

Toyota in America: How it survived the auto industry crisis and its plan for the future: A descriptive study

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Abstract

The report pinpoints major obstacles the Toyota Motor Company has faced since its inception in the 1950s, analyzes the US motor industries, the big three automakers, and how Toyota broke into the US automobile market. At the same time, the European car manufacturers failed, and then analyzes how the big three automakers vis-à-vis Toyota dealt with the global financial crisis of 2008-2009. Then it highlights how Toyota dealt with the global safety recalls of 2010. Finally, it showcases how Toyota overcame these obstacles to become successful in the hybrid and electric, and hydrogen-fueled car markets of the future. The report analyzes Toyota's production and marketing strategies that have made it the number 1 car company globally.

Keywords: Automotive industry, Car industry, Auto industry, Automobile, Toyota.

Introduction

For the first time, Toyota overtook GM as the largest automaker in the world, ending GM's 70 years of dominance in 2008. It entered the North American auto industry in 1957, but from 1985 to 2005, its share in the North American industry grew substantially at the expense of the 'big three' American car manufacturers. One of the prime reasons why Toyota has been so successful is because of its highly efficient lean production system and its ability to anticipate external forces affecting and shaping the industry and come up with strategies to convert the threats of those forces into opportunities. This article analyzes some of these external forces that has shaped the North American auto industry and sheds light on how Toyota strategized to overcome them, where other car manufacturers have somewhat failed.

Toyota is a brand name that exemplifies exceptional quality and passenger safety. Its name has been synonymous with 'the best' quality cars beloved and trusted all around the world. Their 'customer first' principle along with continuous improvement and lean production systems have resulted in Toyota becoming the number one car company in the world, in 2021 Toyota became the largest car company in USA dethroning GM as the largest automaker. Toyota's R&D, continuous improvement, lean production system, and management principles have been the subject of numerous studies, books, documentaries, where researchers across the globe have analyzed their production techniques and principles, conceptualized as the Toyota Way. The article summarizes the concepts in the Toyota Production System and sheds light on the strategies Toyota has undertaken successfully to overcome the crises it has faced since the 1950s, to become the largest automaker

of the world, particularly focusing on its success in the US auto industry. In summary, Toyota has become the number one car company in the world because of its efficient production technique, known as 'Kaizen' and its success in anticipating opportunities and threats as they

appear globally as opposed to other car manufacturers, including the 'big three' auto giants of USA and Toyota has also been successful where European car manufacturers have failed to break into the US auto market.

Manufacturer ▲	Month ▲	LY ▲	Change ▲	YTD ▼	YTD Last Year ▲	YTD Change ▲
Toyota Motor Corp	156,506	183,051	-14.50%	307,193	349,283	-12.05%
Ford Motor Company	128,229	162,834	-21.25%	270,674	305,411	-11.37%
Hyundai Kia Auto Group	102,963	98,527	4.50%	183,859	183,796	0.03%
Honda Motor Company	84,394	106,328	-20.63%	158,343	198,553	-20.25%
Subaru Corporation	44,866	48,300	-7.11%	89,024	94,700	-5.99%
Mazda	28,166	21,544	30.74%	49,245	46,803	5.22%
Volvo	6,219	9,164	-32.14%	13,329	17,315	-23.02%
		Σ = 551,343	Σ = 629,748	Σ = 1,071,667	Σ = 1,195,861	

Figure 1: 2022 US Auto Sales by Manufacturers, From February 2022 to March 1st, 2022
 (Source: 2022 U.S. Auto Manufacturer Sales Figures | GCBC (goodcarbadcar.net))¹

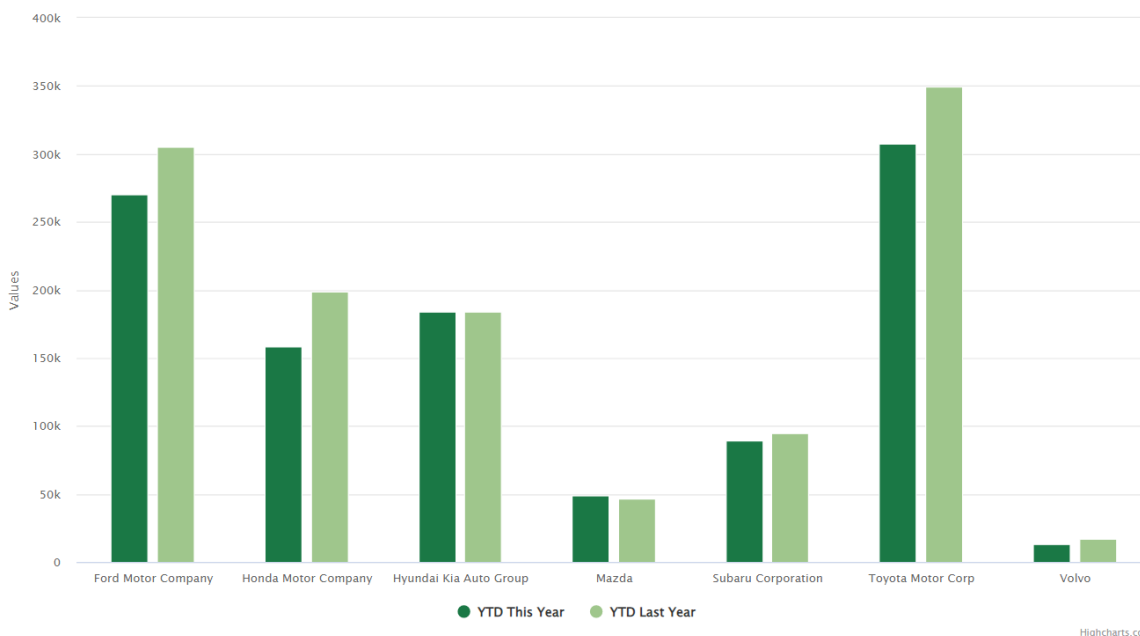
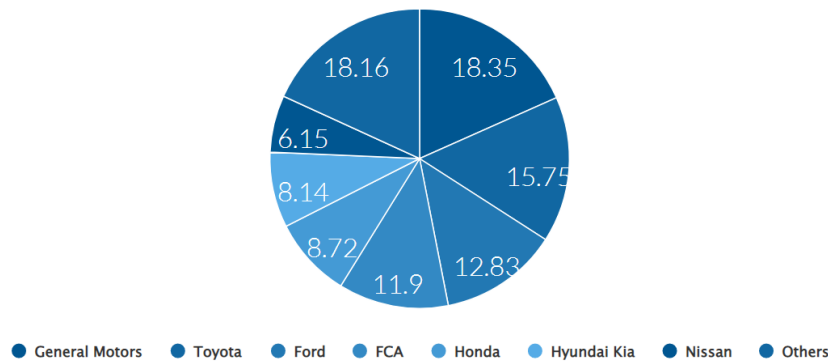


Figure 2: YTD Sales This Year and Last Year by Car Manufacturer in USA
 Source: 2022 U.S. Auto Manufacturer Sales Figures | GCBC (goodcarbadcar.net)

¹ This data table looks at total passenger car sales volumes in USA by manufacturer in the past month. The US manufacturers' sales for the last month is compared with the same month last year. Year to date (YTD) sales numbers is included and compared with year-to-date numbers from last year. With both monthly and YTD sales numbers given, a growth rate column is shown so you can better estimate an individual manufacturer's sales success in the US market.



Source: GoodCarBadCar.net

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Objectives of the Report

The principal objective of this article is to showcase how Toyota Motor Company broke into the US auto market, while other car manufacturers, e.g. European automakers failed, what strategies Toyota used to entice US consumers, how it dealt with the Oil crisis in the 1970s, followed by the global financial crisis of 2007-2008, delving into how the 'Big three' US auto giants dealt with the crisis, how the US auto industry metamorphosized itself following the global financial crises, how Toyota overcame the global safety recalls of its vehicles, finally, how Toyota is investing and strategizing in the market segment of electric vehicles (EVs) and hydrogen-fueled cars of the future.

The specific research objectives of the study are as follows:

1. To analyse what strategies Toyota undertook to break into the US auto market.
2. To identify reasons why European car manufacturers failed to break into the US auto market.
3. To inspect what steps Toyota pursued to deal with the oil crisis of the 1970s.
4. To explore what measures US auto manufacturers undertook to tackle the global financial crisis vis-à-vis Toyota.
5. To study how Toyota dealt with the global safety recalls of its vehicles.
6. To identify the plans of Toyota to tap into the market segments of EVs and hydrogen-fueled cars of the future.

Research Questions

The study is expected to provide answers to the following specific research questions:

1. Why did Toyota succeed in breaking into the US car market, while other European car manufacturers failed?

2. What happened during the global financial crisis of 2008-2009, and how did Toyota and the three American auto giants survive this crisis?
3. How did Toyota manage the global safety recalls of its vehicles in 2010 and 2014?
4. What strategies Toyota is pursuing to break into the market segments of EVs and Hydrogen-fueled cars of the future?
5. What strategies Toyota has undertaken since its inception in the 1950s to become the number one car company of the world?

Literature Review

Toyota Motor Corporation (commonly known as Toyota) is a Japanese multinational automobile manufacturer headquartered in Toyota City, Aichi, Japan. It was established by Kiichiro Toyoda and incorporated as a corporation on August 28, 1937. Today, Toyota is one of the biggest automotive manufacturers globally, with a production of around 10 million vehicles per year, the biggest company in Japan and the ninth-largest company globally as per revenue, as of December 2020. Toyota was the first automotive manufacturer in the world to produce more than 10 million cars per annum, a record set in 2012, when it celebrated the production of its 200 millionth car. Researchers have conceptualized Toyota's production processes and management philosophies as the Toyota Way. (Lloyd, 2020) applied the degree of fit relative to the Good to Great framework on Toyota Motor Corporation and has concluded that Toyota is undeniably one of the most successful companies globally, definitely in the Great category in the framework, showcasing a growth that has been unusually stable for over 80 years. (Hampson, 1999) opines that in reality Toyota production systems occur as a compromise between the two concepts of heijunka, or levelled ('balanced') production, and muri, or wastage from overstretching machines and personnel and the quest for leanness via kaizen. The compromise between these conflicting inclinations is motivated by the ability of Toyota management and other attributes of industrial relations within the company, to better manage its resources and output through the Toyota Way.

Rationale

This study would benefit a wide range of researchers in strategic management and management philosophies, particularly those studying Kaizen, continuous improvement, lean production system, and the Toyota Way. The findings will help the managers to reach an enhanced understanding of how continuous improvement and lean manufacturing embedded in the Toyota Way, contributes to strategic success and failures in the long term. Several prior books on Toyota by Jeffrey Liker (2004, 2011), Cory Lysen (2021), Guy Tessoro (2021), and Nicol Burgamy (2021) have analyzed Toyota's continuous improvement, lean manufacturing processes to improve management philosophies across the globe. This study, while adding further evidence on the issue, especially from the context of strategies Toyota undertook to effectively manage the crises that Toyota faced in the past seven decades, would incorporate management philosophy along with strategy. The present study would pinpoint the effective remedial measures taken by the Toyota management to address the negative impacts of the oil crisis, global financial crisis, global safety recalls, and thereby, enhanced the success and image of the company, which may assist managers globally in developing new and innovative strategies in dealing with such crises in the future, learning from the Toyota Way.

Materials and Methods

The study covers the strategies and policies that Toyota has undertaken in the past seven decades since its inception in the 1950s. More specifically, information on Toyota relevant within this scope have been used to analyze and draw conclusions of the study. To attain the objectives, information has been collected primarily from secondary sources. In addition, a crucial amount of information was collected from the Toyota website and US auto industry analysis from websites and data bases. Secondary sources included publicly available information from articles in newspapers or popular magazines, books, articles, data found in scholarly journals and websites.

The methodological limitations of the study cover several areas including the absence of detailed primary data such as surveys and observations owing to time constraints. Additionally, raw data on Toyota in USA were not available in most cases. The study is thus limited in several areas due to limited availability of raw data; secondary literatures like reports, data bases, books, journals, and company documents available in the public domain were utilized to make conclusions.

Historical Background

In the 1950s, Toyota's automobile production factories went back to full production after the devastations of World War II, and to gain competitiveness, the company began a thorough study of American automobile manufacturers due to perceived U.S. technical and economic superiority.

² Ford Motor Company, General Motors, and Chrysler Stellantis North America are together termed as the "Big Three", being the largest automakers in the USA.

Toyota executives explored the production facilities of corporations, including the Ford Motor Company, to witness the latest automobile manufacturing technology and, in turn, designed and incorporated these technologies in their own facilities, resulting in a nearly instantaneous increase in efficiency.

Incorporating the latest technological advancement in their product and production processes has also affected Toyota's business strategies. Toyota uses the concept of 'Kaizen' or continuous improvement to manufacture its lowest cost and highest quality cars. Toyota has attained a sustainable competitive edge over its rivals because of using 'Kaizen.' Toyota also groups its workers into the assembly line in teams. It provides them individual responsibility to correct mistakes before the cars reach the end of the production line (Housley & Brandwood, 2011). It has also started manufacturing electric cars – the car of the future – to keep up with the recent technological advances.

In 1957 Toyota established Toyota Motor Sales, U.S.A., Inc., to market its vehicles in the US, and the following year the company released its Toyopet sedan, the first model to be marketed in the US; but it recorded poor sales because of its high price and lack of horsepower. The Land Cruiser, a 4 x 4 utility vehicle, was released in 1958, which became more successful. In 1965 the Toyopet was entirely redesigned for the American market and was re-released as the Toyota Corona, becoming the company's first major success in the United States (T. Editors of Encyclopaedia., 2020). From 1985 to 2005, Japan's share of the US auto market has grown to 43%, at the expense of the big three² US motor manufacturers have suffered a 23% share loss (Housley & Brandwood, 2011).

Results and Discussion

Oil Crisis of 1973

One of the most immense economic forces affecting the auto industry was the oil crisis of 1973. Due to increased competition from foreign manufacturers, the North American automakers closed their old factories and moved to countries with low wages, like Mexico. Furthermore, foreign-manufactured, fuel-efficient Japanese cars gained a solid foothold in the American market during and after the 1973 oil embargo and the resultant rise in oil prices because of the Arab Israeli war. American firms Ford, GM, and Chrysler followed the foreign firms by manufacturing new lines of smaller, more fuel-efficient cars. Toyota was able to tap into the market by anticipating the consumer trend of buying smaller cars with better fuel economy due to the economic downturn and recession before the American firms. As a result, Toyota took over the market with its smaller, cheaper, high-quality cars. The company continually thrived in the American market, attaining a reputation for its low-cost, fuel-efficient, and reliable vehicles, such as the Corolla,

released in the United States in 1968 (T. Editors of Encyclopaedia., 2020).

What Happened to European Car Makers?

Whereas Toyota successfully broke into the American market, European automakers were not so efficient and effective in entering the US auto industry. Several factors were responsible for their failure: European automakers do not, presently, have many manufacturing plants inside America; they also pay a 2.5% tariff entering the US market, raising their prices significantly. Transportation costs of shipping the cars from Europe to the USA also raises their costs; they also must modify their vehicles before exporting them to the USA, modifying and customizing their cars, as roads are in bad shape in USA and Americans care less for fuel efficiency, and opt for bigger cars. The USA also lacks after-sales service for European cars (All Car Leasing, 2020). For these reasons, European automakers have failed to attract US consumers in huge numbers so far. So, Toyota's decision to establish 14 manufacturing plants in North America has been the deciding factor behind its success of breaking into the US automobile market.

Global Financial Crisis of 2008-2009: What Really Happened?

After the global financial crisis of 2007–08, new car sales declined precipitately, reflecting the overall decrease in consumer spending. With the onset of the worldwide energy crisis of 2002-2008 caused the Automotive industry crisis (2008-2010) and resulted in the largest bailout package in history from the US government for the 'big three' automakers. Those three were criticized for primarily focusing on SUVs and Pickup trucks with higher profit margins but lower fuel economy, which was deemed irresponsible in the light of rising fuel prices and falling sales. Toyota came up with its strategy by offering substantial discounts to entice customers. North Americans switched to smaller, cheaper, more fuel-efficient cars from Toyota, which helped boost Toyota's sales compared with the 'big three' automakers.

In comparison, Ford had a cash reserve of 25 billion as a hedge against these uncertain times, other automakers like General Motors (GM) and Chrysler filed for bankruptcy, and the United States government had to assist them with bailout money from the Troubled Asset Relief Program (TARP) to rescue the sinking firms. Although Ford celebrated the 100th anniversary of its establishment, GM did not celebrate the same. The automobile giant saw an annual loss of \$39 billion for 2007, the largest loss ever recorded for any automaker. This massive failure was due to the recession in the U.S. economy and the capture of market share to foreign brands, primarily the Japanese Toyota (Davis, 2019).

On the contrary, Chrysler was also hit with huge losses, and together with GM, both of which declared bankruptcy, received a total of \$63.5 billion in "bailout" money in loans from TARP, financed by the US government to help big businesses which suffered losses due to the recession. Ford, however, did not apply for the bailout funds because it had set aside a reserve fund of nearly \$25 billion to help

it through the difficult period (T. Editors of Encyclopaedia., 2020).

As of February 2012, however, news reports showed that the multi-billion-dollar U.S. automotive industry was back on track to enjoying a fast recovery due to the bailout, and both GM and Chrysler could pay back the government bailout loans. Enormous profits were re-recorded in GM, Ford, and Chrysler, Detroit's so-called "Big Three" were booming again. US auto-making industry reigned worldwide in 2012 as the biggest and most profitable year. Few could have foretold this colossal rise and turnaround of the industry from the recession after its inauspicious beginnings more than a century earlier. In early 2012, the U.S. economy showed modest signs of a recovery, with the unemployment rate declining to 8.3%, according to the government's Bureau of Labor Statistics.

Global Safety Recalls of Toyota Vehicles of 2010

However, Toyota, similarly, faced several significant financial challenges: plummeting sales as a result of the global financial crisis of 2008, as well as a global safety recall of more than eight million vehicles in 2010, which briefly paused the production and sales of some of its top models. In August 2009, the unsuitable installation of an all-season floor mat on an SUV by a dealer leading to a vehicle's accelerator getting stuck caused a fatal accident, and it started the most challenging crisis in Toyota's history. One and the same with safety and excellence, this legendary company became vilified by the American media, the US government, and even auto experts and lawyers. Toyota was accused of hiding that their vehicles had electronic troubles causing runaway vehicles leading to accidents and that the company was conspiring to hide this from the public. Then in early February 2011, the U.S. Department of Transportation released results from the NHTSA-NASA Study of Unintended Acceleration in Toyota Vehicles, exonerating Toyota, claiming that there was no evidence of sudden unintended acceleration triggered by electronic malfunctions in Toyota vehicles. The only faults NASA discovered were improperly fitted floor mats and sticky gas pedals that could be slow to return.

However, there has been a single documented case of an accident caused by the improperly fitted floor mats — the one concerning the loaner Lexus, where the dealer was at fault for installing the wrong floor mat and, also, he was at fault to attach it correctly with the restraining clips. Moreover, since then, there have been no documented cases of accidents triggered by faulty sticky pedals (Liker, 2011). Then, beginning in 2014, millions of vehicles manufactured by Toyota and some other car companies were recalled by regulators in the US because of probable malfunctioning airbags manufactured by a Japanese automotive parts supplier. This recall became the largest and most challenging safety recall in U.S. history (T. Editors of Encyclopaedia., 2020). The reasons for these large recalls of Toyota were researched in-dept by Toyota Motor Company itself and showcased that the strategy of being the best in quality, based on the Kaizen thinking, changed for a while for Toyota as they were narrowly focused on becoming the largest motor company in the

world. Toyota became the largest but at the cost of not being "the best" anymore.

Toyota Towards EVs and Hydrogen Cars of the Future

So, Toyota began to focus early on producing environmentally friendly and reliable cars tapping into the environmentally 'green' trend in consumers. With the high fuel costs nowadays, consumers are not buying large cars in the numbers they used to. Toyota's smaller cars are more fuel-efficient and are better for the environment. Currently, Toyota is the global market leader in sales of hybrid electric vehicles and has been one of the major companies to encourage the mass-market adoption of hybrid vehicles worldwide. Toyota is also the market leader in hydrogen fuel-cell vehicles. Cumulative global sales of Toyota and Lexus hybrid car models reached the 15 million milestones in January 2020 (Toyota Europe, 2017).

Nevertheless, it is facing increasing competition in this market segment from Tesla as it became the biggest US automaker in history with its market capitalization of valued at \$81.4 billion on January 6, 2020, even beating Ford's peak market value of \$80.8 billion. Tesla's toppling of US auto giants in electric automobiles can come as a surprise to many. However, Bloomberg had already predicted it in 2014, saying that Tesla can topple the car-dealer monopoly and Elon Musk's revolution not just only about electric cars but also breaking the monopoly of car-franchise owners dominated by the big three (Papadopolous, 2020). However, Toyota intends to have 15 electric vehicle (EV) models marketed by 2025 and invested \$13.5 billion over the past ten years to expand higher-life batteries into production.

Toyota is not only pushing into the growing market for battery operated EVs but also pioneering the technology to develop hydrogen fuel cell cars of the future. World's biggest carmaker is joining the rush with Tesla to gain a share of the growing market for EVs and hydrogen-fueled cars. Interestingly, the byproduct of hydrogen and oxygen combustion in hydrogen fuel cells is water, resulting in around 2% of the emissions of a gasoline engine, which would significantly reduce carbon emissions and may be a solution against global warming (CNBC, 2021). As of 2020, Toyota has regained its position as the world's largest automaker, surpassing Volkswagen (Reuters, 2021). It has sold 9.52 million cars worldwide, even with an 11.3% decline in sales because of the COVID-19 pandemic.

The Toyota Way

The Toyota Way is a collection of principles and activities discovered and manifested in the Toyota company's methodology to management and production (which is defined and attributed as the Toyota Production System). Toyota has been evolving its business philosophy since 1948 and advancing it as implicit knowledge to its management and personnel, but as the company has grown worldwide, its directors formally acknowledged and defined the Toyota Way in 2001. Toyota encapsulated the concepts under two principal pillars: continuous improvement (Kaizen) and regard for its people.

Underneath the continuous improvement (Kaizen) pillar are three principles: challenge (create a long-term vision), kaizen (a continual improvement process), and *genchi genbutsu* ("go and see" the process to get correct outcomes). Underneath the respect for its people pillar are two principles: respect and teamwork (Toyota Motor Company, 2012). Then, in 2004, Dr Jeffrey Liker, a professor of industrial engineering at the University of Michigan, put out a book titled 'The Toyota Way'. In this book, Liker termed the Toyota Way as a system designed to deliver the tools for people to continuously improve their work (Liker J. K., 2004). Liker confers that there are 14 guiding principles of The Toyota Way that can be grouped into four themes: (1) long-term philosophy, (2) the right process will yield the right results, (3) add value to the organization by evolving your people, and (4) continuously resolving root problems garners organizational learning. So, in the 84 years since its inception, Toyota has become the biggest automaker globally and has developed its own management principles and corporate philosophy, which has been inside the DNA behind Toyota's global repute for quality and reliability. The Toyota Way has shown managers in every industry how to improve their business processes through Kaizen and continuous improvement.

Conclusion

In conclusion, although the controversies surrounding recent Toyota recalls have tarnished the Company's reputation to some extent, Toyota so far has been able to strategize successfully to offset the external forces affecting the industry. The danger, however, is that it may undermine the very values that are at the core of the company's success if it focuses too narrowly on achieving the objective of becoming the number one automaker in the world, giving up its goal as a pioneer of being the best in the world, based on Kaizen thinking. As such, Toyota needs to refocus on setting a new, more sustainable, and customer-friendly objective emphasizing providing the highest efficiency and customer satisfaction. Evidently, Toyota's sales in its home market are going through a phase of stagnation due to a weakness in the Japanese yen providing a competitive advantage to Toyota's overseas businesses. Consequently, the company's margins from overseas operations are highly dependent on the depreciation of the Japanese yen against major currencies, including the US dollar and the euro. Despite being an Asian automobile manufacturer, Toyota is falling behind GM in the Chinese market. Finally, with increasing environmental awareness worldwide, a wait in Toyota's capacity to deliver conventional eco-friendly vehicles, like EVs and hydrogen-fueled cars, may restrict its future growth prospects behind Tesla's (Parashar, 2016). The auto industry worldwide is going through a metamorphosis as EVs and hydrogen fuel cell cars are being developed, and Toyota must transform itself as being the innovator in these cars of the future.

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