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New Business Opportunity and Product Life Cycle

Electric Vehicle – a case study

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Introduction

Business opportunities are the packaged investments which allow the entrepreneurs starting new businesses. The Electric Vehicle (EV) industry is showing many opportunities for the entrepreneurs. (Chau, 2016) In different product life cycle phase, the opportunities are different. The governments are becoming environmentally conscious and providing subsidies in promoting the EVs. As a result, the market for EVs is expanding. It is expected that by 2026, the EV market will have a rapid expansion. Many new businesses are getting popular with the EVs. This report focuses on the value chain activities of the EV industry and the businesses that might bring opportunities with the expansion of the Electric Vehicles. The report also highlighted those businesses associated with the EVs getting discontinued in the long run.

Analysing the Electric Vehicle (EV) industry using Porter's Value Chain Analysis

The process through which a firm identifies the primary and supportive activities of a firm that adds value to its products and analyses them for reducing the cost or increase the product differentiation is known as the Porter's Value Chain Analyses. In 1985, Michael Porter in the book *Competitive Advantage* explained about the value chain that it consists of the activities performed by the business for creating value for its customers. (D'HEUR, 2016) The value chain analyses of the electric vehicle (EV) industry is discussed here.

Primary activities

The primary activities are those activities which are connected directly to the creation of new products.

Inbound Logistics

The inbound logistics consists of the activities including the receiving, storing and distribution of the raw materials of the products. (Gunther and Meyr, 2012) The Electric Vehicles need to source and collect the energy storage systems, solar panels along with the materials such as aluminium, cobalt, copper, steel etc. the companies need to maintain a good relationship with the suppliers here.

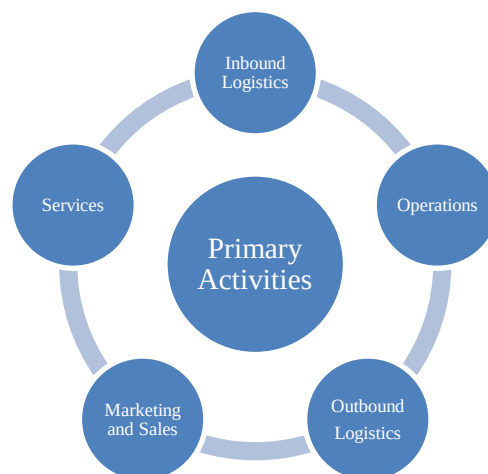


Figure 1: Primary Activities of Porter's Value Chain

Source: (Gunther and Meyr, 2012)

Operations

It contains all the activities which turn the raw or inputs into final products. The proper designs, development, manufacturing of the vehicles need to be done using different types of machinery. The operational cost can be reduced using latest machinery and robotics.

Outbound Logistics

It contains the activities related to the storage, transport and delivering of the products to the customers. (Samson, 2015) The EV manufactures can reduce the cost and sell their cars effectively by maintaining a small inventory and sell their cars online.

Marketing and Sales

It contains the price, promotion and advertising the products to the customers. This industry highly relies on the word to word marketing. People after using cars recommend to their relatives or colleagues. As a result, a proper analysis should be done before advertising.

Services

Services include the after-sales services, setup and maintenance. EV requires much less servicing and its relatively cheaper than the regular cars.

Supportive Activities

These activities assist and ensure the primary activities and work as the basis of the business.

Firm infrastructure

This relates to the activities done inside the companies and enables daily activities. There might be few segments also like the automotive segment and the energy product. The different departments like production, designing, engineering, finance etc need to work together.

Human Resource Management (HRM)

To get a better competitive advantage, hiring experts on EVs will be the best choice. They also need to provide with training and attractive compensation.

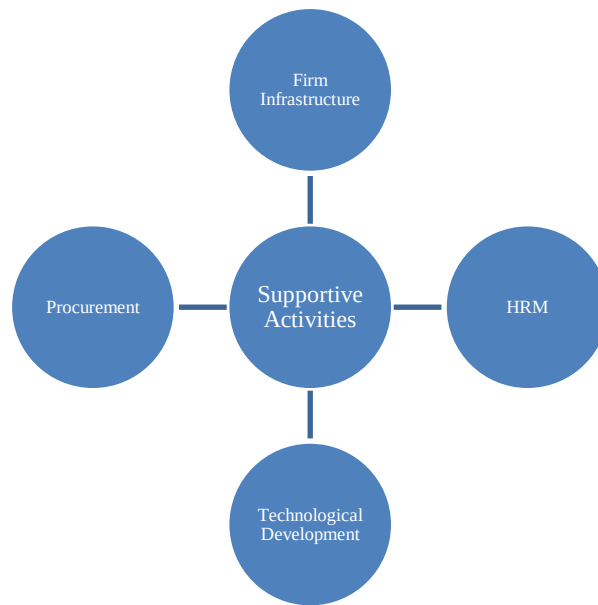


Figure 2: Supportive Activities of Porter's Value Chain

Source: (Robben and Probert, 2016)

Technology Development

The research and development system needs to be the most powerful one in this industry. The better a company will acquire the better market share it can conquer.

Procurement

The maintenance of a good relationship with the suppliers can reduce the cost of manufacturing the vehicles. (DR.K.VANITHA, 2016) The battery cells, body manufactures can significantly help in reducing the cost. The supportive activities can assist the primary activities of EV companies significantly. The firm infrastructure, HRM, Technology development and also the procurement can enhance the values within the primary activities. The other links might be that the proper service and customer relationship can help in increasing the production and sales of the cars. Since this EV industry is new and the activities are related, as a result, the companies need to be careful while performing the activities. The value chain helps in gaining a competitive edge, increases the profit by reducing the cost, helps in maintaining a good relationship with the supplies and optimizes the inventory.

Identification of New and Emerging Business Opportunities

with the Electric Vehicles (EV) Industry

Business opportunities can be denoted as the packaged investment which allows an entrepreneur to start a business. With the development of the EVs, new business opportunities are coming to the entrepreneurs. The market of the EVs is still in the growing. It is the future but still, the market share of the EVs is much less than the traditional cars.

The product life cycle is the process through which a product goes from its introduction to the market until its declination. It has four stages- introduction of the product, its growth, reaching maturity and ultimately declines. (Schmarzo, 2013) The EVs in many countries is still in the introduction phase whereas in some places it has got huge acceptance and is growing.

With the introduction of cars, people are getting interested after analysing the lower maintenance cost. Now the customers are still preferring the in-house charging station setups. Many construction companies are also now offering this charging facility while planning for new buildings.

During the growing phase, the people require lots of services along with the EV charging stations outside their home. (Eschbach, 2018) Here a few attractive business opportunities are getting popular. Since the number of charging stations is still limited, the navigation software and the apps related to the charging infrastructure is growing a lot. (Radford, 2019) People are now using these apps to find the nearest charging stations and EVs service centres.

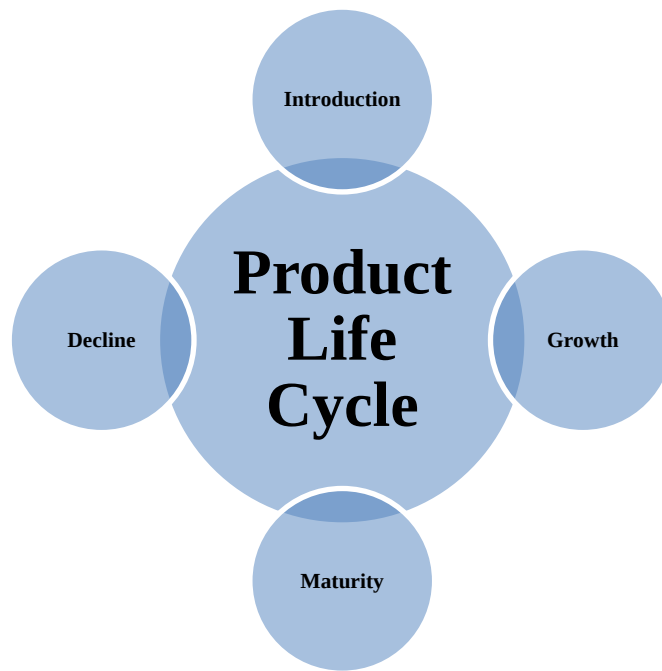


Figure 3: Product Life Cycle

Source: (Onkvisit and Shaw, 2017)

The private companies with the EV Manufactures are jointly giving more importance in building and providing charging stations facilities all over the countries. The battery manufactures are working to provide fast charging facilities which will save lots of time. This battery development is a must and can be with the EVs whole the time.

The offices, hospitals and the educational institutions are trying to offer the charging facilities which can be taken paying a few bucks. Apart from that many new companies are building the charging stations in public places like the shopping malls which offers the EV owners a better charging facility. With their earnings, they can provide the superfast charging facility which is still much expensive for households. The payment systems basing on the RFIDs and the ability to detect the used electricity and billed through it also offers opportunities to a few tech companies.

The market getting popular enters the mature stage and it also offers many opportunities. If the superfast charging doesn't cheap then the battery sweeping business will grow a lot. People while travelling longer routes can easily be relaxed with the battery sweeping systems. (Cars.com, 2020) Even the rental companies with the availability of enough charging stations and will the reduced maintenance cost will start using the EVs.

The solar charging technology can get much popular during this time. With the development of the solar cells, the technology can be used on the car bodies and the frequent charging requirements can be overcome. The online-based car selling and the car parts selling can grow a lot because the day by day the people are relying more on online purchases.

Even when the industry will reach the declining stage, the maintenance, the battery scrapping business will offer many opportunities to the entrepreneurs.

Evaluating the Businesses Associated with the Electric Vehicles (EV)

Getting Discontinued in the Long Run

The introduction of EVs is emerging new businesses in the market which are associated with the EV industry. These businesses are now growing at a much faster rate and will probably earn a good amount of revenue. But not all the businesses will be able to sustain in the long run. With the change of technology, few businesses will no longer be profitable to invest on.

The availability of fast-charging stations will reduce the battery sweeping system resulting in declination of this business. People will be able to get their vehicles charged at a very short time with many places to recharge. The dependency on the Diesel, Octane, Gas as fuel will get much reduced. The EVs now running on both ICE's and EVs will gradually shift to fully EVs engines. (Henderson, 2019) As a result, this business will face difficulty.

With the popularity of EVs, the EV manufacturers might get into backward integration and can start manufacturing their batteries. This will affect the sales and production of battery manufactures. (Jones, Jervey, Roche and Barnowski, 2018) The EV manufacturers will remove the dependency on the third-party car manufacturers and their R&D will help to introduce newer technologies in the battery manufacturing industry.

Hybrid electric vehicles are still using traditional car parts. But with the availability of EVs, the battery electric vehicles (BEV) will skip the requirements of those parts and will change the engine pattern too. These will be solely manufactured by the respective car manufacturers the ICEs car parts manufactures will face it harder to sustain in the market.

The increased availability of EVs and the reduction in the cost of building the charging stations will make people have their charging capabilities in their houses. (Sappidi, 2018) This will reduce the dependency of the public charging stations. As a result, though now it

looks that the establishment of charging stations roadside will be profitable, it might be profitable for the short term and may face issues in the long run.

The EVs are much cheaper in servicing. The engines are not much complicated and they are less prone to malfunction. (Henderson, 2017) At the initial stage, the customers might get few issues but with the maturity, this dependency will get reduced and their issues can be solved by the manufacture's car servicing facilities easily. As a result, the revenue which can be expected with the traditional cars might not be feasible with the EVs.

Conclusion

Electric vehicles are getting popular because of environmental consciousness and lower operating cost. The business opportunities which are evolving with the EVs offer an attractive future. The entrepreneurs need to make a proper strategy to grab those opportunities and work with them. But not all opportunities might be profitable in the long run. The entrepreneurs also need to analyse the opportunities carefully so that they can sustain in the long run. In the UK, it has been seen that the EV sales grew over 214,000 by the first quarter of 2019 which was only 3,500 in the year 2013. (McFadden et al., 2020) The cost of Li-ion battery has also been reduced to below 400 USD per K-wh. The super-fast charging technology is also getting advanced day by day. All these factors are leading the EV industry and are offering more and more business opportunities to the new start-ups. So, proper strategies should be developed to use those opportunities and gain a good market share in the long run.

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