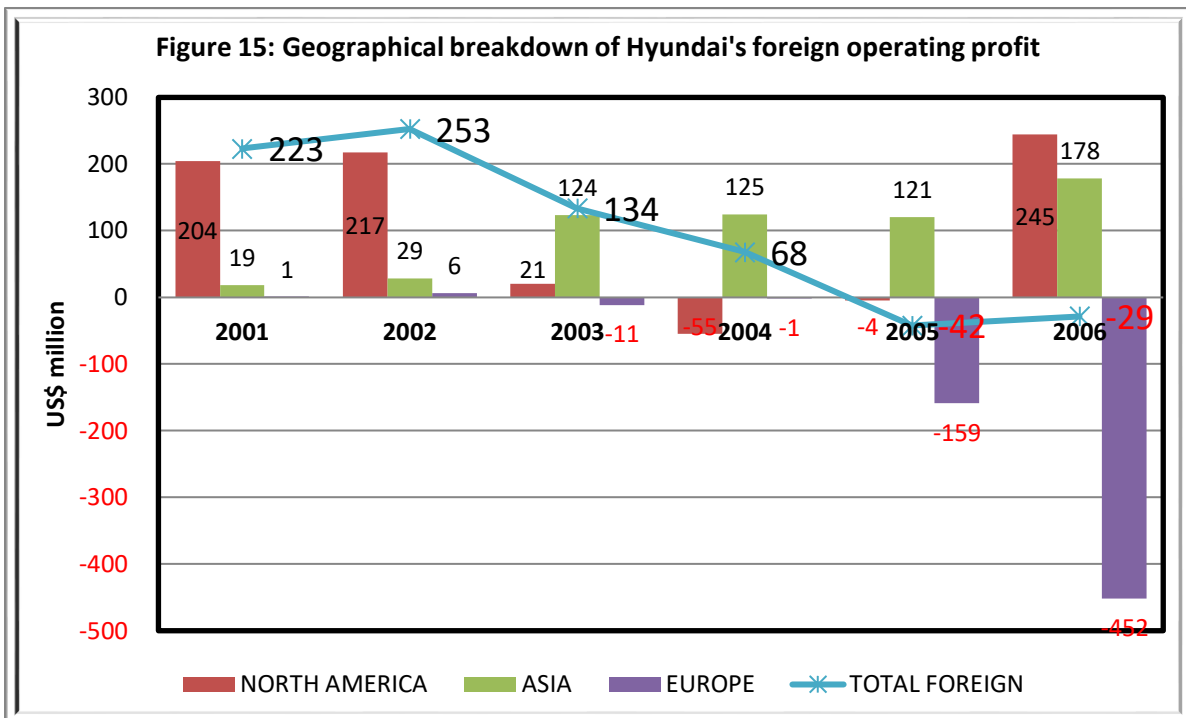
“other countries” Nissan’s lags behind Toyota’s and Honda’s. Nissan has been less successful in catching the Asian wave of growth until 2006.





Suzuki (see figure 14)⁹ is representative of a company that makes the bulk of its operating profit in Asia, due to its strong presence and market share in the small car market, in India and Pakistan, and in motorbikes through Asia. Suzuki was very well positioned to capture market growth in India although it will now have to face Tata's "nano" competition in the cheap mini-car segment. From 2003 to 2006, Suzuki made a yearly average operating profit of US\$ 335 million in Asia, against 85 million in Europe and 41 in North America. It remains to be seen if Suzuki's decisions to enlarge its model range in Europe and North America will reshuffle this geographical breakdown in favour of these two regions.

Finally, we present Hyundai's case, the last remaining big independent Korean manufacturer. During the period 2001-2006 for which data was available, Hyundai has made an accumulated operating profit of almost US\$ 13 billion in Korea (2.1 billion per year on average) and a meagre profit US\$ 607 million abroad. The geographical breakdown (see figure 15) shows that Hyundai's international operations were making a profit of more than US\$ 200 million at the start of the period and ended with an operating loss of US\$ -29 million. The reason is the growing deficit in Europe which reached US\$ -452 million in 2006 partially offset by increasing profit in Asia due to Hyundai's strong presence in China and India, and in North America for some years. This means that the plan of important investments in foreign subsidiaries may represent a risk for the financial stability of Hyundai if it does not managed to turn a profit in Europe and stabilise them in North America.



Conclusion

This chapter started with a question: Is there a leap forward in the process of internationalization of automobile firms? The answer is undoubtedly positive. For the majority of firms, the degree of internationalization for almost all criteria has made significant progress between 1995-1999 and 2000-2006. One of the main reasons is the real emergence of the so-called emerging countries and in particular China. If the pattern of growth in India follows the Chinese way, then being present in these two growing markets will be even more critical than today for old established automobile firms from North America, Europe, Japan and Korea. In this endeavour, they will have to face the growing competition of Chinese and Indian firms which will not only defend their home market but will also increasingly try to develop their international operations. If Russia and in a lesser extent Iran also confirm their growth expectations, there will be for sure a durable impetus for higher internationalisation. Does it mean that all automobile firms will reach and overtake the 64% level already realised by Honda, the most internationalised producer? Probably not. The European and North American markets remain decisive for local firms because volume there is very important, which is less the case of the Japanese market where sales are declining. For Japanese firms, gaining foreign markets shares is even more compelling than for their European and American competitors which must defend their home market. But between the present level of internationalization of most automobile producers and the level reached by Honda, there is room for another round of international expansion.

The question is what will be the impact of the new coming step of internationalization on the productive models of the firms involved? The

internationalization process tends to question the productive model of a given firm because the profit strategy may not be relevant, or as relevant, when the targeted foreign markets are too different from the market of origin, or when foreign expansion destabilises the existing government compromise. But the internationalization process may also strengthen the existing productive model in two cases: when the targeted foreign markets are very similar to the market of origin, or when the targeted foreign market is very different but the volumes involved are so important and growing that almost all profit strategies are relevant or at least compatible. It is beyond the scope of this introductory chapter to bring an exhaustive answer. The dedicated chapters of this volume will bring more insights on this topic. But our privileged scenario is that the growing trend of internationalization promoted by the Chinese and Indian growth opens space for all kind of productive models. This was not the case for Latin America, which was the first to be coined “emerging” at the beginning of the nineties, because income inequality, a major hindrance of automobile demand, is not offset by a big size of the population. Cheap entry mini-cars and cars or pick-ups for the less endowed consumers or farmers, standard passenger cars for middle classes, top range, and deluxe passenger cars, SUV and sports cars for the richest are already frequent in China and India. Even innovative eco-cars using alternative fuels will be successful because the high price of petroleum and pollution are already big issues in Asian emerging countries. This means that the most innovative firms able to make a breakthrough in fuel cell or electric cars will find consumers there. The idea that big and growing volume makes all and old productive models viable make look simplistic, but is appealing.

Methodological appendix

Sources:

Financial reports of automobile firms.

OICA, Organisation internationale de la Construction Automobile.

CCFA, Comité des Constructeurs Français d'Automobile.

Profit definition in account standards

Ford and GM have favoured until recently the publication of net profit and Japanese firms the operating profit. The operating profit depicts more accurately the profitability of the production system and the marketing success of products. Deducting “net interest income” and “equity in net income” gives the “income before income taxes” which is usually in the same magnitude. Deducting taxes, “income or loss from minority interest” gives the “Income (loss) from continuing operations”. In the USA, the precision is important because Ford and GM close automobile plants nearly every year and have bought or sold a lot of firms in other manufacturing sectors and in services since the fifties. Deducting Income (loss) from these “discontinued

operations” and the “effect of change in accounting principles” gives the net profit (loss). For all these reasons, the difference between the operating profit and the net profit can be important, especially in case of numerous plant closures and spin-off (Visteon, Delphi). But on the long-term, the evolution is the same, no loss is turned into profit and the geographical breakdown is not significantly affected.

Notes of Table 1

Ford: the share of the workforce refers to the workforce outside North America and not the USA and for the automobile segment only, which represents 95% of total workforce. The share of foreign assets is based on long-lived assets.

GM: The share of foreign assets is based on long-lived assets.

DaimlerChrysler: The share of foreign assets is based on long-lived assets.

Fiat: The share of foreign assets is the average of 2004-2006.

PSA: The share of commercial revenues is the average of 2000 and 2001 only. The share of assets is estimation based the relative weight of France in Europe’s share of long-lived assets.

Renault: The share of foreign assets is based on long-lived assets.

Scania: The share of commercial revenues is the average of 2003-2005. The share of assets is estimation based the relative weight of Sweden in Europe’s share of total assets.

Volvo: The share of assets is the average of 2001-2005.

For Isuzu, Mazda, Mitsubishi, Suzuki: The share of employment is based on additional information provided in the Japanese version of the financial reports of the firms listed on the Tokyo Stock Exchange.

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¹ The Transnational Index (TNI) is calculated as the average of three ratios: foreign assets to total assets, foreign sales to total sales, and foreign employment to total employment.

² This statistical approach has been developed in a previous study (see B. Jetin, 2003). We use these previous results as a benchmark for the period 2000-2005, although we have introduced some changes.

³ Total revenues include the revenues proceeding from manufactured sales to external customers, financing revenues from the captive financing arm when existing and other revenues.

⁴ For European firms, the region means the whole Europe plus Turkey and Russia. For American firms the region encompasses North and South America. For Asian firms, the region includes North-East, South-East and South Asia. In each case, the country of origin is included in the region.

⁵ Africa is included by GM in the same division as Asia and Pacific but plays a marginal role in GM performance.

⁶ The breakdown data for Latin America and Asia/Pacific/Africa was missing for some years. So we put the aggregate for the all set of these regions, which was available, to allow studying the evolution of Ford's profit in these emerging countries.

⁷ The data has been converted from Japanese yen into US dollars using the exchange rate at the Tokyo stock exchange at the end of the Japanese fiscal year, usually the March 31st. The data cannot be compared directly with Ford's and GM's results, not only because of the different profit indicators but also because of the specific value of the exchange rate at the end of the fiscal year. Using the annual average exchange rate introduce different bias but do not bring more accuracy. Hence the data are presented in dollars for convenience of the reader to give only an order of magnitude in the same currency.

⁸ For the sake of simplicity of figure 11, "other countries" include Asia on the whole period. Starting in 2003, operating profit in Asia is published by Toyota. Due to its importance, it is presented as such in figure 17, although it is still included in the category "other countries" that otherwise would have turned inconsistent with previous years. The same prevails for Honda in figure 12 and for Nissan in figure 13 which does not disclose operating profit data for Asia.

⁹ Suzuki has started publishing data on its operating profit in Europe for 1997, in North America in 1999, and in Asia in 2001. "Other countries" includes Asia, Oceania and South America.