

ASSIGNMENT 1

Topic: Electric Cars

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Introduction

Increase in the competition and stability in cost are the new focus points for the value chain of automobile industry. The competition has increased between different countries for attracting customers to buy their products or cars and maintaining the foot print they already have is also very important. Now-a-days the annual average production of vehicles is 200,000 units. Almost 3500 to 4000 employees are required to manufacture these cars. But due to increasing demand and competition the number of units produced and number of workers are increasing rapidly. The vehicles producing companies are looking for the ideas of producing vehicles that these customers are looking for and for maintaining the competition in long term. They are trying to make vehicles with having financial stability and the risk of loss is least. For this reason the car manufacturers are providing increased number of vehicles and components of vehicles near to the customers. The car industries are increasing the number of manufacturing units in different countries to produce maximum number of vehicles and should be available for them in the show rooms and firms. They are also making new

manufacturing units in the countries which didn't have these units earlier. So now those countries are also producing cars instead of importing them.

The markets which are emerging are having the new sales, because the incomes of people are increasing and so is the demand of new cars. A huge network of supply chain is involved in this process which faces problems when dealing with this huge number of customers. The emerging markets include market of Brazil, Middle East, China etc. which have the capacity to buy 50 % of the cars. The duty barriers and other barriers are the key drivers involved in the process of entering these transport vehicles into the emerging markets. When the companies export their products to the emerging markets but the duties or taxes are more than 30 % which is not favorable. The best option is to make the production unit in each country for meeting the demand of customers. Making these production units is easy, it takes years. Building relationship with the logistic firms and suppliers is also important component of this process.

Few years back, what manufacturers did was that they used to export the vehicles from their own markets and believed that they will provide best facility for transporting these vehicles. Different countries like Japan, Korea and Germany used to do the same but certain economic and political factors has caused loss and forced them to change the policy. According to a report during 2008, the net profit that a country generates by exporting vehicles was almost 19 % but now it has declined to 15 %. It is forecasted that the number would decline more in the coming years because millions of units are not exported and would cause loss. In this way the profit from developed countries is lost.

Another key factor involved in changing the fate of vehicle industry is fluctuations in the price of currency of both states that are trading the vehicles. Due to this the vehicle manufacturers are deciding to make production units nearer to the emerging markets where the sales are most. In past few years the rate of exchange of US dollar and Euro had a difference of almost 10 % but it also went to more than 20 % for almost 2 years. Dollar to Yen rate also faced some fluctuations. When the price of the currency decreases, then the prices of the vehicles increase. When the price of vehicles imported increase, the demand of the vehicles greatly decreases causing serious loss. The manufacturers of vehicles are seeking ways to make more output with less input. The vehicles are standardized and huge amount of the costs are cut down due to this standardization. The new production units formed in the different countries are making vehicles just

like the ones being made in home plants. The benefit of this is that it is increasing the delivering speed of vehicles to the market, reducing the production and development cost.

According to Ford Company's One Ford plan these vehicle producing plants are designed in such a way that it allows producing different vehicles of same size in this plant easily. There are some other factors which have caused the process of making production units in different countries is the cost of logistics which is increasing day by day, the inventory cost and the political factors. The act of emission legislation also affects the process of exporting or importing light vehicles through ships. The production capacity is also an important factor.

Toyota Motors:

It is the Toyota Company who has introduced the first gas electric hybrid car named Prius. The meaning of Prius is to go before which was a great success. EPA of the Prius was also very good which was of around 45 City per gallon. The gases that were emitted from these hybrid cars were less smog forming as compared to the other cars. During 2002, Toyota introduced a new hydrogen fuel cell car which is also called zero emission. Another technology of hybrid was launched by Toyota called Hybrid synergy drive and was installed in all Prius Cars. After that another class of cars was introduced by Toyota in America by the name of Scion. It contained three reasonable innovative cars with great features and was promoted by the marketing plan focusing on youth. It was a huge success. During 2005 Toyota Company expanded their environment friendly line by introducing a luxury hybrid car Lexus RX 400h. The highlanders of Toyota could use this luxury hybrid car. It is also the first luxury hybrid car of the world.

Another hybrid car was introduced under Camry Sedan during 2006. These cars were built in U.S in the plant where a massive number of cars are produced. New plants of Toyota were also built in different cities of America like Texas and new pickup points were also introduced. In 2007 during 50th Anniversary different vehicles were introduced like pickup truck Tundra, Scion XB second generation and a hybrid v8 called Lexus LS 600h was also introduced. In 2008 Toyota's sales increased from the General motors and became world's biggest automobile manufacturers. During 2009, two new gas / electric hybrid cars were introduced by Toyota, one was Prius (third generation) and another was Lexus HS 250h. Another luxury utility car was introduced by Lexus called GX 460 and another generation of same utility

vehicle called RX 350 a v6 power engine car and a hybrid car named as RX 450 h. environment achievement award was also received by Toyota Motors in 2009.

In 2011 an earthquake of 9 Magnitude hit Japan and it was so much strong that it destroyed almost everything. Cities were devastated and businesses were affected by this earthquake. Around 4 to 5 large plants of Toyota were also affected by this disaster and were closed. Tsunami in Thailand also further closed two plants but the production level was returned to normal in the same year because of high efficiency of Toyota. With the help of Scion and Lexus Toyota introduced new designs of vehicles during 2011. Larger and diversified Prius were introduced which were called Prius lift back (third generation), a larger Prius V, Prius C which was smaller than other Prius. In 2012 CT 200 h was introduced by Lexus which is a compact hybrid car. Top safety award was achieved by Lexus for this environment friendly car. Some other cars like GS 450, 350, 350 F were also introduced by Lexus. The sales of Prius increased greatly causing a huge profit for Toyota Company. New plants were also introduced in some other cities of America which provided more than 1500 jobs to people. In 2013 more than 3 million Prius were sold.

Reason of invention of electric or hybrid cars:

The use of fossil fuel emits smog forming gases in the environment which are causing global warming globally, due to which the ozone layer is depleting. So the demand of electric cars has increased because people want a car which is environment friendly. The situation of earth is changing and requires great care and by the help of electric cars we can save as much natural fuels as we can.

Answer:

The vehicles have now stopped using fossil fuels and new technologies like electric cars have been introduced in the society. There are gas / electric hybrid and electric cars available in the society now. Hydrogen fuel cells are being used for this purpose. The future cars are thought to be flying cars or having other technologies but they won't use fossil fuels which is certain. New and developed technologies would be powered by such fuels that could be renewed or reused and does not cause pollution. The prices of the cars would also be low.

The system of navigation is installed in almost every new car because people depend upon satellite for navigating them the way. Now almost every other car has navigation system in it. The new technology of cruise control is being installed which will let the drivers to do whatever they want while the car will drive automatically.

Cars would be made with such technologies that they would do some daily routine cores for us. There is a work in progress by Uber and Google which has helped the drivers drive taxis with the navigation system installed in the mobile apps or car. This guides the driver about the destination where the passenger has to go. It tells the shortest possible routes to reach the destination and the traffic on the way and alternative routes if the road is blocked due to traffic. A voice or artificial intelligence assistant then tells the driver to move left or right. The idea of adding radars to the cars is also a good idea because it will help the driver to avoid collision as it can tell about the cars ahead of them and their speed.

The new automobiles are going to be made of material which is light in weight. The efficiency and responsiveness could be increased by this feature. Some companies are using Aluminum while others are using carbon fiber just like BMW's electric car. These are also used to make super cars. Soon carbon fiber would be used to make basic cars.

Just like the smartphones have sensors of finger print or face recognition, many cars are now having such sensors installed in them to unlock or start the vehicle. More security is provided as the only person whose finger print is saved would be able to unlock the car. This will greatly decrease the risk of getting rob or car being robbed.

There are some technologies that have been introduced in the luxury cars or supercars like automatic braking technique which can help in avoiding any accident or collision from front. There is this system of blind spot warning also introduced which also prevents accidents. Lane drift prevention system is also being installed in luxury cars. Soon in the near future these will be installed in basic cars also. What basically these technologies do is that suppose your side mirrors are not adjusted and you have missed the bling spot, your car would with the help of alarms warn you about any side or frontal collision. When you feel sleepy, the car understands the streets or lanes and will help you to get back on the track automatically. Suppose one is looking at their cell phone, the car with the help of collision mitigation system will understand if any collision is about to take place and apply brakes

when required. So many accidents could be prevented with the introduction of these apps to every basic car.

Conclusion:

In the beginning the new focus points in the value chain of automobile industry are discussed which are increase in the competition and stability in cost. The competition has increased between different countries for attracting customers to buy their products or cars and maintaining the foot print they already have is also very important. The car manufacturers are providing increased number of vehicles and components of vehicles near to the customers. The car industries are increasing the number of manufacturing units in different countries to produce maximum number of vehicles and should be available for them in the show rooms and firms. The duty barriers and other barriers are the key drivers involved in the process of entering these transport vehicles into the emerging markets. The best option is to make the production unit in each country for meeting the demand of customers. What manufacturers did was that they used to export the vehicles from their own markets and believed that they will provide best facility for transporting these vehicles.

There are some other factors which have been discussed that caused the process of making production units in different countries is the cost of logistics which is increasing day by day, the inventory cost and the political factors. The meaning of Prius is to go before which was a great success. The gases that were emitted from these hybrid cars were less smog forming as compared to the other cars. Use of fossil fuel emits smog forming gases in the environment which are causing global warming globally, due to which the ozone layer is depleting. So the demand of electric cars has increased because people want a car which is environment friendly. The situation of earth is changing and requires great care and by the help of electric cars we can save as much natural fuels as we can.

The vehicles have now stopped using fossil fuels and new technologies like electric cars have been introduced in the society. There are gas / electric hybrid and electric cars available in the society now. The system of navigation is installed in almost every new car and the importance of which has been discussed in the essay. Introduction of light weight material is also highlighted in the essay that carbon fiber is being used in electric cars. Like the smartphones have sensors of finger print or face recognition, many cars are now having such sensors installed in them to unlock or start the vehicle.

These sensors are of great importance when we talk about the security concerns. Some other technologies have been discussed that have been introduced in the luxury cars or supercars like automatic braking technique which can help in avoiding any accident or collision from front. The system of blind spot warning is discussed which is also introduced to prevent accidents. Lane drift prevention system is also being installed in luxury cars. It is told in the end that these features will be installed in basic cars too.

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