

# The case of Toyota recall



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## Abstract

**Purpose:** the main purpose of this study is to find out about the recalls of Toyota vehicles which lead to the death of some innocent lives. The recall was due to unintended acceleration. Toyota ultimately recalled millions of its cars for **floor mat** issues, brake problems and "**sticky**" **gas pedals**.

**Methodology:** Data was collected online, by the help of some selected search engines. Information was collected from Toyota's national website as well as other private sites.

**Findings/results:** Most organization should seek for customers or consumer's satisfaction rather than targeting of making high profit. Arrogance and choosing to ignore quality warnings when failures begin to happen is also a problem facing most organization.

**Implications:** Companies or organizations should design and manufacturing information and traceability data that can be shared with suppliers for effective root cause analysis.

**Paper type:** case study

**Keywords:** recall, unintended acceleration, floor mat, sticky gas pedals.



## Introduction

Toyota has long been recognized as seventh largest company in the world and the second largest manufacturer of automobiles, with production facilities in 28 nations around the world (Toyota Assembly and part, 2011). As been the world third largest manufacturer of automobiles in unit sales and in net sales, Toyota has also created good customer relationship and provides customers with the products they need. Toyota Motor Company Ltd. was established in **Koromo Town**, Japan in 1937 by **Mr. Kiichiro Toyoda**. Koromo was a major producer of silk and before the founding of the automobile company, the Toyoda family was involved in the manufacture of automatic looms (a device use to weave cloth) used by the silk and cotton industry (Toyota Motto Corporation, 2011).

During the 1930's the textile industry suffered and orders for new looms from the Toyoda family's factory were slow. Looking for new growth markets and to hand the company over to his son, **Sakichi Toyoda**. Sakichi Toyoda invested in his research and development of an automobile in 1930. As the work was progressing, he established the first Automobile Department, within his existing "Toyoda Automatic Loom Works" company in September 1933.

He later changed the name "**Toyoda**" to "**Toyota**" since he wanted to bridge the gap between his family name and the Company name. That is, making a clear distinction between his family (private life) and his company (public life). Toyoda completed the first prototype of an engine named the **type A** successfully which leads to the establishment of **Toyota Motor Corporation**. Soon after, he launched its first small car known as the SA Model in 1974.

Over and above manufacturing, Toyota also has a global network of design and 'Research and Development' facilities, embracing the three major car markets of Japan, North America and Europe. Across the world, Toyota participates enthusiastically in community activities ranging from the sponsorship of educational and cultural programmes to international exchange and research.

The company never encountered a problem or any bad history until there was recalls of some automobiles by the Toyota Motor Corporation which occurred at the end of 2009 and commerce of 2010. Although the Toyota Company is best known today for its cars, it is still in the textile business



and still makes automatic looms, which are now computerized and electric sewing machines which are available worldwide.

### Toyota Case

Toyota recalled some of its automobiles due to unintended acceleration leading to the death of innocent people. Toyota ultimately recalled millions of its cars for **floor mat** issues, **brake** problems and "**sticky**" **gas pedals**.

### Sticky gas pedals/stuck gas pedal



Toyota case was due to potential problems with the gas pedal mechanism that can cause the accelerator to become stuck - regardless of whether the vehicle contains a floor mat. Toyota said in certain rare cases, the gas pedal mechanism wears down, causing the accelerator to become harder to press, slower to return or, in some cases, stuck. The gas pedals was too long and there is a little space between it and the floor mat. In all, there was a poorly designed floor mat

Toyota began a massive recall last year worldwide to fix the problems that were attributed to **faulty accelerators**, **floor mats getting stuck** in gas pedals and **brake problems** in Prius hybrids. More than 8.5 million Toyota cars and trucks have been recalled. Drivers have complained of cars careering out of control at 65mph while overtaking, and negotiating roundabouts so fast that it felt like their car was on two wheels. A mechanical fault, caused by a combination of wear and cold and wet weather, Toyota believes, means that the accelerator pedal sometimes sticks down. Around 10,000 Toyota owners have so far contacted a hotline to air concerns.



Toyota was overwhelmed by massive product recalls and damage to its reputation after questions over the safety of its cars and allegations that the company did not act quickly enough once problems had been identified.

The problem commenced when one duty police officer and his family back in August 2009 after their car, a Toyota Lexus, unexpectedly accelerated, crashed into another vehicle, tumbled over an embankment and burst into flames lead to the death of the man. Initial company reports identified that the car may have been fitted with the wrong floor mats, which could have slipped and entrapped the accelerator pedal.

The problems began to increase for Toyota. Critics attacked the company for allegedly covering up defects and not taking safety issues seriously enough. By February earlier this year, Toyota had issued recalls for about 10 million vehicles and company president Akio Toyoda was summoned to appear before a U.S. congressional committee to respond to questions over Toyota's handling of the recalls and safety issues. Even if a company tries to cope with a crisis, it often happens that the company faces a secondary crisis, which could be more threatening than the original one when it fails to communicate with society and causes misunderstanding (Nakata, 2010).

## **Methodology**

Data was collected from online by the help of some selected search engines (Bing, Google and Yahoo) and browsers (Google chrome, Opera and Mozilla Fox). An achieved Data containing the figures of recall vehicles were used. Information was collected from Toyota's national website as well as other private sites. Quotes, citations and other relevant document leading to the completion of this case study were also taken from some this site.

Recall by Toyota was first initiated with the assistance of the U.S. National Highway Traffic Safety Administration (NHTSA) and National Aeronautics Space Administration (NASA).



## Recall Data

Toyota had announced recalls of approximately 5.2 million vehicles for the pedal entrapment/floor mat problem, and an additional 2.3 million vehicles for the accelerator pedal problem. Approximately 1.7 million vehicles are subject to both. Certain related Lexus and Pontiac models were also affected. The next day, Toyota widened the recall to include 1.8 million vehicles in Europe and 75,000 in China. By then, the worldwide total number of cars recalled by Toyota stood at 9 million. Sales of multiple recalled models were suspended for several weeks as a result of the accelerator pedal recall, with the vehicles awaiting replacement parts.

Toyota did recall almost 8 million vehicles worldwide to correct issues with ill-fitting floor mats that could trap the accelerator pedal, and for adjustments to throttle pedals that had a tendency to stick or were slow to return to idle. Some of the cars affected by the recall are listed below.

**RAV4, Corolla, Matrix, Avalon, Camry, Highlander, Tundra, Sequoia, Lexus, Pontiac**

## Investigations



Toyota Company



commissioned the National

Highway Traffic Safety Administration (NHTSA) to investigate the software in Toyota engine computers to see if a programming error could command the throttles to open without input from the drivers. Such unintended acceleration was blamed for a number of accidents and deaths over several years, culminating in the recalls. NHTSA confirmed that the cause of unintended acceleration was not due to mechanical defect with the pedals and floor mat systems (Allen, 2010).

According to NHTSA previous investigation, the defect has resulted in a total of 16 accidents with three deaths and seven injuries. Therefore, why didn't Toyota use this as an alert to call for recall but rather delayed in announcing. **Toyota says it believed the defect was unlikely to**



**occur on vehicles sold in the States because American driving cycles are significantly different from those in Japan.** Once the company received 54 complaints on the issue, it supposedly alerted NHTSA of the problem within the five days allowed under the law.

The NHTSA recently charged Toyota with a **\$16.4 million** fine for failing to notify the government of the infamous unintended acceleration issue within the allotted time. Since then, Toyota has been more forthcoming with information about what it claims the company knew and when, but so far there's no been official word from the automaker about this latest investigation.

Meanwhile, Toyota's crisis has created an opening for other carmakers. **GM, Ford, and Hyundai** have all scrambled to claim some of Toyota's slipping market share. (Haq, 2010). The question of unintended acceleration involving Toyota and Lexus vehicles has been repeatedly and thoroughly investigated by NHTSA, without any finding of defect other than the risk from an unsecured or incompatible driver's floor mat. (Toyota-Newsroom, 2009). Also, Toyota Company commissioned NASA to investigate on the problem. NASA investigated many possible avenues that might increase engine RPM (Resolutions per minutes).

### **Congressional decisions**

Congress in February 2010 began a series of hearings on the issue of unintended acceleration in Toyota vehicles. Senate Commerce Committee Chairman Jay Rockefeller of West Virginia has laid out possible steps for Congress and the DOT, including taking a fresh look at the TREAD Act, requiring brake override technology on all new automobiles, requiring auto makers to provide the necessary equipment for investigators to read electronic data recorders and forcing senior executives of auto companies to personally certify that information their firms provide to NHTSA is complete and accurate.(Rockefeller, 2010). Consumer advocates have suggested broader changes including new standards for accelerators and electronics testing; mandatory installation of event data recorders and the collection of more information.



## Toyota's Reaction/Response



Toyota, however, took the result as cold comfort, since the damage to its reputation has been done. The mechanical issues with its pedals and floor mats, after all, remain as the root factor in what eventually became a record recall of over 12 million vehicles around the world and over 5 million here in the U.S. Toyota was eventually fined \$48.8 million for its treatment of the recalls.

Toyota said drivers in the recalled vehicles whose gas pedals become stuck should firmly apply their brakes, drive the car to a safe location, shut off the engine and contact the nearest Toyota dealer. Drivers who experience the problem should not pump their brakes, Toyota said. (Valdes-Dapena, 2010). "At least in that short term, it was not easy for Toyota to erase the negative Image of its products," he said. (Nakata, 2010)

## Solutions from Toyota to fix the problems



Toyota's engineers have developed and rigorously tested a solution that is both effective and simple. A precision-cut steel reinforcement bar will be installed into the accelerator pedal assembly, thereby eliminating the excess friction that has caused pedals to stick in rare instances. (Griffin, 2011)



## Lessons from organization



Most organization should seek for customers or consumer's satisfaction rather than targeting of making high profit. Arrogance and choosing to ignore quality warnings when failures started to happen is also a problem facing most organization. Toyota did not act until the number of cases and the media outcry became loud enough to get through their in-defiance skulls. May be it is not too much of quality that has lead Toyota in to this crisis but rather they should look at their quality of leadership which may sometimes include selecting technology and keeping ears to the ground. Companies or organization should design and manufacturing information and traceability data that can be shared with suppliers for effective root cause analysis.

## Lesson from research.

Research can go further to examine the actual number of vehicles related by models to see which of these models were affected badly or most. Also, extend the research to see if the design or structure of those models is the main cause of the unintended acceleration.



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