

The Global Business Environment

Assignment 1

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Electronic Vehicles in Europe: Gearing Up for a New Phase

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Introduction

In Europe, 13.3million people are directly or indirectly associated with the automobile sector which is 6.1 percent of the total employment. In 2017, passenger car registration grew by 3.4 percent and more than 2.6 million truck, bus, and coaches were sold across Europe. Manufacturers exported 5.9million vehicles in 2017, which added a trade surplus of €90.3 billion along with earnings of €413 billion annually in the EU-15 member states from taxation on this motor vehicle (Jonnaert, 2018). However, to meet some of the key environmental challenges, the manufacturers are taking some key steps as well which leads to a reduction in carbon emission, lesser water, and energy consumption, waste generated, etc [Refer Appendix 1](Jonnaert, 2018).

1a) Forces Shaping the Business Environment of Car Manufacturing Industry in Europe

According to the report of Kefferpütz (2018), there are several factors that changing the market. Despite being considered as the founder of the car industry, Europe is now facing a tough challenge for from various companies across the globe, especially from Asia, which is forcing some of the leading players of the European nations to modify its production process and look for advanced engineering and technology. In recent time, consumers are looking for a more advanced model of automobiles, especially the four-wheelers that are smart and sustainable which causes lesser pollution as people are getting more conscious about environment and pollution in recent years (Kefferpütz, 2018). Factors such as emission scandal, address climate change by controlling greenhouse gas emission, ensure sustainability in the market, providing technology that supports autonomous driving, and most importantly making the automobile sector connected and share- these are some of the factors which are introducing changes across the automobile industry in Europe.

Miller (2017) in his review has mentioned that there are six key factors, which are playing a major role in shaping the business environment of the automobile sector. Here are those six points and a brief overview of the same:

The increasing pace of Disruptive Innovation: There is fast evolution in the shared mobility market, which benefited the asset-light business model across the globe. This trend clearly supports the fact that capital-based structure of the automobile sector, which often consider, as the barrier for the new players for entering the market in the past is now a liability for the industry in its path of expansion and innovation (Miller, 2017).

The battle to Own in Digital Market: The idea of mobility often remains dominated by personal vehicles and the market is yet to reach that level when an organisation can start focusing more on service to generate more money in comparison to sales of vehicles. Although the slow pace of adaptation is increasing the risk for the industry to lose its visibility from customer's mind (Miller, 2017).

Digitalization in Value Chain: The overall ecosystem of the automobile industry is now being digitalized as more and more data sophisticating the connectivity across the business value chain. The idea of value chain gives the opportunity to the automobile firms to explore more monetizing opportunities from consumer's perspectives and transforming workplace by using advanced technologies (Miller, 2017).

Apart from the above points, factors such as resource securing for business continuity, ensure diverse sources are in use for unpredictability and high-security level are the remaining three key trends which driving changes across the automobile sector (Miller, 2017).

Explain how the industry has changed in the last few years.

In the last 25 years, the automobile manufacturing process has changed significantly in the last few decades. Use of advanced technologies along with other modern facilities making the process of manufacturing more and more up-to-date and error-free. The trend of evolution associated with the modern era of automobiles is:

Companies are upgrading their existing model with every passing year by adding up new features or making the existing process simpler for the consumer to use.

Companies are now started to take care of their employees by using automated machinery, which is helpful to gather various parts of the car to get assembled and prepare finished products. The assembly line manufacturing model helped employees to gather parts of the vehicle from different supply points of the manufacturing firm and assemble the same in the assembly live in a proper and faster manner.

In order to assemble the interior of any car, the organizations nowadays are using modern technologies such as which can easily slide inside the car to support employees do their work properly

Use of modern technology, robotics helps organizations to produce twice as many cars every day which it was able to produce 25 years back. In the modern era, standard production time of a car is 16hours which is helpful for the organization to improve the level of productivity as well (Sola and Petit, 2018)

Keeping in mind the trends associated with the modern business trend, technical innovation and demand of the consumers, most of the experts do believe that the automobile sector is going to witness the maximum number of changes compare to any other industry.

Necessary Organisational and Other Changes in the future and requirement of the same

In the rapidly developing global environment and economy, automobile firms are looking out for ways to opt sustainable innovation surpassing 'green technologies. It would involve creation of various supportive normative and supportive frameworks of organisational change and innovation. It would help in reinforcing the practice of adopting and distributing sustainable technologies that derive sustainable value from different holistic social, environmental and economic factors benefitting each stakeholder associated with the process. It would have to ensure benchmarking innovation in its resource management and the development of industries and processes. Some of the most important requirements that the automotive industry would have is easy switch options between driving and relaxation positions (Mckinsey.com, 2019). It would have to focus on greater and more effective passenger entertainments, information systems and GPS. It would need to consider the aspect of effective air conditioning and smog protection and must strive towards zero emission. In order to allow diffusing of various innovative alternatives, several complementary institutional and social measures like meeting new functional needs and aligning organisational infrastructure would be crucial for reformulating normative and cognitive frameworks required for organisational and individual change.

As has been stated in PwC (2019), the global automotive industry is amidst a great transition to attain sustainable and eco-friendly technologies. In order to attain these objectives, the automotive industry would have to globalise in order to gain resources, reduce costs, develop practices and expand markets more effectively. Therefore, it would need to adopt technical, sustainable and radical change and innovative management strategies for addressing innovation through

a systematic and structured approach. This would involve transitioning employees, organisations and the teams from their existing state towards the expected state of future advancement. Change management processes would help organisations to innovate culturally by empowering the employees to accept change in order to make them contribute effectively to their organisational environment (Calabrese, 2016). It would need to focus on the essential factors and illustrate the way the resources may be utilised in setting goals and monitoring the organisational progress. In the future, automotive change management processes would need to include visible tracking processes for transformation projects, effective marketing to initiate communication between the associated stakeholders and use performance metrics for designing desirable intervention strategies.

Why there is a Drive towards Production of Electric Car

Although this is a very early stage of success as only 1 percent of total sales of the new car are from BEV (Battery Electric Vehicle) segment but financial sector is expecting this to reach close to 10 percent penetration by 2030. Sales of EV for the first time passes million units in 2017 and trends suggest that it will reach close to 4.5 million by 2020, 5 percent of the global light vehicle industry (Refer Appendix 2 and 3).

As suggested by Yun (2018), the Push factor is the main driving force, which is driving the demand for this segment. The top three markets of the electronic vehicles at present are China, Europe, and the US. China strengthens its position in the market and by surpassing nations such as USA, Germany, and France, etc. According to the report of Hartke et al (2018), in China, some of the key reasons that support the growth of production of the electric car are:

- High government and local subsidies and tight regulations associated with environment safety for that automobile manufacturer need to follow.

- Facilities like exempt for electronic vehicles from license plates and auctions.

- Preference for the green license plate holders.

In the European market, factors, which are contributing to the growth of the production of EVs, are:

- Constant headwinds for diesel technology

- The growing interest of the consumers in the EV segment

Ability to deliver high performing EV on a regular basis which increases demand for the same that drives the volume of production as well (Hertzke et al., 2018)

As discussed in the case study, most of the EU nations are targeting to impose regulations that can reduce the carbon emission to a great deal. Apart from that, a nation having the desire to become higher energy independence and focus less on oil-based transport, which encourages the production of EV all over European, motions (Hertzke et al., 2018). Among all the nations in Europe, Germany and Norway leading the market where only Netherlands reported a decrease in the growth [Refer Appendix 4 and 5]

In comparison to China and Europe, the demand and production of Electronic vehicles in the US are not that fast as there are two different paces associated with the process. In places such as California etc., where EV companies can do fast market penetrations there is demand among people and some selected places where local administration has zero-emission plans, organizations are encouraged to produced EV as these help in reducing the level of carbon emission and can control pollution (DiChristopher,2018).

If one considers the data of the case study, the global perspective suggests that there are some major reasons that increase the demand and production of electronic vehicles across the globe. These are:

- Reduction in the level of carbon footprint across the globe.

- Save costs related to product development.

- Drive user benefits

Among different nations, the possibility of EV disruption is inevitable as the nation is far ahead in comparison to other nations (Hertzke et al., 2018) [Refer Appendix 6]

How electric car producing firms gaining competitive edge linking to the changes that have taken place within the industry

Organisations, which are continuously focusing on producing electronic cars, are now enjoying a competitive edge over others. Most of the nations in Europe as well as in US and China, the automobile sector is looking for cars which will decrease the carbon and greenhouse gas emission, produce fewer wastes while production and use minimum possible amount of water. EV is one such model, which meets all these criteria in last decade. Moreover, technical advancement is also helping nations to deliver modern electronic vehicles which making driving simple for people.

Technical giants such as Apple and Google are entering the car-manufacturing sector as a partner of existing players, which can improve the EV manufacturing firms. Companies, which are already producing EV at present, are getting fast movers' advantage in the market and at the same time, they are enjoying subsidies from governments in nations like China, etc.

The cost associated with the supply of raw materials is very minimal as the organisation can develop most of the products in-house and assemble the car for final delivery.

There are organisations such as Volkswagen facing fines from administrative departments regarding carbon emission, waste production, etc which are reduced drastically once the firm starts focusing on producing EV (Curran, 2018).

b) Identify new and emerging business opportunities that the production and marketing of electric cars may present to entrepreneurs and business executives

The emergence and development of electric mobility is one of the most significant developments of the automobile sector. It is expected to usher in huge opportunities by developing additional electricity sales for the utilities along with a rising demand for the charging infrastructures and other associated services (Lawson et al., 2016). It would have a huge positive implication for suppliers and OEMs. ICE is expected to dominate the powertrain portfolio in EU; the electric cars would claim a significant share of the portfolio in the future. Cost competitiveness would be a critical basis for adopting these electric vehicles on a large scale. TCO reduction is known to remain contingent on evolution of various battery pack costs. It would also incur huge opportunities for future charging infrastructure (Mckinsey.com, 2019). In the future, wired charging infrastructures would gain higher momentum keeping behind other alternatives. Attaining a higher scale-up would require economies of scale, standardization and various commercial business models.

Adopting EVs on a large basis along with the evolution of the charging behaviour would have huge opportunities for future infrastructure investments. The entrepreneurs and business executives would have to consider the potential impact of the scale-ups and the huge that the electric cars have within the evolving smart grids (PwC, 2019). This is expected to result in huge savings for grid operators and utilities. It would help to create higher demands for new newer applications and services including charging infrastructure such as navigation, charging services and charging hardware apart from recycling

services and the wider power sector such as aggregated demand-side management, smart grid applications and smart charging. Apart from that, newer models of mobility businesses such as those focussed on carsharing may remove their barriers for adopting electric vehicles as privately-owned vehicles like high purchase price and range limitations.

Identify and critically assess other businesses currently linked to the global automotive industry that you think it may not be profitable in the long run to invest on

One of the most crucial businesses linked to the automobile industry is the auto subparts manufacturing units. The current automobile industry relies largely on the subparts. However, in the future, global automotive industry would cease to need such separate manufacturing units, as they would be manufactured in-house. Therefore, the need for such subunits would no longer be there. This implies the fact that in keeping the current trends in mind, it would not be profitable to invest in such subpart's units, as they would cease to have the value they have today. In addition, the electric cars are essentially self-charged. This would reduce the dependency on petrol, diesel or other fuels commonly used today in the automobile sector. Therefore, it might be stated that for firms looking to invest on this industry is bound to suffer some losses. Though it will not become obsolete in the future, it is expected that there would be a significant reduction in its value and use.

Conclusion

The aim of this report was to assess the factors that are changing the European automobile industry currently and the evolution of the sector in the general. It identified the factors that influence the wider automobile sector and the organisational changes that are helpful in ensuring successful implementation of innovative strategies such as electric cars. It strived to identify the reasons, which has led to the increase in demand of the electric cars along with discussing the way firms gain competitive edge. In addition, it has highlighted the opportunities that electric cars would initiate for the firms while identifying the business operations, which would no longer remain profitable.

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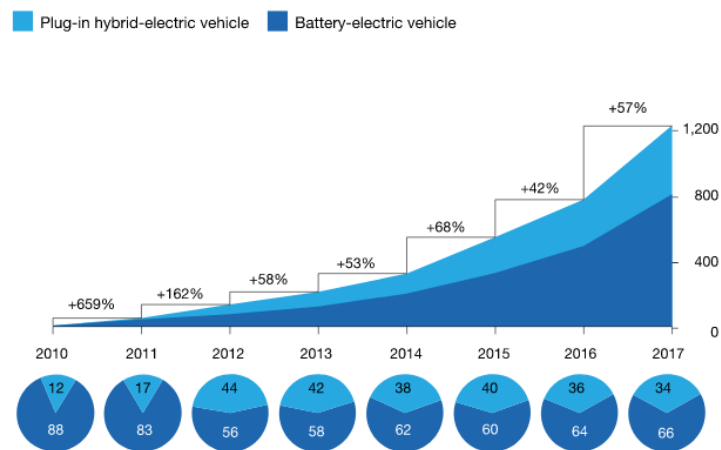
Appendix

Appendix 1: Changes/development in the production of the car in European nations

Sl. No.	Factors	Achievements
1	CO ₂ Emission	Drop of 24% from 2008 to 2018
2	Water Consumption	A drop of 31%.
3	Energy Consumption	A drop of 16% in the last 10 years.
4	Waste Generation	A drop of 14% in the last 10 years

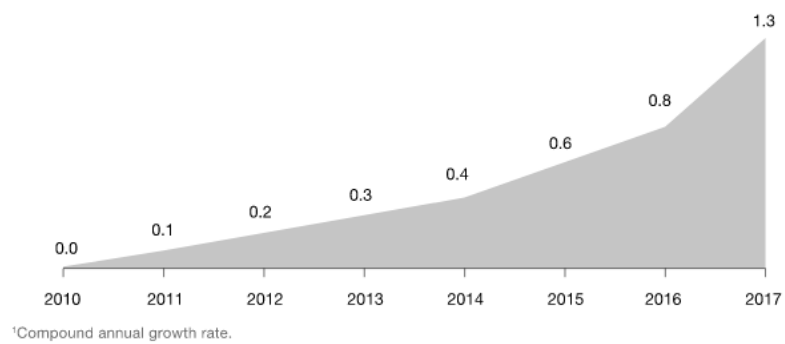
(Source: Jonnaert, 2018)

Appendix 2: Global EV Sales 2010-2017, thousands, CAGR



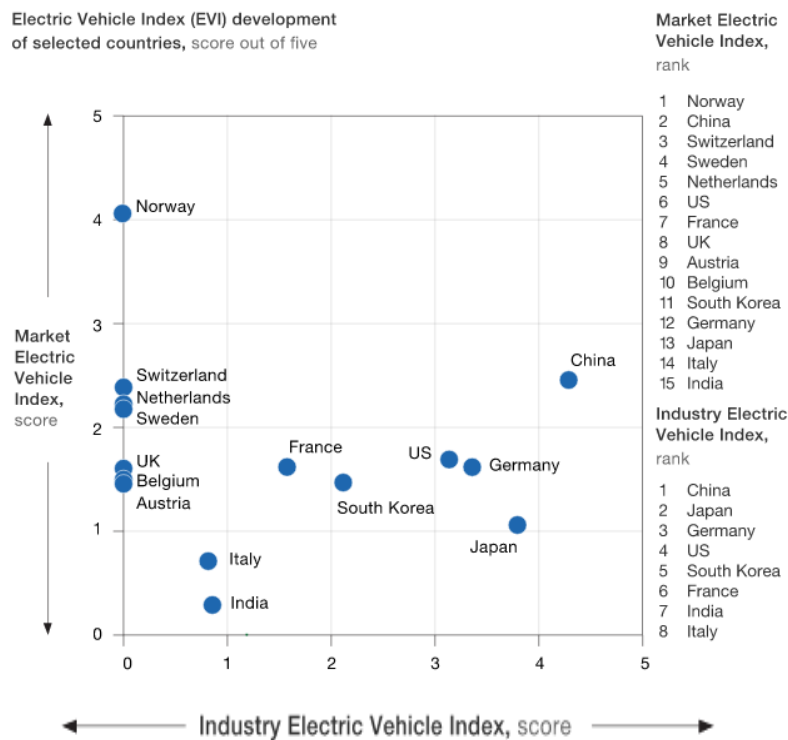
(Source: Hertzke *et al.*, 2018)

Appendix 3: Global EV Sales, from 2010-17, % Share of all Vehicle



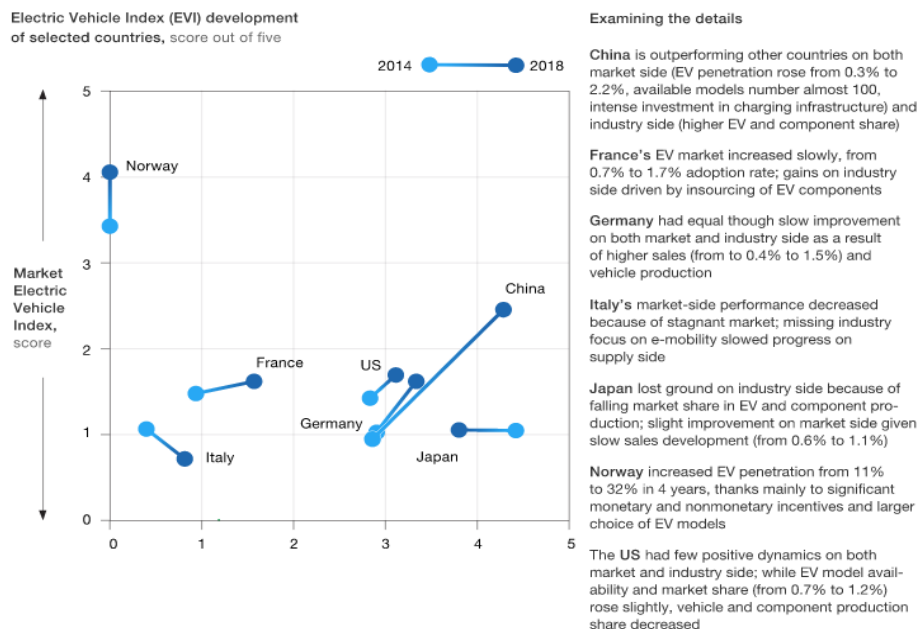
(Source: Hertzke *et al.*, 2018)

Appendix 4: Electronic Vehicle Index Development of Selective Countries



(Source: Hertzke *et al.*, 2018)

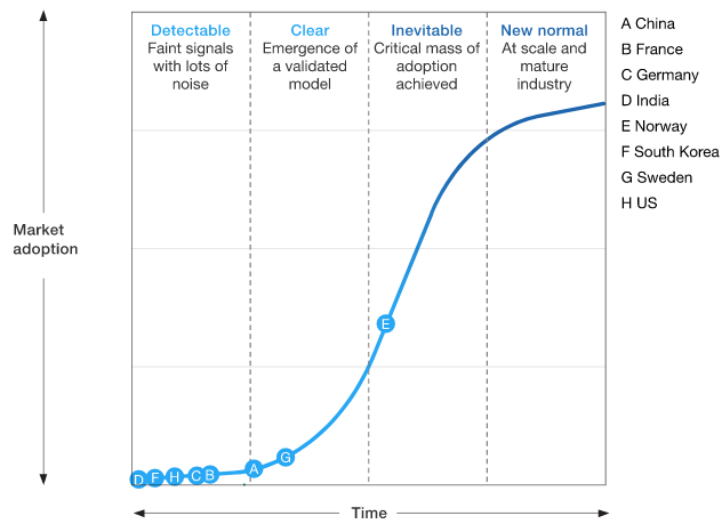
Appendix 5: Electronic Vehicle Index (EVI) Development of Selective Nations



(Source: Hertzke *et al.*, 2018)

Appendix 6: Stages of Disruptive Trend-Focus on Electric Vehicle Market Adaptation

The 4 stages of a disruptive trend—focus on electric-vehicle market adoption



(Hertzke *et al.*, 2018)