Name

Professor name

Subject

Date

Introduction

The current study aims at determining the market for electric cars in the future and how they would replace the gasoline cars. The prominent reasons that the study will research for identifying the future scope of Electric Cars (EVs) include its benefits such as environment friendly and fuel efficiency. Perceptions of drivers will be examined for understanding the future of EVs market and how efficient they will be in replacing traditional cars.

Statement of research question

Does environment benefits and fuel efficiency improve the market for electric cars compared to the gas cars?

Significance

The topic holds significance as it will allow future researchers to study the factors that are important in determining the future markets for Electric Vehicles (EVs). The results of the quantitative online surveys will provide better insights to the readers about the attitudes and perceptions for drivers associated with EVs and traditional cars. The application of the rational choice theory is also useful as it explains the reasons for drivers to switch to new cars.

**Literature review**

Literature studies depict that electric car is a better choice compared to the conventional vehicles that consumes massive amount of fuels. As the society will be unable to fulfill their energy requirements due to oil depletion. Forecasts state that the sales and use of electric cars will increase after 2020 due to the cheaper batteries and longer range (Knowles). Studies are conducted to examine the costs and benefits of electric cars. Fuel saving remains the visible advantage of the electric cars as it consumes only 38% fuel in the city and 20% in the highway when compared to the fuel consumption of the conventional vehicle. The in-built design of the engine makes electric cars more fuel efficient resulting in low carbon emission. The costs faced by the driver of electric car is two times smaller compared to the conventional vehicle. The cost of fuel per mile is 0.05 to 0.07 dollars. While in case of conventional vehicle the cost per mile is recorded as 0.10 to 0.15 dollars. The electric car is a better choice compared to the conventional vehicle in terms of performance and efficiency. Consumption of less fuel makes electric cars more efficient as they eliminate environmental pollution (Weiss, Zerfas and Helmers).

The perceived benefits depend on the technical and environmental aspects. The basic function that provides leverage to the electric car is the technology enhancement allowing it to store energy in battery compared to the conventional vehicle’s storage of fuel. Combining efficient combustion engines with the batteries enhances the performance of these cars. Batteries also provide supplementary engine power that allow speed recovery. Regenerative braking is an additional feature that provides an edge to the electric car’s technology compared to the conventional vehicles. Braking in stop-and-go traffic leads to enhanced efficiency (Deb).

Methods

The present study will use empirical evidence by conducting search on web and by finding relevant studies from credible database. Relevant studies will be retrieved from credible sources such as Emerald, Jstor, Sage, Science Direct, Springer, Wiley and ProQuest. Primary survey will be conducted by investigating the drivers of electric cars. Quantitative survey will be conducted through online questionnaire. The drivers of the electric cars will be asked if they are satisfied with advanced vehicles or not. Questions will also inquire their future decision of using EVs or conventional cars. Rational choice theory will be used for determining what factors influence drivers to switch to EVs. Statistical software SPSS will be used for the computation of the results. Different statistical techniques such as correlations and ANOVA will be estimated for determining the relationship between variables.

Work Cited

Knowles, Michael. "Through-life Management of Electric Vehicles☆." Procedia CIRP 11 (2013): 260-265.

Weiss, Martin, Andreas Zerfas and Eckard Helmers. "Fully electric and plug-in hybrid cars - An analysis of learning rates, user costs, and costs for mitigating CO2 and air pollutant emissions ." Journal of Clean Prod 212 (2019): 1478–1489.

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