



**Environmental Analysis of an  
industry – Assessment 1**  
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**The Global Business Environment**

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## 1. Introduction

The automotive industry has a multiple impact on the global economy as it engages in extractive industries such as steel and chemicals, as well as downstream industries such as ICT, repair, and mobile services (European Commission, 2019). Assessing key changes in the industry environment can help you make recommendations on how companies can improve their industry competitive position. The aim of my thesis is to provide an assessment of the internal and external market environment of the automotive electric car industry.

### 1.0. Macro-Environment Analysis

Scanning the external environment can provide detailed information on major changes in the industry, economy, and consumer trends to identify the main determinants of the company's future strategy, while identifying opportunities and threats. Therefore, we will use the PESTLE analysis in this case. (Kotler & Armstrong, 2012: 77-88)

#### Political and Legal Factors

The political challenges of the US-China trade war can create serious problems for the industry. The increase in trade tariffs initiated by China and the US may result in additional import and export costs for the entire automotive industry. This is because most of the major players have a global supply chain. (Chong & Li, 2019) This also slowed down overall sales growth, even though Europe recorded a 50% increase in 2019. (Wheeler, 2020)

**Brexit:** The impact of the UK's exit from the EU may affect supply chain operations in the European automotive industry as there may be additional duties or delays. (Bailey and De Propriis, 2017)

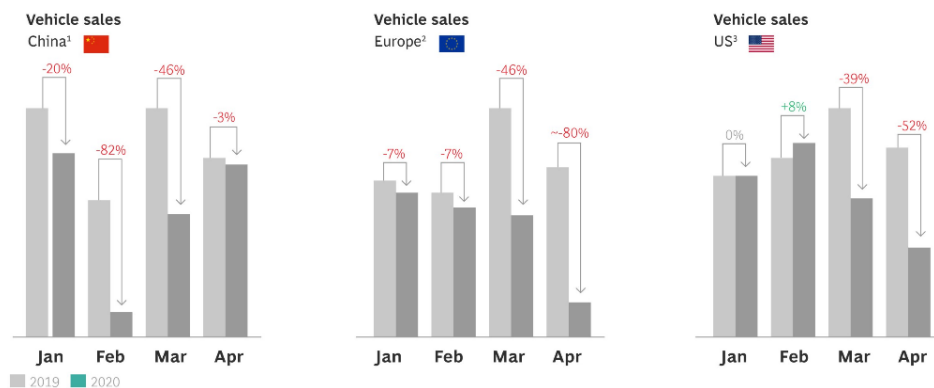
**Taxation liabilities:** in many European markets (eg the Netherlands, Norway, France, etc.) there are tax obligations on private cars that aim to encourage the use of public transport and environmentally friendly transport over conventional cars. (Wappelhorst et al., 2018).

**Electric vehicle adoption targets:** many European countries have set rates for electric vehicle adoption. For example, Germany aimed to reach one million electric vehicles by 2020, while the Netherlands wanted to achieve the same target by 2025 (McKinsey, 2014)

## Economic Factors

**Market size:** Even before the Covid-19 crisis, global car sales were falling. Automotive sales are expected to decline significantly in 2020 by 14-22% in both China, Europe, and the United States. However, controlling the spread of Covid-19 in China has led to a market recovery. Car sales are expected to recover in the last quarter of 2020. (BCG, 2020)

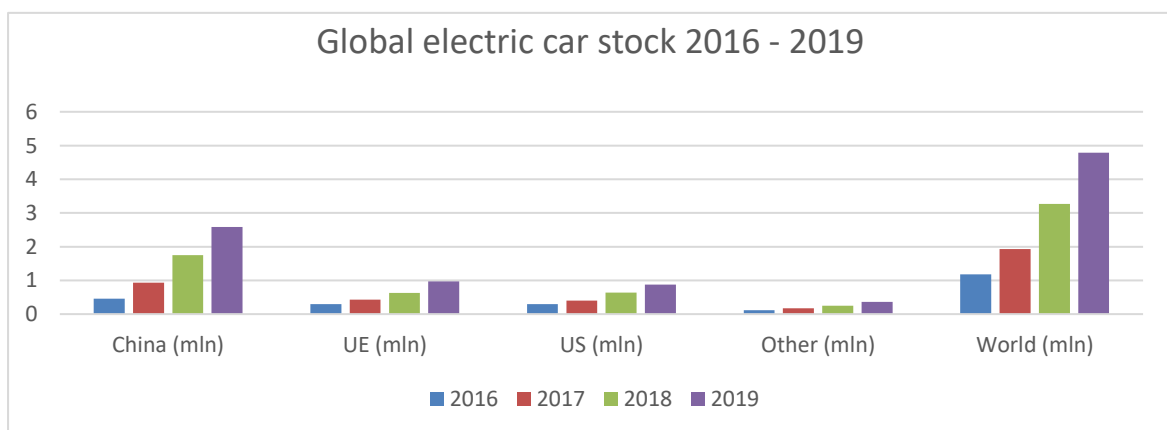
**Figure 1: Vehicle sales comparison: 2019 to 2020**



Source: BCG (2020)

At the same time, an overall increase in sales of electric cars is expected compared to 2019, where sales of these cars in the general market are expected to be 3%. This is due to a policy of sustainable development that supersedes the use of internal combustion engines, given the recent Covid-19 situation. (Wheeler, 2020)

**Figure 2: Global electric car stock: 2016 - 2019**



Source: Global EV Outlook (2020)

**Impact on economy:** The automotive industry has a significant impact on the national economy. The total employment generated across the EU in the automotive industry in terms of production is 2.7 million people. The EU is the second largest car manufacturer after China.

(AECA, 2020) Also compared to fuels, electricity prices are more stable, which allows for long-term savings. Jobs will be preserved. Only its execution model will change. The works will result from the installation and maintenance of power equipment, and the saved capital on gasoline will be able to return to the local budget. (Malmgren, 2016)

## **Social Factors**

**Focus on brand reputation:** Emphasis is placed on brand reputation as a determinant of consumer choice. On the other hand, the scandal around the choice of Trump, an admirer of Tesla electric, and his collaboration with Elon Musk, resulted in a significant loss of market share in the US (Casey, 2020)

**Sustainability demand:** more consumers are interested in electric and hybrid vehicles and want to use sustainable modes of transport. In particular, in the US there is a growing demand for brands that exclusively produce electric vehicles (e.g. Tesla) (Ingram, 2018). Similarly, in Norway, the best-selling car models in the last quarter of 2013 were Battery Electric Vehicles (BEV) (McKinsey, 2014).

## **Technology Factors**

**Artificial intelligence impact:** technological advances play a fundamental role in shaping the future of the automotive sector. The development of automatically powered vehicles by converting sensory data into vehicle control data is expected to improve road traffic and be more profitable for the company from a marketing point of view. (Eisenberg, 2018)

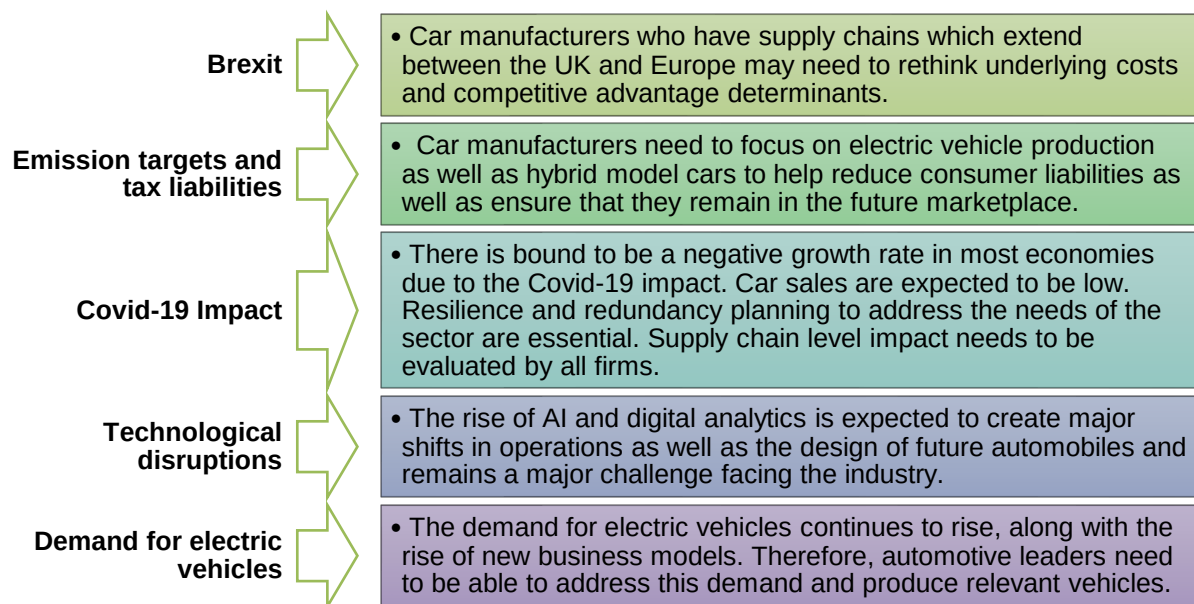
## **Environmental Factors**

Particular attention is also paid to the damage caused by the emission of greenhouse gases to the environment, causing climate change and thus the risk of floods or fires and costs related to heating and air conditioning. Therefore, in the long run, electric power is an alternative to internal combustion engines (Malmgren, 2016).

The global trend to reduce the carbon footprint is a key determinant of the future of the automotive industry. For example, the UK wants to ensure very low emissions for 40% of new vans and 50-70% of all new cars by 2030. By 2040, the government also wants to ban the sale of conventional gasoline and diesel cars (UK Government, 2017). These ambitious goals require car manufacturers to rethink their existing business model.

The figure below summarizes the key implications of some of these macro-environmental factors for the major players in the automotive industry.

**Figure 3: Key PESTLE factors and their impact**



Source: Marcin Klytta

### 3. Porter's Five Forces Analysis: Environment Assessment

An environmental analysis can provide the necessary information on the immediate stakeholders that may affect the company's performance. (Dobbs, 2014)

**Buyer power:** Buyer power is considered moderate. Buyers keep their cars longer and choose new ones more carefully. The electric car market is mainly focused on educated and affluent customers, mainly in urban areas. The manufacturer will not have much trouble finding recipients of his products. However, they may have problems accessing landing points. The unpredictability of the market is also an important argument against the purchase. Progress in this area is intense and it is therefore difficult to determine the final market value of a car. (Deloitte, 2011)

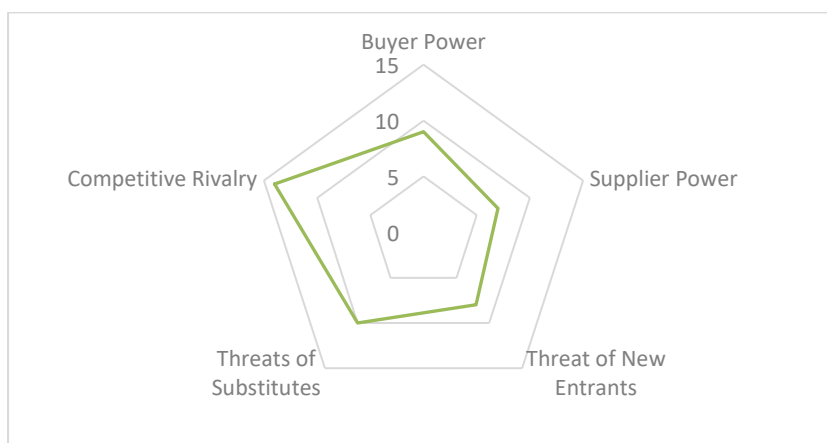
**Supplier power:** Automotive suppliers have been found to have limited power. The growing demand for electric cars creates an excellent opportunity for battery manufacturers. Through partnership and support, brands such as Panasonic and Tesla, or BMW and Catl, increase their interdependence and share their power. (Jang and Jin, 2019). The growing demand for electric vehicles has led to the creation of an independent supply chain.

**New entrant threat:** The threat from new entrants is low. The scale of the operations needed to exist worldwide or across the continent requires significant capital investment. However, there is a growing threat from new entrants from foreign markets, especially from China and India, where consumer interest in electric cars is increasing. (Gao, Wang, Wu, 2008)

**Substitutes:** The risk of substitutes is low to moderate. A potential threat is the growing importance attached by governments to sustainable transport, including the use of convenient public transport. This is particularly important in view of the recent impact of the Covid-19 pandemic. (Deloitte, 2020) Another threat to the electric car market is the combustion industry, especially when the fuel price is stabilized on the market. Other substitutes for electric vehicles in the future may be solar or hydrogen vehicles from BMW or Honda. However, at the moment, the projects are in the testing phase. (Hoiium T., 2014)

**Competitive rivalry:** As is evident in the following figure, the biggest challenge that most manufacturers face is competitive rivalry. The industry operates in an oligopolistic market structure in which there are many players. For example, 2020 belongs to 4 groups: Tesla (17.95%), VW Group (12.6%) Renault-Nissan-Mitsubishi Alliance (9.43%) and Hyundai Motor (6.95%). (Statista, 2020) The competition in the industry is therefore quite high. However, there is a development force in the industry (Wesseling, Faber, Hekkert, 2014)

**Figure 4: Porter's five forces analysis**



Source: Marcin Klytta

#### **4. Analysis and Recommendations**

From the above analysis, the global automotive industry is facing significant internal and external pressures. The purpose of this section is to assess these challenges and find the appropriate intervention.

##### ***Developing production pathways and business models suitable for electric vehicles***

Government pressure and public demand have put tremendous pressure on the auto industry to invest in electric vehicles. Bohnsack et al. (2014) argue that investment in the development of new products in this segment is not enough. There is a need to change the business model. For example, product mix and design should focus on EV range, hybrid preferences and the type of charging infrastructure in the home and public places. It is also important to assess the types of revenue models related to electric vehicle activities and aftermarket services. The figure below shows some of the factors related to business model innovation that need to be assessed.

##### ***Importance of Artificial Intelligence***

The development of artificial intelligence may cause a groundbreaking innovation change in the automotive sector. Artificial intelligence can help create autonomous vehicles. While there are many semi-autonomous cars on the market today, it is expected that there will be many driverless cars in the future. Artificial intelligence can also contribute to a sharing economy where car sharing and car use can emerge as potential alternatives to public transport. Businesses need to be aware of the scope of artificial intelligence. This requires investment in hiring adequate human capital trained in AI technology and reassessing the existing value chain to take into account the impact of artificial intelligence.

##### ***Developing Decentralised Product Policies***

The global value chain assessment shows that companies are investing in R&D not only to improve electrical design and efficiency, but also to meet regional needs, including road condition and purchasing power. Consequently, companies are under pressure to adopt a decentralized product policy. Moreover, as seen in the macro-environment analysis, purchasing power is increasing and consumer demand in developing countries is changing.

Therefore, companies from the automotive industry should focus on innovative activities of a decentralized nature. The goal of these activities is to ensure local optimization of product

design, while the value chain for OEMs is integrated at the global level. This requires the development of decentralized R&D as well as focusing on divergent human resource practices that consider local needs (Pardi, 2019).

## **5. Conclusion**

The results of the external analysis show significant pressures in the form of technological advances, environmental pressures and sustainability initiatives, changing consumer demand and increasing competition.

The industry has an integrated global value chain with an emphasis on R&D and innovation as well as balancing centralization and location. Three specific recommendations are presented that can help you deal with external and internal pressure. These include focusing on the importance of decentralized innovation and operations, identifying new electric vehicle-based business models, and identifying opportunities for companies to integrate AI as part of their value chain.

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