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Information Technology and Automobile Distribution

A Comparative Study of Japan and the United States

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INFORMATION TECHNOLOGY AND AUTOMOBILE DISTRIBUTION: A COMPARATIVE STUDY OF JAPAN AND THE UNITED STATES

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ABSTRACT

Automobile distribution has undergone a drastic change in recent years both in Japan and the United States, because of so-called "market globalization" and "digital/network revolution." The purpose of this paper is to provide an analytic framework of this change and to apply it to Japan and the United Sates to foresee differences in future development. We argue that the firm's strategic positions can be summarized in the three dimensional "strategic-pattern" space: (1) whether the firm is prone to "combinatorial optimization" or "process-oriented optimization", (2) whether the firm's products are based on "modular architecture" or "integral architecture", and (3) whether the firm adopts "horizontal-dominance strategy" or "vertical enclosure strategy". We then characterize recent developments in the US and Japanese car markets as a result of car manufacturers' and dealers' adaptation to global competition and information technology. We identify three typical combination of strategic patterns: (1) "dealer consolidations by manufacturers", (2) "dealer consolidations by retailers", and (3) "informediaries' initiative". We examine advantages and disadvantages among the three strategic patterns. We argue that, while three strategic patterns are likely to coexist in the near future in the United States because of strong regulatory restrictions (dealer protection laws), manufacturer-driven changes are more likely in Japan.

1. INFORMATION TECHNOLOGY, MARKET GLOBALIZATION, AND STRATEGIC PATTERNS

1.1. Drastic, Unexpected Changes and Strategic Patterns: An Evolutionary Approach

Firms in the present day market compete with one another with various measures such as product differentiation, advertisement etc. (Nishimura 1995)[1]. Every firm makes full use of diverse measures to build up barriers and expand profits to protect themselves from the threat of competition: by making use of patents and know-how and by attempting differentiation through brand names and product functions. It was Porter[2] who with his theory of competitive strategy developed analytical techniques to analyze various activities by which firms create a (though partial) monopoly and try to seek profit through this. His approach was adopted by subsequent management studies in this field.

However, Porter's analysis would function properly only if the uncertainties in the competitive factors of the market are "small", in other words, should there be uncertainties, it should be possible to make allowances for them well in advance. When the changes in the market or the production structure by far surpass all expectations, the firms cannot help but take a passive stance in response to this continually changing situation[3]. In such a case it would be difficult to ascertain beforehand what should be the optimal strategy à la Porter for individual firms; hence it would be far more fruitful to analyze the patterns of various strategies taken by firms in response to the drastic, unexpected changes in the environment and through this, predict which strategic pattern has a higher probability of "survival".

In other words, when competitive factors keep changing drastically and unexpectedly, it is almost impossible for a managerial economist to determine which strategy among various alternatives would be the optimum one from the standpoint of the firm and to recommend the strategy to the firm. Rather, it would be more appropriate for him having the vantage of observing mutual interactions of various strategies that numerous firms spin out, to interpret the evolution of the drastic changes from the viewpoint of corporate survival and to suggest the firm probabilistic survival ranking of strategic patterns in order to facilitate its restructuring and other corporate activities. In an era of drastic and unexpected changes, an evolutionary approach is needed rather than a deterministic one.

In the 1990s, there were in fact great changes influencing competitive factors in the world economy. One of them is "digitalization and networking" brought about by rapid development and the diffusion of the revolution of Information Technology. (Shapiro and Varian, 1999)[4]. The other is "market globalization" caused by the mitigation of regulations at a global level, Asia's economic development and the conclusion of the cold war. The scale of these changes was such that they

surpassed any bold predictions of change that had been made in the past. Thus, we need here evolutionary analysis rather than deterministic one.

This paper is organized as follows. In the remainder of this Section, we identify three basic strategic patterns found in the history of industrial changes after the second World War and in particular in the drastic changes in the 1990s. Sections 2 and 3 describe the present day automobile distribution in the United States (Section 2) and Japan (Section 3), taking into account the strategic patterns developed in Section 1. These two sections discuss similarities and differences between the two countries, especially the impacts of Internet and other developments in information technology. Based on the observations in these two sections, we examine factors determining future course of automobile distribution in the two countries in Section 4. There, regulatory factors and the difference between Japanese and US consumers are shown to be possible decisive factors to determine the survival of strategic patterns. We conclude this paper with a speculative note on the future.

1.2. Strategic Patterns

In the present day economy, numerous firms of different origins compete with one another in an array of market conditions. These firms use various competitive strategies to compete. In order to analyze the drastic changes in the automobile distribution system, as a framework we shall categorize the various strategic patterns of firms into the following three pairs: (1) Combinatorial Optimization versus Process Optimization (2) Modular Architecture versus Integrated Architecture and (3) Horizontal Dominance Strategy versus Vertical Enclosure Strategy.

How to Increase Value-added: "Process Optimization" versus "Combinatorial Optimization"

Abernathy has categorized into two symbolic levels the development stages of any production or firm. (Abernathy 1978)[5]. In the initial stage of the development there is competition brought about by "product innovation" as various firms compete with one another in design and functions. However, the process of trial and error gives way to selection with the result that a standardized product specification takes shape. With this, the development stage reaches the stable stage, followed by a shift towards gradual and cumulative process innovation towards mass production of a standardized product. In other words, there is a change in the very nature of competition from search for better product specification to mass production at lower cost, i.e. towards cost competition.

Now, if the nature of the competition is different between the two development stages of the industry, it is but natural that the suitable strategic pattern of firms too would be different. Nishimura[6] has drawn attention to this issue and has indicated that there are two patterns with respect to the optimization of value-added production. One of them relates to "product innovation," and it is a "combinatorial optimization" oriented strategic pattern. In this pattern the firms achieve

competitive advantage and increase their value-added by supplying new products and services through their attempts at designing by experimenting various combination of strategic elements.

The other pattern is in response to cost competition and is a strategic pattern oriented towards "process innovation". This pattern achieves competitive advantage and increases value-added by realizing even more efficiency in production process of products of already established design, under often-limited productive resources given to the firm.

Here it is important to keep in mind that the two strategic patterns are not in a linear relationship in which one pattern necessarily follows the other. Abernathy's concept has been employed from the point of view of the dynamics within some specific industries, and suggests the transition of a suitable strategic pattern from combinatorial optimization to process optimization. However, in case the industrial portfolio including the product architecture and makeup of division of labour changes in its entirety, then it gives rise to a new industry, or even revolutionizes the shape of the old industry. Should this be the case, on the contrary it is the combinatorial optimization-oriented strategy that is relatively suitable, and the transition that will occur will be from process toward combinatorial optimization.

Product Strategy: Modular Architecture versus Integral Architecture

Fujimoto[7] proposes another classification of strategic patterns from the standpoint of product strategy and has pointed out the importance of product architecture in understanding industry development. According to Fujimoto, the architecture of the product design can be classified basically into "integral type" and "modular type" architecture. Integral architecture is the type where the design of the structural parts requires very fine adjustments for each product. Some examples of this type are motorbikes. It is this integrated type of product architecture that has been Japan's strength.

Compared with this, in the modular architecture, by standardizing the interfaces of the parts well in advance, it is possible to produce a wide variety of products. Personal computers are the most representative of this category. It was the Unite States that specialized in the modular type architecture, and recently as seen in the Taiwanese computer industry, there is worldwide spread of the modular architecture type of product strategy.

Business Model: Horizontal Dominance Strategy versus Vertical Enclosure One

Kokuryo (1999)[8] presents yet another classification of strategic patterns from the standpoint of business models. He characterizes the "vertical enclosure" model as the kind of business model in which a specific manufacturer commands product specifications of end products and integrate the their production process including parts suppliers or even the sales channels. In contrast to this, "horizontal dominance" model is the kind in which a manufacturer not only specializes in specific function and parts, but also aims to increase their share and to have a dominant position in this

particular committed segment. Furthermore, Kokuryo suggests that in cases where modularization progresses in the product architecture, it is the horizontal dominance strategy specializing in specific modules that can achieve higher conformity.

Combination of Strategic Patterns.

The classifications taken up so far: "combinatorial optimization" versus "process optimization", "modular architecture" versus "integral architecture" and "horizontal dominance versus vertical enclosure", correspond to each other on the three dimensional axes, which can be integrated to yield two large strategic patterns. One is the strategic pattern made up of the "combinatorial optimization + modular architecture + horizontal dominance" (horizontal; wide but shallow); and it is the United States that have been mainly proficient in this. The other is "process optimization + integral architecture + vertical enclosure" (vertical; narrow but deep), in which Japan has enjoyed advantage.

In this paper we analyze the present US-Japan automobile distribution system from the viewpoint of how the typical combination of strategic patterns found in each country conforms to the local market environment, and then make predictions for the future. However, before launching into the specific topic of automobile distribution, it is necessary to take a macroeconomic look at how the typical strategic pattern of each country conforms or fails to do so to changes in the country's macroeconomic environment. Changes in automobile distribution are one of the manifestations of such kind of macroeconomic adjustment.

1.3. Market Globalization, Digitalization and Networking

The main driving force of Japan's post war economy was the manufacturing industries producing industrial goods traded internationally. From the proportion of nominal GDP, manufacturing industries in 1955 increased from 28% to 36% in 1971 and went on to maintain a rate of 28% in 1990. It was after 1992 that the ratio fell in the balance. The behavioral pattern of Japan's manufacturing firms was what came to be called as "catch up" pattern. To employ Abernathy's classification, by taking on industries with already established designs, Japanese firms tried to catch up and overtake by taking up the challenge of process innovation.

In the environment of the 1960s and 1970s, industries that had witnessed very little change in dominant design such as chemical and assembly based industries like automobile and home appliance industries, followed the typical pattern of Japanese industries, which was process optimization as in "reducing waste, improving quality, and cutting costs" . It can be interpreted that it was through these means Japan was able to gain success.

Such a pattern of process optimization conformed well with Japan's long-term employment system, which in turn gave rise to the effective accumulation of learning and skills. The pattern that increased productivity by partial process optimization through the cumulative effect of effective

learning, was in the initial stage directed towards introducing production equipment and production system from developed countries, and subsequently adapting it to suit Japanese conditions. Further, after the oil crises of the 1970's, Japan went on to develop process optimization based on the very unique production plans of the kind as seen in the Toyota production methods that were introduced during the first oil crisis.

What brought about major changes in this market environment in Japan is the opportunity for "market globalization" provided by the end of the cold war in the mid 1980s and the growth of the Asian economy as well as "digital networking" brought about by the definite progress of IT in the 1990s.

The globalization of the market contributed greatly to the progress of the "modular architecture". With market globalization, not only was there a spread in product outlets, but also a sudden expansion in the market for various kinds of semi-finished goods. This is how the production of semi-finished goods at a global scale became possible. In fact that itself led to the supply of finished modules of even higher quality. With this, there was a quantum leap in the flexibility of the production process required to manufacture the final products. By making the maximum use of this flexibility and carrying out "combinatorial optimization" it became possible to increase value-added production. Even if the world scale modularization of the production process could not attain the quality standard achieved by integrated process optimization, it was still able to maintain a quality level that was quite close, and to cut costs by taking advantage of low input costs in various areas of the world.

Furthermore, the "digitalization and networking" brought about by the IT revolution in the 1990s helped to accelerate this movement. Within ten years of the commercialization of the Internet, the number of users increased to several billion, thereby accelerating market globalization. There was also the added factor that the specifications of the interface of the digitalized products were very strictly defined and this itself conformed to modular architecture.

In addition, because the radical improvement in the performance-to-price ratio of digitalized parts and products made it possible to acquire high performance hardware at lower costs, there was a reciprocal fall in the emphasis of the process improvement and innovation which were once carried out to reduce the burden on the scarce and highly expensive hardware. Also even though the development costs (fixed costs) of the original (first copy) of the digital material that is representative of software or programs is extremely high, the costs of the additional production after the second copy (that is, variable costs) are very low. Consequently, because of the fact that there is less need to carry out refinement or improvement at the programming level, continuous improvement activities of the production process of the digital goods through process optimization becomes less important than before.

In other words, market globalization as well as digitalization and networking worked towards increasing the superiority of the strategic pattern consisting of combinatorial optimization, modular

architecture and horizontal dominance strategy.[9]

2. THE UNITED STATES: YEAR 2000

In section 1.3 of the previous section, we pointed out that the strategic pattern adopted by most of the Japanese firms (process optimization, integral architecture, and vertical enclosure) gave rise to a mismatch with respect to the economic environment in the1990s in the general manufacturing industries. However, that is a generalization only; other factors also play a decisive role shaping individual industry.

On the one hand, in the case of automobile distribution, retail-level regulations are among most important factors in determining the current market structure. These regulations virtually determine the relation between manufacturers and dealers and between dealers and consumers exogenously, and thus limit the range of possible adjustments that might occur in the automobile distribution in face of changing economic conditions. These regulations have been in place long before market globalization, digitalization and networking explained in the previous section.

On the other hand, automobiles are sold through the communication interface between the sellers (manufacturers and dealers) and the buyers (users)[10]. Consequently, this communication interface becomes a crucial business problem for all firms that are involved in automobile distribution. This implies that the advances made in recent years making the customer interface more open and modularized under market globalization, digitalization and networking are having a tremendous influence on the strategies of all the firms. Especially, proliferation of Internet has a profound impact on the automobile distribution.

In this and next sections, we carry out a comparative analysis of the problems characteristic of automobile distribution between the United States and Japan, by using the framework suggested in the previous section coupled with the impact analysis of regulations and internet proliferation.

2.1. Regulations for Dealer Protection

In most states of the United States, there is what is called the "ten-mile law" (Shioji and Kealy 1994)[11]. There are restrictions on the location of franchise dealers of new cars: new franchise should not be granted in the vicinity of the existing franchise. In 1938, the Federal Trade Commission pointed out that compulsory sales quotas and compulsory audits that were imposed on dealers by the manufacturers were unfair trade practices showing uncompetitive situations and recognized the need for reforms (Hewitt 1956, Shimokawa 1977)[12]. The Good Faith Law was enacted in 1957, which called for a clear prohibition of threat or other coercions, by the manufacturers towards dealers (Shimokawa 1977)[13]. In this way new car dealers in the United States were very carefully protected by restraint eliminating "excessive and unfair competition".

In contrast, innovative forms of retailing emerged one after another in the distribution of other consumer goods. Department stores that were on the rise towards the end of the 19th century were the spearhead of this wave of retail innovation. In most cases, innovators were new entrants outside the realm of traditional retailing. They entered the market with innovative strategies that were quite new to the retail market of that time: self-service (supermarkets), suburban large-scale commercial complex (shopping malls), mass-purchase from manufacturers with volume discounts and mass-sales to customers with low prices (discount stores) or concentration on a specific category of products with an impressing array of product lines within this particular category (category killers).

The most important factor in the United States to spur constant retail innovation is the competitive market structure based on free entry[14]. Competitive pressure from innovative entries gave rise to continuous process of natural selection in the various stages of distribution, and before long it eradicated inefficient business formats and firms to concentrate productive resources on efficient business formats and firms. A by-product of this process was a relative increase in the negotiating power of existing retailers with respect to the manufacturers. In this way, new retail business formats were experimented in the United States in rapid succession in consumer goods markets other than automobiles. In a sense, the process was a dynamic "combinatorial optimization" process in its excellence.

Putting together the history of the US retail business, the uniqueness of the automobile market becomes even more conspicuous. As far as automobiles are concerned, for those small-scale local dealers who generally do not sell more than one brand, there basically has not been any change in the past one hundred years: a car is sold to a customer by a sales person in the dealership.

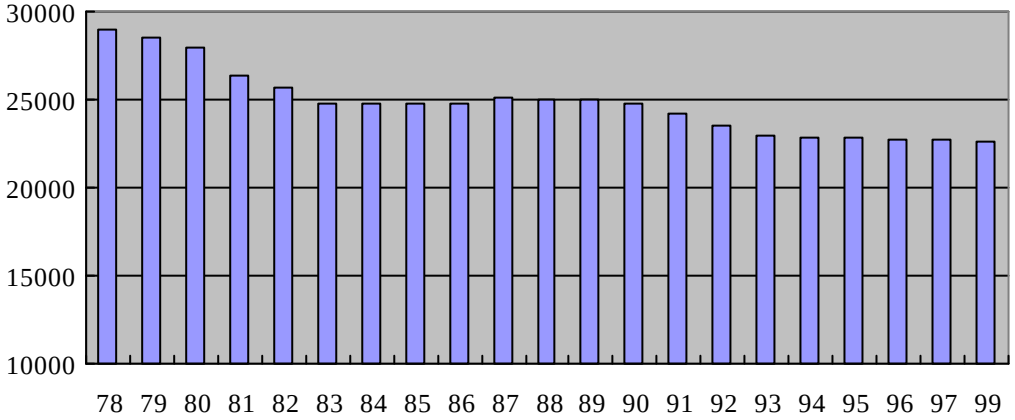
If the manufacturer-dealer relationship is so stable over time, it is tempting to think that there were advances in process optimization and competition in this respect. However, this was not the case. Unlike Japan, there were few measures for manufacturers to exercise leadership on the dealers in the United States, and therefore it was difficult for both parties to cooperate through sales policies etc. in order to increase their efficiency in business affairs.

Also because of the dealer protection policy exemplified in the ten-mile law, there was no pressure to compete for consumers, nor was there a consolidation of retailers by way of survival of the fittest through a natural selection process. In this way, the "combinatorial optimization" oriented strategic pattern did not come to the surface; neither did the "process optimization" type strategic pattern. It is thus fair to say that this lead to a long period of stagnancy.

2.2. Retailer-Led Innovations

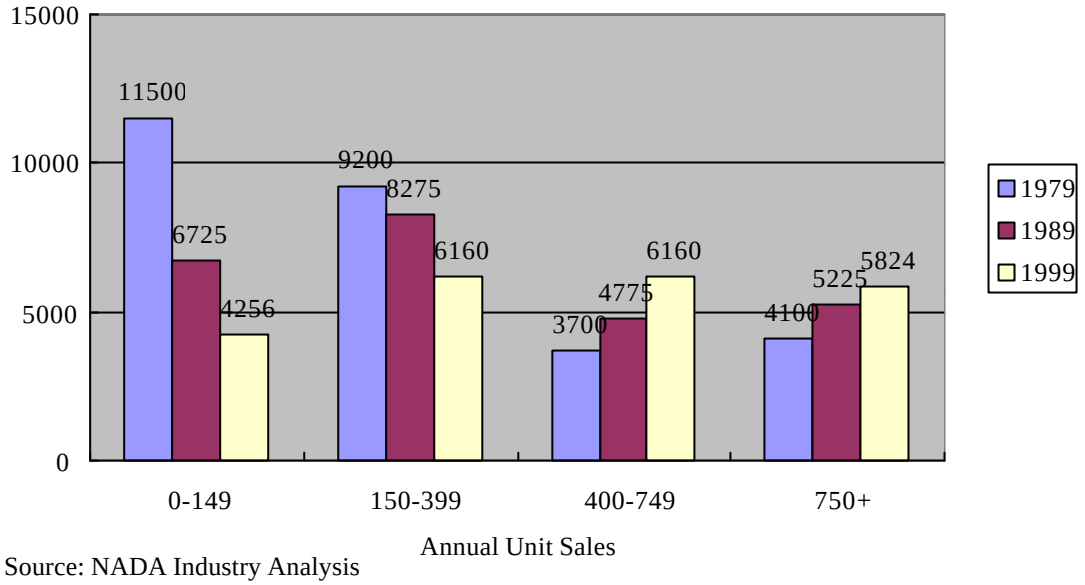
Albeit slowly, the number of new car dealers did go on decreasing. In 1999 the number of dealers had reduced to 23,000 from 29,000, which was the figure in 1978. Again, parallel to this, the scale of sales per shop continued to expand every year. For example in 1979, the number of dealers whose yearly sales were less than 150 vehicles were a little less than 40% of the total dealership, but this fell to less than 20% in 1999. Figures 1 and 2 show the fall in the number of dealers and the trend towards expanding the scale of sales per shop.

Fig. 1 Number of Dealerships in USA



Source: NADA Industry Analysis

Fig. 2 Number of Dealerships: Annual New Unit Sales



Source: NADA Industry Analysis

Although the change was slower compared to other retailers, retailer-led business reforms have been seen in recent years. Here we take up the following two innovations as the representative example of retailer-led business reforms in the automobile distribution. The first one is the Auto Mall where dealers increase their attractiveness to customers by clustering one another in one location convenient to consumers. The second one is to build up dealer chains nationwide where a new entree buys off existing dealerships and brings them under its control.

Auto Mall

The attractiveness to customers who want comparison-shopping is rather weak if independent dealers are locate in a dispersed manner as has been the case for many years. Auto Malls[15] started from this observation under the initiative of independent dealers. Auto Malls began in 1973 in California and increased to 190 countrywide and their share in sales of new cars is estimated about 10%[16].

The basic advantage of Auto Mall is a synergy effect from having competing brands in one place to attract consumers from large areas who want comparison-shopping. Furthermore, shopping malls are often located in neighborhood of auto malls, and there is a synergy effect of these two malls. However, competition is intense amongst auto malls to attract customers and those malls with a lackadaisical scale or that are too old either lose their customers to newer large scale malls or eventually just fade out.

There are limitations to the economy of scale in Auto Malls. Because the operations of the respective stores are independent and not coordinated, there is no progress in the overall efficiency

of the business operation. And because it is not possible to search for information about the stocks of many dealers at one terminal, the consumer has to stroll around to locate the dealer they are looking for.

In other words, although Auto Malls of independent dealers located in one place are effective for the dealers in attracting customers, and for customers in obtaining the convenience of stores carrying all kinds of goods, there nevertheless are limitations to the efficiency improvement since their operations are not integrated. In this sense, the Auto Malls have not risen beyond the level of shopping malls with their independently managed clusters of stores.

Dealer Chain

In recent years there has been a new move in this line: to purchase out existing small-scale dealers and form a dealer chain.

The Car Max's strategy is such an example. Car Max is a subsidiary of electric home appliance chain store, Circuit City. It entered the used car market in 1993 and established Car Max as a "used car superstore", with large-scale displays of used cars and their fair prices[17]. By 1997 it had established 6 stores, and then entered new car business by acquiring a new car dealer in Atlanta and in the same year made its stocks public. By the end of 1999 Car Max had expanded to 34 used car superstores and 20 new car dealers.

Mimicking this business format, was Autonation that took more aggressive measures to expand their business. Republic Industries (which changed its name to Autonation in April 1999) attracted the attention of the business world through its expanding used-car superstores called Autonation USA at a rapid speed throughout the United States. In 1998 it extended its activities to buying-out new car dealers. By the end of 1999, Autonation had already enlisted over 400 new car franchises throughout the United States. In the same year the sales had reached $11.7 billion. Further, Autonation had also got under its umbrella rental car companies like Alamo and National Car Rental.

The operations of Autonation aim for the following economy of scale and scope. It can command a strong position in negotiation with manufacturers through large scale stocking of rental cars. By renewing its existing rental cars with new cars every two years, it has a steady supply source of good quality used cars from its rental car operation. It also strengthens its brand image and ability to attract customers by building used car superstores and new car dealers with the same brand in close proximity. Both the new and used cars are sold at a fixed price with no haggling. Thus, by doing away with unpopular price negotiations, it attempts to establish an image of Autonation as a customer-oriented innovative shop brand. As the story goes, it manages to expand their sales share by offering various models by various manufacturers all in one place (or at one Website), irrespective of whether they are new or used cars.

However it is difficult to say that such retailer initiative is necessarily successful. Taking the

example of Autonation, although it bought out dealers, all it did is integrate them without having them carry out any changes in their management. It did not have any control over them; and in the end it faced a problem of too many dealers in its operation[18]. In reality, as of April 2000, the value of its stocks had slumped to $8 per share. Considering the fact that in the beginning of 1997 the maximum value had exceeded $40, the fall was close to one fifth. In the past, Autonation bought out dealers not with cash but with its stocks. This was possible since dealers were happy to have the stocks of ever-increasing value. However, this strategy is no longer viable since its stock value has plummeted. Actually Autonation is already in the process of restructuring its business. It announced plans to withdraw from used car superstores and to spin off its rental car business.

Table 1 shows a simple representation of the scale of business of some representative nationwide chains (dealership groups) that include Autonation and Car Max.

Table 1 Major Dealership Groups

Company	Number of Dealerships	Annual New Unit Sales
Autonation	400+	$11.7 Billion
Car Max	20	$0.4 Billion
Sonic	172	$2 .0Billion
United Auto	104	$2.4 Billion

FY1999

2.3. Impact of Internet

Although Auto Malls and nationwide dealer chains such as Autonation opened up breakthroughs in the automobile distribution, their limitations were also increasingly apparent. Facing them now is the rapid rise in a new kind of innovation based on the strategic applications of the Internet.

In the retail business of the United States, there are waves of innovative business formats utilizing electronic shopping through the Internet; the online bookstore Amazon.com is a typical case. (US Department of Commerce, 1988; 1999).[19] At the same time, we often find newspaper and popular magazine articles reporting the rapid expansion of Internet sales for automobiles.[20] But such reports may be misleading in two respects.

Firstly, to be quite precise, the business that is generally referred to as Internet sales of automobiles, does not imply direct sales online by bypassing existing dealers, but refers to the online buying service. They are mostly online shopping support sites, like Autobytel, which collects a membership fee and commission from the participating dealers and refers consumers' request for a price offer to these dealers. In other words, it does not actually "sell" automobiles, but merely "introduces" prospective customers to dealers.

Secondly, it is important to understand the nature of sales through the Internet and its share in the total sales of new cars. At present in the United States, the yearly sales of new cars are about 17 million. According to the survey by J.D. Powers[21], about 40% of the buyers of new cars in the first quarter of 1999 obtained information in some form or the other from the internet, and this ratio was up by 15 points from 25% compared to the same period in the previous year. However the percentage of people who actually used the Internet as a means to make their purchase increased only to 2.7% from 1.1% in the previous year.

Let us summarize the characteristics of these Internet shopping-support sites. At present, Autobytel and Car Point (managed by Microsoft), are the market leaders for Internet sales intermediary of new cars. Autobytel, a pioneer, set up a Website in 1995 and it is said that as early as 1996 had received 345,000 customer requests for price offer, which led to sales of $1.8 billion worth of new cars. The business figures of Car Point are not open to public, but Autobytel publishes information about its business conditions. By December 1999 Autobytel had reached a membership of 3,323 dealers and had handled about 2 million requests for price offer that year. However, it reported a loss throughout the period of 1999, and the loss summed up to 23 million dollars – a steadily increasing cumulative loss. Compared to Autobytel's total sales for 1999, which was about 40 million dollars, its advertisement and marketing expenses had increased to 23 million dollars. This implies that even for a leading company like Autobytel, if they do not expend over half of their sales value on advertising etc. it is not possible for them to maintain their brand on the Internet.

Following in ranking with the above companies, there are sites such as Autovantage, Autowave, Cars, Cars Direct, and Priceline. Most of these sites basically adopt the same intermediary sales structure as Autobytel, but some of the sites have a slightly different business format[22].

When consumers access these intermediary sales sites, they are able to obtain free information about the price and quality of new cars. Further, information providing sites, which are in collaboration with such sales intermediary sites, can also provide information about dealer invoice, rebates from the manufacturer to the dealer, and so on. With the availability of such abundant information than ever before, consumers' position in the purchasing process of a new car becomes strengthened considerably. Further, without having to go through intensive price negotiations it is possible for consumers to obtain comparatively cheaper price offers from the member dealers. From the dealers standpoint, by having buyers introduced to them by the intermediary sites they are able to economize on the expenses that was necessary until now in searching for prospective customers.

In short, the benefits that these intermediary services bring to both parties (the consumer and the dealer) by way of the Internet are a reduction of "transaction costs"[23]. In this new business format of information intermediaries through the internet, we find a strategic pattern of "modularization" of buying services at various stages of the purchase process, and within each modular unit of services a strategic pattern of seeking a "thin and wide" "horizontal dominance."

2.4. Manufacturer-led Innovations

Faced with retailer-led dealer consolidations and emerging internet sales intermediaries, the manufacturers – of their own accord – bought out dealers, made inroads into the internet; and thus attempted to control the dealers directly to integrate its distribution.

However the manufacturers' attempt at dealer integration did not necessarily succeed. Although there are only a few states that have clear stipulations prohibiting take over of dealers by manufacturers, should the dealers unite and express opposing opinion at public hearings in the statehouse investigating into the pros and cons of such take over, then in most cases permission to take over is not issued[24]. Also dealers themselves have a deep-rooted feeling of caution and distrust regarding the real motive of take over and integration by manufacturers. Nonetheless, GM had once announced in 1999 that it would buy-out 10% of all GM car dealers, to which there was great resistance from the dealers, thereby compelling GM to withdraw its decision within a few weeks[25].

Regarding internet sales intermediaries, GM, Ford and other manufacturers too of their own accord put up sites to act as an intermediary like Autobytel[26]. Moreover, GM established an in-house company called e-GM focusing on electronic commerce. By employing and upgrading Internet technology in every stage of automotive life cycle from parts transactions for new car production to after-sale service, GM attempts to integrate its business activities and to make them efficient.

As an example of such integration through Internet under the leadership of manufacturers, we will make a brief survey of e-GM [27]. One of the major aims of e-GM is to use the Internet in lieu of conventional advertisement or a catalogue. When GM actually used Web camera to do a live broadcast at the January 2000 Detroit Motor Show, though the number of visitors to the actual site did not exceed a million, visitors to the internet exceeded 2.8 million with a lengthy average visitation time of 37 minutes. The number of visitors to this site too had increased by 80% over the average monthly figure. This showed a tremendous publicity effect of Internet.

Another characteristic of e-GM is the strengthening of cooperation through networking. The first is to aim to increase Internet traffic as such by attracting customers through cooperation with AOL and Net Zero. Secondly, by cooperating with information providing sites like Kelly Blue Book and Edmunds, they manage to draw in customers who have started the search process to seek information online from these sites onto their own sites. The traffic from here is then transferred into the site called "Buy Power" created by e-GM, which then connects it to the electronic sales of GM cars and rouses consumers' attention to offers of related products, after sales service and other trading items.

Further, e-GM also created the site called "Supply Power". This is a system that supports real time information exchange in each stage of supply chains: design, development, production, logistics, and so on. This is also another way to strengthen relationships with collaborators and customers. As

an even further open mechanism, GM, Ford, and Daimler-Chrysler have reached an agreement to manage a parts transaction site called "Covisint". This site provides the automobile component catalogue online, functions as exchanges in which bids and offers are posted and auctions are held. In other words, the innovation that e-GM is planning is not only the use of internet at the level of simple sales, but a much wider plan to digitalize the entire supply chain in an integrated form. These attempts of e-GM can be considered as an example of a vertical enclosure strategic pattern.

To sum up, various moves in the current US automobile distribution can be classified into the following three categories:

- Retailer-led business reforms counting of the synergy from "combinatorial optimization" of dealers
- Internet sales intermediaries pursuing a "wide but thin" "horizontal dominance" business model based on "modularization of sales process"
- Manufacturer-led "vertical enclosure of customers and suppliers" both offline and online

As of June 2000, the conditions in the US automobile distribution are still fluid, and it is difficult to identify which strategic pattern will take the lead eventually. Actually, the changes that have taken place in the past two years are often analogized to the changes that took place in the 50 years before 1995.

3. JAPAN: YEAR 2000

3.1. Japanese New Car Dealers

Today, Japanese new car franchise dealers have a prefecture-wise or a half-prefecture-wise "territory" of their sales footholds. As seen in Toyota's five-channel system, there are a number of manufacturers with multiple channel systems that supply the same or very similar models (so-called sister models). Thus, competition is intense even among the sales channels of the same manufacturer.

Japanese dealers have several to dozens of sales outlets per dealer, and in this way differ greatly from typical dealers in the United States. In the United States, most of the dealers have one store per dealer. GM alone has 7,700 dealers, whereas in Japan even a major company like Toyota has no more than 300 dealers. However, in the case of Toyota, these 300 dealers have 5,000 sales outlets of new car sales.

The relationship between dealers and manufacturers goes beyond mere sales relationship and is far closer, often taking the form of management training assistance, preferential treatment in payments, and/or dispatch of executives to dealers. Further, in the case of Nissan and some other manufacturers, the manufacturers own as well as control almost half of their dealers. Thus, the following hierarchy came to be established in Japan for automobiles: Manufacturer --> Dealer (several hundred) --> Sales outlets (several thousand). This is just like something close to an internal organization. Moreover, little has changed in this hierarchy and combination of players. Thus, this is a fruitful ground for process optimization, as we will see later in this section[28].

Figure 3 reports the result of the survey conducted by one of the authors on the manufacturer-dealer ownership relation over the period 1993-95, based on public financial figures. All the dealers in the manufacturer's sales channels have been classified into the following: "50% + (manufacturers shareholding exceeding 50%)", "up to 50% (the same below 50%)", "no detailed data", and "no data available". Looking at this it is quite clear that there is a great deal of capital investment by manufacturers in new car dealers, and it is also possible to identify each manufacturer's traits. For example, Toyota, when compared to other manufacturers has an overwhelmingly low number of dealers as subsidiaries. In contrast to this, Mazda and Nissan have a high percentage, more than half, of subsidiary dealers. Honda and Mitsubishi also show similar traits.

Fig. 3 Manufacturers' Shareholding of Dealers

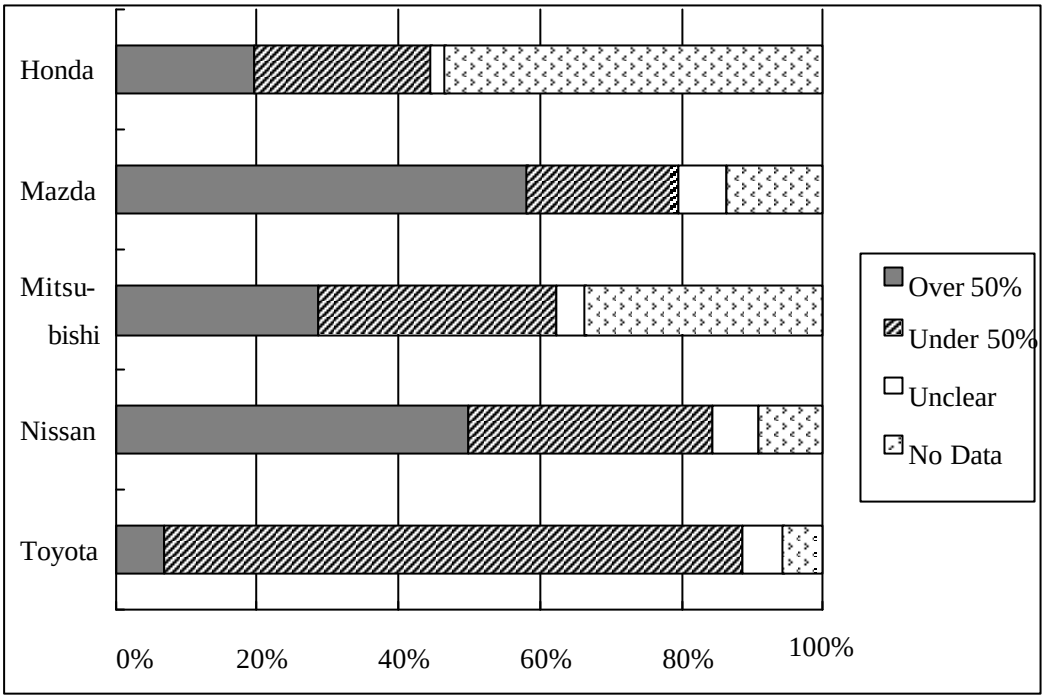


Table 2 lists the scale of dealers of all the domestic car manufacturers within Japan. According to the data obtained, Japanese new car dealers have opened about 10 stores per dealer and employ around 200 people.

Table 2 Number of Dealerships in Japan: FY1999

Make	Dealers	Dealerships	Head Count
Toyota	309	5,011	121,964
Nissan	196	3,039	67,590
Mitsubishi	294	1,477	39,738
Mazda	127	1,138	20,862
Honda	176	864	15,800
Isuzu	75	480	15,056
Subaru	62	553	12,283
Daihatsu	71	693	14,650
Suzuki	163	1,381	12,472
Total	1,473	14,636	320,415

Source : Jidousya Nenkan 2000, Nikkan Jidousya Shinbunsya, 1999.

* Not Including Honda Primo and Mazda Autozam.

3.2. A High-Cost Distribution System

Since the era of high economic growth, the sale of automobiles to individual customers as well as to corporate clients has been mainly through door-to-door sales. It was often argued that the number of cars sold is determined by the number of sales persons as well as the number of sales outlets, and hence most of the efforts had been put into quantitative expansion[29]. Alternately, the scheme was to increase production and sales by increasing inputs of labor as well as land and building. As long as the marginal revenue from an additional labor input exceeded its marginal cost, increasing the number of salesmen made sense. Above all, during the period of high economic growth where the labor cost had been relatively lower as compared to the cost of other production factors, this manner of doing business was rational for the Japanese economy.

However, along with the changing times, two problems began to show up in the labor-intensive door-to-door sales by sales personnel. First, as labor costs rose in Japan, this sales technique became increasingly costly. Secondly, door-to-door sales technique itself was gradually unsuitable to the life styles and attitudes of the Japanese consumers[30]. The percentage of successful closure of sales activities started from door-to-door sales is still about 60% just as before[31], but nowadays since most people are away from home during the hours coinciding with the sales person's visits, this has led to a steady fall in the efficiency of the door-to-door sales[32].

While the average monthly car sales is about 4-4.5 cars per salesperson in Japan, the corresponding sales figure per salesperson is about 7-8 cars in the United States[33]. In addition, for those dealers that depend on receiving orders through internet-sales intermediaries like Autobytel, it is not unusual to find figures as high as 30[34].

Table 3 compares the business conditions of dealers between the United States and Japan. Japanese dealers that manage several stores have a larger turnover and higher revenues, but since the percentage of the business turnover cost is about 20% of sales as compared to 11% in the United States, most dealers do not show a positive profit. Table 4 shows the percentage of the stores showing loss based on the models they sell. It is quite clear from the table that one out of three dealers is in deficit.

Table 3 Average Dealer's Financial Highlights: FY1998[35]

	USA	Japan
Revenue (Ratio to Rev.)	¥2,608 Million 100.0%	¥7,916 Million 100.0%
Gross Profit (Ratio to Rev.)	¥336 Million 12.9%	¥1,165 Million 20.3%
Operating Expenses (Ratio to Rev.)	¥292 Million 11.2%	¥1,603 Million 20.3%
Income Before Taxes (Ratio to Rev.)	¥44 Million 1.7%	¥2 Million 0.0%

Source: Jidousya Hanbai, Vol. 37, No.10, p. 13, Japan Automobile Dealers Association, 1999. NADA (http://www.nada.org).

Exchange rate: 1US$ = 110 Yen. Revenue and gross profit of Japan's dealers includes commission incomes

Table 4 Ratio of Deficit Dealers in Japan[36]

(%)

	FY 94	FY 95	FY 96	FY 97	FY 98
Heavy Car Dealers	22.3	18.2	22.1	53.2	69.0
Compact Car Dealers	32.1	22.7	17.6	42.9	40.8
Sub-Compact Car Dealers	22.3	20.5	13.3	29.0	31.9
Mini Car Dealers	32.4	23.1	2.7	22.4	18.9
Import Car Dealers	49.3	23.4	13.9	35.5	42.5
Total	**28.6**	**21.4**	**14.8**	**36.5**	**38.2**

Source: Jidousya Hanbai, Vol. 37, No.10, p. 13, Japan Automobile Dealers Association, 1999.

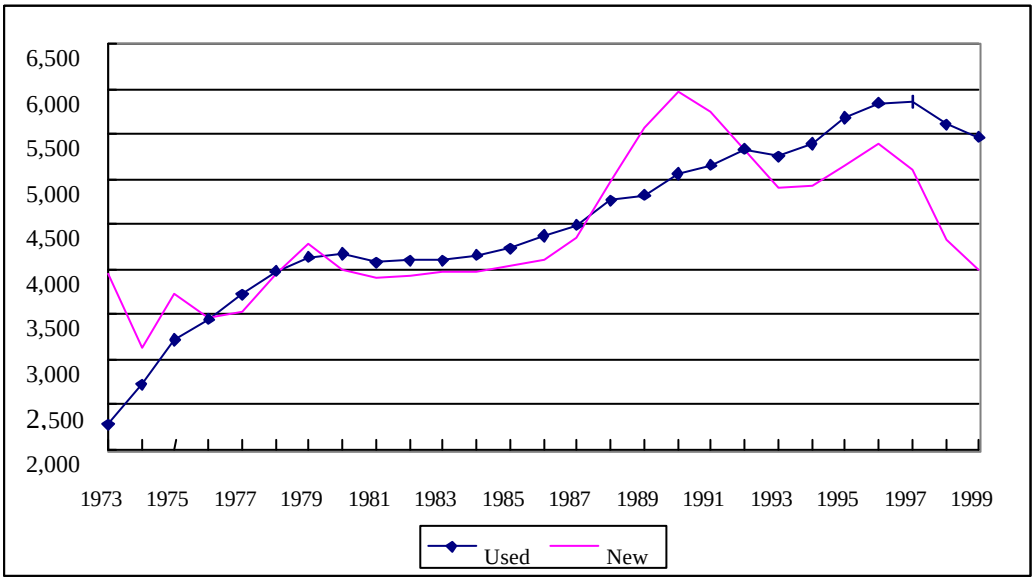
The main reason for high sales cost can be attributed to the stance taken by the manufacturers to put priority on optimization in production process, even at the sacrifice of optimization at the level of retail sales. From the standpoint of the consumers, it is but natural to do comparative buying from the various models of multiple dealers, and if retailers wish to respond to this need they would have a whole collection of models and would try to assist buyers in selecting what they need. The reason why retailers such as department stores, supermarkets and discount stores could attract a large number of customers is that instead of hanging on to any particular manufacturer, they carried all kinds of goods that would sell. As for goods that did not sell, it wasn't necessary to push the sales since they would simply stop additional orders and liquidate the existing stocks.

From the standpoint of production managers of manufacturers, however, it is sometimes difficult for them to accept the fact that a product would just be phased out simply because it had lost

its popularity with the customers. They often consider it as a problem of sales promotion rather than intrinsic quality of the product. Moreover, for automobile manufacturers which have a high percentage of fixed costs such as development costs, equipment depreciation costs, and personnel expenditure, the incentive for continuous and stable production is very strong, since automotive production process exhibits maximum efficiency under such stability. There is a tendency to think that the production process should not be disturbed overly by a flip-flop in consumer demand. As a result, manufacturers tend to push dealers to sell slow-moving models to maintain stable production, and are willing to share the resulting high distribution costs in the form of various rebates to dealers. This is why costly sales techniques such as door-to-door visits and prolonged business hours of salespersons came to be justified as necessary to induce customers towards buying the cars of the particular manufacturer. Close human relationship between manufacturers and dealers strengthened this tendency.

However, new car sales slumped in Japan in the 1990s, and in 1999 the sales figure of models other than small vehicles failed to reach 4 million, which was a reversal to the level 13 years ago. A high cost distribution system has its rationale so long as it contributes to improving the performance of the whole system including development, production as well as sales. However, when the market is stagnant or is shrinking, the high cost of the distribution system becomes a burden, rather than an asset, of the system as a whole.

Fig. 5 Number of Unit Sales of New and Used Cars in Japan (Not Including Mini Cars)[37]



Source: Nissan Motors, Jidousya Sangyo Handbook 1985, Kinokuniya Shoten, 1985. Jidousya Nenkan 2000, Nikkan Jidousya Shinbunsya, 1999.

3.3. Internet, The Japanese Style

Unlike the United States, there was neither horizontal dealer consolidation by new retail-market entrants, nor were there any conspicuous consolidating move from existing dealers in Japan[38]. The manufacturer-dealer relationship was far deeper and car manufacturers and their dealers are more or less "integrated" to pursue "process optimization" of sales process.

However, the "wide and thin" "horizontal dominance" business model using the Internet was imported from the United States and made inroads into Japan. Both Autobytel and CarPoint began their business in Japan in the autumn of 1999.

Autobytel set up a joint venture in Japan with Intec, Recruit and Itochu Trading, and opened an Internet site in Japan in November 1999. By the end of the year, dealer membership had crossed 200. Also, the number of consumer requests for price offer reached 110,000 within five months from its opening and by March 2000 the rate of successful closure of sales activities were 9.1%.

Both Microsoft and Soft Bank played a central role in establishing Car Point in Japan, and by November 1999 it had started an intermediary service. By March 2000, dealer membership had reached 800. According to its public reports, by May 2000, the number of consumers' requests for price offer were around 5,000, with the rate of successful closure at 15-25%[39]. CarPoint has put efforts in getting comprehensive contracts with manufacturers, and has received favorable responses from Nissan, Mitsubishi, Mazda, Fuji Heavy Industries, Isuzu etc.

One can find the name of various manufacturers in the dealer affiliates of both CarPoint and Autobytel, with the conspicuous exception of Toyota. Toyota has put up its own independent Website called Gazoo, which is mostly used by the Toyota dealers.

Gazoo, which was started by Toyota in 1998, was initially a service where the dealers provide information about new cars to their customers at the terminals of Toyota's own network placed at their end. The terminals were provided by Toyota for its dealers' exclusive use. But later on it also put up an Internet Website along with increasing their terminals in convenience stores and the like. Presently it is possible via Gazoo, to search the database for information about new cars at Toyota and used cars held by its dealers, as well as to request price offer from participating dealers and to make business reservations with the dealers. As of January 2000, Gazoo's membership had reached to about half a million.

Toyota's view is to develop Gazoo into an integrated site for electronic commerce with a wide range of goods and services, instead of limiting itself only to the field of automobiles. For this, it has already begun dealing in clothes, foodstuffs and such items. Toyota has announced that in 2001 Gazoo will be split up to form an autonomous division and go public if conditions are favorable. Instead of depending on third parties like Autobytel, this stance of Toyota to deal with not only automobiles but also a whole range of goods all by itself, is greatly different from that of other automobile manufacturers. Gazoo's activities are most certainly a manifestation of a

vertical-enclosure strategic pattern.

So far we took an extensive look at the process-optimization strategic pattern in the Japanese automobile distribution, which is rooted in the production logic of the manufacturers, the establishment of manufacturer-consolidated distribution structure, and manufacturer-led internet service as an example of a vertical-enclosure strategic pattern based on integrated distribution services. Nevertheless, these existing strategic patterns increase costs and put pressure on profits. Further, the Internet intermediaries with their wide but thin horizontal dominance strategic pattern have advanced into Japan from the United States. With this, there is a rise in the uncertainty that great changes will occur in the future. In the next section we deal in greater detail about the differences in business environment between the United States and Japan, and by analyzing the corresponding strategic patterns, offer our views about the future of the distribution system in these two countries.

4. FUTURE DIRECTION: DIFFERENCES IN STRATEGIC PATTERNS BETWEEN THE UNITED STATES AND JAPAN

4.1. Quality and Quantity of Available Information

Compared to Japanese consumers, US consumers are able to obtain information about the price of new cars at greater detail. For instance, if one visits the automobile information providing sites like Edmunds and Kelly Blue Book, it not only includes the manufacturer's suggested retail price of almost all the models sold in the United States, it is also possible to obtain for free various price related information such as the dealer invoice price, rebates and incentives offered by manufacturers to dealers, as well as rebates offered by manufacturers to consumers. If one can obtain all this information, the dealers margin becomes clear, and customers can at a glance figure out the profit margin that the dealer puts on the cost of the car, which in turn increases their negotiating powers.

In the case of Japan, consumers cannot obtain such information systematically from Japanese commercial sites. Even if one uses intermediary sites like Autobytel, the price offer that comes in initially from the dealer is not the actual transaction price. One has to conduct price negotiation at that stage in order to get the final price offer. There are consumers who report their business negotiation process with dealers and the buying price on bulletin boards on the Web, but such information is sporadic and not systematic, and more than that, even if they do show the actual transaction price, they are not of the kind that convey a clear information about the dealer's margin.

Further, in the United States, there is a lot more open information than just those that are price related. For example, the Insurance Institute for Highway Safety, which is one of the organizations formed by the US indemnity insurance companies, puts forth statistical data about the model-wise death rates due to traffic accidents. In addition, it also openly displays the evaluation of the collision test data of all the models sold at present.

In Japan the trend is towards publicizing similar data related to safety, but the quality and quantity of the information are overwhelmingly inferior to the US counterpart[40]. The results of collision tests made public are for a small number of models only, and the data about the number of death is very scarce. In future, Japanese customers can expect an increase in information available for reference, but considering the close relationship between the manufacturers and dealers, and underdevelopment of third-party, or neutral information sites, to reach a level as that of the US would take quite sometime. In other words, Japanese customers have access to much inferior quality and quantity of information about automobiles, as compared to their US counterparts.

4.2. Structural Difference

In the United States, most of the sales of new cars are inventory sales. US customers have a habit of

inspecting even new cars onsite before buying. This reflects a long-standing belief of the customers that it is natural for new cars to have uneven quality. This act of confirmation is called "kick tyre" where the standard practice is that the customer selects a prospective car from the dealers stock, tries it out in various ways like kicking the tyre, opening and shutting the door, starting the engine and only then he/she signs the contract and drives off home with the new car. Thus if the customers cannot make the decision to buy unless they see the actual car, then one can suppose that inventory sales seem the easiest and appropriate strategy.

On the other hand, Japanese customers rely on catalogues and displayed cars when they decide to buy and sign the contract. They set their eyes on the car for the first time on the day of the delivery and unless there is some major problem, accept it without any objection. Japanese customers believe that there is no inconsistency in the quality of a new car. Thus it is possible to sell order-made cars in Japan; in reality it is said that about 50% of the cars sold are produced after orders are received from customers.

Where inventory sales are mainstream as in the United States, the system enabling cross-searching dealer inventories for comparison will gain superiority, and the system of ordering cars from a distant place only after receiving the order will cause confusion. In contrast, when dealers receive orders from customers relying on catalogues and displayed cars, then the prospect of online ordering is even brighter than the United States.

4.3. Manufacturer-led Consolidation

As we have already seen, in the United States there are a great many dealers who are also very independent. Dealer integration is also visible but the trend now is that new entrants are taking the lead. Manufacturer-led dealer consolidation has legal and procedural problems and has not succeeded so far.

In contrast, in Japan even though there are a number of sales outlets for new car sales, nonetheless the number of dealers is much smaller than the US counterparts. Moreover, the manufacturer-dealer relationship is far more close in Japan than in the United States, and thus it is easier for the manufacturers in Japan to permeate their sales policies to the dealers.

Therefore, in the United States it is very difficult for the manufacturers and dealers as one body to take up the "process optimization" oriented strategy. New entrants like Autonation buy out dealers and carry out strategies oriented towards "combinatorial optimization." They may further strengthen their business design after integrating acquired dealerships and in this way carry out "process optimization" through retailer consolidation, but this remains to be seen.

In the case of Japan, since dealers are already in a close relationship with manufacturers, it is thus easier for them to follow the lines of the "process optimization" strategic pattern through refinement of their current practices under manufacturer leadership. This in turn implies that, if

newcomers try to buy out dealers and seek a business model found in other retail markets of large-scale purchase from multiple manufacturers and large-scale sales with price discounts, or if internet intermediate sales sites attempt an all-inclusive coverage of dealers - in other words if they try out a "combinatorial optimization" oriented strategy based on new process designs – there is a high possibility that such an attempt would be hindered.

4.4. Consumer Attitude towards Dealers

To put it bluntly, many of the prospective customers in the United States find it a *burden* to buy new cars at the dealers, while such is not the case in Japan.

According to a 1999 survey[41] conducted by the Japan Car Distribution Program of which the authors are members, Japanese customers who answered that they found the experience of buying a car cumbersome did not exceed 6.2%, and this figure has been stable in the past few years. This figure is lesser than that shown by a similar study in the United Kingdom. Though there is no corresponding survey in the United States, we expect that the figure would be much higher there.

In the United States, there are many customers who find negotiating with the dealer salespersons an unpleasant task, as a result of which the satisfaction of buying automobiles is low. This seems one of the main reasons for the spread of the use of Internet in automobile purchases. Thus if most of the Japanese customers are rather satisfied with their experience of buying cars through dealers, then one can suppose that US type business models like Autobytel would encounter a serious problem in Japan.

According to a survey conducted by the Japan Car Distribution Program in March 2000 which targeted internet users who bought automobiles, there were 6.1% who answered that they did not find the automobile buying experience 'uncomfortable', showing that Japanese internet users are no different from the general public in their evaluation of automobile purchase experience. However the survey shows an important difference between the two sets of automobile buyers, which may be quite important for the future of automobile distribution.

Firstly, Internet users as compared to regular buyers very frequently gather a profound amount of information. The major source of information is still the dealers, but apart from that, over 45% of them, *i.e.* more that double the number of regular buyers (at 19%) referred to automobile magazines. Likewise, the response rate to advertisements on television, radio etc. was nearly 46%, *i.e.* twice that of regular buyers. To the question as to which method of information gathering was mostly, more than 50% of the regular buyers mentioned that they managed with the information they got by natural means whereas only 17% of the Internet gave a similar answer. Whereas 19% of the regular buyers answered that they actually test drove the cars, 45% of the Internet users answered that they actually did so.

Secondly, the Internet users actively participate in price negotiations to a greater extent than

regular buyers. Internet users obtain information about the price of other dealers and thus prolong negotiations about discount as compared to general buyers. Less than 17% of the Internet users entered into negotiations without prior preparation as against 35% of regular buyers. As a result of this, it is the Internet users who are able to obtain large discounts.

Thirdly, the Internet users have a firm hold on the leadership in automobile buying. The response rate for the query regarding who concluded the sales, 52% of the Internet users answered that they did it themselves, as against 45% of the regular users. Especially whereas 9% of the general users answered that they had hardly participated in the decision, not a single Internet user came up with such a response.

In this way, one gets the impression that the active manner in which internet users who actively gather information and try to buy cars at their own initiative with aggressive price negotiations, is in contrast to the passive buying manner of the general customers who tend to be quite satisfied with relying on the existing dealers. Although this statement may be an oversimplification, there is no doubt that this is indeed the general trend.

Needless to say there are differences in the attitude in the business dealings of US and Japanese customers, but even within Japan, it is possible to see differences in attitude and activities between the general buyers and buyers with access to Internet. One can imagine that this difference will influence the automobile distribution trends in the future.

4.5. Consumers' Psychological Involvement in Automobiles

It is commonly recognized that there is a difference in attitude of US and Japanese consumers towards automobile as a product. As is often said, most people in the United States do not mind if the car has a few dents and scratches and believe that the bumper is meant for just what it is named as – to bump into.

In contrast to this, the Japanese consumers tend to preserve their cars with great care *sans* dents and scratches. The self-service car wash centers bustle with car owners during the weekends and there are many users who send a car for repair at the slightest scratch or dent.

When it comes to it, in the United States, the car is already a daily-use commodity with the principal objective towards its functions. In contrast, in Japan, there is a strong tendency to portray one's status or individuality through one's own car, so much so that at times some people are so enthusiastic as to even personify it. Of course, this is a relative comparison and does not mean that all the consumers act this way.

We can take this difference to imply the difference in psychological "involvement" that the consumer feels towards the automobile as a product[42]. In other words, the level of involvement that consumers in the United States perceive towards their cars is relatively lower than compared to that in Japan.

The decision making regarding the purchase of products with less consumer involvement tend to require less information processing as compared to a product with higher involvement. Thus buyers in the United States attach less importance to the social worth or the significance of the car, but base their decisions of buying on the price, convenience and functions of the car.

On the contrary, the buying decision for high involvement goods is greatly influenced by the significance of the brand. Thus, the Japanese manufacturers employ the image strategy or brand name strategy to directly communicate with the consumers with a high level of psychological involvement in cars. This is proved to be effective in rousing the demand.

4.6. Strategic Patterns

Table 3 The Comparison of the US and Japanese Car Distribution

Item	United States	Japan
Quality and quantity of market information	Detailed and abundant	Limited
Sales structure	Inventory-driven sales	Order-driven sales
Dealer consolidation by manufacturers	Manufacturer-dealer corporation is difficult	Manufacturer-dealer corporation is easy
Consumers' evaluation of dealer services	Consumers are Unsatisfied	Consumers are satisfied But Internet users have aggressive attitudes with price bargaining.
Consumers' attitude towards cars	-Low psychological involvement -Car as an everyday good	-High psychological involvement -Car with social values and inherent significance

As we have seen so far, there are great differences in the market environment for automobile distribution between the United States and Japan. In the United States, the buyers are rather realistic about cars, consider interactions with dealers an unpleasant task and hence go ahead to obtain as much detailed information as possible regarding the price and quality through the Internet. However just before making the purchase, they need to go to the dealers to actually view the car for themselves.

In contrast, Japanese consumers attach a sense of social status and significance to their cars and there is a high psychological involvement. They do not feel any stress in dealing with the dealers directly. They order their car either by looking at a catalogue or through a display, and when the car is delivered to them, they accept it without any fuss. There is a high degree of trust for the new car.

Taking all these premises into consideration, we shall study strategic patterns that the players in the automobile distribution may follow and examine the probability of "survival" of such strategic pattern in the near future both in Japan and the United States.

The first strategic pattern corresponds to: "process optimization + integral architecture + vertical enclosure" and is a "manufacturer-led dealer consolidation" strategy. In this strategy, the manufacturers aim to accomplish competitive superiority through "process optimization" where they consolidate and integrate dealers into their supply chain, streamline the sales process of dealers, and carry out production and sales in response to the consumers' orders. In this case, information technology is used as a tool for smooth information processing mainly within the supply chain. For example, one can consider the following: once the dealers receive specific orders via the Web informing them about detailed specifications, they can transfer them into the manufacturer's order entry system which would then be incorporated into the lean production system.

The second strategic pattern, "retailer-led dealer consolidation," is one of the patterns of the "combinatorial optimization + modular architecture + horizontal dominance". In this type of strategy, national chains like Autonation bring into their subsidiaries various dealers, expand their scale and try to horizontally develop related business, such as new and used car rentals as well as devote themselves to increasing their sales. In this case, information technology is used with the following objectives: (1) to integrate the operations of numerous independent dealers, (2) to enable search of information about inventory, (3) to increase the synergy by promoting smooth joint information exchange between rental and used cars, and (4) to accept on a 24-hour basis requests for price offer from the internet users. Once the operation system is established, it may also be possible to use information technology to carry out "process optimization" of sales activities.

The third is the strategic pattern of the information-intermediaries' initiative, which is a kind of strategic pattern based on "combinatorial optimization + modular architecture + horizontal dominance". Here information intermediaries like Autobytel and CarPoint accomplish a "wide and thin" strategy in "modularized" sales activities by matching numerous sellers (dealers and manufacturers) and buyers (consumers) through the internet in a large scale and develop their business by providing information regarding automobile sales to the consumers. They attempt to achieve their dominance in the industry by acting as business intermediaries. In this case, information technology is used as a means to connect numerous buyers and sellers with diverse traits and strategies through a standardized interface.

4.7. Differences in "Survival Probability" of the Strategic Patterns: US and Japanese Markets

In the previous section, we argued that there are at least three major types of strategic patterns in the US-Japan distribution system. In this section, we consider how these strategic patterns may be adapted to the respective environments in the US and Japan and examine their "survival probability" in the respective market. We pay special attention to the differences that arise in the United States and Japan.

The United States

Firstly, even though the "manufacturer-led dealer consolidation" as discussed in the previous section is a possibility, nonetheless the chance of its success is rather slim because of various legal restrictions at the state level. And even if a manufacturer succeeds in its effort towards dealer consolidation temporarily, there would be problems such as lack of accumulation of know-how on the manufacturers' side regarding retail management and lack of good consumer response because of a very narrow collection of products through a single manufacturer leadership. Also if one takes into consideration that the car is regarded simply as nothing more than a daily in the United States, the prospect of eventual success is not large for vertical enclosure strategy based on manufacturer-led dealer consolidation at this moment, except for a few luxury brands and specialty cars.

Secondly, regarding the "retailer-led dealer consolidation", this is indeed a possibility as long as there is financial backing to buy out independent dealers. However, it is necessary to solve the issue of how to accomplish operation integration at a countrywide level while maintaining operations at different regional sites with disparate nature. Further, even if one wants to have a wide collection of products across manufacturers at the retail stage, there still remains the issue of keeping up the cooperation with manufacturers competing one another and their supply chains. Without such cooperation, it would easily result in the risk of supply and demand mismatch such as large stocks of inventory and missed sales.

Thirdly, regarding the information intermediaries' initiative, its success or failure greatly depends on the trust and support that consumers have about the particular information provider. In the United States, not only do the consumers have access to a large amount of public information, but also there is a high benefit from the matching between dealers and consumers since dealers are so dispersed both in the real space and the cyber one. Therefore if the information providers are able to organize a sizable buying power of consumers by actively supplying neutral information to the consumers and accumulating their attention and trust, then the information-provider-led reform of automobile distribution would get a momentum of rapid growth. However, the profitability of these information intermediaries depends on commission from new car dealers which is currently rather low because of the small scale of the automobile information market[43]. In order for them to get a momentum of real growth it is necessary that they extend their business scope to every possible service concerning automobiles, such as insurance, guarantee, loans, maintenance, road service and so on, but this would put them in intense competition with internet insurance, finance and other service companies.

Further, in the case of the information-provider initiative, various problems may surface if operations are not integrated at the retailer level. Even if dealer-consumer matching is achieved efficiently (that is, the "combinatorial optimization" is achieved), buyers may face a untrustable dealer as before at the final transaction stage or at the point of delivery of the car. If this is the case, they are likely to be disheartened, and there is no doubt that this would be reflected in their next

purchase.

To sum up, it is not likely that there is a clear winner among these three strategic patterns in the United States automobile in the near future. Consequently, instead of convergence, all three patterns are expected to co-exist and continue to compete with each other.

Japan

In Japan, the success probability of the second strategic pattern, namely, "retailer-led dealer consolidation", is very slim if one takes into account that existing dealer chains are under the firm control of manufacturers. Of course one can think of options where some retailers within or outside of automobile distribution buy out dealer networks or form completely new dealer networks to obtain buying powers with respect to manufacturers. Consequently, to realize such a scheme, one need a considerable lead time, for example, to accumulate experience in used car and car rental related business, to build buying and selling capabilities, and to carry out intensive negotiations with manufacturers etc. At present, in the automobile business world in Japan, there are no retailers that have build up such kind of experience and capability that is needed to stand up against the automobile manufacturers.

The third strategic pattern, the information-intermediaries' initiative, also has a similar problem to the one of "retailer-led dealer consolidation". In contrast with the United States, it is much more difficult for the information providers to carry out a horizontal, all-inclusive membership of dealers. Also, at present in Japan, information regarding the price and quality of new cars is not made public to the extent that it is in the United States. Therefore, even if information providers supply information to the consumers, it holds comparatively less appeal to the consumers.

Nevertheless, as seen from the survey reported in Section 3, Japanese Internet users have a positive manner of seeking information and then carrying out negotiations based on this information. The people in their late 40s to early 60s who comprised the majority of the buyers bracket in the past decade and were satisfied with existing dealer services, are gradually being displaced by internet users in their 20s to early 40s who are price sensitive and keen on getting information. This latter group will make up the mainstream buyers in the next decade. Keeping this in mind, it is quite likely that those manufacturers with lesser known brands, or those whose product lines fail to keep up with changing consumer tastes, are likely to lose out as they fail to attract and keep a sufficient number of prospective buyers by means of "vertical enclosure" through their dealer chains and their very own web sites. Consequently, it is likely that manufacturers failing to attract consumers through their "vertical enclosure" strategy would come up with a compromise proposal of entrusting the "information mediation" stage to neutral third parties such as Autobytel and Car Point[44]. If there are a sufficient number of manufactures taking such moves, the information intermediaries' initiative has a very good chance of success.

Furthermore, it is comparatively easier for Japanese customers to get accustomed to online sales

because of their high level of trust regarding the quality of new cars. Thus, in spite of the strong manufacturer-dealer relationship, if information intermediaries who are independent from manufacturers and dealers are able to offer a choice of wide variety of various manufacturers' models with neutral information to buyers, and at the same time to serve as an agent of manufacturers to receive orders and queries from consumers, they are likely to get into a stable business relationship with manufacturers and thus obtain the necessary finance to grow. However, as mentioned earlier, there still remains the problem of the inadequate scale of intermediary business in the new car segment, resulting in low profitability. Thus, the information intermediaries' initiative is not likely to overtake the mainstream of the industry, though it has a relatively good chance in the market periphery.

Out of the three strategic patterns the one that is most likely to be a winner in Japan is the "manufacturer-led consolidation". Since the Japanese customers' level of satisfaction with existing dealers is relatively high, if there is reinforcement of communication and information supply through the Web and at the stores by applying Information Technology, there is the possibility of further crowding-in of customers into the manufacturers' vertically enclosed "community" of users. Moreover, since the Japanese consumers' psychological involvement in automobiles is relatively high, the manufacturer-led consolidation and vertical enclosure are likely succeed if the manufacturer has highly-regarded brand products which can overwhelm other manufacturers'.

There are, however, a few reservations. First, the earlier reservation on such strategy expressed in the discussion of the US market still remains as to what extent would the manufacturer-led sites or the manufacturer-organized dealers attract customers and satisfy them. Above all, if one considers that the highly satisfied and rather passive buyers are gradually phased out from mainstream buyers and that more aggressive and active internet-using buyers increase their importance, there is the possibility that the manufacturer-led vertical enclosure strategy may come to a standstill.

As for the psychological factor, it is something that only exists inside the mind of consumers. As the consumers get on in the years, the nature of this "intangible" asset changes. For example, even if a certain brand appeals to the youth of 20s at present, in ten to twenty years time when they reach their 30s or 40s, their image of the earlier youthful brand is bound to change.

Further, when manufacturer-led retailer sites like Gazoo develop to enclose consumers vertically, and eventually distance themselves from the manufacturer's decision making process, it is quite possible that they would consider dealing with new cars not only from their parent company but also others to enable the retailer sites to be attractive and to grow. In other words, it is quite likely that the following dilemmas would arise: On the one hand, if the retailer sites continue manufacturer-led vertical enclosure strategy, then their consumer appeal and thus their growth are sacrificed. On the other hand, if the retailer sites adopt the strategy to widen the product lines they carry, then the strategic dominance of the parent manufacturer is compromised.

To sum up, the strategic pattern of manufacturer-led dealer consolidation coupled with the

vertical enclosure strategy is likely to succeed in commanding the mainstream of the market, which is reinforced by effective adaptation of information technology by manufacturers. Nevertheless, since the above also involves a heavy burden to the manufacturer with the continued high costs of distribution, there is a high possibility that only manufacturers with good brand images and good financial and managerial resources can afford such a strategy. Furthermore, continuation of the strategic pattern of "manufacturer-led dealer consolidation" and "vertical enclosure" by itself prevent the manufacturer from infiltrating the realm of Internet users. If this is the case, the medium or lower rank manufacturers who cannot afford such a high-cost strategic pattern, may as a compromise form alliances with information intermediaries to cut the high cost. This in turn makes it more probable for information intermediaries' initiative to be at least partially successful.

4.8. Concluding Remarks: Coevolution of Various Strategic Patterns

In concluding our discussion, it is necessary to make a remark on the "process optimization" strategic pattern. We have argued that this strategic pattern has a high "survival probability" in Japan and that it is expected to remain the major strategic pattern in the Japanese automobile distribution. Reflecting on the plight of the Japanese economy in the 1990s, there has been a great deal of criticism about "process optimization" which argue about the failure to adjust to the progress of information technology. However, the criticism is misplaced since it accuses the earlier, inflexible practices in the old interpretation of "process optimization". On the contrary, the new "process optimization" in utilizing information technology has become all the more necessary now.

No doubt, the use of information technology in carrying out combinatorial optimization creating new business designs and formats is an effective strategy to achieve competitive superiority in the early stage of industry development. However, once the dominant design is affirmed, the efficacy of information technology would be even higher if employed for process optimization and integration. But of course, in this era of intense changes, dominant design would have a shorter life span. However as we have seen earlier, the automobile industry involves numerous and complicated physical elements, and differs substantially from sheer digital businesses. It is here that the efforts of "process optimization" will be just as useful. Whereas the cost of producing additional copy of digital goods is zero or close to zero, the production cost of additional car is substantial, and is greatly influenced by past experiences. Further, it is impossible to completely modularize the complex system of automobile production and distribution, which involve numerous constituents. In this way, with respect to the automobile industry, the digital revolution is not a one-way street from "process optimization" to "combinatorial optimization".

As has been made clear so far, the differences in strategic patterns in the automobile distribution between the United States and Japan came up because of the differences in the environment in automobile distribution. Thus, no strategic pattern would be likely to have complete dominance, and

the respective patterns would exist with their merits and demerits. Consequently, rather than thinking that the future of automobile distribution in the United States and Japan would be a convergence of strategic patterns, it is better to consider that diverse strategic patterns would coexist and evolve side by side.

In the world of automobile distribution an era that defies prediction still continues. It is now quite clear that the conventional way of first specifying "combination of optimal strategies" and then finding the best means to achieve it will be insufficient. In fact, what we need is to constantly keep in mind the merits and demerits of the chosen strategic pattern, especially whether it conforms to the present environment, and then when there is a change in the environment to be flexible enough to come up with an alternate policy and carry it out. When the changes are difficult to predict, then "survival possibility" would become more important than "optimization". In the face of rapid changes in the environment as seen in the automobile industry, when many firms collapse or are absorbed by others, it is the ones that ultimately live through that become the winners.

NOTES

1. Nishimura, K. G., "Seihin Sabetsuka: Tayona Kyoso no Keitai, (Product Differentiation and Diverse Modes of Competition)," in Uekusa, M., *Nihon no Sangyo Soshiki: Riron to Jissho no Furontia* (Industrial Organization in Japan: Frontiers in Theory and Practice), Chapter 6, Yuhikaku, 1995.

2. Porter, Michael E., *Competitive Strategy*," Free Press, 1980. Regarding Porter's Competitive Strategy Theory, refer Chapter 1 of his book.

3. Frank Knight classified uncertain events into two categories of which one is what is thought to be "risk" (in which objective probability can be calculated) and the other is "uncertainty" (in which there is no such probability). See Knight, F. H., *Risk, Uncertainty, and Profits*, Hart Schaffner and Marx, 1921. Our concept of "darastic, unexpected changes" is close to "uncertainty" in the Knightian sense. Recent studies of the Knightian uncertainty shows that rational decision makers become conservative (or put it differently, passive) in face of the Knightian uncertainty. See, for example, Dow, J., and S. R. C. Werlang, "Uncertainty Aversion, Risk Aversion, and the Optimal Choice of Portfolio," Econometrica, 50 (1992), 197-204.

4. Shapiro, Carl and Hal R. Varian, *Information Rules,* Harvard Business School Press, 1998.
Kokuryo, J., *Open Architecture Senryaku* (Open Architecture Strategy), Diamond, 1999.

5. Abernathy, William J., *The Productivity Dilemma*, The John Hopkins University Press, 1978.

6. Nishimura, K., *Nihonkeizai Sangyo no Kadai*, (Current Issues of Japanese Economy and Industry), Nihon Keizai Shimbun, Janurary 25-28, 31, February 1, morning edition, 2000.

7. Fujimoto, H., *Nihon no Seizogyo, "Koushu" Ryoron de* (Japanese Production Industry, Active and Passive Viewpoints), Nihon Keizai Shimbun, morning edition, May 2, 2000.

8. Kokuryou, J., *Open Architecture Senryaku* (Open Architecture Strategy), Diamond, 1999.

9. Another factor in the relative decline of the Japanese industries in the world market is regulatory rigidity of the Japanese government. However, the analysis of this factor is beyond the scope of this paper.

10. Of course there exists an interface in all the inter-firm transactions at the distribution stages, and it is the management of this interface that is important.

11. Shioji, H. and Timothy. D. Kelly, *Jidosha Dealer no Nichibei Hikaku: 'Keiretsu' o Shiza to Shite*, (US-Japan comparison of automobile dealers: a minute look at the 'keiretsu'), Kyushu University Press, p.142, 1994.

12. Hewitt, C.M., *Automobile Franchise Agreements*, Richard D. Irwin Inc., p.95, 1956. Shimokawa, K., *Beikoku Jidosha Sangyou Keieishi Kenkyu*, (Historical Research on the Business History of the American Automobile Industry) Toyo Keizai Shinposha, p.190, 1977.

13. Shimokawa, K., *Beikoku Jidosha Sangyou Keieishi Kenkyu* (Historical Research on the Business History of the American Automobile Industry), Toyo Keizai Shinposha, p.210, 1977.

14. As a rule there is a lack of entry regulations to protect incumbent large stores as is there in Japan. Furthermore, in the United States there is less chance of exclusion towards the new wholesalers and retailers at the intermediate entry stages as is there in Japan. Another factor is the lesser land costs in the US as compared to Japan for putting up a store.

15. The following is an explanation of Auto Mall. Cerritos Auto Square (CAS) in the south of the state of California was the grassroots of Auto Malls. Here there is a franchise of 14 dealers, 24 brands with an annual sales of 48,500 vehicles. This Auto Mall was established as a result of the Regional Development Policy in Cerritos city in 1978. With an area of 330,000 m^2 and a width of 300 meters, it extends for up to one kilometer. At CAS there are certain representative rules which are (1) the customers can park their cars at any of the parking lots, (2) they must not try to stop any customers who are leaving the shops. (3) forced is not allowed.

16. Nikkei Sangyo Shimbun, p.9, Dec. 3, 1997.

17. Car Marx has the following sales features: 1.Large displays of 500-1000 cars, 2. One-price sales without discount negotiations 3. Search inventory through computer terminals 4. A 5-day cooling period after purchase 5. 30 days guarantee period. (Yasumori, J., *Jidosharyuutsu Kakumei* (The Automobile Revolution) Nihon Noritsu Kyokai Management Center, p.108, 1997.

18. Based on Nishimura's personal interview with Leeman Brothers Co.,Ltd. in the US, Nov. 2, 1999.

19. US Department of Commerce, "The Emerging Digital Economy," http://www.ecommerce.gov/viewhtml.htm, 1999.
US Department of Commerce, "The Emerging Digital Economy II," http://www.ecommerce.gov/ede/ede2.pdf, 1999.

20. The following is such a report: "In the US, car sales through the internet has shown an annual increase to 300,0000 vehicles, which is about 20% of the total sales. This kind of internet purchase has accelerated the reorganization of automobile distribution, and there are voices calling the reduction of the 22,000-odd existing dealers within the US to about half" (Asahi Shimbun, evening edition, May 24, 1999).

21. Press release by J.D. Powers Asia-Pacific.(http://www.jdpower.co.jp/us/99int-car.html), 1999.

22. Some of the services that differ from intermediary service are "reverse-auction types" and "direct sales type". In reverse-auction types that are represented in the Priceline, the consumer declares the desired price and the area. Then this information is distributed to participating dealers, and price offer is solicited. The dealer that offers the minimum price gets the right to negotiate with the particular customer. In the "direct sales type", there are the sites such as Cars Direct and Car Order which purchase the car stocks from independent dealers and sell them directly to the customers, or sell cars to the customers through affiliated dealers.

23. Williamson, Oliver E., *Markets and Hierarchies*, Free Press, 1975.

24. "Expert: Few franchise laws ban factory dealerships," Automotive News Archives, Jan. 31, 2000.

25. "GM moves to mend fences with dealers," Automotive News Archives, January 31, 2000.

26. Ford tied up with Microsoft on September 20,1999 and declared that it would sell cars jointly at Microsoft's site Car Point. Ford's press release material: http://www.ford.com/default.asp?pageid=106&storyid=405

27. Based on the press release and lectures given at the following conference. Richard Lee, General Manager, North America Regional e-GM Operations, General Motors, "The Manhattan Project of the Internet: The Explosive Transformation of General Motors into e-GM," Marketing on the Internet for the Year 2000, IMC Conferences, at Pasadena, CA, USA, March 31, 2000. Morita is

responsible for the summary of the press release and lectures reported in the text.

28. Mr. Fujio Cho, the President of Toyota offers the following explanation about the manufacturer's attitude of nurturing dealers rather than of selecting them. "That the relationship with (…) dealers is nurtured over a long time of working together is an aspect of the Japanese culture". Mr. Eiji Toyota, the Supreme Adivisor of Toyota, expresses this as a "culture of nurturing". In contrast to this, the United States have the "culture of selection". "No doubt, the "culture of selection" is necessary to a certain degree, but what would happen to the dealers if we presses it on them unconditionally with Internet transactions such as BtoC (Business to Consumer)? We should not sever off the relationship of friendly corporation and competition with the dealers." (Nihon Keizai Shimbun, May 13, 2000.)

29. *Jidosha Hanbai* (Automobile Sales) Vol.35, No.1, pp.30, Nihon Jidosha Hanbai Kyokai Rengokai, 1997.

30. A personnel manager of one of the dealers has this to say: "The rate of over-the-counter car sales in showrooms has steadily increased, especially for the customers below 40 years of age." *Jidosha Hanbai* (Automobile Sales), Vol.35, No.7, pp.4, Nihon Jidosha Hanbai Kyokai Rengokai, 1997.

31. *Jidosha Hanbai* (Automobile Sales), Vol.35, No.7, pp.4, Nihon Jidosha Hanbai Kyokai Rengokai, 1997.

32. The preference for door-to-door salesmanship seems to be on the decline especially with the younger generation.

33. Shimokawa, K., "Joho Kakumei to Jidosha Ryutsu Inobeishon (Information Revolution and Innovations in Automobile Distribution)", Chapter 4, in Shimokawa, K., and T. Iwasawa eds., *Joho Kakumei to Jidosha Ryutsu Inobeishon* (Information Revolution and Innovations in Automobile Distribution), Bunshindo, p.78, 2000.

34. Nikkei Sangyo Shimbun, Dec. 2, 1997.

35. Source: *Jidosha Hanbai* (Automobile Sales), Vol.37, No.10, p.13, Nihon Jidosha Hanbai Kyokai Rengokai, 1999. NADA public information (http://www.nada.org)
This is calculated at 110 JPY per 1USD. A revenue commission is included in the Japanese dealers sales turnover and gross margin.

36. Source: *Jidosha Hanbai* (Automobile Sales), Vol.37, No.10, p.13, Nihon Jidosha Hanbai Kyokai Rengokai, 1999.

37. Source: Nissan Jidosha Chosabu ed., "*Jidosha Sangyo Handobukku, 1985* (Automobile Industry Handbook, 1985), Kinokuniya Shoten, 1985.
Source: *Jidosha Sangyo Handobukku, 2000* (Automobile Industry Handbook, 2000), Nikkan Jidosha Shimbunsha, 1999.

38. It isn't that there is no move towards innovation in distribution in the Japanese automobile market. For example, the sales of used cars differ from that of new cars where there is no need for a franchise contract with the maker. Because of this, there is a higher degree of freedom for new entries and one can observe various attempts at reforms. The most representative of these innovative newcomers are "Oaknet" which makes use of satellite circuits between the dealers, Gulliver which is a national chain of specialized stores or buying and selling of used cars, and USS whose activities ranges from large scale auction to retailing.

39. Biztech News, Nikkei BP, May 30, 2000.
http://biztech.nikkeibp.co.jp/wcs/show/leaf?CID=onair/biztech/inet/103274

40. As a part of the automobile assessment project by the Ministry of Transportation, the following internet site has put up the data of evaluation tests. In 1999 the tests were carried out on a total of 27 vehicles: 18 small and standard sized cars, 7 midget cars and 2 station wagons.
http://www.motnet.go.jp/carinf/ass/ass-m-11.htm

41. The questionnaire survey by the Japan Automobile Distribution Research Group is used as research material for the group members and at present is not available for public viewing. However, there is a plan to make it accessible to the member researchers via the internet by the end of 2000.
Home page of Japan Automobile Distribution Research Group: http://www.jcdp.net

42. Regarding the involvement concept in marketing research the following author offers a detailed explanation. Laaksonen, Pirjo, *Consumer Involvement: Concepts and Research*, Routledge, 1994.

43. The annual sales of new cars in the US are about 17 million, and transaction costs aside, the number of transactions are far less as compared to consumer goods or services (such as airline

tickets). For instance if we take a very optimistic estimate that all the new cars go via the intermediaries in some form or the other, and if the commission per car is about 100USD, even then the market scale of the intermediaries would not exceed a turnover of 1.7 billion USD per year. As we have seen in the case of Autobytel, the costs incurred through advertisement and marketing to maintain the brand name is enormous. Due to this, it is estimated that the net profit of the new car sales intermediary businesses wouldn't amount to a scale of more than a few million dollars.

44. However, for the information providers to maintain the relationship with the manufacturers, should they take a stance that leans towards the latter, the neutrality may fade and in the process they may lose the trust of the customers.