

Maverick at the Age of Mega-Fusion and Mega-Merger? Toyota's Global Strategies

Koichi Shimizu

In 1998, Toyota, the number three carmaker in the world, sold 1,711 thousand vehicles in Japan through 309 dealers, and 2,930 thousand overseas through 170 distributors deploying about 5,400 outlets in 73 countries. So, Toyota's sales network was already fairly globalized, the markets in the East European countries surely being fallow lands yet. As for its overseas production, Toyota had 40 companies among which 27 firms in 24 countries assembled 1,468 thousand vehicles, whereas Toyota produced in Japan 3,166 thousand of which 1,463 thousand were exported. Then, Toyota seems being on the way to globalize its production network at the end of 20th century. However, Toyota's globalization of production came lately.

If in general the internationalization proceeds passing through four phases: export strategy, strategic alliances and shareholding investments, foreign direct investments, and globalization (Laigle, 1998), the internationalization trajectory of Toyota rather shows in its basic trend the classical process, analyzed by studies on multinational firms during the 1970s and the 1980s (Delapierre and alii, 1983, for example). The successful export strategy of a firm had encountered protectionist policies, set by the importing countries for some reasons — growing trade deficits, devastating local firms, etc. —, so that it decided to produce there to avoid protectionist barriers — quota, prohibitive import taxes, etc. Then, the localized production takes the place of exports. Toyota's globalization process has been going on just in such a way, of course except some marginal cases. The fact that its overseas production essentially began to replace exports from 1985 apparently shows that its internationalization strategy changed from export centered strategy to localization of production during the first half of the 1980s. This classical figure of Toyota's internationalization trajectory came, at least in Toyota's management mind, from the specificity of Toyota Production System (TPS). Under the necessity of coping with trade conflicts and with claims of local governments, Toyota giving the privilege to exports was forced to localize production. Having changed course in such a defensive way, Toyota however would deploy a global production network. Can Toyota carry out by itself such a globalization strategy in the age where international mega-merger or mega-fusion between carmakers looks an obliged path through which they could survive and win the fierce market competition?

1. General Tendency

Toyota Motor Sales (TMS) began exporting in 1952, just after being separated from Toyota Motor Corporation (TMC) because of the financial crisis of this latter, by receiving sporadic orders come from some peripheral countries such as Brazil. The real take-off of its exports was marked during the second half of the 1960s as the Figure 1 shows it. From then to 1985, its exports had a tendency to expand, being accelerated in the period between two oil crises and interrupted by short sluggish terms as those in 1973, 1978-1979, and 1981-1984. These falls in exports were caused by different circumstances. The decrease in 1973 was apparently provoked by the first oil crisis. If we break down the exports by region, it however becomes evident that this decrease was the result of only the rapid shrink of sales on the North American markets (decrease of 40 thousand vehicles). The 1978-1979 decrease was in general considered as due to the second oil crisis, came in fact from three regions, Southeast Asia and Oceania, Middle East Asia, and Africa, whereas Latin America and Africa brought the deceleration of exports in 1981-1984 (see the Appendix 1). Despite these sluggish terms, Toyota's production continued to expand with twin engines until 1985, the growing domestic market and the increase in its exports especially toward the North America.

This tendency was reversed from then, because of the increase in overseas production, especially that of its transplants in the USA, though its production in Japan continued to grow until 1990 thanks for an economic boom fuelled by a "financial bubble" during 1987-1990 (see the Figure 1). Toyota's overseas production rapidly increased from 136.3 thousand units in 1985 to 1,467.6 thousand in 1998. As for the North America, NUMMI, a Toyota/GM joint venture, began to produce in December 1984, following which TMM Kentucky (TMMK) and TMM Canada (TMMC) launched their car production in 1988, so that Toyota's production in North America increased from 64 thousand vehicles in 1985 to 963 thousand in 1998. In consequence, over 60% of vehicles sold in the North America were produced there.

Of course, this inversion of export trend does not mean the decrease of overseas sales. In fact, the latter continued to grow from 2,107 thousand vehicles in 1989 to 2,930 thousand in 1998 (see the Table 1). Even the fall of the sales by half in the Southeast Asia in 1998 with respect to the previous year because of the economic crisis of the ASEAN countries was compensated for by the increase in sales in the North America and Europe and had no substantial effect on its overseas sales. This fact shows the importance of the North American markets for Toyota. In fact, these markets have been

absorbing more than half of its overseas sales since 1970 (1,516 thousand vehicles in 1998), whereas the Asian markets share in its overseas sales remained at the level of about 20% even in 1996 (8% in 1998, the year of Asian financial crisis). Moreover, Toyota's domestic production suffering from the slowdown of domestic demand and the increase in overseas production was largely recovered by the growth of its overseas sales, especially in North America in 1997-1998. As for the turnover, Toyota realized 8,935.5 billion yens in Japan, 3,949.5 billion in the North America and 1,858 billion in the others in 1997 (accounting year), 9,204.6 billion in Japan, 4,737.3 billion in North America, 1,204.9 billions in Europe, 905 billion in the others in 1998. It is then obvious that the North American markets have an overwhelming weight in Toyota's globalization strategy. So, it is natural that Toyota established its global strategy mainly taking account of American political and industrial situations.

This overview of the movement of Toyota's exports and overseas production then clearly shows two phases Toyota experienced in its globalization trajectory: the first can be characterized by an export-centered phase and the second, by localization phase of production that began to replace exports since 1985. In other words, Toyota's international strategy has shifted from a globalization of marketing to that of production during the 1980s. In fact, its localization rate, i.e. the rate of overseas production with respect to overseas sales, has been continuously increasing from about 22% in 1989 to over 50% in 1998, though fluctuations of regional localization rate due to the economic conjuncture of each region are observed (see the Appendix 1). The localization rate in three regions, Southeast Asia, Oceania and Africa, also surpassed the level of 50%. The rate is low as for Europe, Latin America, and Middle East Asia. But the construction of an assembly plant in France (the Yaris would be produced from 2001) and the assembly of passenger cars (the Corolla) in Brazil started in 1998 must increase the rate in the first two regions. Consequently, Toyota's globalization of production will still progress.

In short, if the 1960s and 1970s are the period of expanding its commercial network worldwide, the 1980s and 1990s are therefore regarded as the period of expanding a global production network. By examining Toyota's globalization trajectory and strategies in the next two sections, we will see the circumstances that compelled Toyota to do such a change in its global strategy.

2. Era of the Export-Centered Strategy: 1951-1980

Having a conviction that exports should be necessary to develop a mass production, TMS set up an Export Department with which TMC was going to cooperate by assigning small export staff just after its foundation in 1950. TMS tried to export Toyota's commercial vehicles, mainly the Land Cruiser (four wheel drive) since 1954, toward the niche markets or market segments where advanced Western carmakers had not still their strong presence. Countries in Latin America, Asia and Oceania were its preferred markets because the Land Cruiser met there only the Land Rover and the American Jeep as its competitors. TMS was then going to carry out "aggressive sales activities" in Latin America (Colombia, Peru, Bolivia, El Salvador, Costa Rica) and the Caribbean (Puerto Rico, Dominican Republic) at the beginning of the 1960s. Its exports to Taiwan, Thailand, Australia and some countries in the Middle East Asia (Saudi Arabia, Kuwait, Jordan, and UAE) and in Africa (Ethiopia, South Africa, etc.) also began. However, these exports were promoted in a try-and-error manner by TMS, who then would have some bitter experiences.

Already met some countries that had prohibited the import of completely build-up vehicles, TMS was obliged to export KD sets to be assembled in these countries. It is the case of Mexico and Thailand. TMC also decided the localization of production of the Land Cruiser (Bandeirante) in Brazil by Toyota Do Brazil S.A., founded in 1958 in order to respond to the Brazilian government's local content policy after purchasing a factory of Brazil Land Rover. But these exports even in small volume and the small production of vehicles in Brazil (250-300 units a month even at the beginning of 1970s) were surely reckless. In fact, KD assembly of the Crown in Mexico, started in 1960, was a complete failure, because of a bad preparation of KD sets and finally because Toyota's local partner was arrested for the sake of political affairs. So TMS abandoned this market in 1964, and as just after then the Mexican government prohibited the imports of vehicles, Toyota has completely withdrawn from Mexican market. Toyota itself says about this period: « in a sense, TMS began exporting almost blindfold » (Toyota, 1988: 159). Lessons learned from the experiences in Mexico and others were the « importance of properly preparing its knockdown system and also of selecting local partners » (Toyota, 1988: 162).

Toyota would meet two other severe experiences around 1970. In Korea, Shin Jin Motor had been assembling around 20 thousand of Toyota's CKD from 1969, but this company chose GM as its partner in 1972 to found a joint venture. So, Toyota has lost the production base in Korea. In Taiwan, as the government restricted the import of vehicles, production cooperation began between Toyota and Lu Ho AIC. However the

latter was finally controlled by Ford in 1973 after failure in negotiation between Toyota and Lu Ho under changing political situations (political relations between Japan and Taiwan became worse after the Japanese prime minister had visited China). Lost production partner and despite the efforts of Toyota's distributor, Ho Tai Motor, Toyota could not construct its production base in Taiwan until 1985. Localized production of the Land Cruiser in Brazil had been also suffering of chronic deficits until the beginning of the 1970s.

In addition, there was a quality problem: the vehicles exported were not suitable to local conditions: too small engine, abnormal vibrations and other problems. The turning point in Toyota's export strategy might be the failure in 1958 of its export of passenger cars (the Crown) to the USA. Recognizing the too low quality of the Crown exported, TMS completely stopped its exports toward the USA for four years in 1960. Admitting the importance to develop cars suited to local conditions, TMC then intensively studied the technical problems of its vehicles by comparing them with Americans'. This severe failure and following studies allowed Toyota to develop passenger cars with quality, the 1964 model of Corona and the 1968 model of Corolla, acceptable and marketable in American market and others major markets. From such experiences, Toyota learned the importance to develop vehicles suited to local conditions, and also that of after-sales service. Toyota also revised its exports system: TMS established Export Headquarters in 1962, whereas TMC set up its Export Department in 1963. By organizing the Joint Export Conference, two companies build up a cooperation system in order to develop a coherent export strategy.

These models adapted to local conditions for their exports had contributed to the expansion of Toyota's overseas sales. So, Toyota arrived to penetrate into European markets Toyota had been feeling difficulty to enter. Starting from Denmark, Toyota could obtain its distributors in Finland, Netherlands, Belgium, Swiss, Great Britain, France, Italy, and Austria. Though Toyota encountered the difficulty to sell in Great Britain, France, Italy and Federal Republic of Germany where existed carmakers and their tight sales network, its exports to Europe rapidly grew from 13 units in 1960 to 59 thousand units in 1970. In sum, Toyota organized 26 new distributors in 24 countries during the 1960s against 17 distributors in 16 countries in the 1950s, whereas 14 new distributors in 14 countries would be organized in the 1970s. In Europe, Toyota's marketing strategy has been in having one distributor in each country. If we see Toyota's product strategy in this decade, we could say that Toyota kept its niche market strategy — the Corona for the segment between the Beetle and American compact cars,

for example — even in the industrialized countries, by creating or organizing sales and after-sales networks. But the scene would change.

During the 1970s, and especially after the first oil crisis of 1974, Toyota's exports rose remarkably, from 482 thousand units in 1969 to 1,785 thousands in 1980. Regional break-down shows that North American, European and Middle East Asian markets absorbed large part of this increase, that is 1,124 thousand units (see the Statistic Appendix 1). The North America has constituted Toyota's prime overseas market since 1968, which absorbed over half of its exports from 1970 to the end of 1980s. Toyota's exports to this region amounted to 762 thousand units in 1980 against 245 thousand in 1969. Europe has become Toyota's second overseas market since 1972 and came to import over 300 thousand units in 1980. After that followed the Middle East Asia that imported about 280 thousand units in 1980 against 15 thousand in 1969. Here, we have to notice that the US market then has become the biggest and sine qua none overseas market for Toyota, which would then determine its policy about overseas operations during the 1980s and 1990s.

This rapid growth of its exports toward the North America and Europe means not only that quadrupling of oil price led Western users to buy compact and subcompact cars that consumed less combustion, but also that high quality of Japanese cars began to be recognized by them. Coping with issues of security and pollution at the beginning of the 1970s and the first oil crisis, Japanese carmakers arrived to produce the vehicles that consumed less energy with high quality and low price (Freysenet, Mair, Shimizu, Volpato, 1998).

In this decade, and until around 1980, Toyota's internationalization strategy was centered on exports. Relying upon its Toyota production system (TPS), Toyota's management had been thinking that exports were more profitable than localized production because overseas production operations could not run as well as those at its domestic assembly plants.

In fact, just-in-time supply system of parts coupled with “Jido-ka” (making autonomous) of machines and production lines was based on an intensive regional division of labor between Toyota and its major suppliers in and around Toyota City. Moreover, the TPS was constructed and has been developed on the basis of particular human and cooperative relations or “mutual trust” between the management and the union. Kaizen (continuous improvement) managed and promoted by the production efficiency management has been contributing to increase the quality of products and the productivity. Work process has been designed and organized by the group leaders

(kumi-cho) who have been also fixing the standardized work of their group in collaboration with their chief leaders (ko-cho). These characteristics giving high performance to the TPS were considered, by its management itself for a long time, unique even in Japan and difficult to be transferred abroad where industrial relations and carmaker-supplier relations were quite different from those of Toyota (about the detail, see Shimizu, 1999).

In consequence, the management had no mind until 1980 to transfer its production to any country even if Toyota could sell its vehicles in large quantities, except the countries that have prohibited the import of completely built-up vehicles. However trade conflicts between Japan and the USA obliged Toyota to produce in USA. So, 1980-1985 period became a turning point in Toyota's globalization strategy.

3 Era of the Globalization of Production: From 1980

Concerning the overseas production, it had been limited to KD assembly in some marginal countries until 1980 — Peru (from 1969), Ecuador (1979), Portugal (1968), Kenya (1977), South Africa (1962), Indonesia (1970), Malaysia (1968), Thailand (1964), Australia (1963) and New Zealand (1966), except for Brazil where completely localized production in low volume of the Land Cruiser. Toyota met the same situation in Australia whose government imposed high customs duties on imported vehicles in declaring at the same time the increase in local content rate. This led Toyota to localize the production of Corona and Crown in 1967. After Australia followed Philippines in 1971, Indonesia in 1971, and Peru in 1972. Nevertheless, it was only from 1980 and even in a defensive way that overseas productions were essentially on the agenda of Toyota.

3.1 Commercial strategy under Voluntary Restraint Agreement Régime

Facing the trade conflicts and the growing claim of local governments for the substitution of imports by localized production at the dawn of the 1980s, Toyota had to change its strategy in order to alleviate the conflicts with the local governments.

The growing protectionist pressure in the USA obliged the Japanese government to set up in 1981 the voluntary restraint of Japanese passenger car exports toward the USA (1,680 thousand cars a year until 1983, 1,850 thousand in 1984, 2,300 thousand in 1985-

1991, 1,650 thousand in 1992-1993 and abolished in 1994). Under this quota régime, Toyota, allotted about 30% of exports, would firstly deploy two strategies in order to make limited exports more profitable: increase of exported commercial vehicles (the Hilux) excluded from the quota, and switching exported passenger cars from low range to high range (the Celica, the Supra and the Camry). By founding a transport logistic company (1981) and a financial company (1982), Toyota has then strengthened its marketing. As a consequence, and despite the quota régime in the USA and Canada, Toyota's exports toward the North America increased from 723 thousand units in 1980 to 1,115 thousand in 1986, the peak year of its exports toward the North America. Its product strategy led Toyota to launch a series of new luxury cars from 1987, the Celsior (LS400), the Windom (ES300) and the Aristo (GS300). They have been sold under the new brand Lexus and by the new sales channel Lexus in the North America, classified above the Toyota brand (Corolla, Corona, Camry, Crown, etc.).

Toyota met the same situation in Europe where the EC Committee demanded the Japanese government for slowing down its growing exports toward EC countries where some countries have been restricting imports of Japanese vehicles so as to protect local automobile industry — France, Italy especially. Consequently, the exports toward the Europe grew slowly: increase by 40% for ten years from 1980 to 1990, the peak year of its exports toward this region.

Facing to these protectionist policies, TMC decided overseas production following after Honda and Nissan. In addition, Toyota had to cope with rapid appreciation of yen from 1985, which was going to make its overseas price competitive edge dwindled. So, Toyota had no choice other than to promote overseas production. As well known, Toyota was then going to construct transplants in the North America and Europe after realizing the merge of TMC and TMS in 1982 for reinforcing management resources. By promoting the localization of production, however, Toyota began to organize a global production network, which main sites would be the USA, the UK, the Australia, ASEAN countries and the South Africa. This new strategy would be clearly presented in Toyota's "New Global Business Plan" for 1995-1998.

3.2. Construction of Transplants in the North America and Europe

As mentioned above (section 2) however, Toyota did not dare to manage by itself the production in the USA where industrial relations and suppliers behaviors were very different from Japanese ones without which Toyota could not believe in successful

transplantation of production operations. For this reason, Toyota negotiated the foundation of a joint venture with Ford at the beginning of the 1980s. They could not reach a conclusion because of their disaccord about the model to produce. In such a situation, GM proposed Toyota to create a joint venture from which GM could learn the TPS and procure sub-compact cars it would build, whereas Toyota could organize production as it wanted by the help of GM. This joint venture, NUMMI, started producing the Nova for GM in December 1984, and of the Corolla FX for Toyota in 1986, which would be replaced respectively by the Prism and Corolla sedan in 1988 because of their disappointing sales, and assemble 285T trucks (Tacoma) from 1994. Surely timid at the beginning, but through its experiences in this joint venture, Toyota came to convince itself of the transferability of the TPS to American industrial situations, and then decided to construct by itself its own transplants in the North America. So, TMM USA in Kentucky (TMMK) started assembling the Avalon, the Camry and the Sienna in 1988, and the TMMC (Canada) producing the Corolla from 1988. Toyota has also four production facilities of engines and parts in the North America: TABC (since 1971 and producing truck beds, catalytic converters, stamped parts), TMM West Virginia (engines), and Bodine Aluminum (aluminum castings).

These transplants in North America have recorded better performance than had been expected (see Toyota, 1988, also Mishina, 1998 about TMMK, and Adler, Goldoftas, and Levine, 1988 about NUMMI). The quality and productivity of the vehicles they have been producing were comparable with those of their mother plants in Japan (Takaoka for NUMMI, Tsutsumi for the other transplants). The TPS then proved its transferability even into countries where industrial and business relations were different from those in its home country. However, this did not mean that all of the TPS components have been set into place at these transplants. Detailed studies of these transplants remark that as for the production organization techniques, their production system was modeled directly on Toyota's. So, kanban, heijunka (leveling the production volume over several months), kaizen, visual control by andon system with line stop system, poka-yoke (error-proofing devices), team concept, standardized work were settled there. Toyota also was making efforts to construct the "mutual trust" between management and labor as well as between transplant and suppliers, which would constitute the base upon which all cooperative relations between them would develop. These studies also emphasize that Toyota's human resource management and industrial relations were hybridized there. For instance, though Toyota's production allowance was not adopted there, because of the wage system in the transplants following the norm

of the UAW, a functional equivalent (“Performance Improvement Plan Sharing” at NUMMI, bonus at TMMK) to the production allowance was introduced. It is also the case of the ‘growing-in’ period of wage rate for the new hired workers, which is regarded as the functional equivalent of Toyota’s grade system (see Mishina, 1998, Adler, Goldoftas and Levine, 1998).

However, the production system implemented in transplants remained static. In fact, the dynamics of the TPS resides in the way in which Toyota is carrying out cost reduction in improving quality and productivity (see Shimizu, 1999). The main actors of kaizen improving production efficiency, quality and security on the shop floor at Toyota are group leaders, chief leaders and engineers assigned to the plant, who are doing those activities as one of their functions under the efficiency management. On the contrary, kaizen was carried out by team members mainly through suggestion system and/or QC circles in the transplants. This is for several reasons. (i) In spite of their experiences of over than 10 years, American team and group leaders were not still on the competence level of their Japanese colleagues. At Toyota, such a competence was historically accumulated and succeeded by shop floor managers and engineers, whereas American team and group leaders just began, we can say, to learn know-how by doing their functions in day-to-day operations and model changes. (ii) Japanese colleagues had experienced the jobs of their team or group more than ten years before being promoted to team leader, so that they had sufficient know-how about working process and could behave as the leader of team or group members in good fellowships. By contrast, if kaizen conceived by team leader or group leader was imposed to workers, it would be rejected by workers in the American context of workers-team/group leader relationship. In fact, kaizen was often regarded as intensifying work. So, making kaizen by workers themselves was favorable for training their kaizen mind about quality and efficiency, and creating a fellowship among team members in the case of QC circle so far as their employment is assured (however, delicate problems were surely occurring – see Adler, Goldoftas and Levine, 1998).

In this domain, Toyota's general policy is here: try at first to set into place Japanese style management, and if employees do not accept it, search for another acceptable way or a functional equivalent to adapt the TPS to local industrial relations. In fact, Toyota's basic policy about human resource management is first of all in creating a mutual trust between the company and its employees, between managers and workers, among managers as well as team members. "Teamwork" in Toyota's jargon represents inter-individual cooperation on the basis of such a mutual trust, so that "teamwork" does not

means only working on team in workshops but cooperation between managers and workers, between teams, groups, sections, and divisions. Toyota is thinking that TPS can run and develop on the basis of such a "teamwork". Until the end of 1990s, Toyota succeeded in settling this "teamwork" in its transplants in North America. Of course, Toyota recognizes that long time is still necessary so that employee's competence at transplants catches up that of Japanese'. Until then, the know-how accumulated and used in Japanese plants continues to be mobilized to the transplants in order to improve their productivity and product quality without of course neglecting the contribution of their workers. It is also the case of suppliers of transplants. Long term relationships and mutual trust are the first requirements for the cooperation between transplant and its suppliers aiming at improving quality and reducing costs.

In Europe, a Portugal company, Salvador Caetano L.M.V.T., began assembling Toyota's trucks in small quantity from 1968. This operation remains minor producing about 6,440 vehicles (Dyna, Hiace and Optimo) with 425 employees even in 1997. Then, Toyota's real production in Europe began with the construction of Toyota Motor Manufacturing in UK (TMUK), equipped with an engine plant, and starting the production of the Carina E in 1992. This model had not sold as expected, then was replaced by the Avensis in 1997. TMUK also began assembling the Corolla by constructing the second assembly line in 1998, so that its production volume came close to the level of 200 thousands cars in 1998. The main reason for this localization of production into UK was apparently the construction of the EU that would make difficult the export toward the European markets protected. TMUK resembled in assembly line to that of its mother plant, Tsutsumi assembly plant, however adopting a different approach from that in its American transplants to the management of industrial relations and the purchase. According to the collective agreement between TMUK and AEU (Amalgamated Engineering Union) in 1991, they put into place the TMAB (Toyota Members Advisory Board), consisted of members of top management and employees' representatives nominated by vote. TMAB has been regularly discussing the issues concerning two parties: wage, working conditions, company policies that influenced the employees. TMUK applied the annual salary even for the blue-color workers following after the Nissan UK, which then has been revised every year based upon the progress of worker's skill and company's performance. Its production system is of course based upon the TPS, but had the same problems of kaizen activities as in TMMK. At the beginning then, the persons dispatched from Tsutsumi plant was taking care of kaizen. As for the purchase of parts, Toyota gave the priority to the procurement from European

suppliers (160 firms founded in 10 countries, the half of which were in UK in 1994), so it was TMUK that was coming to gather the parts. Like as in the USA, TMUK organized a Technical Support Team in order to help its suppliers to improve the quality of their products under the long-term relationship with them. Then, here also, the just-in-time supply has not been applied as in Japan. It is confirmed then the adaptation of TPS to the local industrial and business conditions.

3.3 Localization of Production in the other Countries

Toyota's main assembly plants outside of the North America and Europe are found in Australia, South Africa and ASEAN countries (Indonesia, Thailand and Malaysia).

In Australia, where Toyota had exported vehicles from 1959 and begun KD assembling from 1963, it had to satisfy the Australian government that demanded for increasing the local content rate up to 85% of vehicle price. So, Toyota reorganized, in 1977, Olbaly Trading (Toyota having 90% of its equity) into TMA (Toyota Manufacturing Australia) that became Toyota's passenger car producer in Australia, being equipped with an engine plant since 1978. Toyota also took 50% equity of AMI (Australian Motor Industries) in 1972, which has since been producing Toyota's utility vehicles. Purchasing parts and engines also from an Australian subsidiary of GM, and constructing a press plant in 1981, the local content rate of produced vehicles has been over 85% of their price since 1980. However, these two subsidiaries remained unprofitable because of inefficient production organization. So, Toyota implemented the TPS there in 1982 by realizing two shift works, standardized work, and short time die change system in order to increase their productivity. Then, TMA and AMI became the first plants to which Toyota applied the TPS in foreign countries. By the way, Toyota founded a joint venture with GM, UAAI (United Australian Automotive Industries, the Australian version of NUMMI), in 1988 which, by absorbing TMA and AMI, would produce Toyota's Corolla and Camry and GM's Comodor, in order to reply to the Australian government encouraging the development of national automobile industry. As the government policy became less constraint, and perhaps because of the divergence in their strategy, this joint venture was dissolved in 1996. Toyota sold all its shares to UAAI that became then the complete subsidiary of GM (GMHI), whereas the production facilities of Toyota became TMCA (Toyota Motor Corporation Australia), a subsidiary of Toyota Motor Sales Australia (TMSA), which produces the Corolla and the Camry in supplying the Nova and the Apollo for GMHI.

In South Africa, TSAM (Toyota South Africa Motors), founded in 1961 as a marketing company of which Toyota has 27,8% equity, began assembling CKD sets of the Stout since 1962 and the Corona since 1964. Responding to the local government's demand for increasing the local content rate, TSAM constructed in 1969 an engine plant so that the local content rate reached 55% in weight of vehicle. Toyota's relation with South Africa was kept even during the period where its apartheid régime internationally became critical after 1985, though Toyota “adopted a more prudent policy in 1988” in its exports (Toyota, 1988: 364). Not withdrawing from South Africa, Toyota could reinforce the production of TSAM after collapsing of the apartheid régime. By localizing the production, TSAM then arrived to produce 79 thousand vehicles with 7,051 employees in 1998. Toyota has also a small production base in Kenya from 1977, assembling about 700 KD sets a year with 420 employees.

In ASEAN countries, Thailand, Malaysia and Indonesia were the countries Toyota preferred. In Thailand, which government applied a reduction of 50% to duties on vehicles produced at local KD assembly, TMT (Toyota Motor Thailand), founded by Toyota and TMS (Toyota Motor Sales), began to assemble KD sets since 1962. In 1969, after the start of cooperation between Toyota and Hino, the subsidiary of Hino in Thailand (THI) also began assembling KD sets of the Corolla. In Malaysia, Bolneo Motor, renamed Assembly Services Sdn. Bhd., changed about from import of Toyota's vehicles into KD assembly in 1968 following the government industrial policy. In Indonesia, the government prohibited it too the import of vehicles in 1970 where P.T. Toyota-Astra Motor, founded as a joint venture of Toyota and P.T. Astra International, began assembling KD sets of the Corona being equipped with an engine plant. Gaya Motor also commenced KD assembly of the Land Cruiser and trucks. Over time, and especially after the ASEAN's requirement for BBC (brand to brand complementation) among ASEAN countries, Toyota had to found parts companies — Toyota Auto Body Thailand in 1979, Siam Toyota Manufacturing in 1989 in Thailand, and T&K Autoparts Sdn. Bhd. in 1992 in Malaysia.

In these countries, Toyota substituted exports with KD assembly, then was increasing local content rates over time because the local governments claimed for localizing production.

3.4 "New Global Business Plan"

In 1995, the trade conflicts between Japan and USA was at the peak where on May 16th, Michael Kantor of USTR declared the imposition of duties of 100% for price on Japanese high range cars imported. In such a situation, Toyota set forth the “New Global Business Plan” for the years 1995-1998 in order to alleviate the conflicts. This plan consisted of promoting localization of production, increasing local procurement of parts, materials and equipment, and augmenting imports from abroad and exports from overseas plants to other countries.

1) *Localization of Production*. Its objective was to increase overseas production in three regions — North America, Europe and Asia-Oceania — from 1,216 thousand units in 1994 to 1,900 thousand in 1998. Then the share of overseas production in overseas sales had to rise from 48% to 65% (see the Table 3, Toyota's “New Global Business Plan”). This objective was not attained because of the economic crisis of ASEAN countries in 1998. However, the production capacity of its transplants in the North America was reinforced up to 1,250 thousand units in 1999 after the construction of TMMI which could produce 150 thousand utility vehicles (Tundra T100). The production volume in 1998 of these transplants was 1,010 thousand units, including those of NUMMI and TMMK. In Europe, by constructing the second assembly plant in 1998, TMUK expanded its capacity up to 200 thousand units. In Asia, though the objective for this region was to produce 640 thousand units in 1998, its production volume shrank from 454 thousand to 280 thousand. As a result, the total production volume of these regions in 1998 remained 1,380 thousand units in contrast with 1 900 thousand in the “Plan”. Concerning the share of overseas production in overseas sales, Toyota seems to renounce fixing objective since the objective was difficult to attain because of change in market conditions. In fact, this share in 1998 remained about 58% according to Toyota — a regional decomposition of share in 1997 gives about 60% in the North America, 25% in Europe and in Asia, and 50% in Oceania (see the Table 2). However, we have to remark that by promoting this “Global Business Plan”, Toyota succeeded in largely expanding its global production capacity, under the policy of “produce where demand exists”.

2) *Local procurement policy of parts, materials and equipment*. The American government as well as other local governments had demanded increasing export of parts from their countries and local content rate of overseas production operations. Mainly under pressure of the USA, Toyota changed its procurement policy from the well known closed policy — “keiretsu transaction relations” — to “open door policy” by setting in place “Toyota Global Optimized Purchase System”, supported by “Supplier

Improvement Support Program”. This means that if potential suppliers can propose competitive cost in respecting quality, delivery time as well as committing themselves to continuous improvement, Toyota is ready to conclude purchasing contracts with them. Toyota's top management also decided to import increasing parts from abroad by political judgment despite the objection of its Purchasing Division that was taking care of suppliers in Toyota's “keiretsu”. Promoting the BBC in ASEAN and localizing parts production by construction of parts companies or plants, Toyota has been making efforts to increase local content rates and the level of local production integration.

3) *Sales of imported cars.* Toyota also tried to sell more imported cars through its distribution networks. Already in 1992, Toyota organized the DUO network for selling VW/Audi cars according to the agreement concluded with VW, which consisted of production by VW of Toyota's pickups in its Hanover plant (cease of production in 1997) and marketing by Toyota of VW's cars in Japan. In 1994, the sales volume of VW/Audi cars by the DUO chain was 19 thousand units from which it was increased up to 34 thousand in 1997 but to 28 thousand in 1998 because of the Japanese economic stagnation. Toyota also began to sell in Japan the Cavalier produced by GM (7 000 units in 1998) and the Avalon produced by TMMK (4 000 units in 1998).

4) *Exports from transplants.* In order to satisfy local governments claim as well as to obtain scale merits, Toyota has been promoting exports from its transplants. Without saying about its North American transplants, TMMUK began export of its cars toward the outside of Europe from 1996, of engine blocks to Japan, whereas the BBC was organized in ASEAN countries — production of power steering units and lower ball joints in Malaysia, of constant velocity universal joints in Philippines, and of engine blocks in Thailand, for example.

Showing its cooperative international strategy in its “New Global Business Plan”, Toyota wanted, as a No. 1 of Japanese automobile producers, to cool down the trade conflicts. However, it was not done only to alleviate the conflicts, but also to deploy its global production network in such a veiled offensive way. Though it was not in the “Plan”, Toyota then build a plant with production capacity of 150 thousand Corollas in Brazil which started production in 1998, founded Toyota Kirloskar Motor in India in 1997 to produce multipurpose vehicles, and decided the production of the Yaris (Vitz in Japan) in France from 2001. Toyota was also negotiating with the Chinese government over the construction of an assembly plant in China. Now Toyota looks able to carry on its global business without merge or closed business cooperation with foreign carmakers, except some strategic alliances (see the Figure 2 about Toyota's strategic alliances and

shareholding investments, which however does not contain a technical cooperation with GW, concluded in 1999).

4. Facing the Age of a World Oligopolistic Competition

As we saw above, Toyota's internationalization strategy was turned into offensive one so as to consolidate its place in global automobile market. However, because of the worldwide reorganization of automobile industry at the end of the 20th century such as the merge of Daimler Benz and Chrysler, the absorption of Rover by BMW, that of Car Division of Volvo by Ford, and the cooperation of Renault and Nissan, the world automobile market seems becoming oligopolistic. In addition, investment in R&D for developing ecological vehicles is urgent and necessitates more and more important financial resources. Competing on such a market might oblige carmakers to become “big companies”, as they do. Can Toyota behave as a “maverick” in such a situation? So, we see in this section Toyota’s financial resources for its globalization strategy, another dimension of globalization that is the internationalization of product development, the impact of globalization upon its home industrial organization and finally its partial alliance strategy to develop new ecological car technologies.

4.1 Finance and Management of Overseas Operations

Though famous for its debt free management from the mid-1970s, Toyota issued convertible bonds of 200 billion yens in 1987, company bonds of 800 million dollars with underwriting right of new stocks in 1988, convertible bonds of 300 billion yens in 1988, company bonds of 1, 5 billions dollars in 1989 in order to finance the construction of new plants in UK and Japan. In fact, Toyota had to construct its new plants of TMMI, TMMC, TMUK, Tahara No. 4 and Toyota Kyushu from 1986 to 1992. Though having a financial reserve of 2,088 billion yens, Toyota was able to finance these constructions, it preferred profiting from low interest rates (between 1.2 and 1.7%) rather than reducing its financial assets which has been giving it a considerable financial profit. This financial policy has been maintained even during the 1990s. In 1992, company bonds of 1 billion Euro dollars was issued for investments; and in 1993, those of 1.5 billion Euro dollars for refunding 1988’s bonds though their interest rates were high (6.875% and 5.625% respectively). In 1997, Toyota emitted company bonds of 1 billion Euro dollars

for repaying 1992's bonds. From then, Toyota changed course in order to profit from low interest rates in Japan (1.4 to 3%). In 1998, Toyota refunded 1993's bonds by company bonds of 50 billion yens, and issued other bonds four times, whose total amount reached 350 billion yens. So, Toyota had the balance of 514 billion yens to refund in the March 1998. During these years, Toyota continued to accumulate its financial reserve up to 3,939 billion yens in the form of deposits, valuable papers, etc. Then, it is allowed to generalize that Toyota has been financing the productive investments by emission of bonds profiting from low interest rates, except Euro dollar's bonds, and reinforcing its financial assets. Consequently, Toyota has disposable financial resources enough to carry out by itself the globalization strategy, including worldwide competition for ecological car development.

About the management of transplants, Toyota seems giving a special status to the North American subsidiaries. NUMMI was a fifty-fifty joint venture of GM and Toyota, TMMC being wholly owned subsidiary of Toyota, whereas the capital of TMMI was financed of 80% by Toyota Motor Sales USA (TMS USA) and of 20% by Toyota. This is because Toyota wanted to localize TMM USA by TMS USA's reinvesting profits gained there. This localization policy in the USA arrived to found a holding company in the USA, Toyota Motor North America (TMNA), and a company controlling Toyota's American facilities, Toyota Motor Manufacturing North America, in 1996. From then, TMNA has owned of 100% TMMK, TMM Indiana, TABC, TMM West Virginia, and of 87% Bodine Aluminum. Toyota also has its holding company in Germany, Finland and Sweden, Norway and South Africa, which however concerns the distribution companies. Its overseas transplants out side of the USA were owned of 100% by Toyota and then controlled directly by Toyota. In general, their president being a Japanese, other Japanese staff dispatched from Toyota is strongly supporting locally employed managers as general managers or advisors of them. If Honda has a tendency to manage its transplants by Japanese staff, whereas Nissan has delegated transplant's management to local managers, Toyota is found between them about the management personnel policy. As for the other production facilities, Toyota shared their capital with local companies because of local government policy (see the Appendix 2).

4.2 Internationalization of Product Development

Toyota decides the product policy of its overseas production facilities, centralizing the product development into the Product Engineering Design Department at Toyota

City. About the vehicles transplants have to produce, market information is gathered by its foreign subsidiaries and sent to Toyota that based on it, decides the new model to produce and launch on the local markets. As for the concurrent engineering with local suppliers, Toyota's engineers travel to meet their engineers in order to perfect the design of parts. Or, as in the case of the development of TUV (basic utility vehicles: Kijan and Zace), local engineers come to participate in the product development at Toyota. This character of centralized product development will not change in the near future, but the design of body feature is different.

Toyota has three design centers: Design Center in its Tokyo Head Office, Caltex Design Research in the USA (since 1973) and N.V. Toyota Motor Europe in Belgium (from 1990), which was removed to the south of France, renamed Toyota Europe Design Development in 1998. So, when a new car development is planned, a design competition is organized amongst these three design centers. For example, the body shape of the Prius was designed by an engineer at Caltex Design Research after their competition, that of the Yaris (Vitz) by a designer at N.V. Toyota Motor Europe. These centers are of course founded to develop the car designs suited to the local markets. However, it is not probable in the foreseeable future that these overseas design centers have a competence to develop product designs.

4.3 Impact of Globalization upon Toyota's home industrial organization

As we saw above, Toyota's global business looks running well. However, advance in localization of production is actually posing two problems, aggravated by the long stagnation of Japanese economy.

First, though in Japan, Toyota has to maintain the production at the level of more than 3 million vehicles in order to keep its employees (about 70 thousands), it seems difficult to follow this policy for a long run. In fact, production of many plants, including those of its body makers such as Kanto Auto works, has been getting down. Hino, a truck maker of Toyota group, decided to reduce about thousand employees. Kanto Auto Works announced the shutdown of one of its assembly plants producing passenger cars. Even at Toyota, the tact time at Motomachi and Tsutsumi plants became two times longer in 1998 than had been in 1997 because of shrink of production volume. The situation is more serious as to its Japanese suppliers. Toyota's purchasing from them has a tendency to reduce, because not only of "delocalisation" of production, but also of Toyota's "Global Optimized Purchase System". Though Toyota is recommending them

a diversification of their products outside of automobile industry, it is difficult for weak suppliers especially under second tier suppliers to redeploy their business. In fact, their competencies deeply rooted to too specific transaction relations to be able to develop completely new products, and there are not so many business chances in the actual state of matters.

Second, we can also foresee that the Toyota industrial model is going to alter once again, but this time under its localization of production. Some new reorganizations of its corporate system are observed and suggested. Facing international mergers and cooperation between carmakers, which will make market competition fiercer, Toyota decided to reinforce the ties among its group companies:

— In order to do so and having a plan to found Toyota holding company at the same time, Toyota dispatched five vice-presidents to Denso, Aishin, Toyota Automatic Loom, Toyota Auto Body and Toyota Finance in 1999. The holding company seems to be founded in order to reinforce the control over its group companies, especially over Denso that has been less dependent on Toyota (only 45% of its products were sold to Toyota) deploying its own strategy that sometimes compromised Toyota's interests. For example, without agreement of Toyota, Denso sold to Fuji Heavy Industry a new engine control technology (VVT-i) that Denso had developed in collaboration with Toyota for four years from 1991 (Asahi Shinbun, April 29th, 1999). With holding company and direct control by dispatched person, Toyota at least could supervise its group companies so as to prevent them from transferring new high technology to its rival companies, because the advanced high technology is regarded as a main weapon in fierce market competition.

— Because of over capacity, emerged from the “delocalisation” on the one hand and market stagnation on the other, Toyota revised its relations with Daihatsu and Hino by increasing its shareholding. Though assembling Toyota's low range vehicles (Corolla, Townace, etc.) from 1968 and with managers dispatched from Toyota, Daihatsu kept its own commercial strategy by developing its own vehicles in minicars and low range cars that often competed with Toyota's ones. Toyota increasing its shareholding up to 51,2% from 33,4% (15,4% before 1995) in 1998, Daihatsu became now Toyota's subsidiary that produces mini-cars Toyota does not produce (Daihatsu supplies a small car, the Duet, to Toyota from 1999). In addition, the overseas operations Daihatsu deployed might be under the control of Toyota (see the Figure 2). As to Hino, a heavy truck and bus maker, that had been assembling Toyota's Hilux etc. from 1968, Toyota increased its shareholding up to 20,1% from 11,0% in 1998, so that Hino was also integrated in

the division of labor in Toyota group. From 1999, Hino definitely became Toyota group's truck and bus maker.

This realigning of Toyota's industrial organization in Japan going with the construction of a global production network proves that Toyota's global strategy is set in place that has to permit Toyota to compete on fierce globalized market competition, shaken by mega and quasi mergers between carmakers. In this situation, trumps of Toyota would be its technological competencies (especially its ecological technology proven by Prius) as well as its financial capacity that allows of massively investing in R&D.

4.4 Partial Alliance Strategy

After the commercialization of the Prius by Toyota, the first hybrid car in the world, development of ecological car became the focal point in the worldwide competition among carmakers. On the stagnant market, winners would be those who launch brand new and salable cars without gasoline engine before its rivals by setting its technology as de fact standard. However, the development of such a brand new technology demands a huge financial resources and time, from which appear alliances between carmakers.

In the case of Toyota, who considers the development of ecological technology as one of the essential conditions for winning the fierce global competition at the 21st century, it founded a joint venture with Matsushita in 1996 in order to develop a new battery (fuel cell) for the Prius, which will be supplied to Honda from 1999 for its hybrid car. The success of the Prius constitutes a trigger for the others of urgent development of ecological car in various forms, hybrid car, electric car or hydrogenous fuel engine car. And a future technological path is still open. Toyota itself does not believe the hybrid system of the Prius could be a final version. These circumstances augment financial and human resources to be invested in R&D, and necessitate a technological cooperation among various firms concerned. Then, in 1998, Toyota concluded a technological cooperation with Exxon (one of the oil majors) for developing a new infrastructure for hydrogenous fuel supply. In order to develop de fact standard technologies of ecological cars, Toyota arrived to conclude a technological cooperation with GM in April 1999, into which Honda would participate after concluding a mutual supply of engines with GM in December 1999. Of course, these

technological alliances of Toyota remain partial, because Toyota does not search any merger or fusion with those firms.

5. Conclusion

Internationalization strategy of Toyota changed during the first half of the 1980s from export-centered one to the localization strategy of production, excepting for early KD assembly in several countries and localized small production in Brazil, forced by local governments' protectionist policy. This change was imposed to Toyota, though it preferred the exports to the overseas production for the sake of its TPS, considered untransferable. The trade conflicts from the end of the 1970s, the voluntary restraint of exports toward the USA were the main reasons for Toyota's decision to produce in the USA. The rapid appreciation of yen from 1985, but also the self-conviction of transferability of the TPS led Toyota to expand overseas production operations for substituting its exports with products of its transplants. This tendency was reinforced when Toyota established its "New Global Business Plan" in order to alleviate the trade conflicts with the USA in 1995. From then, "produce where demand exists" became Toyota's globalization strategy. Remark that this globalization of production has been deployed on the basis of its international sales network created during the 1960s and 1970s. Then, Toyota does not carry out its overseas productions where the demand has to be searched yet. Also, it is out of question for Toyota to merge with any foreign carmaker, because its industrial model is too specific to do it. Moreover, Toyota has financial assets enough to conduct this strategy and invest in the R&D of ecological vehicles, as it was shown by the launch of the Prius. Toyota seems capable to compete on the world automobile market where the zero sum game is played.

However, this does not mean that its industrial model remains unchanged. Reinforcement of the ties of its group companies, move toward the foundation of its holding company, "delocalisation" of production, increasing parts procurement from abroad suggest a reorganization on going of its industrial organization in Japan. Is Toyota aiming to become a global company? On the other hand, Toyota changed its product policy. Now, Toyota gives its priority to product innovation in order to take the initiative in developing future vehicles like as the Prius or in giving a new concept to cars like as Vitz (Yaris), as if the development of such cars prior to the others constituted the best card to compete on the zero sum game market. In any way, Toyota's industrial model seems moving from "continuous reduction of costs at constant volume"

(Freyssenet, Mair, Shimizu, Volpato, 1998) into “innovation and continuous reduction of costs at constant volume”.

[Bibliography]

- Adler P.S., Goldoftas B., Levine D.I. (1998), Stability and Change at NUMMI, in Boyer R., Charron E., Jürgens U., Tolliday S., *Between Imitation and Innovation*, OUP UK
- Delapierre M., Madeuf B., Michalet Ch.-A., Ominami C. (1983), Nationalisations et internationalisation, La Découverte/Maspero
- Freysenet M., Mair A., Shimizu K., Volpato G. ed. (1998), *One Best Way? Trajectories and Industrial Models of the World's Automobile Producers*, OUP UK
- Inoue T. (1995), “Jidosha-Sangyo no Genjyo (Status Quo and Problems of Automobile Industry)”, in Public Communication Center on Economics at University of Waseda ed., *Global Strategy in Japanese Automobile Industry*, Chuo-Keizai-Sha (in Japanese)
- Laigl L. (1997), Strategies et trajectoire d'internationalisation des firmes asiatiques et européennes, *Actes du GERPISA*, No. 22, fevrier
- Mishina K. (1998), Making Toyota in America: Evidence from the Kentucky Transplant, 1986-1994, in Boyer R., Charron E., Jürgens U., Tolliday S., *op. cit.*
- Nikkan Jidosha Shinbun (1998), *Handbook on Automobile Industry* (in Japanese)
- Shimizu K. (1988), A New Toyotism ?, in Freysenet M., Mair A., Shimizu K., Volpato G., *One Best Way ? , op cit.*
- Shimizu K. (1999), *Le Toyotisme*, Collection Repères/Editions la Découverte
- Suzuki N. (1991), Amerika Shakai no nakano Nikkei-Kigyo (Japanese Firms in the American Society), Toyo Keizai Shipo-sha (in Japanese)
- Takahashi Y. (1997), Nihon Jidosha Kigyo no Gurobaru Keiei (Management of localized plants of Japanese Automobile Firms), Nihon Keizai Hyoron Sha (in Japanese)
- Toyota (1987), *A History of the First 50 Years*, Japanese version
- Toyota (1988), *A History of the First 50 Years*, English version
- Toyota, *Annual Report*, every year from 1974
- Toyota (1999), Toyota no Gaikyo (Outlook of Toyota)