

Advantages and Disadvantages of Electric Cars



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Introduction

People live in a fast-paced world, where there is a constant need to travel to different destinations. Based on that, there is a need to ensure fast and convenient transportation by motor vehicle. Carburetor-powered vehicles have been used for sports since ancient times (Secinaro et al., 2020). In recent studies, it has been highlighted that fossil fuels are not renewable. Their prices fluctuate and pollute the environment. This has led to the emergence of other energy sources for motor vehicles that are relatively environmentally friendly and inexpensive. In most cases, electric cars are an almost ideal solution to this problem (Holmberg and Erdemir, 2019). This is considered one of the best inventions of modern time. Therefore, the report aims to investigate the electric car development and its possible advantages and disadvantages with related examples.

Definition

An electric vehicle is a motor vehicle powered by electricity. This vehicle does not contain the fuel emission process due to its engine capacity and capability (Knobloch et al., 2020). From the development measures, there are three types of electric cars: electric cars that are powered directly from an external power source, electric cars with rechargeable batteries, and electric cars with built-in generators for driving (Paoli and Gül, 2022). In addition, electric cars do not necessarily run on fossil fuels. For example, this is based on renewable energy sources, such as the sun and wind. These are the sources that can also be used to generate electricity. In an electric car structure, electricity is transported via overhead cables and stored in batteries. Electric vehicles are connected to a power source for several hours to charge batteries that store the energy needed to drive them (Secinaro et al., 2020). However, electric vehicles have not been fully deployed as they are still in the pilot phase and require small infrastructure, such as charging stations on motorways.

Working of Electric Car

As mentioned earlier, electric vehicles run on electricity generated by energy storage devices, such as rechargeable batteries. The electrical system of electric cars consists of three main components: an electric motor, a regulator, and a rechargeable battery (Cunanan et al., 2021). The machine contains a battery made by connecting many smaller elements. The battery drives an electric motor with a differential that turns the wheels (Datta, Hossain and Roy, 2019). In addition,

the engine charges the battery when the car is moving and braking. Electric vehicles also have devices that convert electric current from one form to another (Bauk et al., 2020). An example of such a device is a boat charger, which charges the battery by converting electricity from direct current to alternating current and vice versa. The electric motor plays a similar role to the petrol-based automobile.

Advantages of Electric car

Although multiple advantages have been observed to the electric cars. This is because the new invention and technology have brought a great environmental change. This has a direct impact on the society and life of people. Under such conditions, the following are the major advantages that have been observed in the electronic cars:

Energy Sustainability

Environmental considerations have been the main reason for the desire to use environmentally friendly energy on the roads. Electric vehicles are a potential solution to the growing confidence in imported oil in most countries (Alamoudi et al., 2019). Weaker economies suffer from energy shortages, one of their major development issues. For example, people around the world are suffering from the climate change issue., The usage of fossil fuel consumption vehicles is creating this issue. The solution for this aspect has been provided in electric cars (Abid et al., 2021). These are the cars that are efficient for reducing the emission of carbon dioxide by reducing burning. Consumers have realized that they have an important role in protecting the environment. They now want to contribute to a more sustainable environment by reducing their carbon footprint on individuals. Electric cars seem to be a viable solution to this need in the short and long term. Better Place contributed to this decision with its innovation strategy.

Many opponents of electric cars claim that these cars are less environmentally friendly due to long-term emissions of green gas (Datta, Hossain and Roy, 2019). These opponents argue that making electric vehicles energy efficient requires the creation of green power plants. Some give examples of electric cars based on coal-fired power stations, claiming that they can increase greenhouse gas emissions by up to 20% (Stopka et al., 2020). Companies understood this and collaborated with Green Generators. In countries like Denmark, companies are working with wind turbines. In Israel, the company is developing solar power plants. The company is looking for ways to offer comprehensive sustainability solutions (O'Shaughnessy et al., 2019). However, much

remains to be done in this area. Australia needs to build more infrastructure to support green energy. It provides adequate support to customers even as the market grows. Over the next nine years, the electric car industry is expected to reduce CO₂ emissions by 40% (Bhaskar et al., 2020). This is achieved through interdisciplinary cooperation between generators and electric car suppliers.

Lower Maintenance

Maintenance is one of the most essential aspects for car dealers. People around the world own several cars that they use daily. Such cars need special protection to avoid damage to the people (Alamoudi et al., 2019). In regular measures, the traditional car requires special management and up-gradation regularly. For example, this needs tuning, oiling and continuous engine protection services. But the situation with electric cars is much easier. Consumers are not required to pay much attention in this regard. As the car is energy efficient, there is no need for regular oiling and tuning (Bauk et al., 2020). Therefore, as a consumer of the electric car, one need can easily manage the cost most effectively and efficiently. Based on that, it has been assumed that the need for the maintenance of electric vehicles is much lower than for other cars. This is considered one of the best advantages of electric vehicles.

Energy Efficiency

Every electric motor requires sufficient energy to operate. However, the manufacturing of electric vehicles is based on a similar trend. In a similar situation, the car is being driven with less energy. Concerning the other, the electronic car needed less energy consumption (Datta, Hossain and Roy, 2019). However, it has a sustainable source of energy. Still, it is using less energy as part of the management. For example, if a traditional car consumes five tanks of fuel to cover a specific distance, the electric car will take around three tanks of fuel to cover the same distance (Cunanan et al., 2021). This is how the car can provide several advantages in the form of taking less energy as compared to others.

Disadvantages of Electric Car

All scientific inventions are believed to come up with the latest technology. And every technology in this regard contains relevant disadvantages to be considered as management. Following are some of the common disadvantages of the electric car.

Car Performance Issues

The electric car stakeholders have addressed the inefficiencies that have previously affected the electric car market. In the past, there were concerns about the longevity of electric vehicle batteries. Most batteries have a short life and require regular recharging. Entrepreneurs are tackling this challenge by creating lithium-ion batteries (Alamoudi et al., 2019). These devices have proven more efficient than previous experiments, as more energy can now be stored in electric vehicles. For example, the lithium-ion battery has twice the capacity of the previous model. A lot has changed in recent years, and when this new battery is achievable, the performance of electric cars will continue to improve. All it needs to do is focus on continuous innovation to overcome the barriers that consumers may face (Abid et al., 2021). In the past, electric car users had to park at charging stations for a long time to recharge their batteries. The battery leaks every time the driver uses an electric vehicle. After a while, the battery needs to be charged to power the vehicle. For instance, in the old electric car charging systems, most customers had to wait a long time at the charging station because the process took a long time. However, electric car companies solved this problem by introducing a battery replacement system. Instead of waiting for the battery to charge, companies simply replace an empty car battery with a rechargeable battery (da Silveira, Lermen and Amaral, 2021). They have revolutionized the electric car industry for the convenience of their customers.

Installation Of Charging Networks

These electric vehicles are likely to work better thanks to the various charging stations across the country. All-electric vehicles need easy and safe access to the charging station to compete with traditional vehicles. For example, there are about 11 public charging stations in London and one private charging station in Wales (O'Shaughnessy et al., 2019). Still, these charging stations are not enough to deliver the required energy sources to these cars. This needed special considerations and management of the car manufacturing along with appropriate amounts

of energy to be used. For example, the charging needed to install more plants around the world. In the United Kingdom, there is a great population. Also, the trend for electric cars is increasing. As a result, this is becoming much more challenging for the companies to develop updated charging stations (Cunanan et al., 2021). Moreover, customers are also required to have a good understanding and wait for the charging of their vehicles due to the availability of limited options.

High Investments

The electric car is one of the great investments in the economy. The development of the car needed special consideration along with management opportunities. For instance, the car's development must be based on the wide plant. The plan needed great investment to set the structure for manufacturing (Holms and Argueta, 2019). On the other hand, the electric car is based on the latest technology. Such technologies are also demanding high investments. Although from the production measures, the companies are required to have a huge amount for manufacturing the car (Cunanan et al., 2021). On the other hand, the customers, in return, need to pay a great amount as per the car value. Therefore, with high investment measures, it is believed that the company is suffering from great issues related to its management (O'Shaughnessy et al., 2019).

Limited Car Availability

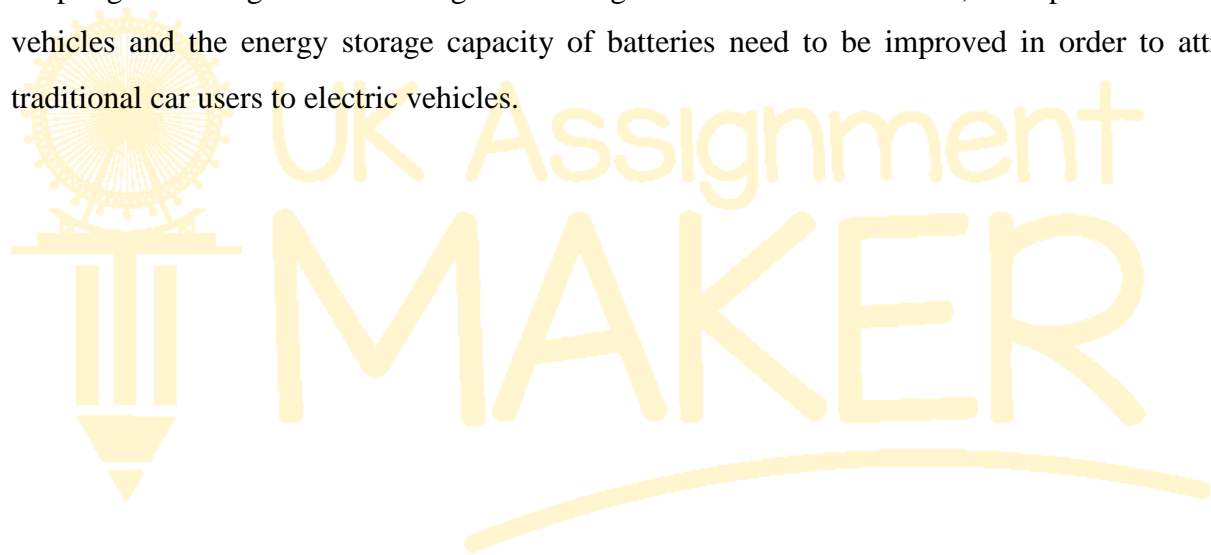
There are a lot of people who need electric cars. They are claimed to be car lovers trying to invest their time and money in automobiles. These car lovers have multiple expectations regarding their cars. But in the case of electronic cars, they have a very limited variety (Datta, Hossain and Roy, 2019). As this is an electric car, the shape and size of the car are inflexible. The companies are manufacturing or coming with limited options for the customers to purchase their desired car. Therefore, it is becoming a major issue to manage in the working environment (Cunanan et al., 2021).

Conclusion

In the current period of global warming and recession, where almost everything has risen, it has become necessary to use environmentally friendly and cheaper energy to power machines. Therefore, electric vehicles play a key role in protecting the environment due to their very low emissions.

The electric vehicle is a general term used to denote various electric road vehicles. The power source may be an onboard rechargeable battery or other electricity generation and storage device. The solar panels on board are powered by electric vehicles, better known as solar cars. And those who get electricity from gas stations are called hybrids. Similarly, a battery-powered car in a boat is more precisely referred to as a battery-powered vehicle. Recently, the term electric vehicle has been used only to refer to an electric vehicle powered by a lithium-ion battery.

The car, along with various advantages, has created some major challenges for people who are in need of this car. Such as this needs special efficiency. Rechargeable points, along with high investment. This is a creating barrier to the development of the new cars. However, electric vehicle manufacturers must market these vehicles. In addition, the public must understand the benefits of adopting technologies to reduce greenhouse gas emissions. In addition, the speed of electric vehicles and the energy storage capacity of batteries need to be improved in order to attract traditional car users to electric vehicles.



Self-Evaluation

Self-evaluation is the best tool to highlight the strengths and opportunities regarding oneself for performing specific things. This has a direct impact on the development opportunities of the people (Bhaskar et al., 2020). Similarly, in my cases, I have also evaluated myself while performing this assignment throughout the module.

Challenges I Have Faced

Every time people face various challenges while performing new things. This is the regular aspect of the human considering the situation (Bauk et al., 2020). Based on that, I have also faced some challenges while performing this task. One of the major challenges of working is the wide variety of information. Although the viability of the information is the opportunity for performing the task, in my case, the assembling of such information became a challenge. The electronic car is a hot topic that contains various views. Therefore, I took a great time to consider the best information to share in this assignment while leaving others. This needed special skills for summarising that I lacked at the start. However I have completed the task, but it took too much time.

Apart from this, the second challenge that created barriers to the task completion is related to the team working. I am the person who always remains engaged in the team working activities as this is having a great working aspect in the management. But the module did not focus much on team working. The above assignment was also based on the individual's task. This was a bit challenging or problematic for me. As per my personality, I am the person to deal with group working. This includes working with proper discussion and taking feedback from the group members. But on this assignment, I was all alone to perform the task. As a result, I have no one to comment on or provide feedback on my work. This created one of the major challenges for me to maintain my reputation in working conditions. This is how this becomes an essential aspect for me to consider. Moreover, in relation to time, the team management could have done this work in a much easier format. But as I was alone, I needed to spend more time consuming the assignment. Due to this, time management has also become one of the problems that I have suffered while considering the work and focusing on this assignment.

What I Enjoyed In This Assignment

First of all, there are various aspects that I have enjoyed in this assignment. The topic itself has been of great interest to me while doing the research. I am the person who always remains engaged with cars. This is one of my passions to keep the updated knowledge about the cars and their related aspects. Therefore in-depth research on this topic increased my interest. Although I am glad, I had my own choice to choose the topic. Based on that, I selected my favorite topic. On the other hand, I realised that at the start, I did not have much information about the topic itself. Although this is a car-based topic, I have got new information. For instance, I got to know about the efficiency of the energy by the fact that electric cars consume less fuel. This was one of the major discoveries of information that upgraded my knowledge.

On the other hand, I realised that my writing skills have improved through the module. And this task has provided me with an opportunity to prove that. I have gained great knowledge about purchasing and related aspects. I have also enjoyed this assessment due to various difficulties. As mentioned above, I have faced some challenges and problems. All of them have provided me with chances to develop my skills. For instance, during summarising information, I was both confused. But later, as mentioned, I tried to collect the relevant information while leaving others behind. This was the development of the summarising skills that I have developed in this assignment.

Moreover, my interest in this topic was the best aspect of the assignment. The intention of this assignment was not only to provide the piece of paper for the marks but to gain effective knowledge and perform what I like the most. The discussion of this topic allowed me to put all of my concentration into finding the best point to discuss in the assignment. Therefore, I have claimed that I have learned a lot of things while performing this assignment. Due to this, I can say that this was the best experience of the module and not only provided knowledge and increased my searching and summarising skills.

Improvement Opportunities

From the learning aspects, I have gained great knowledge. This has a direct impact on the improvement of my skills and the development of my cognitive abilities. For instance, as per the situation, I am much able to have searching skills and valuable abstract information in the most authentic manner. This is creating great chances for development in the working environment. Still, from the challenges, I have pointed out some major potential for improvement. For instance,

I faced great difficulty working alone rather than in a team. Therefore, I must increase my personal skills to work independently from others. Under such a situation, I can focus on my work and will get engaged in the working management aspects. For example, I must try to perform all the roles such as planning, organising and maintenance of activities. This can create my personal and professional skills for the management of activities and performing a task in an effective manner.



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