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Environmental Analysis of Electric Vehicles Industry

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Introduction

Business organisations need to find innovative idea continuously to become successful in the competitive market place. The need for innovation has dependent on so many factors and the business environment is one of the most crucial things that should be given more value by the management of any organisation. Both the internal and external business environmental factors have a huge impact on the pathway of a business (Worthington, Britton and Thompson, 2018). To fulfil the need of the customer, every organisation needs to be attached with innovation and analyse the external environmental factors. In this report, the modern electric car industry and the environmental impact on this industry have analysed briefly. There are so many hydric electric vehicles has innovated by lots of companies. Its need and demand have also started to go high. As this type of car can get energy from the battery, solar panel and other energy generating sources rather than the natural fuel, this type of cars have started to become one of the main attractions of the buyers. In this report, the process of organisational change for innovating this type of car along with the reason for bringing this change are described.

PESTEL analysis and ranking in the context of Electric Vehicles Industry

PESTEL analysis is conducted to evaluate the external organisational environment. It is a marketing specialist system or method for evaluating and tracking macro-environmental elements that influence an enterprise (David and David, 2016). The electric car industry has to face the influence relating to the external business-related environment. Here a PESTEL analysis is conducted to evaluate the external environmental factors in the context of the electric car industry. All the analysis is listed here by their influence level on the electric vehicles industry,

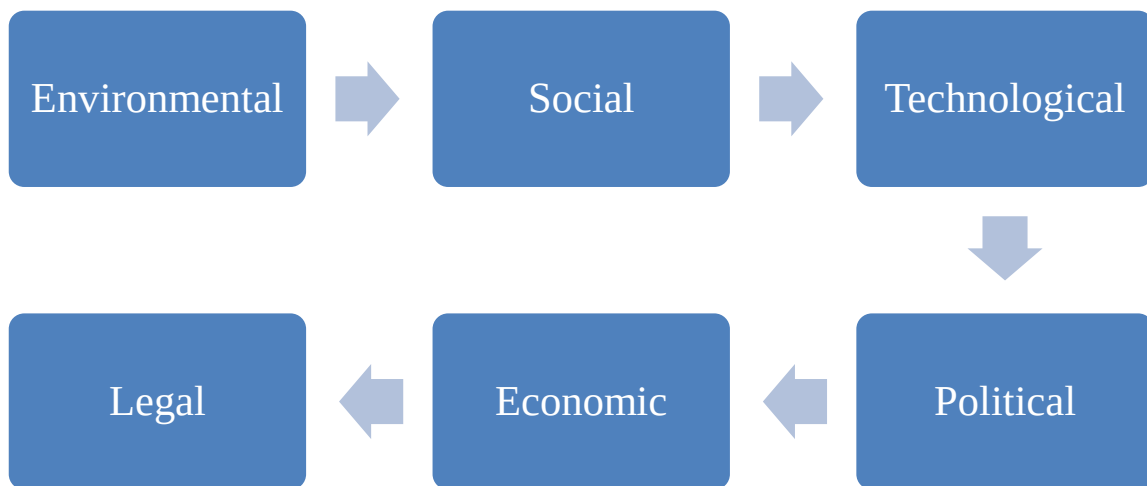


Figure 1: Ranking of the PESTEL analysis

Source: Author

Environmental: The environmental issues are influenced by the car industry more than any other thing as the cars are using organic fuel which is highly adverse for the environment. So, most of the car manufacturing companies are trying to innovate the cars which will not create havoc for the environment (Novak, Sparl and Ažman, 2015). As a result, more and more companies are coming forward to convert their product based on electric energy. Government of many countries of Europe has to provide facilities to the EV industry to enhance its production.

Social: The impact of society is much positive to the production process of the EV industry. Because peoples will be more benefited by using electricity as the energy system of the cars rather than oil or gas which are costlier and unhealthy.

Technological: The impact of technology is huge in the EV industry. The European companies have started to adopt the EV formula because of there technological advancement. Primarily the Li-ion battery technology has used which has tried to improved day by day by the top companies like BMW, Volvo, Audi and others (TechCrunch is now a part of Verizon Media, 2020). The continuous improvement in technology will reduce the cost of production in large scale.

Political: Because of its economic and technical advantages, policymakers are seeking to encourage the EVs. The governments throughout Europe offer both manufacturers and purchasers of EVs incentives and extra perks. The government agencies also cut taxes on the production and distribution of these cars. According to the information of the case study that the government invests in the construction of the EV system. According to (Privacy settings, 2020, in the Netherlands, for example, the sales contribution for full-electric lease vehicles was 0% in 2013 and 4% in 2014, compared to 14-20% for ICE vehicles.

Economic: The lower battery and community panels allow EV manufacturers to reduce their vehicles' prices (Roy, 2017). They also benefit from the simple accessibility of financing. Governments do provide financial incentives and investments that provide a benefit to this industry.

Legal: The legal factors for the EV industry is not too much influential. Because the government of the European countries are helpful to this industry. Again, it is not harmful to the environment so the EV industry may not have to face many legal restrictions.

Discussing Porter's Five Forces to evaluating the industrial competitiveness of the Electric Vehicle Industry

Porter's Five Forces is a tool which is used for measuring the industry competitiveness of a particular sector. There are five forces which are analysed in this analysis to evaluate whether a new industry is suitable for the new business organisation or not (Lynch, 2018). Many of the European country-based companies are adopted this technology for its varieties of

advantages and cost reduction facilities. Here Porter's Five Forces analysis is given below in the context of the European EV industry,

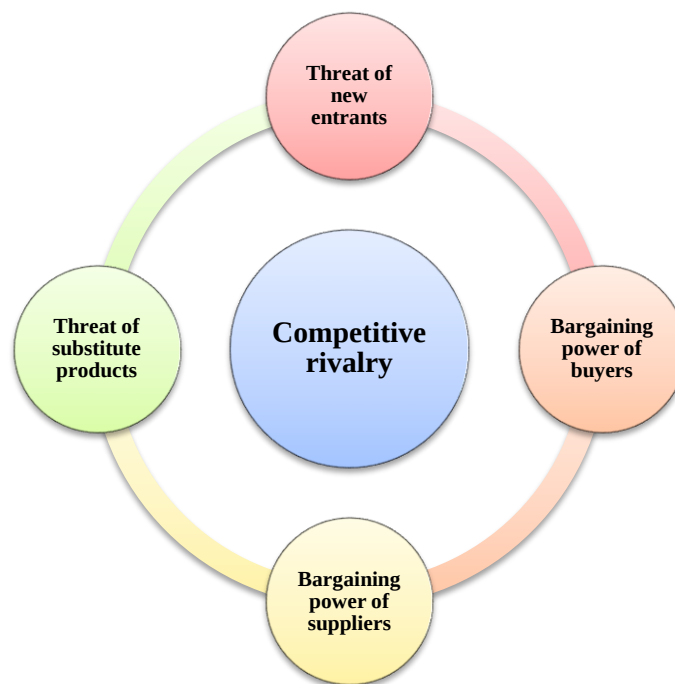


Figure 2: Porter's Five Forces analysis

Source: (Birkinshaw, 2016)

Competitive rivalry: Competitive rivalry is very high among the different companies in the EV industry. Because most of giant vehicles manufacturing companies are involved in this sector like Volkswagen, Kia, Fiat, Nissan, Tesla, Mercedes Benz, Skoda, Audi etc (Interbrand - Global Brand Consultancy, 2020). So, it will be very difficult for a new company to enter this industry.

The threat of new entrants: The threat of new entrants is low in the EV industry. Because the manufacturing plant needs to restructure to start the production of electric cars. Again, most of the car manufacturing giants are involved in this EV industry to make it more difficult for entering as a newcomer.

Bargaining power of buyers: It is very cost-effective for consumers to turn quickly to another. Due to various brands, their electric car model is subject to different prices. This power is much greater. Besides that, buyers have also been helped by the small number of people's vehicles.

Bargaining power of suppliers: In this sector, the chances of manufacturer convergence are much less likely to be forwarded. For separate parts, EV manufacturers retain multiple providers (Wells, 2010). As a consequence, the frequency of this power is mild. To reduce their prices, EV manufacturers should continue retrospective integration.

The threat of substitute products: Threat of substitute products is moderate in this industry. Because the cost of EV is low than traditional cars. But if the customers choose not to buy cars and use public transport, in that case, the threat of substitute products is high.

In conclusion, it can be said that the bargaining power of buyers and competitive rivalry is high in the EV industry. On the other hand, the bargaining power of suppliers and the threat of new entrants is low. The threat of substitute products is moderate in the context of the EV industry.

Critical analysis of organisational and other changes in the EV industry which may take place in future

The organizational change represents the cycle of systemic, decision-making, political, economic, and technical change in an enterprise that impact and illustrates trends in the economy or sector (Pugh and Mayle, 2012). This is also a continuous process that will take place daily. There is still a lot of difficulty in manufacturing electric cars. Further components are required in electric cars than traditional vehicles. So, when an organisation has tried to involved in electric car manufacturing it must have to change its organisational settings. Especially, the companies need to change their manufacturing facilities. The attempt to reduce the carbon emissions motivates ecologically aware citizens to purchase electric vehicles. Some are also capable of paying a zero or reduced-emission replacement premium to Coal. For instance, the "environment" is the major reason for 29 per cent of Norwegian purchasers to buy EVs. So, in the first phrase, the car manufacturing companies must have to change their manufacturing style for producing electric cars.

All the companies which have the vision to make electric cars need to change their infrastructure and technological process. Provided the cost of large-scale network deployment, Europe is too relevant to be faced by the government sector alone; in the coming years, the economic feasibility of charging technology is one of the most significant obstacles for the e-vehicles market (Scott, 2014). So, to start the production procedure of EV, the manufacturers need to think about the charging facilities by providing utmost priority. To

respond to this factor, in the recent year the electric car manufacturing companies have involved with so many changes. One of them is battery swapping. Despite several controversies and market failure in Denmark and Israel, this technology is used by Tesla that has possessed the capability to swap batteries for its prototype S and it confirmed it would pilot power supply exchange stations in the United States based on this technology.

The technological change regarding the charging behaviour all the companies have tried to bring change in the time scale and behaviour of charging. It takes just a couple of minutes to refill an ICE car at a gas station, and the network is open. For full battery EVs it takes 20-30 minutes to load even a battery up to 80% (TechCrunch is now a part of Verizon Media, 2020). As a result, all the companies which are involved in EV production should try to make the charging process faster. It can be possible with high-quality technological changes. If buyers that do not have direct connections to a basement or any other private or semi-private residence parking – a large number of people in cities – also adopt electronics, the importance of public charging points will significantly raise. For example, about three-quarters of all residences have an allocated parking space in Germany. However, two-thirds of the house have a little basement but off-street parking, going to look only at the urban city of London. So, to reduce this problem, the car manufacturing company has to establish public charging points to provide more advantages to the customers.

Although ICEs are predicted to dominate by 2020, they will play a key role in the energy industry by the year 2030. The governments now give tax breaks to manufacture electronic vehicles. Businesses must take this chance because they will control the market in future. To achieve that, EV manufacturers should take part in electric car production.

Critical evaluation of the reasons for organisational change in the context of the EV industry

There are some crucial reasons for making a change in an organisation relating to the EV industry. Nowadays, consumers are ecologically conscious. They are also funded by the government and new regulations and limits on electric vehicles, one of the main sources of emissions. The government agencies want to decrease their dependence on imported fuels as well. Reduced imports of fuel will save a huge sum of money mostly on the economy. So, it is considered as the basic reason for making organisational change and start the production of EV. The production process of electric cars is different from traditional cars. As a result, the companies must have to change their production process for producing EV (Nieuwenhuis,

Wells and Vergragt, 2018). Organisations must need to involved in the changing procedure to make the charging facility available to the customers because it is considered as the main problem of commercialisation of EV. The benefit of these cars is that they are charged at home. The authorities also establish the charging base along with private corporations. This is also projected that by the year 2025, battery prices are reduced to \$160/kWh. All of these aspects enable organizations to bring in internal changes and respond to the growth of EVs.

Conclusion

In summary, the environmental consciousness of general customers has provided the EV industry with a huge market base. It has made easier for the car manufacturing companies of install electric engine because it is cost reductive and even the government of European countries have provided so many advantages to those companies. This industry remains prominent at the early adoption stage. Such cars are known to be nearly green. In fact, with this development, companies are experiencing further improvements. They also create new approaches that will allow them to put themselves more strongly on the market. After all, some vital organisational change and more investment in the technology can make this industry to grow by a large extent.

References

- Birkinshaw, J., 2016. *Strategic Management*. Northampton, MA: Edward Elgar Pub.
- David, F. and David, F., 2016. *Strategic Management*. Pearson Education UK.
- Interbrand. 2020. *Interbrand - Global Brand Consultancy*. [online] Available at: <<https://www.interbrand.com/>> [Accessed 16 May 2020].
- Lynch, R., 2018. *Strategic Management*. Harlow, United Kingdom: Pearson Education Limited.
- Nguyen, T., 2017. Management education as an industry and MBA as a product: revisiting joint MBA programs using Porters five forces model. *Global Business and Economics Review*, 19(3), p.356.
- Nieuwenhuis, P., Wells, P. and Vergragt, P., 2018. Technological Change and Regulation in the Car Industry: Introduction. *Greener Management International*, 2004(47), pp.5-11.
- Novak, A., Sparl, P. and Ažman, S., 2015. Impact of customer satisfaction on financial results of car servicing companies: findings from Slovenia. *E+M Ekonomie a Management*, 18(3), pp.113-128.
- Pugh, D. and Mayle, D., 2012. *Change Management*. Los Angeles: SAGE.
- Roy, R., 2017. The Changing Face of Performance Improvement: Lessons Gleaned from the Electric Car Company. *Performance Improvement*, 56(6), pp.49-50.
- Scott, B., 2014. Facilitating organisational change: Some sociocybernetic principles. *Journal of Organisational Transformation & Social Change*, 4(1), pp.13-24.
- Techcrunch.com. 2020. *Techcrunch Is Now A Part of Verizon Media*. [online] Available at: <<https://techcrunch.com/>> [Accessed 16 May 2020].
- Volkskrant.nl. 2020. *Privacy Settings*. [online] Available at: <<https://www.volkskrant.nl/>> [Accessed 16 May 2020].
- Wells, P., 2010. Creating new value-added configurations in the electric vehicle industry. *World Electric Vehicle Journal*, 4(4), pp.823-834.

Worthington, I., Britton, C. and Thompson, E., 2018. *The Business Environment*. Harlow, United Kingdom: Pearson Education Canada.