

Industry Analysis

Global Automotive Industry

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Team 4:

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**Abstract:**

The automotive industry is one of the world's largest industries but also an industry that struggles the most. We are going to look at the chief business and economic characteristics of the industry, then we will identify the driving forces for change. Next, we will look at and evaluate the strength of competitive forces, and assess the competitive positions of companies in the industry. Finally, we will predict who will likely make certain competitive moves and how they will go about it and we will pinpoint the key success factors of the automotive industry.

## Chief Business and Economic Characteristics

The automotive industry is a major industrial and economic force in the world. It makes 60 million cars and trucks a year, and they are responsible for almost half the world's consumption of oil. The industry employs 4 million people directly, and many more indirectly. Despite many large companies having problems with overcapacity and low profitability, the automotive industry retains strong influence and importance.

Forecasted economic impacts of a proposed automotive assembly plant.

	Direct, Indirect And Induced Impacts					
	2006	2007	2008	2009	2010	2011
Employment	189	3,583	7,800	10,611	12,240	12,242
Personal Income*	7,114	141,912	368,820	561,168	684,180	735,696
Revenue, State Government*	1,032	20,585	53,498	81,399	99,242	106,714
Sales*	16,620	318,492	1,405,080	3,024,000	3,792,960	3,864,240

This graph shows the projected numbers of employment, income, revenue for the state government, and the expected sales for the years from 2006-2011. Represented in the thousands, as you can see, over the years, employment has increased significantly over these six years. Personal income also increased drastically from a little more than \$7 million to around \$735 million over the this six year period. As you can see also, for the revenue for the state government and also the industry's sales, they have significantly increased over these six years. This is mostly due to the fact that transportation is huge in this era of the world. Everyone needs to get from their homes to their offices or workplaces. Businesses need to be able to ship out products. They need company cars to get people to and from jobs. The world revolves around the automotive industry, and if it didn't exist, then the world wouldn't be near as advanced as we are, and production would drop considerably as well as the world's economy dropping

considerably. The automotive industry is over 100 years old and it originated in Germany and France, but found its way to the U.S. in the mass production era. It is called the “industry of industries” because of the twins, mass production and mass consumption. Although, the industry may seem like it is doing well with the number of cars and trucks being sold, and the billions that the industry makes each year, it is actually doing very poorly. Average margins have fallen from 20% in the 20’s to 5% in today’s market. All of this is caused by the fact the the automotive industry accounts for only 1.6% of the stock market in Europe, and only 0.6% in the United States.

These are the top automotive assembly companies around the world, and how they are faring with each other. General Motors, Toyota, and Ford are the top three competitors in the United States, and they are all in the top five in the entire world. Japan also has several companies that are competing to be global leaders though, but they are well behind the top three, other than Toyota.

	<b>Vehicle Sales Per Year (Millions)</b>	<b>Revenues (\$US Billions)</b>
General Motors	9.17	192.6
Toyota	7.97	182.9
Ford	6.82	177.1
Volkswagen	5.24	119.1
DaimlerChrysler	3.85	187.5
Nissan	3.51	82.0
PSA/Peugeot Citroen	3.39	70.4
Hyundai Automotive	3.28	38.5
Honda	3.24	80.5
Renault	2.53	51.7

Average sales for GM are a little more than 9 million cars/trucks per year with revenues averaging about \$192 billion per year. The U.S., Europe, and Japan account for 80% of global sales, but the market is stalling. It has been stalling for the last couple of decades. When an industry is having problems with growth, the common reaction is to reduce capacity, but this can be very painful because mass production causes a strong cost advantage, which is what leads to overcapacity in the industry. That can be either too many companies trying to join the industry, it could be that each company is over-producing cars and trucks, which in turn decreases their revenue because they are spending too much money producing vehicles. The other issue is that foreign companies are coming to the U.S. as well which makes the U.S. based companies struggle even more for business. This could be based on different prices by different companies, different or newer technology, luxury v. affordable, sporty v. practical. There are several factors that affect the automotive industry economically, but let's take a look at the driving forces of change in the automotive industry.

### **Driving Forces of Change**

The automotive industry has experienced growth shifting into markets such as Western Europe, China, and the United States. Over the next decade, there is said to be more change than the world has seen over the last twenty years. According to Randy Miller, 82% of automotive organizations “lack preparedness, execution, and resource alignment to enable faster change”. As Miller discusses further, the first driving force for change is “accelerating the pace of disrupting innovation”. One major mode of disrupting innovation are the company's Uber and Lyft. In today's world and economy, less and less people are buying cars. They have little use for them,

especially if they live in the city. Most people would rather order and pay for an Uber or Lyft than they would to go buy a car. There are a few reasons to why they prefer this. Today's generation is lazy. People would rather pay more for something than actually doing it themselves. Instead of buying a car, paying the insurance, paying for gas money, and taking the time out of their day to drive themselves and possibly put themselves in a risky position if they got in a wreck. If they took an Uber or Lyft, it might be anywhere from \$5-\$10 depending on where and how far away you are wanting to go, but people would rather do that now than have to worry about all of the other factors. There is also the safety factor to deal with. Instead of driving your car out to the bar and risking driving drunk on your way home, taking an Uber or Lyft takes that situation out of the equation. This is one major situation that the automotive industry is trying to figure out and handle so that they stay above water in the market. Ford has created a new line of "vehicle" called GoBikes. These are basically motor-assisted bicycles that you can pay for that is relatively inexpensive. It is very convenient if you are in a big city and you need to get around the town quickly. They are easy to obtain and easy to use. It also involves the cellular industry, by consumers using their cellular devices to unlock the bike and pay for it, and once they are done riding, they use their cellular device to end their ride and complete their payment. This is one way that Ford and other automotive industries have adapted their organizational planning to better accommodate for this generation. Now, obviously there are several people who have to own cars whether for personal use or company use. But the world is starting to get out of how it use to be several years ago where there was no Uber or Lyft, or motorized bicycles. This is hurting the automotive industry. There will always be a need for transportation, but with the growing, limited number of people buying cars, several companies in this industry have to

compete even harder. This means that if you aren't a top dog company, then you most likely will go out of business. So companies are asking themselves how they can differentiate themselves from their competition. How can we stand out? How and Why is our product better? What areas are we ahead in, and what are the areas where we need to spend more time focusing on improving? These are all questions that are continuously being asked, and there will never be a day where these questions aren't asked. Another driving force for change is revolutionizing modern driving. In this day and age, people are trying to think about the future. Now people can summon a cab or an Uber with a few short clicks on their cellular devices. People can unlock their cars and start their cars without the car keys; they can just do it from their phone. The newest, and largest step in the automotive industry is creating autonomous cars. This means that the cars will be able to drive themselves without help from the passenger in the car. According to Nick Ismail, about two-thirds (66%) of the United Kingdom consumers believe that in the next 15 years, there will be more driverless cars on the road than regular cars. The key factor is that a lot of people do not feel comfortable getting into a car that you can't actually drive or be able to control. The other factor is configuring all of the data into the cars and be able to have the car's AI follow all of the laws of the road, and be able to plan for possible accidents. It could be done a lot easier if every car was a driverless car. They wouldn't have to worry about many accidents. They would just have to program all of the cars, the exact same way. But sadly, that isn't how it works, and it will never be able to work that easily because you could never get rid of all of the normal cars in the world. There are several driving forces for change in the automotive industry so that this industry can survive in the future. There will be significant change in the industry over the next decade, and a lot of automotive companies will have to adapt and adapt and adapt

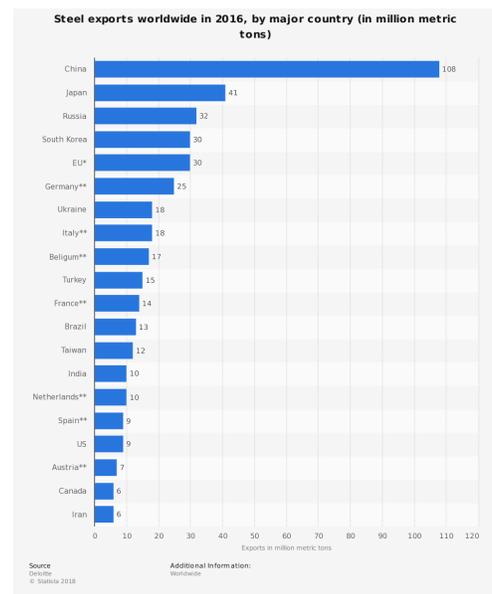
to the constantly changing world so that their company, and the industry remains alive. This can be done by changing and adapting to the current environment, but it can also be done by working with your competition to help further the industry itself, and hopefully your company as well.

## Strength of Competitive Forces

In order to effectively analyze the automotive industry on a global scale we use Porter's Five Forces model to look at each individual aspect of the industry. Because of the recession that occurred in 2008 this model is even more important now because some companies, like Ford Motor, seem to be making their last ditch efforts to survive.

The first competitive force we're going to look at is the threat of new entrants. In order for a company to break into the automotive industry they would need a massive amount of capital, access to manufacturing facilities, and a phenomenal and differentiated product if they had any hope at all of grabbing any amount of market share. Additionally, the ferocious competition among well-established automakers also prevents new companies from breaking into the market. When looking at a product like automobiles, reliability and quality of work are paramount to the success of a company. For potential new entrants this is almost impossible to convey or prove because consumers are very risk averse when buying products they rely on daily. Therefore, the threat of new entrants to the automotive industry is low to very low.

Next we need to analyze the bargaining power of those companies that supply auto manufacturers with raw



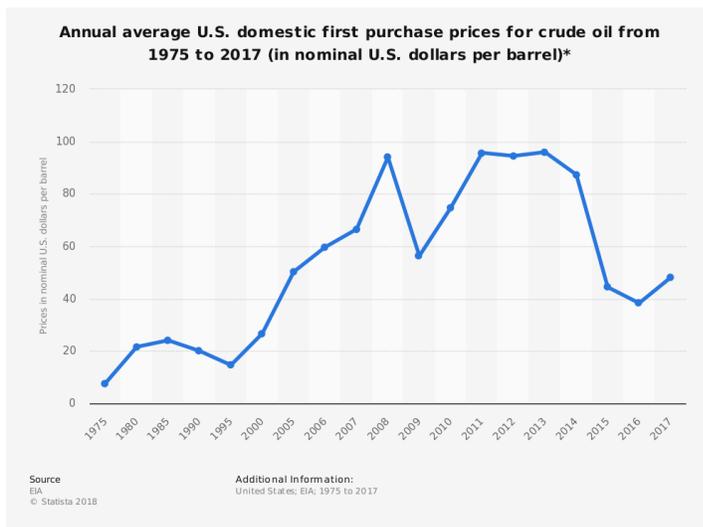
materials. Steel is, and has always been, the most used raw material in all cars and trucks. But because steel manufactures are so high in number, most large automotive manufacturers do not use just one -- they use several. They do this in order to forego being completely shutdown due to the inability of their steel manufacturer to deliver; this factor reduces the bargaining power of suppliers. Additionally, the varying quality of products coming from different suppliers has actually forced many companies to begin their own steel producing and stamping operations. However, because of the steel stamping that is involved with these car parts, the initial investment when switching to new suppliers can be very high, therefore, increasing the bargaining power these suppliers have. Because of these factors, the suppliers' bargaining power ranks between weak and average.

The people who hold the majority of the power in the automotive industry are the buyers. With the dealership-led sales force, auto manufacturers give a lot of power to their dealers and also to their customers. Dealers hold the buying power of auctions and buying inventory in secondary markets over the manufacturers' heads. However, to combat this, manufacturers offer



very competitive financing to their dealers in order to get the newest stock on the dealers' lots. Now, for the final consumers of these vehicles, they have all of the power. With upwards of ten competitive automakers operating globally, consumers have the power to buy

comparable and differentiated products for equal prices in various makes and models. Because of this, companies have to constantly innovate and continue to give their customers a reason to buy their next car from them. Aside, from the single individuals who buy 1-2 cars, government and large-scale contracts are vastly different beasts; but the power remains in the hands of the consumers.



The next force is threat of substitution -- the ability of customers to find another industry that provides what you do. One of the most effective forces driving people to look for other modes of transportation is rising fuel costs. Until very recently, gasoline was on a steady and seemingly unending climb. This caused many more people

to drive less, use bikes, carpool, or use more public transport than they had in the past. When consumers do this, it forces car companies to innovate. It was during this time that we saw the initial rise in hybrid technology. In analyzing substitution, it helps to look at the global economics of complements to the automotive industry; such as oil prices, steel prices, governmental regulations on those industries. As shown to the left, between the years of 1995 and 2008, oil prices skyrocketed. Because of this, the Prius became a very popular model due to its fuel efficiency. Additionally, the Big Three (Ford, Chrysler, GM) began improving their engines and transmissions in order to be more fuel efficient. Ford in particular coined the

EcoBoost engine which has propelled the company forward in the hybrid corner of the market. Therefore, the strength of substitution is rather weak because it has bred more innovation rather than pushing the industry down.

Finally, we need to analyze the rivalry amongst competitors. Before the late 70's and early 80's, the Big Three dominated the US market with 84% of the market share. However, with the rapid introduction of foreign-produced Toyota and others to the US market, competition has been fierce in this industry. Companies compete on both price bases and non-price bases. The market demands constant innovation. This forces companies to fight for resources including human capital that companies believe can design and engineer products to beat out the competition. The most demanded innovations are safety, reliability, and comfortability. We see all three of these in the luxury truck market. When looking at a foreign entrant like Toyota, they have redefined the light-duty truck market with their Tundra and Tacoma models. The biggest knock on these trucks used to be that they were produced overseas. So Toyota actually built plants in the US specifically for their truck models. With so few choices in the truck market, and less people using trucks for "truck stuff", the fuel economy and cabin features have become the main focuses for truck producers. This has led Chevrolet to develop a "High Country" trim level boasting all leather interior, heated and air-conditioned seats and steering wheels, and a cabin that feels like a comfortable living room. Additionally, Ford has focused on fuel economy with their EcoBoost turbocharged engines. Therefore, the force of rivalry is strong to very strong.

When analyzing all of Porter's Five Forces for the automotive industry, we can conclude that this industry is nearly impossible to break into due to high entry barriers led by astronomical capital investments. Suppliers are easy to find but guaranteeing quality is difficult. Buyers makes



the rules and without a reputable brand or radically innovative product, other options will eliminate your chance at joining the market. Even though people do not want to ride the bus, if times are hard enough, they will and they will not

buy new cars. And finally, if you can overcome all of these other factors, the competition will shred to pieces.

### Competitive Positions of Companies

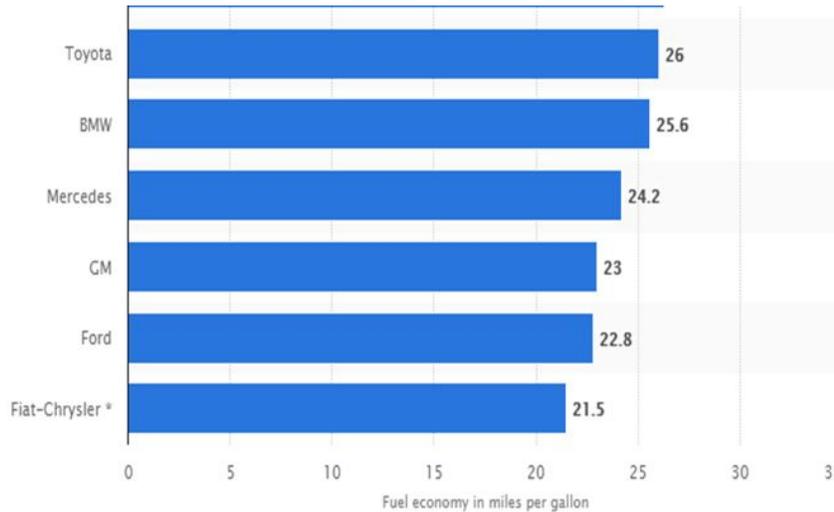
One of if not the most important factor for any business is how will they compete within the industry. There is not business if the company does not position itself correctly with a competitive advantage to either dominate the market and be the industry leader of a blue ocean or fight all the other similar companies and survive in the vicious and ever-changing waters of the red ocean. When evaluating the automotive industry, it has one of the reddest oceans which would lead one to ponder, how do you compete? What makes one automaker superior and leagues above others in certain areas? A fight for supremacy between the giant automobile manufacturers is in full swing. Innovation and enforcing of advantages have intensified not only competition but also the trend toward oligopoly in an industry that has been in a power struggle for decades.

To conduct an analysis on competitive positions within this industry we are going to

discuss 3 companies, Toyota, General Motors, and Ford. We will evaluate them on the three components of competitive advantage which are cost, differentiation, and focus. The first aspect, cost, will be defined as how firms distinguish themselves within sales. It's how you can develop an edge that gets you the sale and takes it away from your competitors. The two usual techniques of achieving this goal is to either increase profits by reducing cost or increasing market share by charging less than competitors. The second aspect, differentiation, involves making your products or services different from and more attractive than those of your competitors. This can be done in a variety of different ways including research and innovation, quality, and marketing, and can be key in succeeding in the automotive industry. The last dimension we will discuss is the focus approach. The focus approach concentrates on niche markets and tries to understand the dynamics of that market and the unique needs of customers within it. Users of this tactic really have great knowledge and are fantastic at knowing and exploiting market wants and needs.

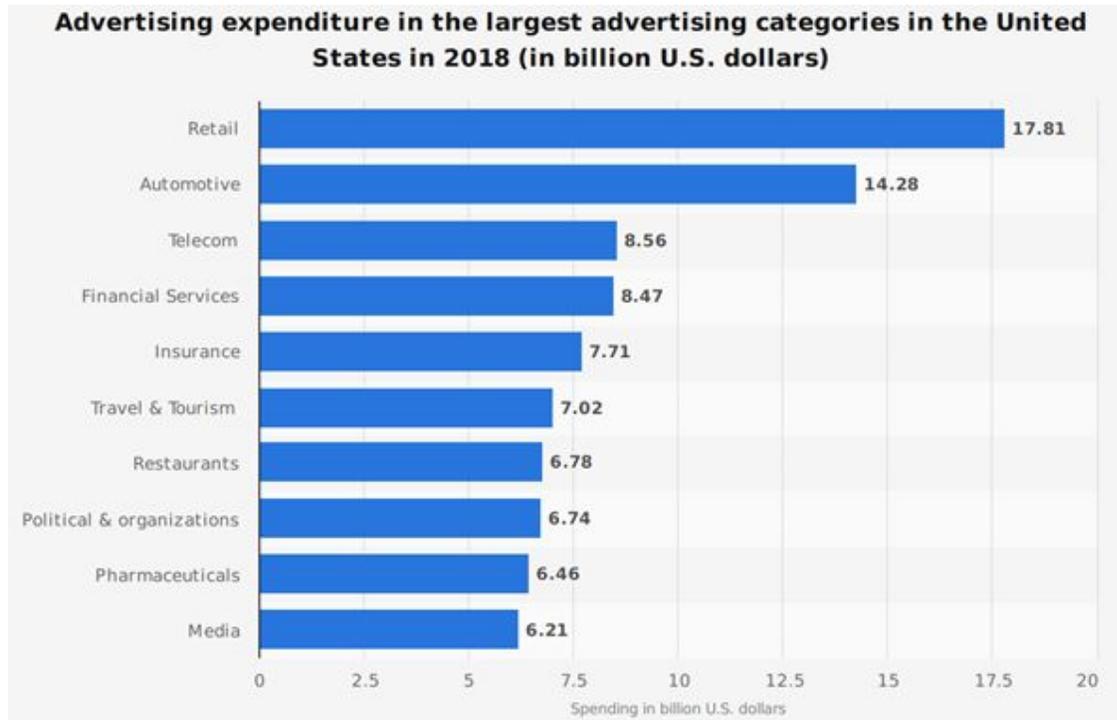
The first company we will evaluate to see how they fair in the automotive industry is Toyota. Toyota Motor Corporation's advantage is stemmed from a combination of the cost leadership strategy and the broad differentiation strategy. They try to lead cost globally being an extremely powerful company worldwide with huge global impact on the auto industry price market. On the other hand, the broad differentiation strategy requires developing business and product uniqueness to ensure Toyota's competitive advantage. They strive to be industry leaders in innovation and fuel efficiency. The combination of these generic strategies supports Toyota's global reach in all market segments. Below is a graphic on Toyota leading both Ford and GM in fuel economy in miles per gallon. This is an important aspect of their competitive advantage and how they are able to combat other companies within the industry. Although the margins are close

there is a significant difference in 22 and 26 miles per gallon in the eyes of the customer.



Next, we will discuss General Motors and see how they position within the industry to stay afloat within the red ocean. Differentiation strategy has a supporting role for General Motors' competitive advantage, however, cost-leadership remains the company's main competitive strategy. The relatively lower prices attract customers, playing into GM's hands on what they are trying to accomplish. A strategic objective for them is to enhance manufacturing process efficiencies through automation and continuous improvement to support General Motors' competitive advantage. They strive to work smarter not harder and work to improve processes every day. In differentiation, the strategic objective is to make products attractive based on features, brand image, quality, and convenience. For example, the differentiation is applied through General Motors' research and use of commercials to advertise and really sell their brand and image. Below is a graph showing how important advertising is within the automotive industry as a whole compared to other industries and why GM believes they can differentiate from the pack and focus their efforts on advertising.

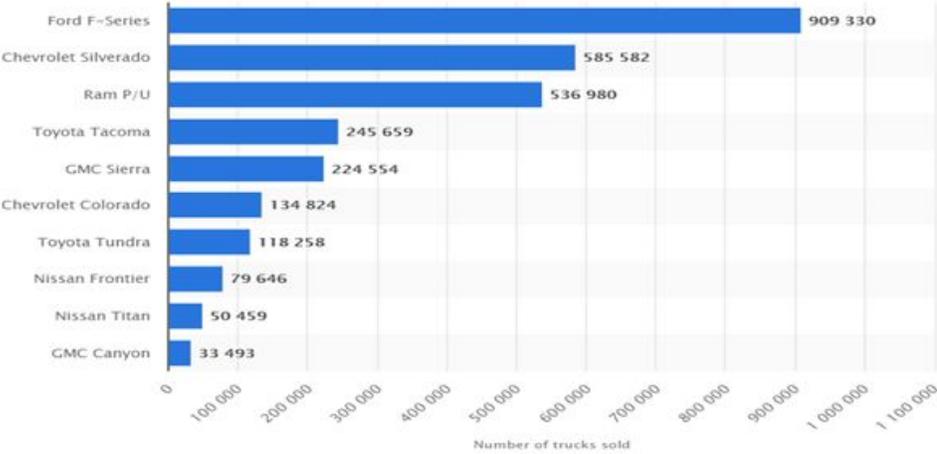
The last company we will relate to the automotive industry and use to compare advantages



within the industry is Ford. Ford's strategy is unique in the fact that it has changed over time. Initially, Ford's strategy was cost leadership. The firm developed the assembly line to minimize costs and maximize productivity which caused outstanding success in attracting customers and rapidly expanding its market share. However, Ford Motor Company's initial strategy did not protect the business from competition and the other companies would catch up. By 1927, GM overtook Ford to become the largest American automobile manufacturer. GM used its strategy of broad differentiation to offer a wider array of products that Ford did not offer. Americans at the time were gaining higher wages and started valuing style and design, and not just low prices. Today, Ford Motor Company has been shifting its strategy to emphasize differentiation and focus developing a competitive advantage. Ford still maintains its cost leadership generic strategy; however, the firm is moving toward other aspects to compete once again with firms like GM and Toyota. From our analysis the way that Ford will be able to compete and maintain its

footing within the automotive industry is its niche specialty in trucks. It has dominated this area within the U.S. and given it an amazing advantage in the automotive industry. Below is graph displaying Fords main advantage and why they have focused on the F-150 for so long.

**The best-selling light trucks in the United States in 2018**



© Statista 2019

**Potential Competitive Moves**

It is important to use the finding to predict future outcomes and draw conclusions about the industry. In our analysis on the competition within the automotive industry we will predicting the future of the industry and how we expect advantages will continue to grow while other advantages may fall behind and become ineffective. With artificial intelligence progressing, self-driving cars, and the electric car skyrocketing due to tesla the automotive industry is truly an arms race. Companies are scrambling and searching for the next new great thing and trying to stay a step ahead of the competitors. An emphasis on hiring young bright innovative minds will be noticeable and old advantages such as cost, and efficiency will only get more and more difficult to compete on. We predict that of the three companies analyzed Toyota will continue to dominate. With its vast resources to pour into research and technology it can simply outspend its

competitors and essentially bring a gun to a knife fight. The graph below displays companies with the most revenue in 2017. As you can see Toyota leads the whole automotive industry, so it has a huge trump card going forward in maintaining an advantage.

### The 100 largest companies in the world ranked by revenue

Search:  Records: 13

	Revenue in billion U.S. dollars
Walmart	500.34
State Grid	348.9
Sinopec Group	326.95
China National Petroleum	326.01
Royal Dutch Shell	311.87
Toyota Motor	265.17
Volkswagen	260.03
BP	244.58
Exxon Mobil	244.36
Berkshire Hathaway	242.14
Apple	229.23
Samsung Electronics	211.94
McKesson	208.36

### Key Success Factors

When analyzing what makes an automotive company successful, the first thing we need to understand is how flexible are they as a company. Are they capable of adjusting manufacturing process and technology rapidly? Can they adjust to changing preferences based on governmental regulations, technology, etc.? The next necessary step is to evaluate their capital utilization and free cash flow. Understanding how their finances are being operated and managed is vital to understanding how the company is performing in the industry. Breaking this down further and analyzing individual regions or continents of operation allows for a closer

examination of excess costs and losses. The next thing is brand recognition and marketing. In such a ferociously competitive industry, the player who spends the most money usually wins. However, because the popular manufacturers are so well-established in the marketplace, it comes down to whether or not a consumer recognizes your brand and has a positive reaction to your products. Building consumer loyalty through customer service, honest public relations, and ethical operations will determine whether or not the public will trust your cars. The industry is more about selling a person a company rather than just one car. Finally, the amount of innovation a company is producing and investing in determines the longevity of a company. In a mature and very competitive industry, “the next big thing” is what keeps companies alive. In the automotive industry, the primary aspects of innovation involve interior design, fuel economy, and reliability. With the technological revolution we are living through, 4G LTE and WiFi has made its way into our vehicles allowing us to stay more connected to people and to our vehicles. Additionally, fuel economy changed the demand for hybrid vehicles in a monumental way. That is why Toyota and other foreign cars became so prominent in the 70’s and 80’s and again in the mid-late 2000’s.

Overall, companies must be competent in the management of their capital, they must be able to adapt to changing market demands, their brand must be trusted and recognized, and they have to be able to innovate quicker than the competition.

## **Conclusion**

The automotive industry has seen many changes over the course of its existence. But through all of those changes one thing has remained constant in this industry: the ability for

companies to adapt and overcome. Competition breeds innovation and the automotive industry is no exception. Vehicles in our lifetime have made monumental changes in aerodynamics, engine performance, technology and design. And the companies that produce those vehicles have managed to find ways to operate and be profitable in the global arena. This industry is one of the largest in the world, and I believe that as long as there are people, these companies will continue to find better and better ways to move us from point a to b.

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