



Japanese Society for Quality Control (JSQC),

A Few Thoughts about Toyota's Massive Recall

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With regard to the Toyota's massive recall in North America, Tokyo Bureau of the Wall Street Journal asked JSQC to recommend an appropriate JSQC member to whom it wanted to ask for a comment on the quality management issues in the Japanese manufacturing industry. Upon this request, JSQC recommended Prof. Yoshinori Iizuka from the University of Tokyo, former JSQC President. Here are the comments made by Prof. Iizuka through a series of e-mail correspondences and telephone interviews.

Questions from Tokyo Bureau of the Wall Street Journal

1. Toyota Motor Corp. announced a massive recall in North America the other day. Could you make a comment on the quality management issues in the Japanese manufacturing industry, in particular, on the trend of the Japanese quality management over the past five to ten years?
2. Is integrity of the Japanese quality management deteriorating? If so, what is lying behind the deterioration? (Could you elaborate the point you made in yesterday's e-mail, please?)
3. What is the key to achieve a good balance between quality management and international competitive edge or price competitiveness? The Toyota's recall, for example, highlights an issue that globalization of high-volume production sites which it has facilitated to maintain its price competitiveness results in a quality failure. What do you think about it?

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Summary of Prof. Iizuka's Comments

In fact, I was interviewed on a similar topic, i.e. "Is Japan no longer Quality Power?" by English Journal of Nikkei around 2000 when the JCO criticality accident, concrete slab drop accidents in several tunnels of the Sanyo Shinkansen Line and a series of medical accidents took place in Japan. At that time, I tried to dodge the question by saying "Although Japan is called the world preeminent quality power, the world-class quality has been achieved in one-fifth of the manufacturing industry which accounts for about a quarter of the Japanese GDP of about 500 trillion yen. In other words, the top-class quality is achieved only in a segment of as small as 5 % of the Japanese GDP. These accidents took place outside of the segment featuring the world-class quality." The Nikkei reporter, however, was persistent, asking me a penetrating question such as "Is the Japanese manufacturing capability intact yet?" Being honest, I answered "I would have to say the Japanese manufacturing capability is getting deteriorated."

What I meant at that time is deterioration of truth-pursuing hungry spirit, pure honesty and insatiable appetite for supremacy; that is deterioration of capability, mentality and mindset that everyone must constantly maintain. We have to admit that the deterioration prevails not only among organizations but also among individuals though it differs in degree to some extent.

The problem we must highlight now is that business is not making sufficient or appropriate efforts to innovate concept of quality and methodologies of quality realization to cope with the change of the times even if awareness of quality is not impaired. We should recognize that every company is making some efforts, but it is necessary, I think, to humbly test whether direction of these efforts is in line with needs of the age. The simple answer is that the direction is hardly in line with needs of the age. This problem is not fully recognized or investigated to work out an idea for innovation of quality technology.

To offer customer values in a mature economy, business should take account of increasingly diversified, sophisticated and complex needs to be met, and it should also assure robustness of products/services against diversified and demanding conditions of their use. I do not think, however, that business is fully prepared.

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With regard to technology, business fails to fully address the need for fractionization and sophistication of technologies which are essential for product realization, and the need for integration and systematization of various technologies. This kind of failure might lead to poor quality.

It should be also noted that it gets increasingly hard for business to cope with rapidity of change in the mature economy. Technologies, which business is expected to address, have become extensive in type, breadth and depth, compared with those in the period of rapid economic growth. Again business is not fully prepared. Business is not yet fully equipped with ability of prediction, evaluation of verification necessary to cope with rapid changes.

To address acceleration of speed, reduction of costs and innovation of technologies, business needs to procure goods and services increasingly from specialist vendors and affiliated companies. To make such procurement successful, an appropriate methodology needs to be designed to avoid any poor quality, but business does not make sufficient efforts. Furthermore business does not address SCM (supply chain management) or partnership although they are important especially for successful global procurement.

To respond to these changes of business environment, the industry must shift focus of quality management methodologies. Such shift, however, does not take place sufficiently. This is the reality. The reality is that business thinks it works seriously on quality challenges but its quality-centered business management is not appropriate or relevant to needs of the age.

It is not yet found out what has caused the Toyota's quality problem of sticking accelerator pedals. I do not think it is appropriate to make any comment now on factors underlying this recall. Looking back the quality initiatives taken by the industry over the past ten years, however, I have made the above generic comments.

In general, business has not lost its quality mindset. Business, however, is not able to fully meet the needs of the age as it does not quite recognize that the quality technology required in the current mature economy is different from that required in the period of rapid economic growth. Putting it sweetly, I think the industry fails to recognize the reality that quality issues become by far more difficult than before.

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There is a misunderstanding in the question about a good balance between quality management and price competitiveness. Quality represents customer's perception of values provided through products/services. Quality management, therefore, serves as overall management to enhance competitive edge. Quality management and price competitiveness will never contradict each other if a company carries through its business management based on the principles of the quality-centered business management including performance based on customer value provision and profit as a resource to run a cycle of reproducing the customer value provision.

I do not agree to the argument that the Toyota's massive recall is attributed to its strategy of globalization of high-volume production sites to maintain its price competitiveness, which results in a quality failure. In the case of the automobile industry which is characterized by high-volume production, business economics or sources of profit or competitive advantage relies on reasonable costs and volume sales. The automobile industry needs to be equipped with excellent capabilities of product planning, product designing, production engineering and manufacturing. Overall technology integration capability is essential. In short, the automobile industry, by nature, is surrounded with demanding challenges. It is hard to think of a new business model superior to the current business model to facilitate high-volume production through component standardization and common design. From the quality viewpoint, high-volume production is advantageous as well. Quality of automobiles is sufficiently challenged and checked as a massive number of automobiles are used in various conditions and environments. In order to mitigate such a quality risk that Toyota encounters, it is necessary to fully and thoroughly check quality at the design stage, and identify and characterize any unanticipated event, if detected, so as to take a prompt and adequate action. To this end, business needs to be sensitive and insightful to understand the essence of a problem and active in sharing information.