FIVE FORCES ANALYSIS IN AUTO INDUSTRY

MBA Candidate, University of Kentucky, USA

To the executive committee,

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Introduction

The firms and businesses that produce and sell self-powered vehicles including passenger cars, trucks, farm equipment and other commercial vehicles are called automobile industry. We could mark that the automobile industry has been globalized and accelerated during the last half of 1990's because there were several constructions of facilities and of course several mergers between giant multinational automakers were joint during that period. Due to the auto industry, it followed the development of road systems, a fact that led the growth of suburbs, shopping centre around major cities, and the growth of other industries like ancillary such as the oil and travel businesses.

Market Definition

We will largely pay attention to companies that make passenger cars for private use, because this kind of trade yields the biggest proportion of revenues to the industries. There are many kind of passenger cars that are offered in many designated styles such as Coupe (BMW), Sports (Ford, Dodge, Ferrari), Grand Cherokee (Jeep), Commander (Jeep), Classic (Ferrari, Mercedes), 4X4 (Land Rover, Porsche), Coupe Convertible (Mercedes, BMW). As we see, we talk about a perfectly competitive market with different number of buyers and sellers, different size firms and different levels of differentiation between goods with identifiable products (passenger cars) and firms often employ price discrimination between them. They try to segment their markets and charge different prices to customers with different demand elasticities. The theory is simple. Identify those customers with highly-elastic demands (they're the ones who are very sensitive to price and will be driven into the arms of your competitors by high prices), and cut prices. Next, identify customers with less-elastic demands (they're the ones who are insensitive to price and are likely to buy anyway), and drive the price to them up. In other words, charge $40 for a new tire in your shop, but charge $60 for the same tire to the motorist stranded on the highway. Europe is the largest producer of automobiles in the world, for example average 14 million of units are produced in E.U. compare with almost 8 and 9 in North America and Japan respectively. Competitive and leading worldwide manufacturers are many General Motors, Ford, Toyota, Volkswagen, Chrysler, Peugeot, Honda, Mazda, Hyundai and many others, while the most competitive are Ford, General Motors, Chrysler, Toyota and Porsche, brands that dominate our cars and the auto industry today. Meaningful geographic submarkets exist in which companies compete each other. The known as "Big tree'' in the U.S. where we meet General Motors produces Chevrolet, Pontiac, Buick and Cadillac, among others, Chrysler - Chrysler, Jeep, Dodge and finally Ford Motor Co – Ford. Other example is Lincoln and Volvo or Toyota Motor Co along with Honda Motor Co in the Japan auto market.

Internal Rivalry

The auto industry is very concentrated, with the top 8 global auto companies having more than 90% of global revenues and the top 50 global auto parts companies having 80% of global revenues (the top 4 US tire producers have 75% of the US market). It is important to say concentration in auto industry is increasing as this market becomes global, and the effects of globalization and scale economies in auto market are remarkable. The advantages of global market and economies of scale are leading inexorably to the concentration of output on hand for fewer and fewer firms. For example, one every two cars was made by the three largest car producers in 1969 (Chrysler, GM and Ford) but this figure changed during 1996 to one out of three because Chrysler was replaced by Toyota and the top three firms' share was only 36%, more firms had entered the market and the share was deducted in smaller portions for firms. The car market has declined last years due to the inflation. The inflation affects every market's part such as manufacturing and production, for example the increase in the price of fuel and steel caused a lower growth rate in Indian car industry and this market has been a noticeable halt for inflation. Due to inflation, many firms don't enter the market because newly firms cannot make discount offers to the buyers. The effect of inflation has taken the rise in the price rate of the cars by 3-4% which in turn suffices the need to meet the rise in price of the raw materials to build a car. When the stock market is on a slow rise, auto firms like Hyundai, don't boost its production and sales of the cars. During a year when most industries try to survive in a tough market, Japan's automotive sector has enjoyed bumper profits. Most Japanese car makers have defied both a lengthy recession in their home market, and widespread economic weakness in their international markets. They have gained a strong lead on their US and European peers. The strongest Japanese firms are Toyota and Honda; both have displayed their confidence by diving head-first into the competitive world of Formula One - a move which in Honda's case marked a return to the sport. Japan's car makers consider the US market their best hope to have important profits and growth in the future - even though the Japanese people buy 5.8 million cars a year, almost exclusively from domestic producers. "The US is the most important market for anybody because it is the most profitable one" said Nissan Motor's chief executive, Carlos Ghosn. Auto firms can't adjust car's cost price in the market easily. For instance, General Motors, Ford and Chrysler launched a series of adverts and they introduced a range of incentives such as free credit, meanwhile, held their prices. Auto firms are able to observe prices and sales of cars in the market. Let's see how many plants were opened in Eastern Europe, Asia and South Africa. Many people buy car on credit and firms know interest rates today are lower than the first half of 90's. In addition, firms knew tax on cars would fall in 2000 when the 10 per cent goods and services tax replaced the 15 per cent sales tax. This prediction gave the chance to firms to customize their prices in order to succeed more sales.

Furthermore, many people respond to higher petrol prices - and to the expectation that, for example prices are more likely to go higher than fall back - by switching to more fuel-efficient cars, is a necessary tool of predicting our car sales level. A research by Amber Rabinov of the ANZ Bank, has found a clear link between new car sales and the price of petrol. Sales of light cars - such as the Toyota Echo, Hyundai Getz and Holden Barina - have been strongly correlated with petrol prices in recent years. But sales of large cars - such as the Commodore and Falcon - have shown a strong negative correlation. As petrol prices have risen, large car sales have fallen heavily. There is excess capacity, a term that auto firms call "the global oversupply of car manufacturing capacity". The opening of many new car plants is making the world car market highly competitive and exerting downward pressure on car prices in all countries. Considering price elasticity, it is affected by a few factors. One of them is the desired rate of return on investment of the industry. Another is the perceived risk of the industry. It strongly depends on the country. The price elasticity of supply in the automobile industry is generally very high because of the big profit margins. One more important feature of internal rivalry is the brand loyalty among existing sellers. To illustrate the importance of this, think the advantage of Japanese firms in the US where they offered cars that were seen like Americans due to they were produced in the US. The same pattern happened to Nissan, which produced cars in Sunderland, UK and followed the imitation of Toyota, which tried to take advantage of the phenomenon by setting up production facilities in France. Auto firms must differentiate their product that win with consumers, by addressing the fickle wants and needs in a particular locale at a point in time. The problem with differentiation is seen in two ways. The first way demonstrates, what the buyer wants and needs can be determined it deductively through surveys, clinics and from other factors. It is primarily considerable that it seeks to eliminate negatives to maximize the pool of potential buyers by reducing the number of consumers who might reject the product's features. The second way is more intuitive and tries to find a unique combination of both functional and expressive or emotional, we could say, attributes that appeal to enough buyers so that the firm can earn a decent earn. In other words, it is more concerned with maximizing the depth of attraction than minimizing the breadth of rejection.

Entry

It is true that nobody can enter to the automobile industry conveniently. Cars demonstrate a variety of features in which they differ from their predecessors. An entrant has to spend big amounts on safety, motor management, comfort, design and numerous electronic functions. The industry requires more ongoing efforts to reduce fuel consumption by decreasing the air resistance for example. Car industry is always focused on brand loyalty, and this is an advantage of existing auto firms in the auto industry, because businesses have invested more to win a customer than keep him like Mercedes, BMW, GM.

Car firms are benefited from lower marketing cost, greater brand value, reduce consumer sensitivity to price and improve financial results compare with a new firm who don't have any reputation into the auto industry and tries to survive. Take the names of Japanese automobiles of Toyota, Honda or even the German made Mercedes vehicles, one may observe that each has successfully gained a significant market share of the global automobile industry, simply because of the efforts put in to make their brands customer friendly, efficient, economically viable and perhaps most important of all the safety element. In late 2007, for example, General Motors offered $1,000 in loyalty cash to current Saab owners (Saab is a GM brand) who purchased a 2008 model. Another example, Lexus has invested in the quality of service, which is basic to build brand loyalty. Toyota retains about 63% of prior Toyota buyers, whereas Ford retains 53% of prior Ford buyers. Consider Ford sold about 3.4 million cars in North America last year, but Ford will retain 340,000 fewer customers than Toyota next years. Suppose a car costs about $23,000, so Ford will lose $7.8 billion dollars of sales because Ford customers are less loyal than Toyota customers. Worse, some of the lost customers will purchase from Toyota, leaving Ford an even bigger hole to dig out of. Loyalty means everything in the automobile industry. Auto firms have a focus on automation and simplifying product lines to lower costs and benefit from economies of scale. The average car now needs only 15-25 man-hours per vehicle and this drop 2% annually. Auto manufacturers have long tried to protect their exclusive sales organization through contractual arrangements, pricing strategies, and technical features and European Union is poised to restrict possibilities of exclusive contracts. Existing auto firms are benefited from exerting close control over the sales and distribution channels in order to be able to execute their marketing strategies, including price policy, and to guarantee a high service level for their customers. Exclusive dealers are the distribution channels for auto firms but competitive pressure is increasing despite their privileged relationship with the auto manufacturers and their established role is threatened. All major manufacturers plan to increase production capacity over the next years and expand their markets abroad; as a result the competition between dealers for different brands will be increasing. These days there's no easy access for raw materials in the auto industry, due to the rising prices. The beginning of 2005 the prices of hot wide strip steel have gone up by 41 per cent, aluminum has become 55 per cent more expensive, and the price of copper has risen by a whole 174 per cent. Steel remains the most important material for the automotive industry and it can be limited replaced. The availability of steel in automotive qualities with specifications at the required times and in the required quantities as auto firms need is a key success factor for the automotive industry. The remarkable rise of steel's price has resulted the price of iron to go up by two thirds compared to last year, and the price of coking coal has trebled, adding one more entry barrier for the new entrant. Existing firms have gained experience in order to make antilock brakes (ABS system) which are help to avoid skids, air bags which are deploy swiftly and powerfully that you will have no time at all to react to what's happening.

They produce new front-wheel drive, all-wheel drive, or four-wheel drive cars better in snowy or icy conditions than the rear-wheel drive that was once standard, or modern tires have better traction and reaction to steering than in the past. All of the above need capital expenses and experience, and these components are not met by the entrant. If an entrant tries to buy technologies, this can be "minefield" for "the puppy firm". Instead, entrants are able to have access to favorable locations; classic examples are India and Hungary. Ford India and many other global companies have many plans to make India a manufacturing and export hub. India's economy has sustained a growth of 8 per cent in the last financial year and the government has played its role effectively in ensuring that the growth is sustained, because the linearization policy is a great boost from the government to car industries, for instance duty on capital goods / project imports attract investments or the reduction on duty on auto components would be really encouraging. From the other hand, Hungary is a hub for Audi and Suzuki. It is considered as a bridgehead to expand investments to Central and Eastern-European parts. A new company can find qualified, motivated, flexible and hard-working labor force with a high productivity rate. Additionally, an entrant can join not only to a political and economical stability but also country's entrance to the European Union that means an entry to a 500 million market. Government's protection laws are differed between countries like U.S., Japan and Canada. Canada has recently legislated an end to the tariff on auto components; this was temporary because it followed retaliation to Japanese firms. U.S. retains its 2.5% tariff on components, and still retains a 25% tariff on pick-ups. The Japan government argues that the tariff-reduction is an incentive to get more assembly plants domestically.

Substitutes and Complements

There are numerous amounts of substitutes in the automotive market and if the price of one vehicle increases the demand for a substitute will increase. Why? It is simply to think that one car has more equipment that the other, it has longer useful life, it is more flexible especially in a metropolitan area where Sedan cars are dominating, it consumes less fuel, or it has bigger capacity than other. For instance, if gas increases people tend to buy cars which have less gas consumption or even they change their transportation habits (their purchase patterns as well), they will take bus, or train. Generally, the higher the cost of operating a vehicle, the more likely people will seek alternative transportation options. The last word of technology includes the electric cars (and cars that work not only with hybrid electric, but also ethanol capable e-85 and clean diesel) which have designed to be eco-friendly; it is powered by a battery supply unit. The first electric car produced by Peugeot (Peugeot Leonin). The company and others who tried to make this kind of car like GM were benefited by the mass-production and they offered it to a lower price in the market. There is definitely price-elasticity of demand in the car industry and people tend to be informed before invest to a car. In recent years, prices of new cars have been falling.

This should increase the demand for new cars and reduce the demand for second hand cars and mass transport services such as bus travel (ceteris paribus). It is remarkable to point out the importance of complements in the auto industry. Some firms like the Big Three in U.S. took an advantage from gas substitutes building hybrid cars because of a law which was taken in the U.S. congress by Republican and Democrats, which require automakers to build "flex-fuel" cars that could burn the various alternative fuels (such as fuel made from corn, soybeans, and plant fiber). This move to flex-fuel technology will give to the Big Three, an advantage over foreign automakers. Another substituting which brings benefits to the automakers is the replacing of petrochemicals with biochemicals, because not only can a manufacturer save money by avoiding costly permits and compliance penalties, there is also a dramatic reduction in hazardous waste disposal costs. Finally, companies can appeal to "green" customers, an increasing portion of the market.

Supplier Power

There are different kinds of suppliers in auto industry. There are suppliers for braking system, classics and frame, cooling system, electrical system and engine, exhaust and fuel supply system. However, the most important suppliers are steel suppliers and the biggest suppliers come from China where labor and production cost is very low. The automotive supplier industry is facing a strong restructuring process and the concentration of car makers and an ongoing out-sourcing process of car manufacturer represent new challenges for the supplier. Next years, it will become vital for the supplier to enlarge his field of core competencies. The census definition of supplier's industry shows that suppliers have been remained almost identical, and while the industry has grown tremendously, it has also become less spatially concentrated compared to the auto industry concentration. We could say that the long-term comparison between auto and supplier concentration reveals not only the continued existence of agglomeration at the industry level, but also suggest a noticeable change in the geographical extension of the supplier region. Auto firms buy much less these days (purchase volume is lower relative to other customers of suppliers), and they can make car components by their own. This results to cut jobs (workforce reduction) and decline profit for suppliers as car sales plummeted worldwide. About the relationship investments between automakers and suppliers, we could notice that automakers keep demanding price concessions, and suppliers are giving in more than ever. It is an increasing trend that's great for automakers. A recent study by International Resource Network shows how supplier price concessions are getting steeper. To demonstrate the relationships between suppliers and makers, I pose the opinion of Bruno Dehler, BMW's manager of supplier support and purchasing strategy, repeatedly twisted a bone-dry linen napkin: ``We would try to wring every bit of savings out of the supplier until they were all dried out. Then we'd hang them out to dry some more," Dealer said as he placed the napkin on a nearby floor plant. ``This squeezing and this hanging out to dry is not the way that works--not with today's technology," he said.

Toyota doesn't take this approach.

There's no credible threat from supplier to a product toward a maker. Most makers have many interchangeable suppliers and the ability to tool up quickly for in-house production. In contrast, the extensive communication system facilitates the rich flow of information which are necessary for the "let's work things out" approach of the selected strategy and information requires a high degree of commitment to the relationship between supplier and maker. To conclude, it is necessary to mark suppliers can't apply price discrimination to their offering products because they are not considered as a model of oligopolistic competition, where firms make a two-dimensional product line decision and choose a location in style space, thus inducing horizontal differentiation but they are in competition between each other with identical goods, competing globally.

Buyer Power

The two major buyers in the auto industry are private consumers, who buy cars for themselves and rental companies, who offer cars for leasing. Because besides buying a house, car is the second largest purchase, consumers don't buy a lot these years and I would say they don't represent a large fraction of auto makers revenue and leasing companies do so. To support my opinion, as having worked in BMW in the past, I would argue consumers have various preferences and an auto maker should definitely suit the car to the customer's needs and trends. People came to BMW dealer asked for small cars, they were disinterested in buying large cars, which means more fuel consumption, difficult to find a place for parking in the narrow streets, more governmental taxes, and of course they were hesitated on paying large amounts on buying a car which will be replaced after some years, so they prefer to buy a used one. Buyers are more informed, surfing the net and finding the best one car for them. Buyer has high power. Studies consider auto industry and consumer behavior in reducing greenhouse gas emissions, and in addition to governmental laws for "friendly-environment cars", create a tough situation for auto makers. For example, a software program which will be funded by the National Science Foundation's Materials Use, it will be used to understand the consumer and industry response to policy decisions, and how the state of the market impacts the environment. Rental companies, which are not concentrated and the economic slump has hit them, buy even smaller amounts of cars and they have much lower power than private customers. Private customers can pose a credible threat to the auto firms demonstrating their preferences. To consider the private customers threat, it's worth to go back in 1992 when federal government in U.S. in order to revive auto industry offered a 15 percent income tax credit to new car buyers, so buyers had the power to control their sales. Today's car buyers have negotiating power. Buyers knowing the score beforehand, and knowing just how much automakers want to keep sales up in tough times, they can negotiate the term of monthly payment, they can buy last year's new cars with a high discount because backlogs are caused to depreciation, they can get down to a good price before adding an incentive, for instance negotiating a price before the financing and the trade-in value.

Finally because car's buyers products are substitutes, buyer can walk away easily and find another auto maker to buy a new car. Instead, rental companies having raised their rates and cutting workers to keep up, they have started closing off-airport rental locations. Rental companies don't pose threat because they don't represent a large number of auto firm's revenues and they try to cope with crisis. Auto firms have benefited from these circumstances and they have posed a "take-it-or-leave-it" price to transactions.

Conclusion

To sum up, surviving in the auto industry's interchangeable environment, it is required enough discipline, specific information and innovation centers for the firm, organization and flow of capital. The gamer who invests more on keeping customers is the winner in the auto industry's game. Firms should offer something different every year like Peugeot with electric car Peugeot Leonin in order to attract more customers than other competitors and it should find ways in order to keep its domination on suppliers and some important buyers such as rental companies. After the five forces competitive analysis in the auto industry, I would like to summarize and support my research in this field with a table, which illustrates the affects threats of every single competitive force to the unique auto industry.

FIVE-FORCES ANALYSIS OF THE AUTOMOBILE INDUSTRY	
Force	**Threat to profits**
Internal rivalry	Medium
Entry	Very Low
Substitutes / Complements	High
Supplier Power	Very Low
Buyer Power	Medium

You've done an impressive amount of research for this paper.

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