

Impact of the Pandemic on Volkswagen

by EDUARD SORIN CACOVEAN 2115776

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Professor

DR.AKINSEYE ALUKO

Institution

UNIVERSITY OF WALES TRINITY SAINT DAVID

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Introduction to the Automobile Industry

The first functional automobile was developed in the late 1800s, marking the beginning of the automobile industry. Since then, numerous manufacturers have entered the sector, and the product has undergone enormous advancements, increasing automotive demand. The sector has many manufacturers, with Toyota, Ford, Honda, Volkswagen, and Daimler being among the most prominent. According to experts, the industry is a crucial economic sector that significantly contributes to global economic expansion.

Impact of Covid-19 on Volkswagen in the Automobile Industry

Automobile manufacturing is one of the businesses most impacted by the global spread of COVID-19. Due to the enormous effect of the epidemic on the world's economy, the income levels of several people have decreased. Several have lost their jobs, while others have experienced compensation decreases. Owing to this, people's expendable income has decreased, and they now prioritize meeting their basic needs. Automobile purchases are becoming less popular due to a lack of available funds. Consequently, Volkswagen faces a significant threat of a precipitous decline in automobile demand.

In addition, there has been a decline in the export of vehicle components from China, widespread manufacturing pauses in Europe, and the discontinuation of machine components in the United States. This interruption in the supplies has contributed to the pressure exerted on Volkswagen by declining demand.

Volkswagen will need to devise a variety of countermeasures in order to overcome this chaos and thrive on the market. Volkswagen can create new, less expensive models, restructure

the costs of current models so that the autos are affordable to consumers, and regulate their costs so that they do not incur enormous losses and can remain competitive in the marketplace.

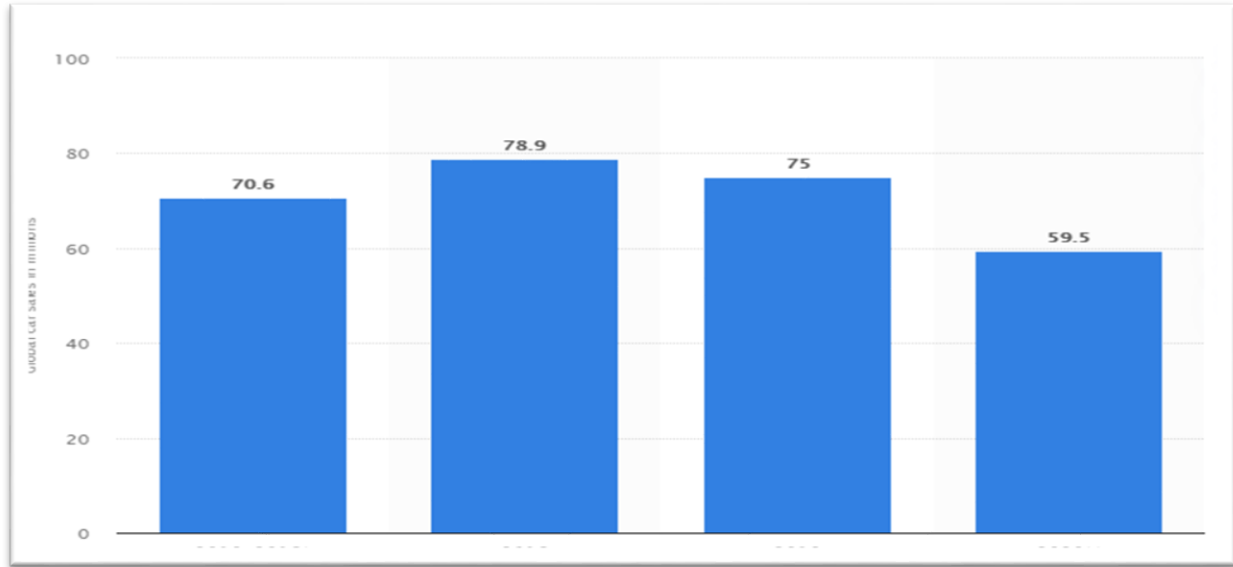


Figure 1 Global Car Sales

Before the pandemic, automobile sales rose, with specific categories setting new records. In 2020, it was anticipated that auto sales in the United States alone would range between 16 and 17 million units (Fernandes, 2020) as March approached. However, the all-consuming COVID-19 halted the everyday activity. With the possibility of a vaccine being distant, governments globally implemented lockdowns and quarantine requirements. These regulations prevented individuals from purchasing autos at dealerships. In addition, as a result of the widespread inactivity, the global economy has taken a knock that is considered the worst since the 2008 Financial Crisis.

There were layoffs throughout the business. After announcing the most significant profit losses in a decade, Nissan chose to close its Barcelona facility. This resulted in protests from factory employees. Similarly, manufacturing in Volkswagen halted due to temporary plant shutdowns. The auto sector is highly dependent on global supply chains exacerbating the overall

situation (Li et al., 2020). Supply chains are frequently dispersed over many parts of the globe, and each nation has its form of COVID legislation.

As a result of the widespread loss of jobs, people began to save more instead of making large expenditures such as automobile purchases, which further reduced demand. While gasoline prices fell throughout North America, it was not accompanied by an increase in vehicle sales. July sales of new cars in the United States decreased by 23.9% compared to the same month in 2019. Europe experienced a 25.7% decline in sales over the same time (Hoffman and Kaplinsky, 2019).

Nevertheless, individuals have embraced digitalization more often during their homestay by working from home, utilizing online services, and purchasing items online. As a result of the fall in public transportation usage due to fears about the transmission of infection, private cars have become more popular. Volkswagen quickly adopted internet means for client outreach, enabling online instructional videos and home delivery of products.

However, total sales have remained relatively stable. The market for electric vehicles, however, has had a unique experience. More electric vehicles were registered during the lockdown period than its internal combustion engine (ICE) competitors. The discovery that lockdowns have significantly reduced CO₂ emissions has prompted some to question the environmental usefulness of conventional automobiles. According to some analysts, this may cause a subset of purchasers to favor electric automobiles over gasoline- or diesel-powered vehicles. However, the general trend toward electric vehicles will rely on government efforts to promote them.

A portion of Volkswagen's troubles was alleviated when governments announced recovery plans for vehicle manufacturers in certain nations. As limitations lifted in July, production

resumed, but sales did not restore to pre-COVID levels. A significant exception is China, where the vehicle industry has had a quick rebound. As a result of the economic setback that has been endured, consumer confidence remains low over the globe. Amid this activity, Volkswagen's stock prices increased to the point where it eclipsed Toyota as the world's most crucial automaker (Li et al., 2021).

Methods to Enhance the Performance of Volkswagen

Learning Effect

Fabozzi et al. (2008) describe the learning impact as the decrease in average time required to generate an amount of production by a fixed ratio as output increases in a labor environment. Volkswagen can get economic advantages from the learning impact during the current pandemic. There are several ways in which Volkswagen might profit from the learning effect:

1. As a result of employee specialization, work is completed more quickly, and output increases.
2. Reduces labor costs because fewer productive workers are required to execute a task.
3. As a result of bulk purchasing, other costs, including materials and overhead, are reduced.
4. Setting lower prices for products because the unit cost can be decreased. This directly increases sales.

Target Costing

It is a method by which a business plans ahead for the price points, costs of the goods, and profit margins it hopes to reach for a new product (Shank and Fisher, 1999). If it cannot produce

a product at these predetermined levels, the intended endeavor is deemed a failure. As a result of the present epidemic, Volkswagen has adapted its target costing method.

1. A proactive approach is undertaken throughout the product conception and design phase.
2. Considers rival pricing while determining product pricing.
3. Utilizing approaches including reverse engineering, value engineering, and functional analysis, the individual takes steps to reduce the cost per output unit.
4. As a result of considering consumer preferences, the customers will feel that the product provides more incredible value.

Just in Time (JIT)

Just in Time (JIT) is a method to boost efficiency and eliminate waste by receiving items only when they are required for the production process, hence lowering inventory costs (Canel et al., 2000). A company in the automotive industry that adopts the JIT methodology can get various benefits. There are a few of the advantages Volkswagen might reap if it can confront this epidemic condition with success:

1. Lower warehouse and storage expenses because no excess inventory is maintained.
2. Because there are no more inputs accessible in the organization, the workers are compelled to be more cautious and reduce resource waste, which increases productivity.
3. Adaptation of TQM as JIT minimizes faulty goods and enhances product and process quality (Flynn et al., 1995).
4. Enhanced client satisfaction resulting from increased efficiency and personalization.

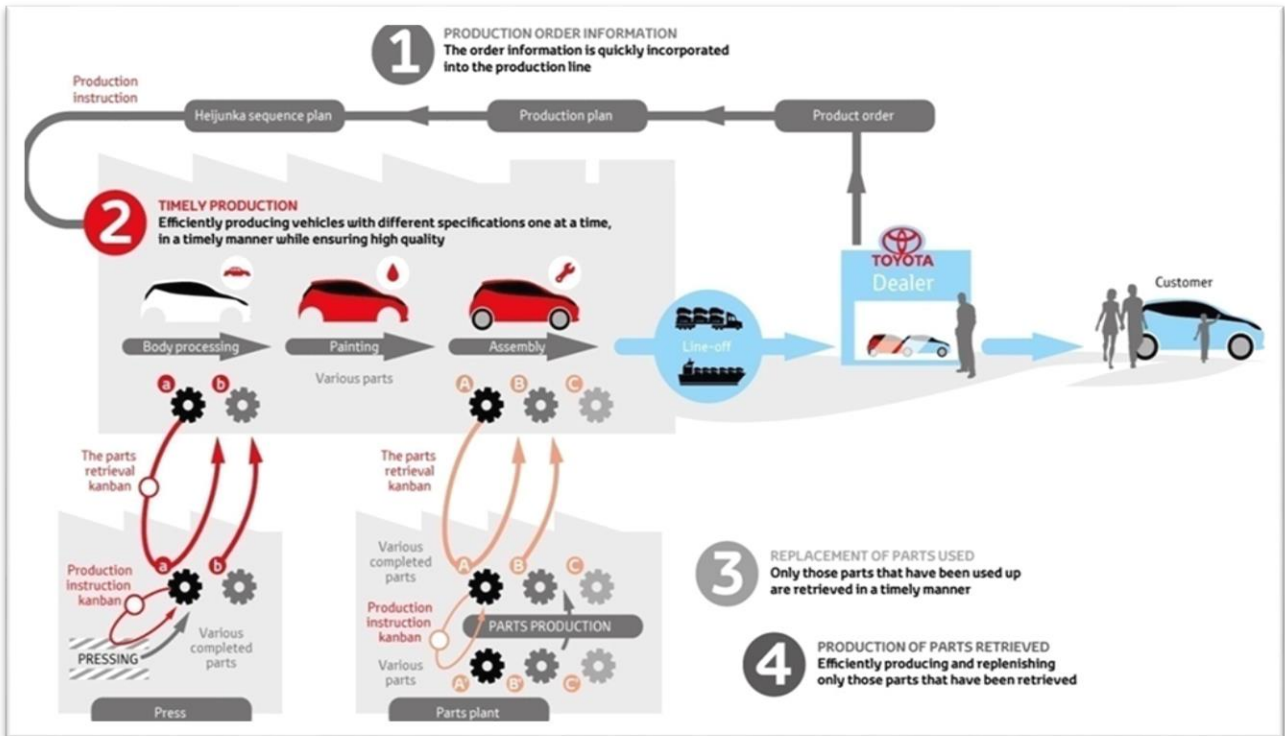


Figure 2 Example of JIT system for Volkswagen

Value Analysis

Value analysis could be described as the continuous evaluation of all aspects that contribute to the price of a product, component, or material in order to identify cost-saving opportunities that do not compromise the product's quality, efficiency, or any other attribute desired by the customer (Desarbo et al., 2001). The advantages of value analysis for Volkswagen during the current pandemic are as follows:

1. Identifies and eliminates wasteful expenses.
2. Possesses the capacity to upgrade antiquated processes, enhancing productivity and reducing expenses.
3. Can discover faults that result in customer loss and a poor reputation.

4. Increased client satisfaction as a result of enhanced performance and fewer product problems.

Functional Analysis

Avis (2009) describes functional analysis as examining the links between a product's performance, perceived customer value, and production price. Even though functional analysis is not of much assistance to Volkswagen during the current pandemic, it can be advantageous in specific ways:

1. Assists in identifying the cost of every function and its cost target.
2. If a cost gap is detected, alternatives to cut costs are identified.
3. Assists in determining whether a given function must be provided if its expenses are excessive.

Utilization of Balanced Scorecards by Volkswagen

Balanced Scorecard

Using a balanced scorecard, Volkswagen's management can identify and plan activities to be undertaken and monitor the repercussions of these actions to improve the business's total performance, not just its financial performance. It offers information from four distinct vantage points:

1. Financial perspective.
2. Customer perspective.
3. Internal Business perspective.
4. Learning and Growth perspective.

Critical Success Factors (CSFs) and Key Performance Indicators are included in each perspective (KPIs). These assist the business remains focused on the most critical actions and monitoring the accomplishment of objectives (Roy and Wetter, 2001).

Application of the Balanced Scorecard

With the advancement of technology and the growing influence of consumers and rivals in the automobile industry, financial performance indicators were insufficient for gaining market insight. Therefore, Volkswagen was required to use the balanced scorecard to obtain a complete evaluation of company performance (Martinson et al., 1999).

However, during the ongoing pandemic, Volkswagen must have a complete perspective of their performance to identify the company's existing performance and the modifications required to face the epidemic successfully. The balanced scorecard can assist Volkswagen in achieving this objective. During the current epidemic, employing the balanced scorecard as opposed to financial performance metrics has the following advantages:

1. Considers the overall views when presenting the information. The balanced scorecard includes details from consumers' viewpoints, internal operations, learning, innovation, and finances. In contrast, most performance measurements concentrate solely on a company's financial performance. This assists information users in analyzing performance from multiple perspectives (Davis and Albright, 2004).
2. Provides management with extensive information. As a result of basing its Key Performance Indicators on its business objectives, Volkswagen will be able to obtain information that is crucial to achieving these objectives. Consequently, superior

management information can be collected, resulting in enhanced decision-making and strategic planning (Kaplan and Norton, 1996).

3. Finds sub-optimizations. As the balanced scorecard compels management to consider the business as a whole, it enables them to determine whether advances in one sector have been accomplished at the expense of another. By recognizing this, management can develop more effective methods to strengthen all segments without disrupting another (Voelker et al., 2001).
4. Provides workers with knowledge on the priority areas. A balanced scorecard gives information about the present employee's performance and the categories they can contribute to achieving the organization's goals (Chavan, 2019). Consequently, the balanced scorecard could analyze each department's employees' performance expectations and actual performance.
5. Offers more reliable statistics. The performance results acquired by the balanced scorecard are more credible than other performance assessments since the organization does not solely depend on financial reports, which have a greater likelihood of being manipulated. Key Performance Indicators such as the number of repeat purchases, the proportion of defective items, and share prices are more difficult to falsify and can gather more accurate data (Lingle and Schiemann, 1996).

Conclusion

The COVID-19 pandemic has had a significant impact on many sectors of the global economy, including Volkswagen. The enormous influence on the vehicle industry has produced a problematic scenario for the administration of Volkswagen. Therefore, the management must alter

its tactics and devise new plans to confront new risks and possibilities and prepare for an uncertain future.

This research examines how methodologies like the learning effect, just-in-time (JIT), target costing, value analysis, and functional analysis can help Volkswagen improve its performance, face unanticipated risks, and take advantage of new opportunities to withstand the global pandemic. In addition, the paper explains how the balanced scorecard can aid Volkswagen in obtaining a full appraisal of its performance from multiple viewpoints.

Because Volkswagen has experienced a significant decline in sales and demand due to several issues, its future has become uncertain. Every vehicle manufacturer is now confronted with uncertainty and the need for inventiveness. In order to withstand the current epidemic, it is now the job of management to successfully confront these problems and develop new customer-attractive business models and cost-control strategies.

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