

Case Study of Toyota Automotive

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Abstract

A vast number of companies have both utilized and pioneered within technological advancements of our generation. Some companies continue to go beyond the limits to excel in corporate strategies and implementations that have propelled the consumer market into an age of continuous progression. Amongst the mass corporate market, Toyota is claiming a top rank as one of the most innovative and smartest industries of 2016. The transportation company has become a leading global automobile industry for its improvements in productivity, output, and efficiency. The company has risen from its financial, management, and production crisis that have occurred through the years of its growth to propel as a dominating force in the automobile industry. Toyota currently is one of the leading manufacturers for extensive research towards innovative solutions and mass changes in the automobile industry.

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The history of Toyota spans back to its emergence during 1937 when it was established by Kiichiro Toyoda. Kiichiro Toyoda took over his father's business and research of the Toyoda Automatic Loom Works in 1933 which was dedicated to the production of automobiles. The company's creation skyrocketed as Toyoda continued extensive research on gasoline-powered engines which led to the manufacturing of two prototype models. Toyoda then carried out the division of the Toyoda Automatic Loom Works and transitioned into the full conversion to Toyota's Japanese automobile industry. Kiichiro Toyoda prides the company on its simple founding philosophy, which is the development and application of a national technology. Toyota currently is the largest automobile manufacturer in Asia and second largest producer.

For most of the company's beginning years in the consumer market, it struggled to maintain momentum or recognition in comparison to other automobile industries at the time such as Nissan and Ford motors. However, the procurement boom which was a consequential result of the Korean War had helped Toyota in the 1950's to overcome its slow business growth and spark progression. In 1951, Toyota began its implementation of its Five-year plan for the modernization of production facilities. Udagawa (2005) states "the purpose of this plan, involving a ¥5,787 investment, was to establish a mass production system using the latest machinery and advanced factory layout" (p.108). Toyota used an interesting strategy during this time to align itself with foreign companies who were facing financial and production issues due to the economic plummet. Toyota sought out a temporary overseas link with Ford Motors that the company found critical to fill a technological gap which put a production ban on passenger cars

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during the war period. The negotiations were halted which resulted in Toyota going above the production ban and designing a passenger vehicle. This proved to be successful as Toyota introduced in January of 1955 its first passenger vehicle, called the Crown, which proved to be a success across world markets due to the compact size and miniscule gas consumption.

Udagawa (2005) finds in his research that “the rise of Toyota began truly in the 1970’s during the oil crisis which brought about soaring petrol prices and a rapid shift in demand towards smaller cars” (p.122). The Japanese car industry during this time was able to compromise and cope with the dramatic changes in the world economy, and it expanded its production by increasing exports to other countries, mainly the United States. Toyota’s placeholder in the shadows of other automobile industries had proven to be well worth the extensive research and careful manufacturing of its products that were able to successfully cater to consumer markets worldwide during this economic crisis. This opened up an entirely new market and segment for Toyota to be able to expand its industry for more than sixty years as a prominent force in the automobile industry, especially for its expansion and consistency currently in the United States market.

Despite Toyota’s eminent success and recognition as a leading car manufacturer in the current consumer race, there are factors that have contributed to both the pioneering innovations the company has utilized and also the factors that have contributed to its shortcomings. Toyota’s marketing strategies and advantage over competing manufacturers was its appeal to international markets, for example its successful introduction to the United States market during the Korean War. One of the largest positive attributes that the company uses to appeal to mass markets is its focus on quality control. Udagawa (2005) reports that the company at this time had created a

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slogan to focus on “All Toyota-Quality assurance which was initiated during November of 1967, the company had initiated what was considered a Kanban system which acted as a zero defect program as the method of quality control” (p.113). The company had created exhaustive efforts to initiate both management, production, and quality control of its products by teams called “Quality Control Circles” which were groups of leaders within the company that would oversee operational improvements to cost, safety, and maintenance.

By the 1980’s, Udagawa (2005) states that “Toyota was able to create advancements for their company by rationalization, procedural improvements, and standardization of operations as a result of the Quality Control circles initiated under the Kanban system” (p.114). The company still continues to abide by the Kanban system (which is now referred to as “Just-In-Time”) along with many other additions along the years that have proven to be substantial additions to the prosperity of their company. Fujimoto (2012) describes the various systems that have been utilized by Toyota:

Toyota’s “Just-in Time” and “Total Quality Control” strategies include the kaizen (continuous improvement), kanban (pull system), jidoka (automatic defect prevention), heijunka (production-leveling), multi-skilling, 5S (sorting, sweeping, etc.), and others. When these individual routines are combined into a coordinative system that achieves stable competitive performance, it is called “organizational capability in manufacturing”. Toyota’s organizational capability in manufacturing was constantly analyzed by Western competitors throughout the 1980s and 90s, but it turned out their strategies were rather difficult to imitate (p.33-34).

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According to Fujimoto (2012) the company has also taken on the “Monozukuri System (referred to as the Toyota Production System Aka Lean Production System) which is currently recognized as a major contributor to the industrial performance of the company” (p.38). Toyota was authentic in its manufacturing processes and was able to stabilize the company using techniques that competitors were not able to implement in the same way, which is a reason why today the company continues to have an advantage in the global market.

Although the company continues to be a powerful automobile industry and is currently in the process of technological innovation, there are some reflections which reveal systematic issues and even notable quality control issues that the company has run into. Cusumano (2011) identifies some of the main issues the company has faced regarding their quality control:

Between 1999 and 2010, at least 2,262 Toyota vehicles sold in the United States experienced unintended cases of rapid acceleration and are associated with at least 815 accidents and perhaps as many as 102 deaths. (p.33)

This is believed to be a quality control issue of the programmed engine and braking functions, which has plagued Prius and Lexus hybrid models, which were the most reported vehicles in these negative cases. The company had also been involved in other quality control issues between 1995 and 2000 with their Tacoma and Tundra pick up models sold in North America as a result of an improper antitrust treatment at the time which resulted in the company not being able to allocate stable resources for manufacturing parts. Cusumano (2011) reports that “this resulted in corrosion of frames, sticking brake issues, and driving mechanism shortages” (p.33). The Corolla and Camry models of 2010 had been plagued by various quality control issues as well.

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Cusumano (2011) examines how this actually may not necessarily be just an issue of quality control, but instead may be a consequence of Toyota's attempts to reduce costs in comparison to its high quality competitors in hindsight markets such as Hyundai. The company's biggest weakness was its historical groundbreaking standards for quality and durability seeming to slowly diminish. Cusumano (2011) suspects that this was more of an issue that resulted in managerial conflict of resources:

While Toyota was deemed successful for overtaking managerial resources and overseas supply chains in the push to overtake General Motors as the world's largest automaker, and although Toyota finally did this in 2009, the quality control problems appear connected to overly rapid expansion of production and parts procurement outside Japan, particularly associated with the decision to use a different brake pedal. (p.35)

It's apparent that although the business has prided itself on efficient quality control and production management, the business has experienced shortcomings in these areas over the past years due to its stressed efforts to keep costs to a minimum and production output high.

There are a number of external factors that have also influenced barriers and inhibited Toyota's present expansive growth. Considering Toyota's headquarters skyrocketed and current activity in Japan, the company was originally seen to remain in a low-market and unpopular segment of the automobile industry due to the low socioeconomic status of the Japanese economy. Toyota was in a heavy manufacturing race with neighboring competitors such as Nissan, which is also established in Japan, as well as Hyundai which was established in Korea. There was competitive nature for resources, implementations on strategies for success, and also the state of the global market added uncertainty to the success of Toyota's practices.

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The quality control debacle that had begun to plague Toyota beginning in the late 1990's to early 2000's had also created controversy as consumers began to question safety and opted for alternative automobile options. To refute this external factor, Fujimoto (2012) in his research found that the reports of Toyota's recall scandal were actually caused by factors unrelated to manufacturing:

Mismanagement of design quality as opposed to manufacturing quality, but many critics ignored this fundamental distinction. Thus, one simple reason for the decreasing popularity of Toyota-style capability was a lack of knowledge about basic manufacturing concepts. (p.39)

This resulted evidently in the declining popularity of Toyota's capability as a consequence of lack of knowledge for manufacturing concepts from individuals in charge of overseeing areas of production.

An analysis of Toyota as an overall business shows it is a relatively successful automobile industry, with some negatives that need to be addressed. The company has advantages in its strategies that have proven to make it a domineering automobile force that other competitors cannot mimic due to their lack of comparable manufacturing resources. The Japanese company has been able to utilize and allocate low exchange rates, low wages, and industrial policies (such as Quality Control Circles and Kanban) that have continued to make the company prosperous. However, upon an evaluation beyond the effective means the company has practiced there needs to be a re-evaluation of quality control management. While the company is able to maintain stable profit margins and has regained a competitive edge in the automobile industry, the largest issue within an overall evaluation of the company is the need for management to reallocate

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manufacturing resources by reconfiguring low-cost production at the expense of vehicle safety.

The company has made massive gains since it's recall debacle and is able to maintain constancy as it's current pace, but the company should remain focused on making sure compromising consumer safety for cost effectiveness does not reoccur.

The corporate level strategy of Toyota has various levels of focus associated to it's stability. Berke et. al (2007) analyzes Toyota's corporate culture and finds a people-oriented approach:

Toyota focuses on a number of attributes ranging from respect for people and relationships (associate focused), a focus on improving quality of life and supporting communities, zero tolerance for issues of integrity, and pursuing the philosophy of continuous improvement. The company has followed a pattern of analytical, strategic, and consultative capabilities with a focus on development teams and leadership positions that oversee performance. (p.15)

Toyota focuses on remaining a high performing organization that values development of people, accountability for results, strong leadership, and values of performance. The company's corporate strategy believes that each individual should be held accountable as an individual and work to develop their strengths through the corporate workforce of the company, this concept is referred to as Maximizing Associate Performance. It is a performance-based concept meant to center on employee motivation for acquired knowledge, improvement, and pride themselves on being able to take part in leadership development on projects within the company. This corporate style is a main attribute to Toyota's successful acquisition for companies such as Lexus, Scion, Daihatsu, Isuzu, Hino Motors, and Fuji Industries (which is in association with Subaru); which

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also take on the same level of corporate strategies being overseen by Toyota. The acquisition of these areas within the automobile industry has contributed to Toyota's competitive strategy as each subdivision caters to different consumer markets with various price ranges.

I believe that this is a very interesting decentralized system that doesn't just focus on people in managerial roles solely, but allows for flexibility and personal development of employees within the company. It's important that employees within a corporate organization do not feel as if they are strictly part of the numbers within a level of hierarchy, but instead are part of a team that strives to improve quality of life for consumers through their products. This is a positive overall representation of how a company should choose to conduct itself and appeal to the public market, by holding itself and its employees to moral and developmental standards. Berke et. al (2007) states how Toyota has even made bold attempts to promote diverse ideas by hiring mainly outside of the company:

Toyota at some point had filled executive leadership positions with outside candidates that introduced new skills, knowledge, and ideas into the organization which illustrated changes that touched every level of the organization. It provides a message that getting ahead in the company would be more about leadership skills and knowledge necessary instead of a hierarchy. (p.16)

This leadership style within the corporate level can also come with some caveats, considering employees who have worked hard and probably would consider themselves to have a superior level of leadership to be sidelined for outside candidates. While the efforts by Toyota are obviously well intended to represent diversity and flexibility among the company, it could affect employee morale for those who have remained dedicated to working for the company during an

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extended period of time. I also believe that this leadership style could have also inadvertently affected manufacturing issues as discussed earlier in regards to quality issues. While new executive leaders for the company may propose strong practices and innovative ideas, they could be lacking in other segments of knowledge that provide for manufacturing and quality control for the company as a whole. Toyota's efforts to cater as a humanitarian company are positively appreciated and recognized, but it should be further considered that maybe alternative options to hiring too much outside of the company to promote diversity could potentially harm due to lack of knowledge for the manufacturing process.

Toyota takes on a very direct approach in their business practice by using a simple approach known as Kaizen, which means continuous improvement. The company prides itself on a desire to make products with high quality and remains to be a strong force on both the Japanese and international markets. Funaru (2010) finds that "the company employs this strategy of being based on high quality, on developing new innovative technologies, focusing on further research, creativity, and also hard work" (p.4). Currently, Toyota is leading in future research for automobile technology. Many companies and consumer markets are becoming more involved and invested in Toyota considering their more recent research in battling pollutant emissions, with new business products and proposal concepts for Fine-N engines and Hybrid Synergy drive systems. Funaru (2010) shares some of the research advantages and tactics for their business market:

Toyota's performance range of engines and advanced design reflects the high standards set by the engineers who produce for the company, therefore today Toyota offers clients

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the following advantages: gasoline engines with advanced technology, variable rate control valves, and unique hybrid propulsion system synergy. (p.4)

Toyota's competitive and marketing strategy is their focus on extensive research towards continuous improvements for consumers' quality of life. A typical Toyota automobile body and chassis are also developed with extreme safety precaution, as Funaru (2010) shares is designed to "absorb energy from impact and provide maximum occupant protection as proven in accident reports, crash tests, and advanced computer simulations. (p.6). Toyota's budget conscious appeal to local and international markets is what has resulted in the company's successful profit margin. Currently as of the last quarter of 2016, Toyota has sold this year alone over eight million vehicles and has grossed over \$16.28 billion.

Toyota has implemented their practices by enforcing an integrative strategy, as Funaru (2010) describes as "a cross-functional strategy that appoints gradual improvement, management, and continuous business activities and the parameters of quality, productivity and competitiveness, with direct involvement of all staff" (p.4). Toyota also has created independent studies on consumer needs, collecting data based on popular votes regarding products and feedback has helped them cater their strategies towards what the consumer market looks for in them as a company. Funaru (2010) states the company also focusses to implement their strategy "by building more research and design centers in the proximity of production facilities; these bring specific items of the areas regarding the design and amenities" (p.6). One of Toyota's slogans is to "Think Global, Act Global" which has made them a proactive company and they have implemented their strategies efficiently within the Japanese and overseas markets to keep them consistent as a leading automobile industry.

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Toyota is a very powerful and innovative company that has excelled in many areas within the global market. The company is currently creating collaborative safety research centers around international markets in cooperation with universities, hospitals, agencies, and research institutions to expand research into advanced safety technologies. The Toyota Research Institute is also in the process of launching a prototype hydrogen-fuel-cell vehicle for the mass market, called the Mirari, which has a range of over 300 miles and emits only water vapor in its attempts to limit harmful engine pollutants. The company is also working on hydrogen fuel stations to propel the future of automobiles into hydrogen based resources instead of gasoline. It is apparent that Toyota has a bright and accelerated future for itself in regards to the growth in research it has committed itself to, but this does not come without means for improvement.

Toyota should dedicate itself more thoroughly to ensuring it maintains its standards for quality control and ensuring suitable production management from individuals who oversee these areas. The company would receive major backlash if subjected to another debacle of recalls or quality control critiques considering the level of research and production output that the company has committed itself to. I believe that the company will continue to prosper and will eventually be able to deliver groundbreaking innovations for the automobile market.

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