"Practicing International Management Case Toyota’s Strategy for Production

Efficiency Toyota Motor Corporation (www.toyota-global.com) commonly appears in most rankings of the world’s most respected companies. One reason for Toyota’s strong showing in such rankings is that the company always seems to maintain profitability in the face of economic downturns and slack demand. Another reason is that leaders in a wide range of industries have high regard for Toyota’s management and production practices. Toyota first began producing cars in 1937. In the mid-1950s, a machinist named Taiichi Ohno began developing a new concept of automobile production. Today, the approach known as the Toyota Production System (TPS) has been intensely studied and widely copied throughout the automobile industry. Ohno, who is addressed by fellow employees as sensei (“teacher and master”), followed the lead of the family that founded Toyota (spelled Toyoda) by exhibiting high regard for company employees. Ohno also believed that mass production of automobiles was obsolete and that a flexible production system that produced cars according to specific customer requests would be superior. It was at Toyota that the well-known just-in-time approach to inventory management was developed and perfected. Implementing just-in-time required kanban, a simple system of colored paper cards that accompanied the parts as they progressed down the assembly line. Kanban eliminates inventory buildup by quickly telling the production personnel which parts are being used and which are not. The third pillar of the TPS was quality circles, groups of workers who discussed ways to improve the work process and make better cars. Finally, the entire system was based on jidoka, which literally means “automation.” As used at Toyota, however, the word expresses management’s faith in the worker as a human being and a thinker. A simple example illustrates the benefits of Toyota’s system. Toyota dealerships found that customers kept returning their vehicles with leaking radiator hoses. When a team of workers at the U.S. plant where the vehicle was made was asked to help find a solution, they found the problem was the clamp on the radiator hose. In assembly, the clamp is put over the hose, a pin on the side is pulled out, and the hose is secured. But sometimes the operator would forget to pull out the pin. The hose would remain loose and would leak. So the team installed a device next to the line that contains a funnel and electric eye. If a pin is not tossed into the funnel (passing the electric eye) every 60 seconds, the device senses that the operator must have forgotten to pull the pin and stops the line. As a result, a warranty problem at the dealerships was eliminated, customer dissatisfaction was reduced, and productivity was increased. Nearly 50 years after the groundwork for the TPS was first laid, the results speak for themselves. Toyota’s superior approach to manufacturing has been estimated to yield a cost advantage of $600 to $700 per car due to more efficient production, plus another $300 savings per car because fewer defects mean less warranty repair work. Ohno’s belief in flexible production can also be seen in the fact that Toyota’s Sienna minivan is produced on the same assembly line in Georgetown, Kentucky, as the company’s Camry models. The Sienna and Camry share the same basic chassis and 50 percent of their parts. Out of 300 different stations on the assembly line, Sienna models require different parts at only 26 stations. Toyota expects to build one Sienna for every three Camrys that come off the assembly line."