



New business opportunities of Electric Vehicle Industry

Student: Stefaniya Milanova

Student number: 1908761

Course: BABM, Group 1

Module Code: LCBB4005

Module name: The Global Business environment

Tutor: Kenny Tang

London, May 2020

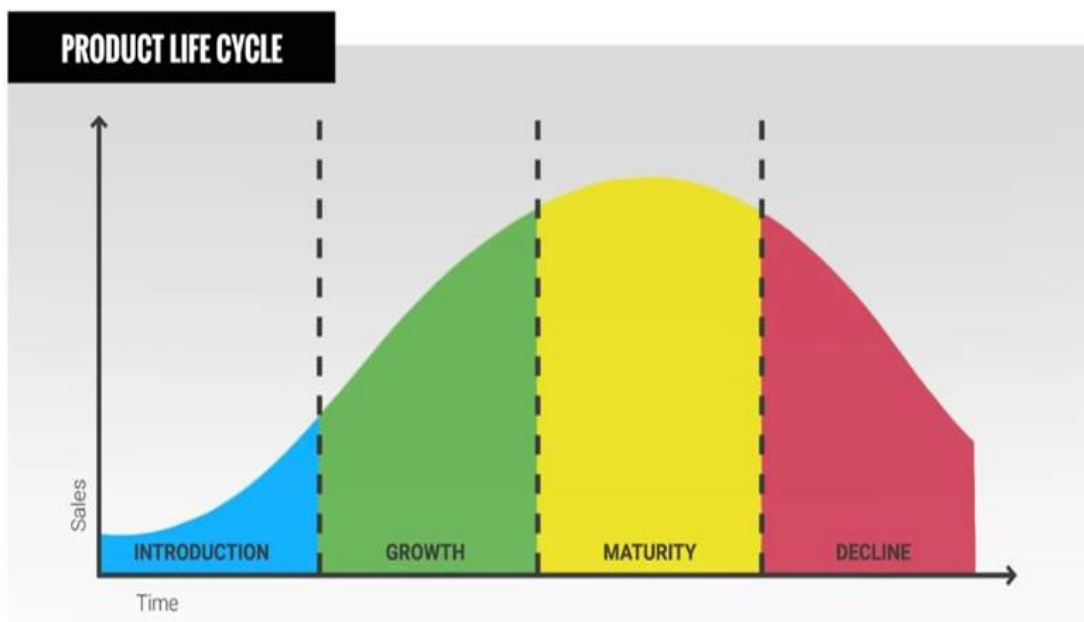
Contents

INTRODUCTION	3
Product Life Cycle	3
Porter Value Chain	6
New Business opportunities	7
Other non-profitable businesses linked to the global automotive industry	10
CONCLUSION	10
Reference list:	11

INTRODUCTION

In the last few years, the electric vehicle industry blooming, mostly because of the significant growth of this sector in China. Over time EU undertook many activities to promote the deployment of electric vehicles and all actions of national, regional and local levels help this trend as well. Those countries that provide abundant stimulus and excellent charging infrastructure usually take a larger market share. (Niestadt and Bjornavold, 2019) In this report, it will be used the Product life cycle concept and the Porter value chain analysis to examine the electric vehicle industry and to explore the new business opportunities that occur for the existing players on the market and the new entrants.

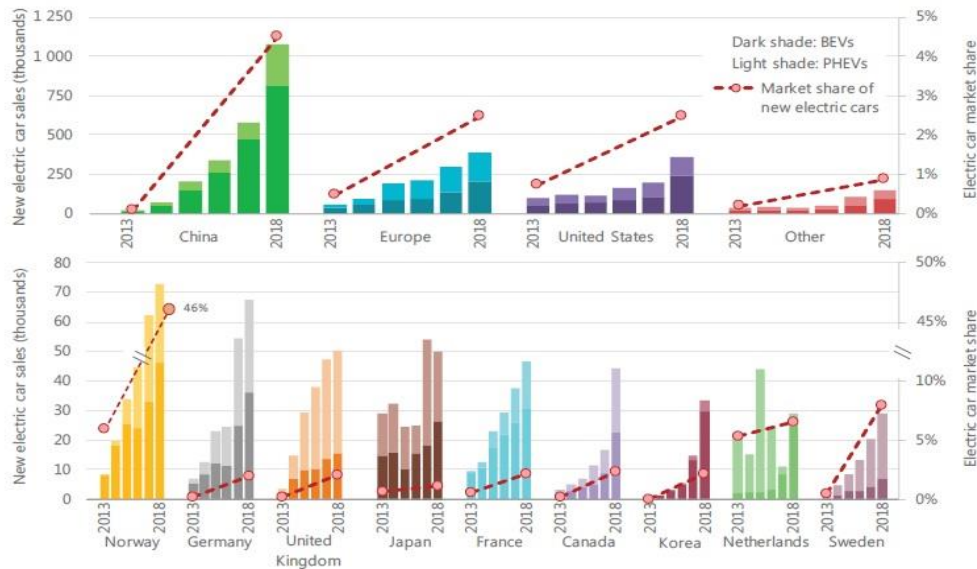
Product Life Cycle



(Source: Sraders, 2019)

The Product life cycle is a method used for observation of the phases of adoption of a product in the market. There are four main phases of the Product life cycle – **Introduction**, **Growth**, **Maturity** and **Decline**. Depending on which phase is the product, using this method companies are capable to make decisions and implement different strategies in terms to obtain a better place on the market. (Lamb, Hair and McDaniel, 2012, pp.402–404)

Global electric vehicles sales and market share 2013 - 2018



(Source: IEA, 2019)

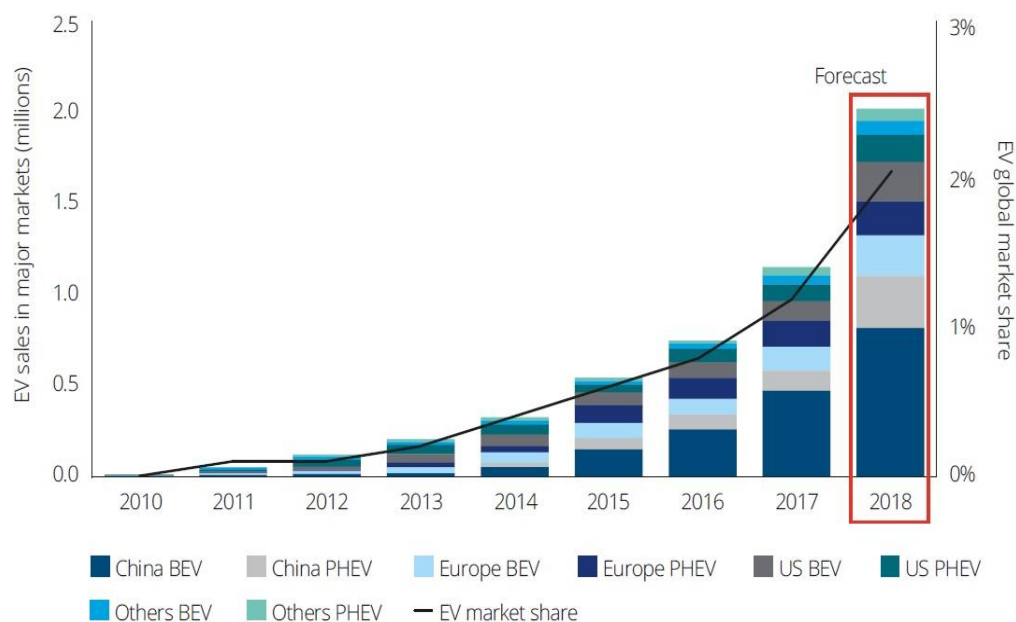
According to the product life cycle method until 2015 electric vehicle industry was in its introduction stage. At this stage, the product is already introduced on the market and the major purpose is to be created a demand of consumers and the product to be imposed on the market. Also, at this phase the company mainly exams the distribution channels, focuses on advertising and promotion and these factors significantly increase the cost. The demand is creating gradually, the sales are very low and the life of the product depends on the market forces and how the company manages the product. If the product is adopted successfully in the market, it will become attractive for the rivals. In a bad scenario the product could die even at this phase. (Udroiu and Bere, 2018, pp.18–19)

Currently the electric vehicle industry has a large share of the global car's market and it is at the growth stage of the product life cycle. The sales are going up, accordingly the revenue increases, which affects the initial cost and leads to generating profit. The competition among the players on the market is rising, the expansion of charging points increases and this technology is developing. People still need to be persuaded and educated regarding the benefit of electric

vehicles but now it is easier to sell to those who remain incredulous. In this phase to uphold the growth drive, companies have to underline brand preference in their promotion instead of brand awareness. (Udroiu and Bere, 2018, pp.18–19)

2017 was a remarkable year for electric vehicles when surprisingly the global sales of battery electric vehicles and plug-in hybrid vehicles reached 1 million units and electric vehicle market share jumped over 1%. (Deloitte, 2019)

Electric vehicles sales in major regions

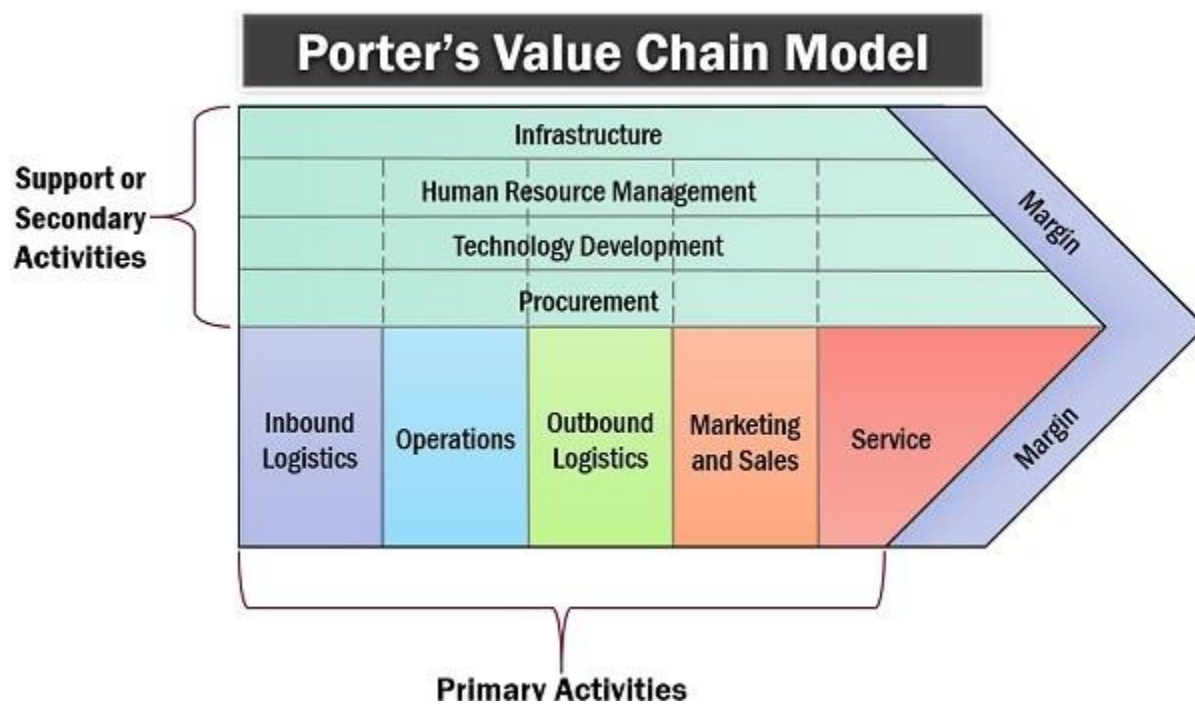


(Source: Deloitte, 2019)

The favourable situation is continuing the last years and the existing policies and regulations contribute to the growth of the electric vehicle market but in the next few years the electric vehicles industry is unlikely to move to the next stage of the product life cycle. Until the beginning of 2020 the forecast was that increasing consumer demand complemented by investment and innovation in technology would enhance electric vehicle implementation. It was assumed that the EV market would hit its peak in 2022 which would lead to a decline of the price and electric vehicles would be affordable for any consumer. (Deloitte, 2019)

In 2019 global electric vehicle sales are 2.2 million. According to Mackenzie's research this quantity will decrease to 1.3 million by the end of 2020. The coronavirus outbreak, the possible retardation to fleet purchasing because of inferior oil price and the wait of purchasing new models, all of this influence the decline in the expected sales. Mackenzie anticipates that by the end of 2020 China and Europe will recover the demand while in the US the demand will lag by 30%. (Mackenzie, 2020)

Porter Value Chain



(Priya C, 2019)

The Porter value chain model is a coherence of activities that companies execute aiming to offer a valuable product or service and to become more competitive in the market. This model includes 9 important elements separated into 2 groups - **Primary activities** and **Support activities**. The primary activities are divided into **Inbound logistics**, **Operations**, **Outbound Logistics**, **Marketing and Sales** and **Services**. The support activities contain **Procurement**, **Technology and development**, **Human Resource Management** and **Firm infrastructure**. (Sekhar, 2009, p.115)

Nowadays there is not even one profitable powertrain technology because the variety and complication of the powertrain value chain establish a serious disturbance for EV manufacturers and suppliers. The existing suppliers, the new external suppliers and start-ups suppliers penetrate the market and rival for domination in the next generation of powertrain technology. All of this press the single players and influences present and future profit. The EV powertrain includes essential elements as the motor controller, electric motor, transmission and batteries through which it is possible to be provided low or zero-emissions technology of e-powertrains. They are expensive and complicated to be elaborated, projecting and created. The expectations are for massive usage of electric vehicles by 2030 which will establish tremendous opportunities for suppliers overall the value chain. (McKinsey & Company, 2019)

New Business opportunities

Manufacturers of conventional vehicles and new entrepreneurs have the choice to expand the scope of their operations applying innovative business models that are directly linked to their existing product and service portfolio or to take the opportunity to move beyond.

- ***Battery Manufacturing***

As a result of the increasing demand for electromobility the electric vehicles' battery market also marks significant growth. The higher investment for manufacturing EV batteries was repelling new entrants but now this market rejoices to remarkable interest from the other competitors. When the technology becomes standardised, this will decrease the price of the battery and in turn will reduce the price of electric vehicles for end consumers. (Eddy, Pfeiffer and Staaij, 2019)

At the moment the big players of this market are Korea, China and Japan and this provides a big potential opportunity for the battery makers from the other countries including those from Europe. In 2018 under 3% of the EV batteries' global demand was provided by suppliers from other countries and almost 1% by companies from Europe. But as opposed to China, Europa still suffers from a lack of effective industrial tactics to fascinate widespread battery production. As a result of this obstacle Lithium Werks, located in the Netherlands and which already possesses 2 factories in China, said that the company elects to establish factories in China because of the

better infrastructure and because the procedure of obtaining building permission is simplified. (Eddy, Pfeiffer and Staaij, 2019)

However, the battery manufacturers usually do not want to play risky and that is why they choose to operate in areas with a good political environment, various opportunities for economic benefits, good legislative system, well-maintained infrastructure and accessible supply channels of raw materials. It has to be noted that many EU countries are able to provide these favourable conditions. (Eddy, Pfeiffer and Staaij, 2019)

- ***Charging Services***

A huge number of EV charging services providers have difficulty making a satisfactory profit in terms to recover their infrastructure's investment only from selling power to electric vehicle drivers. In order to get access to a charging station very often customers need a subscription at EV charging service provider. The New Motion (Europe) and ChargePoint (US) offer charging stations and also the billing and payment services for those business customers who prefer to possess installed charging stations. The consumers make payments for subscription and service providing and also they receive special identification cards which allows them to use all public charging points joined to the system. (McKinsey & Company, 2014)

If some merchants want to bring more consumers, they might offer for the first 1 or 2 hours free of charge service and charge a higher price for the rest of the time. For example, Tesla provides accessibility to the Supercharger stations in the US and Europe which are suitable only for Tesla models. (McKinsey & Company, 2014)

- ***Car sharing – fleet operator***

For a subscription fee car manufacturers or other companies can offer to consumers fleet of electric vehicles in order to give access to mobility and the client could have an option to choose electric vehicles for free with the service. For example, Car2Go car-sharing service already notes quick development in Europe.

As a part of the car-sharing venture, the peer-to-peer business model provide the possibility to individual owners to renting out their personal cars when they are not using them via a third-party online platform. An example of this service is Autolib in Paris. (McKinsey & Company, 2014)

- ***Navigation software and apps related to charging infrastructure***

Because electric vehicle infrastructure is not broadly accessible people have to search hard for the nearest charging spot and also the type of spot suitable for their vehicle. At the moment there are many map apps but with a limit in possibilities. In addition to this model could be included the option to book a charging station spot. (McKinsey & Company, 2014)

Some examples of such types of apps are Google Maps, PlugShare (US), Chargemap (Europe), Open Charge Map, ChargeHub (Canada and US) and others.

- ***Battery Recycling***

With the expansion of the electric vehicles industry occurred the serious need for facilities for reuse and recycle. The leaders applying this business model are China and South Korea. Some of the automobile companies like Nissan, Renault, BMW and Rivian considering second-life applications at the design stage of battery. (Evreporter.com, 2020)

- ***In-Vehicle Services***

This model could be applicable to both conventional and electrical vehicles. This service allows the drivers easy and fast to get access to current and statistic information about vehicles, the characteristics to manage the car's safety and identifying damages. For example, the Danish platform Connected Cars enable drivers to receive real-time data about fuel and other substantial parameters and also to send this information to a car service shop in order to repair or precaution. (Startus-insights.com, 2019)

- ***Online Electric Car Sale Business***

This business model could be applied not only by existing players on the automobile market like Tesla and Volvo for example. Some entrepreneurs who want to start e-car selling business and

they do not possess a place where to exhibit their vehicles, they could take advantage of the option for an online car showroom. Nowadays the internet gives possibility for people to buy everything online and their purchases to be delivered to a particular location. (ProfitableVenture.com, 2020)

Other non-profitable businesses linked to the global automotive industry

It is significant for any business to build a good concept in order to create the right strategies when applying a new business model. Whether the business model will succeed or fail depends on mainly how a company interacting with the models of its competitors in the industry.

Battery swapping is considered a fast recharge option in terms to be solved the problems regarding the infrastructure and the time needed for charging. Despite the countless business opportunities offered by the EV industry, the implementation of innovative business models is extremely risky and proves unsuccessful for some entrepreneurs. Good example for that is the battery-swap model of Israel venture Better Place. The reason that this business model has been failed is because of the small number of producers that have been prepared to create vehicles compatible with the battery swap system. The investment to create such type of vehicles is huge and the start-up costs to build the infrastructure is significantly high. (Nieuwenhuis, 2018)

CONCLUSION

The automobile industry experiencing immense technological change. Some of the key factors that contribute to the market growth of the electric vehicle industry are the increasing attention toward environment protection, advantageous government activities in this direction and the competition amongst rivalries in the industry. These factors influence innovative technology and create a diversity of opportunities for new businesses. Automobile producers and suppliers and start-up technologies should understand the innovations that appear today and those that will come in the future. In this way the companies will be able to apply the new technologies in their long-term business strategies.

Reference list:

Deloitte, (2019). *New market. New entrants. New challenges. Battery Electric Vehicles Contents.*

Available at:
<https://www2.deloitte.com/content/dam/Deloitte/uk/Documents/manufacturing/deloitte-uk-battery-electric-vehicles.pdf> (Accessed: 16 May 2020)

Eddy, J., Pfeiffer, A. and Staaij, J. (2019). *Recharging economies: The EV-battery manufacturing outlook for Europe.* McKinsey & Company. Available at:

<https://www.mckinsey.com/industries/oil-and-gas/our-insights/recharging-economies-the-ev-battery-manufacturing-outlook-for-europe> (Accessed: 29 April 2020)

Evreporter.com (2020). *Mobiike Aims to Revolutionise Shared Mobility by Providing Secure Keyless Access to Vehicles.* Available at: <https://evreporter.com/lithium-ion-battery-reuse-and-recycling/m> (Accessed: 18 May 2020)

IEA.org (2019). *Global EV Outlook 2019 – Analysis [IMAGE].* Available at: <https://www.iea.org/reports/global-ev-outlook-2019> (Accessed: 15 May 2020)

Lamb, C.W., Hair, J.F. and McDaniel, C. (2012). *Marketing.* Cengage Learning, pp.402–404.

Mackenzie, W. (2020). *Global electric vehicle sales to drop 43% in 2020.* Available at: <https://www.woodmac.com/press-releases/global-electric-vehicle-sales-to-drop-43-in-2020/> (Accessed: 16 May 2020)

McKinsey & Company (2014). *Electric vehicles in Europe: gearing up for a new phase?.* Available at:

<https://www.mckinsey.com/~media/McKinsey/Locations/Europe%20and%20Middle%20East/Netherlands/Our%20Insights/Electric%20vehicles%20in%20Europe%20Gearing%20up%20for%20a%20new%20phase/Electric%20vehicles%20in%20Europe%20Gearing%20up%20for%20a%20new%20phase.ashx> (Accessed: 27 April 2020)

McKinsey & Company (2019). *Reboost: A comprehensive view on the changing powertrain component market and how suppliers can succeed.* Available at: <https://www.mckinsey.com/~media/mckinsey/industries/automotive%20and%20assembly/our%20insights/reboost%20a%20comprehensive%20view%20on%20the%20changing%20powertrain%20component%20market%20and%20how%20suppliers%20can%20succeed/reboost-a-comprehensive-view.ashx> (Accessed: 14 May 2020)

Niestadt, M. and Bjornavold, A. (2019). *Electric road vehicles in the European Union Trends, impacts and policies.* European Parliamentary Research. Available at: [https://www.europarl.europa.eu/RegData/etudes/BRIE/2019/637895/EPRS_BRI\(2019\)637895_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2019/637895/EPRS_BRI(2019)637895_EN.pdf) (Accessed: 3 May 2020)

Nieuwenhuis, P. (2018). *Alternative business models and entrepreneurship.* The International Journal of Entrepreneurship and Innovation, 19(1), pp.33–45.

Priya C. (2019). *Porter's Value Chain [IMAGE].* The Investors Book. Available at: <https://theinvestorsbook.com/porters-value-chain.html> (Accessed: 27 April 2020)

ProfitableVenture.com, (2020). *50 Best Electric Car Business ideas & Opportunities for 2020.* Available at: <https://www.profitableventure.com/electric-car-related-business-ideas/> (Accessed: 20 May 2020)

Sekhar, G.V.S. (2009). *Business Policy and Strategic Management.* I. K. International Pvt Ltd, p.115.

Startus-insights.com (2019). *5 Top Automotive Startups Out Of 700 In Mobility.* Available at: <https://www.startus-insights.com/innovators-guide/5-top-automotive-startups-out-of-700> (Accessed: 16 May 2020)

The WhipCar Team, (2013). *WhipCar closes.* Available at: <https://www.automotiveworld.com/news-releases/whipcar-closes/> (Accessed: 18 May 2020)

Udroiu, R. and Bere, P. (2018). *Product Lifecycle Management: Terminology and Applications.* BoD – Books on Demand, pp.18–19.