

A Profile of Toyota's Culture for Innovation

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‘An innovative climate is not just a sentimental need. It has powerful business implications and can bring real results. There’s a reason why companies like Google and Apple have such a breathtaking record of rapid innovation; you need to look no further than their climate. A climate of innovation ensures that you’ll have the inherent ability to not just innovate with an occasional flash of brilliance, but to do so continuously. That’s an extremely important strategic advantage to have in a fast-moving marketplace that’s overcrowded with competitors’.¹

¹ FutureLinkLLC. See; www.getfuturelink.com

Objective and Methodology

The objective of this Profile and the 25-Factor analysis is to examine the management policies and practices of Toyota regarding innovation and compare these practices with those of internationally-recognized innovative companies.

Based on what we know of Japan's management practices and those of Toyota, we have commented on 23 of the 25 Factors which, based on earlier research into the best practices of 28 global corporations, can be used to describe a culture for innovation. Four of the companies which were part of the original research were Japanese corporations; Toray Industries Ltd., Sumitomo Electric Industries Ltd., Epson Corporation, and Asahi Chemical Industry Co. Ltd.

For each Factor, we examine whether Toyota's practices are in line with those of other globally-based innovative corporations. Are Toyota's management practices similar or different to other Japanese corporations or do its practices differ, and in what way?



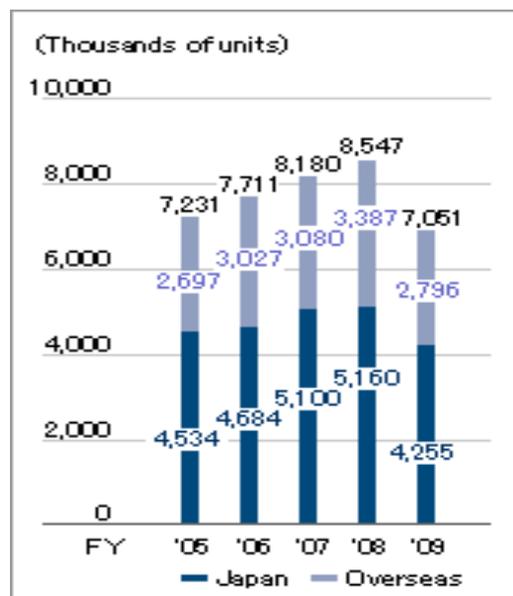
Factors highlighted with a 'red flag' may well be in need of deep examination by Toyota management as these practices are out-of-line with the management practices of other highly-innovative companies in North America and Europe.

Overview of Toyota

The massive recall by Toyota of 8.4 million vehicles (8 million for unintended acceleration and 400,000 for brake problems) was, according to the company, **attributed to over expansion and insufficient attention to quality**. Toyota's organization was unable to cope with the building of upwards of 17 new production facilities since 2,000 on top of the need to supply and manage the current total of 75 production plants world-wide. Toyota has survived the recall but did the recall affect Toyota's traditional innovative culture? Is the culture for innovation in each of Toyota's broad geographical facilities the same? Probably not! Are there some lessons to be learned? Probably!

To put a perspective on the size of the recall, but not to minimize the significance of the recall, it is important to note that according to Ray Lahood², Secretary of the Department of Transportation, 23 million vehicles have been recalled in the U.S.A. in the last 3 years and most were not made by Toyota. About 30,000 complaints per year are handled by NHTSA.

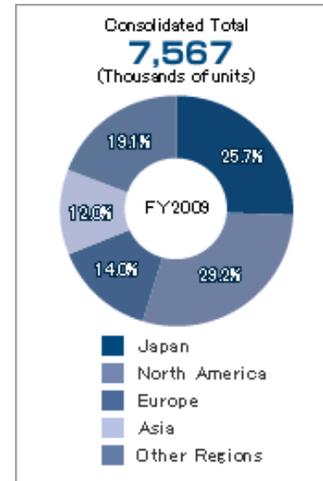
Toyota has dramatically expanded its global operations over the past decade. The graph opposite³ shows the production of units for fiscal years 2005 to 2009 and indicates the degree of overseas production.



² PBS interview, February 24th, 2010.

³ Toyota financial information; web site.

Global sales by region show the dispersion of sales in major markets.



Plans are to continue on this path. Toyota's production target world-wide is forecast at 8.27 million in 2010, up 6% year on year⁴.

Toyota's Culture is Deeply Rooted – in Japan

Toyota's culture is deeply rooted, engineering first, continuous improvement second and a reliance on their own corporate resources to solve problems. Japanese culture is, as well, closely tied to the culture of making things, monozukuri (making things) and kaizen (continuous improvement). The culture is a matter of pride. In Toyota the culture goes right back to the company's early beginnings when it imported British-made looms and improved on their performance. Doing things better with someone else's basic idea is at the root of Japan's industrial/commercial success.

For Toyota, and for many global companies, corporate culture is the result of a founder [not to deny the influence of subsequent management regimes] who had a vision of innovation and its relevance to growth. Culture for innovation may not travel well.

However deep the culture is, it may not travel well. The transference of the culture from the home country to other cultures can be difficult. For example, The Toyota Way 2001, a 13-page document intended to encapsulate the way Toyota does its business, took 10 years to get to a stage where it could be released by Toyota⁵ in spite of the fact that this was done under the reign of one President; Fujio Cho. Toyota has had to adapt⁶ the Toyota Way to local culture but one senses that this was done with some reluctance and only, in the end, because Toyota had to make the adaptation to make it work. It took 15 years at Toyota Motor Manufacturing in Georgetown to inculcate the Toyota culture in the U.S. facility, and in this case, modifications had to be made to adapt to national and even local cultures. To become a Toyota Manager takes 10 years⁷ and even that is considered a fast pace. Culture takes a long time to develop!

The question arises; if it takes this long to 'transfer' even a modified version of the Toyota Way to other countries, which most often have dramatically different cultures, what is the practical limit to the rate of geographic expansion? Even with the sophistication of Toyota management and their attention to detail, to

⁴ By THE ASSOCIATED PRESS, cp.org, Updated: February 25, 2010 9:53 PM

⁵ Toyota Culture; Liker and Hoseus, McGraw Hill, 2008.

⁶ Toyota Culture, Liker and Hoseus, McGraw Hill, 2008. Page 18.

⁷ Toyota Culture, Liker and Hoseus, McGraw Hill, 2008. Page 18.

training, to providing hands-on help, **there remains a limit to the rate of adaptation outside Japan to the new 'Toyota Way' business methods.**

Cultures differ by region and by country. For a discussion of the a few of the different dimensions of culture on a national basis and to better understand, for example, the cultural differences between the U.S. and Japan, have a look at Hofstede's Cultural Scores⁸. This Profile sheds some light on possible root causes of the slow and inappropriate response to the recent major recall.

If over-expansion was the culprit, then the solution is too simply stop or slow-down the rate of expansion. The reality is that other factors were also at work. Japanese corporate culture⁹ "genchi genbutsu" refers to "getting your hands dirty, to identify or solve immediate problems. In the case of the recall, the hands did not get dirty enough fast enough.

Executive Overview

There are observable differences between the management practices of highly-innovative global companies¹⁰ and Toyota's practices. Some of these differences are rooted in the cultural differences between the 'east' and the 'west'. The recall, and Toyota's inappropriate response, may have highlighted certain cultural characteristics of the company and these differences may impact its innovativeness over the longer term.

Based on our review of Toyota's culture, set out in the 25-Factor Profile at the end of this document, 9 management practices are identified which are not in line with the practices of highly-innovative companies.

1. **Conformity and consensus are valued above all else.**

The C.E.O.s role in Japanese business is often viewed as a consensus¹¹ making role, often trumping the value of leadership. Peace and harmony may reign but if it is the majority making the wrong decisions, and the unheard-minority are right, which can be the case, there is a problem.

In highly innovative companies the C.E.O. is often called upon to exercise leadership, which in other words, often means going against the consensus of the Board, or the Executive Committee. Note GE's C.E.O Immelt's decision to move ahead with the decision on GE's 'ecomagination initiative'¹². The C.E.O.'s role is to provide leadership and not necessarily arrive at a consensus.

2. **Individual level risk taking is at odds with the thrust for group conformance in Japanese companies.**

Individualism, it seems, is not valued by Japanese corporations where conformity and consensus rank higher. Sticking your neck out can be dangerous for your career! One senior official in Japan has made a call for Japanese business to have more 'crazy people'; obviously meant to be a constructive comment relating to a deficit in the current management culture.

3. **Hiring, career progression and compensation practices reinforce the importance of conformity as a cultural value.**

⁸ http://www.geert-hofstede.com/hofstede_japan.shtml

⁹ Wikipedia; Japanese Management culture

¹⁰ See: <http://www.corporateinnovationonline.com> for research results.

¹¹ Wikipedia; Japanese management culture

¹² GE Profile; Factor #2, page 8.

‘Companies¹³ provide their own training and show a strong preference for young men who can be trained in the company way. Interest in a person whose attitudes and work habits are shaped outside the company is low’. **The focus is on hiring persons, mainly male, who will ‘fit in’.** Recall hiring practices of P&G decades ago; ‘you don’t need the MBA, we will teach you the P&G way’ was the mantra provided to new potential hires. Decades later P&G now hire from the outside where there is a deficit in talent¹⁴ or in the manner of thinking about a problem.

‘Compensation consists of a wide range of tangible and intangible benefits, including housing assistance, inexpensive vacations, good recreational facilities, and above all the availability of low-cost loans for such expenses as housing and a new automobile’. **The purpose is to maintain harmony and avoid stress and jealousy within the group.**

‘Career progression, in Japan, is highly predictable, regulated, and automatic. Compensation for young workers is quite low, but they accept low pay with the understanding that their pay will increase in regular increments and **be quite high by retirement**’. The Japanese approach puts a high value on staying the course since the big pay-off is mostly at the end of one’s career. **Whistle blowing is a rarity, but is this surprising!**

4. **Tolerance for failure,**

Failure is relative to Japanese corporations, highly tolerated in Western corporations where it is often referred to a ‘learning experience’. Tolerance of failure is one of the characteristics of highly innovative companies in North America and Europe¹⁵.

For example, failure rates for new projects, new ventures which involve research and development are often explicit; see¹⁶P&G. The ‘yield from the process of innovation has risen from a 15-20% success rate to 50-60% over the past several years’ according to Lafley. That percentage is ‘about as high as P&G wants to go’ since a higher rate would signal that the ‘company is playing it too safe’¹⁷. By stating an acceptance of 50%, Lafley is communicating not just a target for success but the acceptance (not that one wants this!) of a significant failure. **Without failure, there is no evidence of experimentation, nor the assumption of risk, nor the likelihood of progress.**

While the example applies to new ventures, the sense is that failure in highly-innovative companies comes with the territory and the organization needs to be open, transparent and react to ‘failure’ in a positive manner. The effective handling of a recall can be taken as a positive event (not wishing, of course, to have the event in the first place) for the company under fire. One learns more from one’s failures than successes!

Failure in a Japanese company is a major disgrace. One can be cynical and say that Western companies have been great at handling failure since there have been so many failures but this reaction is not helpful. **Failure is not viewed the same way in Japan as it is in Western organizations.** Akio Toyoda, the grandson of the founder, has apologized¹⁸ for his failure and taken the issue very personally. While not a common practice in North American business, the apology and the deep bow (45 degrees of more), has much more significance for the public and employees in Japan.

5. **Employment mobility is limited in Japan and impacts the transference of ideas.**

Movement from company to company within one’s industry is almost unheard of in Japan

¹³ Wikipedia; Japanese management culture

¹⁴ See profile of P&G at; <http://www.corporateinnovationonline.com>.

¹⁵ ADL Study of Management Practices updated by W&P Ltd.

¹⁶ See profile of P&G at; <http://www.corporateinnovationonline.com>.

¹⁷ Page 178, The Game-Changer.

¹⁸ Testimony in Tokyo and before a U.S. House committee.

whereas in North America and Europe it is an accepted practice. In Japan learning from ‘your industry’ is not seen as important as it has been in North America and Europe. Japanese industry does not see others in their industry as sources of invention nor innovation¹⁹ as does industry in North America and Europe. Thus if one’s career is tarnished, the ability to make use of the same skills in a different industrial setting is much more difficult in Japan than in the west.

6. **Job tenure or permanent employment.**

In Japan, the practice of lifetime employment (*shuushin koyou*) has been the rule in big Japanese companies beginning with the first economic successes in the 1920s²⁰. Lifetime employment gives Japanese workers the important feeling of job security as part of and in turn, elicits a high degree of company loyalty.

‘Since 2003 the situation has changed somewhat and there is a move to create part-time jobs, and especially since the economic meltdown, to discontinue the practice of *shuushin koyou* and rather embark on massive layoffs’. Toyota has said recently²¹ that ‘it will be more open to job changes or dismissals.

7. **Transparency and openness**

Transparency is the issue raised by the alleged refusal of Toyota to release so-called ‘Books of Knowledge’. These ‘books’ catalogue design and testing data on all of its vehicles. Edolphus Towns²², committee chairman of a House Committee in the U.S. has requested this information and accuses Toyota of ‘hiding information’. While there is a general sense that Japanese reporting is not as transparent as is the practice in the west, this is probably not the issue which should be used as an example of withholding information even though it plays to the image of secrecy.

‘Books of Knowledge’ should be just as protected as patent and licensing arrangements and kept ‘locked up’ by the corporation.

8. **Management arrogance.**

Management, in learning to live with too much success, may have also contributed to the sense of arrogance in Toyota, especially at top management levels. Such **arrogance** is, however, neither limited to Toyota nor Japanese management, but **is a well demonstrated world-wide phenomenon.**

9. **Emphasis on creativity versus continuous improvement.**

Toyota has, over its history been an inventor as well as innovator but one wonders whether the focus on ‘continuous improvement’ has been more the hallmark of the company (along with its exportation of management techniques and philosophies) than its approach to creativity. Has the culture of creativity, which is more embedded in R&D activities, been subjected to the same level of examination as ‘continuous improvement’ and the squeezing of product costs?

There are several indicators which suggest that Japanese companies in particular, and maybe Toyota is but one example, have developed a culture which will not serve them well in the fast developing 21st century. **Perhaps this is a wake-up call to Japanese industry**, more specifically to the management of Japan’s large companies; a chance to re-examine their management practices and ‘tool-up’ for the 21st century.

¹⁹ ADL Study, updated by W&P Ltd.

²⁰ Wikipedia, Japanese management culture.

²¹ Globe and Mail, February 25th, 2010, Report on Business.

²² Globe and Mail, Report on Business Weekend, ‘Hidden Documents Alleged’.

Toyota's Management Practices according to 25 Factors which Support a Culture for Innovation

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Factor #1: Management's view on realizing profits; short-term versus long-term.

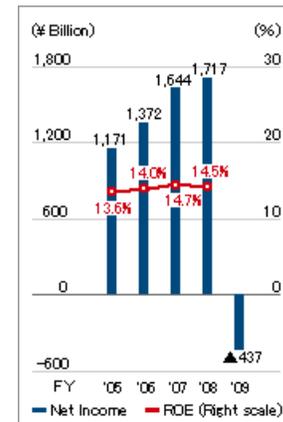
Toyota takes a long-term view with regard to achieving profit; e.g. the company is fiscally conservative and robust. So while the recall is a setback, and will be costly, Toyota's attitude to profits will prevail and eventually return the company to its historic solid financial performance.

Of the 14 Principles of the Toyota Way, the first is that the company has a 'long-term philosophy; i.e. decisions are made with a view to the long term 'even if this means sacrificing short-term financial goals'²³.

Factor #2: Management's view on the importance of innovation.

'Kiishiro Toyoda, like his father, Sakichi Toyoda, was passionate about innovations, big and small'²⁴. From the very beginning, company emphasis has been on innovation. Subsequent leadership has continued to focus on 'continuous improvement' through innovation.

Toyota places a heavy emphasis on the need to modify and make more efficient its production processes. Part of the company's 'mantra' is to 'stay ahead of the times by study and creativity'. The company also invests heavily in R&D.



Factor #3: Tolerance of mavericks – in the corporate organization.

Toyota, as with many other large Japanese corporations, emphasizes group activities, consensus building, and shared values and, **is not seen as an organization which encourages, let alone tolerates mavericks.**

Permanent employees²⁵ are hired as generalists, not as specialists for specific positions. A new worker is not hired because of any special skill or experience; rather, the individual's intelligence, educational background, and personal attitudes and attributes are closely examined. The individual is 'honed' and 'cloned', 'socialized' is the word often used, to meet the needs of the organization. The emphasis is on conformity.

Perhaps a more balanced approach to hiring is required so that specialists also can get involved in companies when and where they are needed. With the rapid development of technologies, particularly electronic, there may be better talent outside Toyota than in-house. P&G's hiring of 'mid-career designers' in order to tap into designers' thinking and acting, i.e. more intuitive and less linear way of thinking is an example of hiring from the outside to instill a new dimension in the organization.

Factor #4: Planning emphasis; rationing expenditures or looking for opportunities.

Toyota goes about looking for opportunities more so than seeking resource rationing or cost cutting measures (the current economic climate for autos and Toyota's difficulties are an exception). Plans for

²³ Toyota Culture, Liker and Hoseus, McGraw Hill, 2008.

²⁴ Toyota Culture, Liker and Hoseus, McGraw Hill, 2008. Page 11.

²⁵ Wikipedia, Japanese management culture

production expansion may now take a back seat while there is a consolidation of effort by investing even more in quality and engineering excellence.



Factor #5: Tolerance for failure.

Long term employment guarantees, typical of Toyota and large Japanese organizations, can have a negative effect on both management's and staff willingness to take risks and go against the 'corporate norm'. The easiest course of action is for the individual to go along with the majority, i.e. the norm. In spite of early warning (2002) of problems with unintended- acceleration, which must have raised warnings from some within the company, management took no evident action, not wishing to acknowledge failure.

Such a position is contrary to the mantra which is put forward by Toyota. Toyota is the company which gave its workers the right, indeed the obligation, to stop the production line if they saw any problem. Knowing there would be no reprimand for stopping the line, and only praise for bringing the problem to light, the philosophy is a cornerstone of The Toyota Way.

Most innovative companies have a very open approach to failure – expecting failure and when it occurs, and making it a learning opportunity. P&G set targets for their failure rate – and if the failure rate is below the target, management believes that they are not being sufficiently adventurous. DSM, a Netherlands-based highly innovative company makes explicit its forecast success rate at 50%. While these explicit rates are primarily related to new ventures, where the success rate is never seen to be 100%, none-the-less, these innovative companies have an attitude towards failure which appears different from that of Toyota.

Factor #6: Emphasis on management of people and their interactions.

Toyota places a heavy emphasis on its people by way of broad range of programs, techniques and approaches. 'New members gradually become socialized into the culture through on-the-job exposure and training'²⁶. Leaders are essentially teachers, in some sharp contrast to the practice of Western companies.

Principles #9 of the Toyota Way makes it clear that 'leaders need to understand the work, live the philosophy, and teach it to others. Principle #10 makes the point that the company is to develop exceptional people who follow the company's philosophy.



Factor #8: Tolerance to a corporate norm.

Japanese companies seek conformity and tradition. Rigorous rules of behavior are in place regarding social, organizational and management practices.

Toyota, in contrast, has a reputation of seeking non-confirming technical and management ideas in order to move ahead with innovation. Its development of the Prius was stimulated by the rejection by senior management of less adventurous plans for a new model.

There is a culture in the 'nation' which emphasizes the need for a 'corporate norm' which, while valued by the 'nation', is less reinforced by the actions of Toyota management who seek to upset traditional thinking in the product development and production processes.

New hires are 'socialized'²⁷ into the Toyota Way, which is another way of saying that they are taught a system and are expected to follow the system. Deviation from the 'right process' is not encouraged.

Factor #9: Tolerance for risk (in the planning process).

²⁶ Toyota Culture, Liker and Hoseus, McGraw Hill, 2008. Page 13.

²⁷ Toyota Culture, Liker and Hoseus, McGraw Hill, 2008. Page 10.

As noted, Toyota is financially one of the most stable companies in the auto sector. Liquidity is very high. Within Japan the company is viewed as ‘conservative’²⁸ and ‘risk adverse’ and this conservatism is reinforced by its location in the Aichi prefecture of Japan, known for its extreme thriftiness.

Factor #10: Degree of formal communication within the organization.

Toyota has gone to great lengths to maintain a flow of communication within the organization on a global basis. Consistent with the Toyota Way, the communications protocols are well articulated. Even ‘bad news’²⁹ is encouraged and seldom kept from employees. This openness is a reflection of the view of a large partnership at all levels and including supplier organizations and the full range of ‘stakeholders’. Face-to-face meetings are highly valued.

Factor #11: Use of Independent Work Groups.

Principle #10 of the 14 Principles of the Toyota Way makes clear reference to the use of teams ‘who follow the company’s philosophy’³⁰. There are also numerous references to the role played by special groups, teams, formed for specific tasks.

Factor #12: Degree to which management decisions are made with input from the rest of the organization.

Toyota has a culture which seeks to draw on ideas from both customers and employees. Its ‘mantra’ of Genchi Genbutsu emphasizes going to the source. It has a mandated suggestion system to identify and cause improvements to be made.

Principle #13 of the 14 Principles of the Toyota Way clearly states that decision making is by ‘consensus’, that this takes time, that all options are considered, but that this leads to rapid implementation. It is interesting to note that those that do not follow the ‘right process’ which includes getting input from others to generate consensus, do not get high praise³¹.

Japanese managerial style³² and decision making **in large companies** emphasizes the flow of information and initiative from the bottom up, making top management a facilitator rather than the source of authority, while middle management is both the impetus for and the shaper of policy.

Consensus is stressed as a way of arriving at decisions, and close attention is paid to workers’ well-being. Rather than serve as an important decision maker, the ranking officer of a company has the responsibility of maintaining harmony so that employees can work together. A Japanese chief executive officer is a consensus builder³³.

In some contrast, harmony is not one of the characteristics of many C.E.O.’s of western companies, rather the emphasis is on leadership and taking initiatives which are often initially seen to be against the grain of the organization, its culture and traditions; often referred to as ‘exercising leadership’.

Factor #13: Formality of the decision process.

Toyota has gone to great lengths to design the organization structure so that decisions can be made expeditiously. Built on a base of trust and respect, the company makes use of a matrix approach to organization, a concept of distributing decision making based on established standards, and the clear

²⁸ Toyota Culture, Liker and Hoseus, McGraw Hill, 2008. Page 22.

²⁹ Toyota Culture, Liker and Hoseus, McGraw Hill, 2008. Page 296.

³⁰ Toyota Culture, Liker and Hoseus, McGraw Hill, 2008.

³¹ Toyota Culture, Liker and Hoseus, McGraw Hill, 2008. Page xxix.

³² Wikipedia; Japanese management culture

³³ Wikipedia; Japanese management culture.

identification of a team leader³⁴. Decision making is to be done without reference to higher levels of management or consulting with support groups, where this is possible. The concept is clear and the procedures are explicit.

Factor #14: Availability of reward mechanisms for innovation.

In Japan, the approach to rewarding employees is based on a longer-term view of the individual's career and success with the company. Early training is extensive so that individuals have an exposure to many aspects of the company's. Training is followed by promotion but this only comes after years of working in a position. Employees are there for their lifetime.

Toyota, in adapting their reward system to the 'American Way' did not compromise on the individual versus group aspect. Group effort and success were reinforced and individual excellence less so.

Bonuses or special pay arrangements for innovation per se are not evident. This would be consistent with the Toyota idea of sharing benefits and teamwork and not wishing to single out individuals. Percentage bonuses are paid, equally to all team members so as to not differentiate among members, and are also tied to overall plant performance. Salaried employees are paid a base salary and a bonus, but again, no special recognition for innovation. There are modest differences between compensation practices in Japan as compared to the U.S. to accommodate the western recognition of the individual.

One can say that while innovation is not recognized per se, the whole of the compensation system provides a motivation, transparent and well understood, to all participants.

Factor #15: Planning action versus action orientation.

No comment.

Factor #16: Attitude to mergers, acquisitions; open or closed.

Japanese firms resist cooperating with other firms – due to their inward looking attitude. Vertical integration, while ensuring quality and reliability, also leads into non-core areas where work could be better done by others³⁵.

The existence of the philosophy embedded or implied by the Toyota Way, and the evident admitted difficulties in adapting the culture to a green fields location strongly suggests that Toyota is not ever likely to make an acquisition or even join in joint ventures. It is a sufficiently difficult task to import the Toyota culture, one person – or small group – at a time, that to consider the application of the culture to an acquisition of a size is almost inconceivable. Toyota's position is that it is not in favor of any form of merger or acquisition.

Japan policies restrict capital inflow, acquisitions and mergers. There is an anti-merger/acquisition sense in the country and a strong desire to keep Japanese companies controlled in Japan. Importantly, there is a closed attitude within the 'nation' to mergers or acquisitions of Japanese companies.

Factor #17: Expectations for employees regarding loyalty to the company versus own personal development.

Toyota would expect its employees to be completely loyal to the corporation. In return, the employee is provided with life-time of employment. Toyota's last strike was in 1949/50.

³⁴ Toyota Culture, Liker and Hoseus, McGraw Hill, 2008. Page 235.

³⁵ The Economist; November 5th, 2009.

Factor #18: Decentralization versus centralized hierarchy.

Toyota strives for a relatively flat organization³⁶ but has a concept which allows for groups to be formed in such a way to enable problem solving by the group itself. The concept, as one might expect, eases the flow of information in both directions.

Factor #19: Availability of resources for project/initiatives; generally seen to be available or not.

Toyota, through its on-going investment program, provides a sense that resources are available to pursue ideas of merit.

Factor #20: Staff versus line involvement in the decision process.

No comment.

Factor #21: Success at keeping highly-valued innovators.

There is no information available on this Factor but it is probably safe to conclude that innovators stay with Toyota, at least for the parts of the organization located in Japan. This is traditional in Japanese companies and, with Toyota's impressive record of growth accompanied by innovation, it is unlikely that high-value innovators would need to leave. Innovators will likely stay with the company.

Overseas operations, located in regions where there is a greater mobility of staff, and where those with training by Toyota would be targeted by others in the automotive or manufacturing sector, would probably have a higher exit/turnover rate.

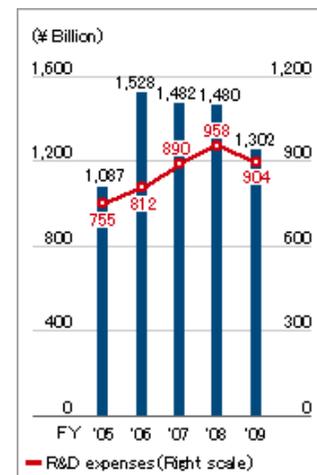
Factor #22: Innovative tradition; is in place or yet to build.

Toyota has an innovative tradition since its founding in the 1920s. Toyota has a tradition for both invention and innovation whereas the 'nation's' tradition is more focused on innovation and less so on the leading edge of innovation; i.e. invention or the creation of new ideas. All leaders of the company since its inception have placed a heavy emphasis on innovation.

Factor #23: R&D budget levels with reference to the competition.

Toyota's expenditure on R&D amount to upwards of 10% of revenue. This is a substantial commitment to R&D. There is no sense that, due to the recall, that this level of expenditure will be affected over the longer term,

Graph opposite shows the level of capital expenditures and R&D spending for fiscal years 2005 to 2009.

**Factor #24: Perception of innovation trend; increasing or decreasing.**

Toyota no doubt believes that their reputation as an innovative company is increasing based on their introduction of new models, the Prius, Lexus brand, and hybrid vehicles in particular.

Toyota is also credited with changing the approach to manufacturing with their introduction of Toyota Production System (TPS), along with numerous management concepts such as, J.I.T., quality circles, etc.

Toyota's innovation tradition, both technical and managerial, is on the leading edge in the auto industry.

³⁶ Toyota Culture, Liker and Hoseus, McGraw Hill, 2008. Page 232.

Factor #25: Role of employee groups; encouraging or damaging to innovation.

Toyota has a solid reputation for its labor/management relations with the last strike taking place in 1949/50. Employee organizations are seen as highly supportive of management as is typical of Japanese organizations. Life-time employment makes for a special loyal arrangement between employer and employee.

But there is a reverse affect of this cozy relationship. Workers do not have separate skill identification outside of the company³⁷. Despite federations of unions at the national level, the union does not exist as an entity in separate from, or with an adversarial relationship to, the company. The linking of the company with the worker puts severe limits on independent union action, and the worker does not wish to harm the economic wellbeing of the company. Conformity and harmony rule the arrangement.

October 4, 2010

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<http://www.corporateinnovationonline.com>

³⁷ Wikipedia, Japanese management culture