

Microeconomics of automobile industry research paper examples

[Economics](#), [Microeconomics](#)



Introduction

Microeconomics can be defined as the analysis of the decisions made by individuals and groups, the factors that affect those decisions, and how those decisions affect others (Moffatt, n. pag.). Unlike macroeconomics that deals with aggregate level activities, microeconomic deals with individual, household and firm level economic activities. It helps in understanding the dynamics of an industry and microeconomic impact of industries. The industry that has been chosen for this study is automotive industry for two reasons. First, automobile industry significantly contributes to global economy. Second, the industry is dynamic and undergoing a lot of changes in the recent past.

The objective of this paper is to understand the microeconomics of the automobile industry. This will enable better understanding the dynamics, the sensitivities and the strengths of the industry. The paper has been written with four main parts. The first section is a brief on automobile industry, its importance in global economy and its key characteristics. The second section of the paper discusses the construct of automobile industry in terms of microeconomics. The section will discuss the demand and supply factors of the industry and how these factors impact the industry. The third section illustrates some live examples of microeconomic decision making in automobile industry and the consequence of such decisions. The fourth section concludes the paper.

Overview of Automobile Industry

The automobile industry entails manufacture of automobiles, its sale and after-sales activities. The industry has developed over a period of more than 100 years to become a vast entity of many inter-connected parts (Niewenhuis and Wells 15). It is a key contributor to the global economy. According to MarketLine, the industry's yearly growth rate is expected to exceed 5.5% from 2010 to 2015, reaching a value of more than \$5.1 trillion by 2015 (Report Linker, n. pag.). The mere size of the market makes it an interesting topic of study. The industry is a leading employer throughout the world, with 9 million people involved in making 60 million vehicles, or 5% of global manufacturing jobs (Report Linker, n. pag.). According to the U. S. Bureau of Labor Statistics, the automobile and parts manufacturing sector employed about 700,000 workers in October 2011 (Basu, n. pag.). With its size and impact on economy, the automobile industry attracts attention of economists and nations.

The automobile industry can be classified as an oligopoly market as there are only a few main suppliers in the market that compete with each other for market share. Growth in the industry has been accelerated due to various factors. First, globalisation and reduction in trade barriers has helped boost the industry. Globalisation has also played a key role in changing the industry construct by facilitating cross border business deals and entry of manufacturing giants into foreign countries and setting up manufacturing units over there. Second, changing lifestyles and increasing purchasing power has augmented the industry growth. A trend has been emerging of migration from rural and upcountry areas to cities for better economic

opportunities. This has led to changing lifestyle in people, increasing demand for automobiles for commutation in cities leading to industry growth.

Increasing economic independence of women has also helped the industry.

There are three types of manufacturers in the industry, high volume-full range producers, specialist producers and niche producers ((Niewenhuis and Wells, 16). The first category consists of players like Toyota and GM that produce basic models and compete on price differentiation strategy. The second category consists of manufacturers like Mercedes that produce better quality cars with more features than the basic models of car. The firms in the segment compete with a slight product differentiation and optimum pricing strategy. The third category of manufacturers like Ferrari is entirely focussed on product differentiation and offer unique product propositions to the consumers.

The two important variables to study microeconomics of automobile industry are demand factors and supply factors. This is because it is the combined interaction of these two prime factors that decide the fate of industries.

Demand Factors of Automobile Industry

The microeconomic demand factors that affect the automobile industry are purchasing power and affordability of households, availability of financing options, price of fuel (oil and gas), product promotion, demographic changes and availability of substitutes.

Purchasing power of households has increased in the recent years. The proportion of total income that is spent on essential items has also been declining over the years. As proportionate spends on essential items is

decreasing, spends on luxury goods increase. As spends on food items decrease, there is a tendency in people to have higher demand for two luxuries: one is housing and second is having own vehicle. Thus, rising affordability, especially in middle class population has accelerated the demand household demand for automobiles.

Availability of financing options has also increased in the last decade. Both, number of private and public financiers and their growth focus have helped industry. The availability of easy and cheap finance for new vehicles in automobile sector has helped to drive up the industry sales in the United States to the highest levels since 2007 (Leong, n. pag.). At present, almost 85 per cent of all new car sales are backed by auto finance, compared to 65 per cent five years ago (Caketail, n. pag.). While obtainability of credit encourages non-car users to buy cars, reduction in interest rate motivates an owner of basic car model to upgrade to a luxury car. Thus, these factors empower individual consumers with ability to purchase and upgrade their vehicles and spur the industry growth.

The price of fuel, gas or oil, is inversely proportional to demand for automobiles. As the price of gas and oil increase, household's fuel expense increases and people may shift to other cheaper options of travelling, like public transport. This also acts as opportunity for automobile manufacturers, as consumers will be attracted by high mileage options during these scenarios. Thus, while rise in fuel price reduces demand for automobiles, it increases demand for high fuel efficient cars and cars running on alternative energy sources. Since it is an oligopoly market, adopting effecting product and price differentiation strategies based on customer's preferences is an

important feature of the industry.

The automobile industry is characterised by a few big manufacturers that compete with each other to gain market share and a large number of consumers. Differentiation strategies work in this market. While, product and price differentiation has already been discussed in the previous section, this section of the paper discusses the importance of advertising and promotional activities undertaken by firm, and its impact on household demand for cars. Some examples of advertising and promotional strategies used by marketers are celebrity endorsement, old car exchange offers and offering cheap in-house financing options.

Demographic changes have also affected the demand of automobiles and growth of automobile industry. A transition phase has been witnessed in the automobile industry wherein the consumers have started emphasising on aspects other than price into their car purchase decision. During twentieth and twenty first centuries, the demand for specialised cars has been on the rise. From the 1970s, the industry saw emergence of green consumers who takes environmental criteria into account while making a purchase decision (Niewenhuis and Wells, 12). More energy efficient cars are another segment of cars that is gaining popularity. With rising purchasing power, there has been a shift to luxury models of cars, as compared to lower end cars.

Depreciation, too, is a cost to which the market pays attention; variation in value retention rates likely reflect qualitative aspects of products, such as their reliability, comfort, and quality of manufacture (Lipschultz 160). Thus, customers are taking into account a combination of factors before making their automobile purchase decision. This phenomenon is typical of

movement to a more matured market.

Availability of substitutes also affects demand in automobile industry. For example, by end of twentieth century, US buyers and turned to light trucks, much heavier than cars, thus largely negating the gains made in more efficient car designs (Niewenhuis and Wells 12). With rising popularity of sport car and innovations in this field, few consumers shifted to this segment of cars. Fuel economy oriented customers moved to solar operated and electrically operated cars. The increasing focus on environment compelled consumers to demand cars with better emission technologies.

Supply factors of Automobile Industry

The key microeconomic factors affecting supply in automobile industry include cost of production, technology position, competition and product penetration.

Cost of production is an important determinant of the amount of automobiles supplied by firms in such oligopoly market. If the cost of factors of production increases, the supply of cars will be adversely affected. The key factors of production for car manufacturing are raw materials like steel and rubber, labour and capital. In 2010, the global steel industry is undergoing a major structural shift in contract structures across its supply chain (The Smart Cube, n. pag.). As per the new construct, steel manufacturers had to pay to their suppliers based on prices that got reviewed every three months. It is difficult for the supply to absorb the entire price revision for long time.

Hence, the emerging trend is that the car manufacturers shift to frequent price revisions. Since the beginning of 2012, some buyers have voluntarily

turned to short-term contracts with an adjustable pricing mechanism to reap the benefits of declining steel prices (The Smart Cube, n. pag.). In case manufacturers have international trade exposure, currency volatility will also affect their profitability. Cost of labour also determines supply in the industry. Government policies, sometimes, lead to drastic revision in labour wages. The revision can either increase or decrease labour cost. If government policy favours labour and leads to higher wages, it will have an impact of reducing supplies. Apart from policies, upward revision of labour is also determined by competition of labour among firms. All these factors lead to higher cost of production and adversely impact supply of automobiles. Technology position is also a key influencer of automobile supply.

Differentiation has become an important aspect of automobile industry. Technology and innovation help attract customer more. Thus, supply of old and out-dated models are affected by arrival of new technology in the market. For example, if a competitor brings in an excellent fuel efficient technology, the supply of a manufacturer's old model will decline. Brands that are considered technologically more advanced will be preferred to other brands. In automobile industry, technological changes are quick and supplies are higher. With technological advancement, productivity also improves. As productivity increases cost of production decreases and supply increases. Automobile industry is competitive for the suppliers. Automobile manufacturers compete with each other on price, product, advertisement and marketing differentiation strategies to make their place in the industry. The industry, like any other industry in real world, is not characterised by perfect information symmetry. The consumers generally are less informed

than the manufacturers and distributors. The latter can use this information to manipulate the customer to boost sales. Thus, brand building and advertisements play an important role in competing with rival manufacturers.

Internet and retailing are playing an important role in marketing and distribution in automobile industry. The industry is witnessing emergence of new entrepreneurs that are interested in retailing. They not only have innovative ideas, they also have capability of building upon their ideas and attracting investments in their venture. Internet technology has lowered entry barriers for other entrepreneurs with new ideas about helping customers find, evaluate and buy new vehicles (Hirsh, Rodewig, Soliman and Wheeler n. pag.). This is coupled with poor performance of the traditional dealer model. The dealer model is losing its charm with shrinking margins for dealers. This trend has led to shift of power to the retailers. While manufacturers ruled the supply market earlier, emergence of retailers has given the latter substantial power in the industry. In response, the manufacturers want to expand their participation in the customer life-cycle value chain to improve profitability and grow in markets that have been largely stagnant (Hirsh, Rodewig, Soliman and Wheeler n. pag.). Internet is being used as an important marketing and retailing platform. Many of the most important auto industry innovators today are developing Web-based services, leading some to predict that the most important automotive company of the next century will be a software-based company (Hirsh, Rodewig, Soliman and Wheeler n. pag.).

Illustration of Decision Making in Automobile Industry

This section of the paper discusses the application of microeconomics in automobile industry. The two cases being discussed in this section are that of General Motors and Ford.

Microeconomic Failure for General Motors

General Motors was one of the most reputed companies of USA at one time and it was doing extremely well financially. It set an example for other automobile companies in before 2008. But, the company experienced big setbacks during the slowdown of 2008. It is debated that poor microeconomic management was one of the reasons for the company's downfall. Decision making of the company went wrong on two aspects. First, GM ignored the change in industry environment. Recession had badly hit the spending power of households. This led to increasing demand for low-end, better mileage providing vehicles of good quality. The competition responded well to this change. Toyota made a cheaper car with better gas mileage that was of better overall quality, and was engineered for greater durability than its chief competitor, GM (Davis, n. pag.). As the product proposition was lucrative to customers, they naturally shifted their preferences to Toyota and market share of GM declined. In spite of rising fuel prices, GM did not offer a product that could compete with Toyota's high mileage vehicles. Later, the company did respond to high consumer demand for fuel-efficient or alternative-energy vehicles by developing hybrid vehicles, but only long after its competitors had brought them to the market (Davis, n. pag.).

Second, the number of brands offered by GM was high. GM sold eight different brands of cars – Buick, Cadillac, Chevrolet, GMC, Hummer, Pontiac, Saab and Saturn at one point of time (Davis, n. pag.). In automobile manufacturing, the initial investment and cost of running factory is high. Such manufacturing units manage to breakeven only at high output levels. Thus, having a large number of brands was one decision that did not work in favour of GM.

Third, in spite of the higher operating cost of its factories, GM had other expenses that put pressure on the company at the time of slowdown. These expenses were attractive compensation and retirement benefits to its employees and high leverage. The higher the amount of debt in a company, the higher it is exposed to risk of bankruptcy. All these factors and wrong microeconomic decision taking led to downfall of the company and is an example of microeconomic failure.

Conclusion

Microeconomics is an important element of economics that studies decision making of smaller units like individuals and firms. Automobile industry has been selected for the study as it significantly contributes to global economy and it is undergoing a lot of changes in the recent past. The objective of this paper was to understand the microeconomics of the automobile industry. The paper concludes that microeconomic factors impact the industry and affect its demand and supply. The microeconomic demand factors that affect the automobile industry are purchasing power and affordability of households, availability of financing options, price of fuel (oil and gas),

product promotion, demographic changes and availability of substitutes.

Rising affordability, especially in middle class population has accelerated the demand household demand for automobiles. Availability of easy and cheap finance is empowering consumers and spurring the demand in the industry.

Increasing in oil prices is adversely affects the industry demand, but also increasing opportunities for product innovation. As the market is oligopoly, differentiation strategies work in the market and can boost demand.

Demographic changes and availability of substitutes are also affecting the industry and consumers are taking into account multiple factors before making their purchases.

The key microeconomic factors affecting supply in automobile industry include cost of production, technology position, competition and product penetration. Cost of production primarily governs supply in the industry. Increase in cost of production by rising prices of factors of production like labour, raw material and capital affects supply in the industry. As derived from the GM illustration, high leverage also adversely affects supply as it can lead to bankruptcy. With technological advancement, productivity also improves. As productivity increases cost of production decreases and supply increases. Internet and retailing are playing an important role in marketing and distribution in automobile industry. It is changing the traditional dealership model in the industry and paving way for presence of multiple channels, thus benefitting the end customers

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