

Deming Award, A Journey Towards Business Excellence

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Abstract: *The perception of word “quality” is different for different people. But largely quality is synonymous to excellence, value to customer, conformance to specifications and standards, conformance to requirements, fitness for use, and ultimately to customer satisfaction.*

Total Quality Management (TQM) refers to company-wide quality assurance from suppliers to customers using system approach of documented sets of procedures and control of process variability in a team spirit with top management commitment. TQM makes entire organization to rethink and rework its existing systems, processes, culture, communication and customer care with a view to transforming the organization to enable it to cope with the changing context of global competition and become people driven, customer focused and quality committed organization.

Deming Awards are termed as the Nobel Prize in the world of manufacturing. The Japanese Union of Scientists and Engineers (JUSE) Started the Deming prize in1951. Initially, this prize was open only to the Japanese industry, but in 1985 it was open thrown open to the rest of the world. From 1998 onwards, Indian companies started winning Deming prize.

This research article focuses on studying and analyzing Indian manufacturing companies catering to different industrial sectors, who have won Deming award in last decade in terms of total quality management, operational excellence and financial performance and the lessons that can be learned in terms of Total Quality Management by other manufacturing companies in India from these Deming Award winners from India.

I. Introduction

1.1 Total Quality Management

In a rapidly changing world, corporate entities need to be constantly responsive to changes in the market by making changes in their structure, systems and policies. Quality is a language that is globally understood. TQM is an enhancement to the traditional way of doing business. It is a proven technique to guarantee survival in world-class competition. TQM consists of continuous activities involving everyone in the organization in a totally integrated effort toward improving performance at every level. This improved performance is directed towards satisfying such cross-functional goals as quality, cost, schedule, mission need and suitability. TQM integrates fundamental management techniques, existing improvement efforts and technical tools under a disciplined approach focused on continued process improvement.

TQM has two major attributes. First, the customer is the final judge of quality and second, that quality is built into the design of a product rather than merely having it inspected after the product has been manufactured. The major objective of TQM is customer satisfaction with products and services. TQM brings to quality concepts a long-term global management strategy and the participation of all members of the organization for the benefit of the organization itself, its members, its customers and society as a whole. TQM is a concept that goes beyond ISO 9000. ISO 9001:2008 QMS standard provides a strong base on which an organization can build a TQM culture with a focus on the customer involving all employees and demanding continual improvement. Japanese were the first ones to realize importance of quality and uniformity in products. The JITs, KANBANS, 5S, KAIZENS and many such tools were developed to make sure uniformity is maintained across all the products. The contribution of one American Mr. Deming was immense in this regard to bring Japan where it is now.

1.2 W. Edward Deming & Deming Prize

The principals of Statically Quality Control (SQC) defined by Mr. W. Edwards Deming were perfected by Japanese. It is said that when Mr. Deming was called to teach these issues to Japanese companies early post war, he was touched by his host's eagerness to learn. Japanese host institute paid him his fees, but Mr. Deming returned that money asking his hosts to use it for the development of Quality improvement for Japanese industries. This moved Japanese so much that they decided to immortalize Mr. Deming by having an award named after him. Dr. Deming was the internationally-respected authority in the field of statistics, especially the

sampling theory as well as its practice and is one of the founders of the statistical quality control in the U.S. From 1950 and onward, Dr. Deming provided considerable contribution to post-war Japan in order to develop and advance the statistical quality control in the country.

The award was announced initially to be given to Japanese companies for their consistent performance improvement in quality and profitability. Over a period many companies around the world tried to strive for this award. Industry considers the Deming award as equivalent to the Nobel Prize in the field of quality. Those who you get it, they command respect. Mostly it remained Japanese forte with occasional USA and European companies making it in. India with hardly any integration with global economy was obviously out of question. India's contribution to global trade was minuscule. Even after liberalization, it was thought it will take ages for Indian companies to even come closer but just seven years since liberalization, the world was in a big surprise when Venu Srinivasan's Sundaram-Clayton stunned everyone to be the only Asian and (first non-Japanese company) to have gate-crashed in the elite club respectfully. Interestingly, India continues to be the second largest in terms of the number of recipients in the world, next only to Japan.

There are three excellent models of quality management in the world, namely, the DP in Japan, the Malcolm Baldrige award in the US and the EOQ award in the EU. Malcolm Baldrige and European EOQ awards are given to the companies in each region who are selected based on competition among the applicants. DP is open to the global community and awarded to applicants on merit. It is not an award to be won by competing with other companies. The Deming Application Prize tests the application of TQM within a company. The criteria include: Objectives and strategies of the company and whether they are challenging and customer-focused, how TQM has been applied to achieve these objectives, and the thoroughness, consistency and depth of its application across the organization. The focus here is on application – what sort of systematic methods and activities have been applied to achieve objectives and strategies and what is the effect of this. The difference is in the focus rather than the content.

The Deming Prize is an annual award presented to an organization that has implemented TQM suitable for its management philosophy, scope/type/scale of business, and management environment. Regardless of the types of business, any organization can apply for the Prize under certain conditions.. The Deming Prize examination does not require applicants to conform to a quality management model provided by the Deming Prize Committee. Rather, the applicants are expected to understand their current situation, establish their own themes and objectives and improve and transform themselves organization-wide. Not only the results achieved and the processes used, but also the effectiveness expected in the future is subjects for the examination. According to the judgment criteria, the examiners evaluate whether or not the themes established by the applicants were commensurate to their situation; whether or not their activities were suitable to their circumstance; and whether or not their activities are likely to achieve their higher objectives in the future.

II. Literature Review

The four day seminars which Deming gave in America for 12 years, starting in 1981, were at first based on his 14 Points for Management. The guidelines were given by the books *Quality, Productivity and Competitive Position*, published in 1982, and *Out of the Crisis*, published in 1986. The schedule changed progressively from 1989 onwards and focused on the System of Profound Knowledge, which is the ultimate form of the Deming philosophy. This way of thinking is presented in *The New Economics*, published in 1993. The main thesis of Deming is that by improving quality, it is possible to increase productivity which results in improved competitiveness of a business enterprise. According to Deming, low quality results in high cost which will lead to loss of competitive position in the market. His approach can be summarised in his 14 point programme. The Deming Prize committee follows the philosophy of Deming – the Deming 14 points (Gaither & Frazier 1999, p. 634). (i) Create constancy of purpose for improvement of product and service (ii) Refuse to allow commonly accepted levels of delay for mistakes, defective material, defective workmanship (iii) Cease dependence on mass inspection to achieve quality (iv) Reduce the number of suppliers. Buy on statistical evidence, not price (v) Constantly and forever improve the system of costs, quality, productivity and service (vi) Institute modern methods of training on the job (vii) Focus supervision on helping people to do a better job (viii) Drive out fear (ix) Break down barriers between departments. Encourage problem solving through team work (x) Eliminate numerical goals slogans, posters for the workforce (xi) Use statistical methods for continuing improvement of quality and productivity and eliminate work standards prescribing numerical quotas (xii) Remove barriers to pride of workmanship (xiii) Institute a vigorous program of education and training (xiv) Clearly define management's permanent commitment to quality and productivity.

The System of Profound Knowledge is the culmination of Dr. W. Edwards Deming's lifelong work. It is an effective theory of management that provides a framework of thought and action for any leader wishing to transform and create a thriving organization, with the aim for everybody to win. By management appropriately applying the principles and practices of SoPK, a business can simultaneously reduce costs through reducing waste, rework, staff attrition and litigation, while increasing quality, customer loyalty, worker satisfaction and, ultimately, profitability. (The W. Edwards Deming Institute, www.deming.org/theman/theories, Bauer, Reiner & Schamchale 2000, p.412). Bauer, Reiner and Schamchale (2000, p.412) claimed that today, what was earlier known as TQM has morphed into business excellence. Dale, Carol and Glen, the authors of Total Quality Management (Third Edition, 2013) analyze three words as: Total – Made up of the whole, Quality – Degree of excellence a product or service provides, Management – Act, art, or manner of handling, controlling, directing, etc. TQM is the art of managing the whole to achieve excellence. The study by Pranav Mishra, Dr. K. K. Garg and Dr. Amit Naru examines the quality initiatives taken by Indian auto component Industry to win the Deming award. The auto component company TQM implementation experience and its preparation for winning the award explored in detail. The paper finds that total quality management (TQM) implemented in the Deming prize framework has a positive effect on business performance.

III. Methodology

The research methodology adopted in this paper is collection and analysis of company specific data from secondary sources like interviews of top management executives involved in Deming award journey published in various journals and newspapers, case studies and website of JUSE. Study is also done by analysing Annual reports of the companies, their websites and case studies. Deming Prize guidelines and literature is studied in detail. The empirical study is conducted on Deming award prize winner companies from India.

Detailed Qualitative analysis is carried to see the coherence of TQM application to various attributes which are widely used by the companies to boost their business performance under intense competition like Customer Focus, NPD, Strategic and policy aspects, Supply chain Management, TPM & QC activities, difficulties faced and benefits achieved through journey and overall learning based on the experiences during Deming journey. Evaluation is done with regard to literature (theoretical, case studies and empirical). Conclusions are drawn based on findings from the study, the practical context, and literature background to best fit academic theories and practical circumstances.

IV. Overview of companies

Renowned Indian groups like Tata (Tata Steel), Mahindra & Mahindra (FES, Powerol), Reliance Industries (Hazira unit), and Birla (Birla Cellulosic, Indo Gulf Fertiliser) have won the Deming prize. Considerable achievement is from auto components companies. Chennai headquartered Rane group has to its credit four DPs and three Deming grand prizes (DGP) formerly known as Japan Quality Medal. Rane Brake Lining Ltd. (2003), Rane Engine Valve limited (2005), Rane TRW Steering Systems limited-Steering gear division (2005), and Rane Madras Limited (2007) received the DP. Except for Rane engine valves, all other companies received DGPs, which is given to companies that sustain quality level continuously for more than four years. The various companies of TVS Group like TVS Motor Company, Sundaram Clayton, Lucas-TVS, Brakes India have won Deming Prize under leadership of Venu Shrinivasan.

V. Learning from companies

5.1 Customer Focus & Customer Satisfaction: Deming award winner companies adopted TQM management to fast respond to customers with good quality, cost effective products and satisfactory services. They used tools like Customer satisfaction survey, Customer relationship management and Brand equity survey. They engaged early involvement with customer for product design. Mahindra & Mahindra, FES, has strengthened processes for understanding the stated and latent customer needs. It works closely with product development team to translate customer needs into product concept & following the structured MNPDP (Mahindra New product Development) process introduced many new successful products. Customer centricity has now become way of life which is the biggest transformation achieved. The Swaraj and Mahindra brands enjoyed the distinction of being No. 1 and No. 2 in Customer Satisfaction. FES enjoyed market share of 40.6% in FY14. In this period, the Company sold 268,487 tractors, (domestic plus export), under the Mahindra and Swaraj brands, as against 224,844 tractors sold in the previous year, registering a growth of 19.4%. For Rane Group customer satisfaction surveys helped the

group understand customer problems and took corrective actions. The journey helped Lucas-TVS, which saw a serious challenge to its leadership position from MNC competitors, instill customer awareness in all its employees and made them realise that in a highly competitive market the only way to grow business is by satisfying customer. Now its customers expect flawless launch, consistent performance in quality, cost, delivery and safety, and partnership with them in NPD and cost reduction Programmes. The Company had the opportunity to expand its customer base to include many demanding global OEMs. Their TQM philosophy has enabled them to execute these challenging projects to customer satisfaction. In case of Brakes India, the company has been experiencing a significant change in the buying preference of its customers, with expectation of dramatic and not incremental cost reduction. Customers expect a new business model from company highlighting infrastructure, value configuration and offer of a new value proposition.

5.2 New Product Development: The Deming journey has presented recipient companies with huge opportunities in New Product Development (NPD). It has made companies developing advanced technology and multi-project management capability to develop new products for the Indian and international markets, achieving global competitiveness levels in costs and cost structure, doing gap analysis and strengthening R&D for higher quality and increase new product hit rate. For Brakes India, NPD time has contracted to 25% of what it was a decade ago. Since emerging regulations and technologies reflect new demands for products and customers, the company is emphasising more on value, quality, safety and green processes. The concept of 'Green Products' with emphasis on product stewardship and life-cycle management has become the need of the hour for the company. Developing new materials/ alloys by adopting breakthrough methodology is giving the company opportunities in new markets. The company is adopting approach of collaborating with the customer on NPD to drive the costs down, at the same time improving product features. Simulation of the sand flow, metal flow and solidification is the key feature of the virtual environment in the technology department. Lucas-TVS is moving towards a simulation based design where as much upfront design and evaluation as possible is carried out in digital form. Rapid prototyping enables visualisation and getting initial customer feedback. While the mainstream of NPD is devoted to meeting current customer requirements, the company has established an Advanced Engineering Section to address the need for breakthrough product development with new technology to meet customer requirements in the future. The company focuses on products that can address concerns like emission, fuel efficiency, sustainability and end-of-life disposal. The recognition has made the Rane group emphasis more on NPD. Proactively, the employees concerned engaged with customers and ensures that customers stated and latent needs are captured and transformed into new products that satisfy them. The review stages are made robust to ensure products are first time right always. Through continuous improvement lead time for NPD has come down significantly. In case of Sundaram Clayton, the predominantly manufacturing focused organisation transformed into a 'product development' one as the company started investing more in developing its own products and automobile test track facility way ahead of time.

5.3 Strategic Aspects & policy Management: In all these companies main focus of top management is long term business achievement through customer satisfaction. Owners and top management do not delegate and leave the promotion of TQM to their subordinates. There is very high quantum of efforts by the management and employees, higher investments and sustenance. The two vital parameters to apply for the DP - high dedication and passion are common traits of these companies. The top management led TQM evolution in Indian auto component industry have a magnetic vision encompassing all the stakeholders. The top management conducted periodic reviews to ensure that the vision cascaded down the line through long-term and medium term objectives and strategies, in order to align all activities under TQM umbrella. During Deming journey, Tata Steel relooked at the balanced score card and areas needed to change the business. It addressed the challenge of bringing quality to the forefront, by formulating customer focused objectives and strategies in the various divisions and departments. Brakes India was previously 'operating the business' and now it is managing the business. Policy management is now the cornerstone of the business. The company is now cascading the vision down the line through objectives and strategies, aligning all activities of the departments and individuals to realise them. The company has made a fundamental shift towards systematic analysis, pre-planning and blueprinting of operations with focus on habitual improvements with the controls embedded in the system. National Engineering Industries (NER) made the major changes undertaken in systems, structure and policies, including changing from the traditional management structure to a process based organisation, where many functions are combined to create moving fluid structures; and the unique diagnosis system that helped the organisation move to higher levels of capability.

5.4 Human Resources: The companies have used tools like Workforce engagement survey, Any Time Learning, Suggestion scheme, Focus on workmen training, Performance Acceleration in changing

Environment. Training and development is key to increase competitiveness. What is important is to develop positive attitude, enthusiasm, and determination from company executives and employees at all level for a clear concept on TQM Encourage interactive learning to achieve better company operation. In Mahindra, Dignity of Individual is core value. Talent management is key strategic priority. There are planned development programs for all employees. During regular reviews and interactions, they identify development needs and plan interventions accordingly. This is for 1,44,000 employees. In regular communication meets for all teams, they discuss achievements, priorities and celebrate all which they feel proud of. There is open door, free access to leaders type of culture which develops trust, accountability and credibility for each individual. Strong employee centric culture develops a happy, credible and diverse employee base. Tata Steel involved people in thinking about improvement activities such as quality circles, suggestion management, knowledge manthan, etc. Rane group views competent and skillful resources as differentiating factors in the competitive environment. The company is having a Kaizen culture with Total Employee Involvement (TEI). Voluntary Involvement is ensured through suggestions, quality control circles (QCC), Quality improvement teams, and cross functional teams that take up business related projects. 40% of projects are related to quality. About 1000 QCC projects are completed every year. Other employee engagement activities and providing challenging assignments have contributed to a large extent in the retention of key talent. TQM practices have significantly improved the work culture in the organisation with people having total clarity on their roles and responsibilities, aligned together in contributing towards company goals.

In Lucas-TVSM any unique practices are in place like 'Sunday Voluntary Work Team,' where 600 workers come on Sundays, work voluntarily for 4 to 5 hours and take many improvement projects on 5S, safety, quality, quick changeover, TPM, environment, etc. The company is currently pursuing programmes to raise skill and morale for a cordial employer – employee relationship and TEI. The journey has helped the company to clarify the roles and responsibilities of employees at various levels and taught the need to strictly comply with the standard operating procedures to maintain current standards and improve on them. The TQM philosophy with its emphasis on 'continuous improvement' has also focused the efforts of all employees on improving the business processes to achieve higher levels of customer satisfaction. Deming has helped NRB change its culture in terms of TEI. About 40% of the workmen in the company that makes bearings under the NBC brand have understood the system, which was zero earlier. The departments that were divided by walls previously have been working together, which helped them rise faster. While trying to get the award they worked hard, but there was a lull after that. They realised this within three months and acted swiftly, eventually gaining momentum, which helped them to take up the audit again. This led them to challenge DGP. The major intangibles that have accrued to organisation, in addition to the tangible benefits to all stakeholders, is the empowerment of the employees. The people making the decisions now are the ones most closely concerned and informed about the matter, and this increases the commitment, motivation and satisfaction all round. For Brakes India it helped to recast its vision of improving the quality of work-life of employees, considered part of an extended family of the company. The management has empowered the employees and instilled concepts of ownership and accountability. They are working to form talent pools with traditional and non-traditional workers to create a flexible, cross-trained workforce. They are investing in long term skill development and working towards competency based management. In case of Sona Koyo Steering System, the entire organisation worked in a cohesive manner towards a single shared goal. This energised people and brought out the best in them. For RBI Transmission, The Deming Award exercises have demarcated the responsibilities of every individual to satisfy not only customers but also every stakeholder including employees and bankers.

5.5 Total Productive Maintenance & QC Activities : The defect rate in the manufacturing process at auto component industry decreased substantially and customer returns came down as a result of this quality control initiatives. NBC's production equipment consisting of over 1500 machines that produce and deliver best-in-class quality of products depends on a faultless maintenance process with accurate dimensional controls. NBC was awarded the TPM excellence award in 2002 of system and health maintenance of machines and equipment. In Rane Group, the emphasis is on preventing measure; a lot of preventing and detection pokeyokes are implemented. Many of its plants have achieved single digit customer line rejection ppm. Sundaram Clayton (Wabco) restructured its manufacturing cells and introduced TPM and lean manufacturing tools, built up competency and reduced rework, process scrap and machine breakdowns. In Mahindra almost zero machine breakdown, productivity savings doubled, Manufacturing cost reduction tripled, Schedule adherence close to 100%, Field complaints reductions tripled. Indo Gulf, with a re-assessed capacity of 8,64,600 mtpa, is the only fertiliser unit in India to adopt the world-renowned TPM practices under the guidance of Japan Institute of Plant Maintenance (JIPM). It has won awards such as the TPM excellence award, Excellence in Consistent TPM

award, International Asia Pacific Quality Award and the Deming Application Prize, the first company to introduce the principles of Six Sigma in the agricultural fields. They have pioneered the concept of Six Sigma demonstrations in farming wherein an activity calendar is prepared and farming is done accordingly, to give higher yields to the farmers.

5.6 Supply Chain Management: Thereal challenge is in improving suppliers and dealer capabilities. At NRB, Supplier selection is an intensive four step process: Selection assessment, Technical approval, Commercial approval and PPAP approval. Only those Suppliers achieving more than 80% selection assessment rating are chosen for parts supplies. Suppliers are measured for quality performance at three levels: Receiving rejection, Shop Rejection and Customer rejection. All suppliers are evaluated every quarter against 8 quality parameters and are awarded performance rating. Suppliers are rated in A, B and C categories. 'A' is near zero defect performance which certifies them with Direct Online Supply status where their consistency is verified through a rigorous 6 gate program. B and C categories are sharply monitored to improve performances that match NBC quality standards. They are extending the TQM methodology to their suppliers to improve the entire value chain.

5.7 Process Control: Root cause analysis, Training, understanding and use of Statistical Techniques, PDCA cycle are tools and techniques used to always keep focus on objectives. But tools & Techniques (eg. 6 sigma / CFT / Quality Circle etc.) should be used as "Enablers" and must ensure technique itself should not become objective. In NBC, robust processes ensure consistent results, and experts continuously improve the process capability of the company's operations. Strong and well established quality management systems are sustained by continuous monitoring of process parameters at all stages of operations. Well known process quality principles are at work throughout the supply chain lines. Techniques like Poka yokes, SOPs, SPC, Automation, Single piece flow, Kanban, among others, are widely adopted for 'Critical to Quality' parameters. In-process quality control has been the strongest system at NBC. Product characteristics are extensively measured and controlled in submicron levels. World class, state of the art measurement instruments, gauges and equipments are used to ensure precision in product dimensions. NBC processes are certified for Quality Management & Environment Management Systems. In Mahindra, Policy deployment, daily work management, Standardization, PDCA cycle, Systematic problem solving concepts are used in sales and marketing e.g. Mahindra Sales System which Measure critical ratios like Coverage, hit and loyalty ratio, Win loss analysis helped the organisation to carry out root cause analysis and implement countermeasures to increase market share from 25% to 29% from 2004 to 2012. At Lucas-TVS, Kaizen (continuous Improvement) is a way of life in at all levels of functions for sustaining the existing standards of performance and continually improving the standards for better to cope up with ever increasing customer expectations and business competitiveness.

5.8 Benefits to companies: Auto component companies noticed many tangible and intangible benefits in their journey of TQM. There was all-round improvement in customer satisfaction, new product development, supplier satisfaction, employees and their family satisfaction, breakthrough achievement in business results. For Mahindra, the short term impact is that the journey and award has galvanised the organisation. People had rallied behind the goal of winning the Deming prize and a lot of improvement activities had been further refined. Basically, what has changed is their approach, how can they apply TQM to attain their business targets. They are looking at more than double the improvements they had achieved in the past years. By going through the Deming process, Tata Steel discovered the deeper meaning of TQM. Tata Steel prepared for this prize for about four years. In 2005, they conducted a TQM diagnosis along with the JUSE team; that gave them the status of their TQM implementation and helped them uncover a lot of areas that required improvement in both their processes and culture. The TQM diagnosis gave them deeper understanding and clarity on their approach to quality and what areas should be focused on. The long term impact is that they are able to push forward in their excellence journey. More importantly they have put in place some fundamental approaches in the organisation which will help them to leverage them for the performance improvement of Tata Steel.

Being not MNC, NRB was always perceived as second in the pecking order when it comes to customers' preference. After getting the award they started looking at company in a better light. Exports as a percentage of turnover have improved from less than 2% before 2010 to about 17% 2013. The journey has helped them as supplier systems are streamlined now. Currently, about 10% of the vendors supply directly to the shop floor without quality check from their side, from nil earlier. Sona-Koyo's exports were negligible prior to 2000. After receiving the award, the company was able to position itself as a quality company even if India was not known for quality products those days. Post 2003, Sona-Koyo's exports surged, with its entry into US market. This entry was made easy due to Deming award. The journey highlights the RSB Transmission India Limited's cultural change of delivery to customers in terms of right quality, time, volume and sequence. The

award educates the customer of this change, to expect only top class products from them. They have started work on the next stage of Deming. The process has transformed mindset of Rane group's employees. Manufacturing operations are always viewed in terms of meeting customer's requirements with continuous improvement and total employee involvement. The focus has been on improving and transforming the process for achieving better results in terms of productivity, quality, cost, delivery, safety and morale. The Deming Award motivates Sundaram Clayton to embrace continuous improvement every day. TQM touches all of their processes, products and services through total employee involvement. As a result, they realise increased customer satisfaction, market share, customer loyalty and improved business results. For SonaKoya Steering System, the effects were not limited to manufacturing, but extended to product development, human resources development, as well as marketing.

5.9 Profitability: While there are immense benefits in terms of customer satisfaction and confidence, it is profitability that will keep companies healthy. Even in the current economic situation Lucas-TVS is able to sustain the gains that it enjoyed so far due to TQM approach. The engagement of people and deployment of goals through the organisation has helped improve overall efficiency and alignment. The profitability has multiplied manifold and they have emerged as an outfit of scale and substance. For Rane group Due to TQM there is reduction in cost and Capex. In case of Sona Koyo profitability was eroding since 1998 due to competition in the automotive industry that set in post liberalisation. However this trend was reversed in a strong way, thanks to all-out efforts by members of the company while they were working towards Deming. The profit before tax as a percentage of turnover has improved from 5.4% in FY99 to 8% in FY14.

5.10 Difficulties: For Mahindra, The most difficult part of quality journey was enrolling all the various stakeholders into the quality vision. If the stakeholders do not see any value in embarking on the quality journey, it is very unlikely that he will put all energies behind the cause. In the absence of tangible material and economic benefits, it is very difficult to enlist his whole hearted support. Creating a Quality value proposition for each stakeholder is a difficult. The most fundamental challenge to Tata Steel was to create a mindset that looks at improvement activities as essential for achieving targets and goals. This is where the examiners focused. The biggest challenges was in creating this understanding across the organisation, dealing with 35,000 employees, in explicitly stating and documenting improvement targets and how to go about achieving these in a systematic manner, in standardising approaches and creating alignment to profits.

5.11 Disadvantages: Sometimes employees think by achieving this award, we have achieved global quality standards when this is just a milestone in a long journey. While Deming gives several benefits; it makes companies be on their toes always. While it may be a propellant for a successful journey, to some extent it makes a few companies restless. The downturn and the consequent slowing of the global economy accompanied by high profile bankruptcies, poor utilization and job losses elsewhere has totally eclipsed outstanding achievements in improving quality and productivity without increase in price.

VI. The concern – No. of companies reducing

Despite several benefits of TQM, the number of companies applying for the award is diminishing. Of the total 23 companies in India, 7 companies obtained the next level –Deming Grand Prize(DGP). Any company can apply for DGP after about four years of getting the DP. Going by this, in 2009, India had 20 DP recipients. However only 7 companies have gone to next level, Sundaram, M&M, Rane TRW steering system, Tata Steel, Lucas-TVS, Rane Madras and Rane Brake lining.

As the name indicates, DP is a prize given for a particular year. However, it does not qualify recipients to be addressed as Deming companies throughout, as is being done in India. It is valid for that particular year of assessment, and is to be applied once in five years. The drop is because of lack of passion and dedication. Since TQM is process oriented, besides developing the culture of the organisation, it consumes a lot of time and money. Therefore, the involvement of companies is coming down. It takes about five years to challenge Deming from initial assessment. Also, it costs about Rs. 3 crore now, which was limited to Rs. 75 lakh in 2001. Further, applicants have to fare well in CSR activities, as part of the criteria. Moreover, some business groups have their own process to identify excellence, so they are not evincing interest in Deming.

VII. The Way Forward

The way forward for Deming recipient is to sustain performance level and endeavor to raise the bar continuously. Quality goals are moving targets. Future lies in further improving the product quality and productivity along reducing costs and implementing lean manufacturing systems and TPM. Rane group is persuading business excellence through TQM. Towards this they are contemplating certain initiatives that would

help them achieve the same. Based on learning & experiences at FES, the Mahindra group has developed "the Mahindra Way" which is a comprehensive Quality model for their 115 group companies. Each year 25 group companies and functions undergo assessment from internal and external auditors through this model. Initiated TPM in automotive dept. Mahindra Excellence model is based on guidelines of Deming and Deming Grand prize. Lucas-TVS have set a challenging target under Vision 2017 in which it will ensure efficient execution of actions arising out of the identified effective strategies. They are also planning to aggressively expand their presence in the export market in the coming years, in addition to developments that are taking place in the local markets. Brakes India's forward focus comprises of many options including emphasizing on data driven decision making, manufacturing and process reforms, and integrated risk management. Besides, the company will simulate to see the unseen and be ready with the response. The main focus will be on green energy, processes and products. Sona Koyo decided to pursue the new management method of breakthroughs. In addition to the control and continuous improvement methods of TQM, the company embraced new paradigms in innovation. Some of the results of these initiatives were creation of new products and acquisition of new markets.

VIII. Conclusions and suggestions

TQM system calls for rethinking and reworking of an organization's existing processes, position, posture and attitude with a view to transforming the organization to enable it to cope with the changing context of business, where customer is king. TQM is fundamentally about change. For some organizations this may be very slight, perhaps only shifting the emphasis. For other organizations the change may be massive. Total Quality Management is a demanding, disciplined yet humane way of managing an organization.

Indian companies have been giving the highest priority to attaining ISO certifications, but if ISO clauses are not implemented seriously, the companies may be deceiving themselves. The crux of the issue is that whatever quality philosophy company follow, be it TQM, Six Sigma, ISO9000 it must have a continuous zeal and serious intentions of improving the quality of its products and services. It is advisable for organizations to first provide a formal quality framework in the form of an ISO 9001:2008 QMS standards to create stability in the organization and achieve consistency in quality. When the system is well in place and has attained certification, the organization can start their Deming Journey. But the aim of implementing TQM should always be improvements first, and then awards. Deming recipient companies may fail in business if they do not continue the practice. Companies may go through ups and downs, but the committed ones remain to journey.

Indian companies should learn how to employ TQM practices to run the business in a competitive manner to cope with the international market. Companies should address abnormalities to sustain the quality movement, eventually keeping the customer satisfaction index high. TQM increases capability of employees, mean time between failure and response, machine availability and teamwork. Companies also use it as a means to bring about cultural change in the organization with focus on quality, customer and people development and involvement.

Indian industry is facing stiff competition from rivals like, china, korea, and many other nations. It is high time that it must focus upon attaining world-class standards in terms of the quality of its products and services. Indian companies have demonstrated successes on this front by winning Deming prizes. Although companies have won on their home pitch, the war is still not over as long as they do not make stronghold in the international arena. Unless it becomes a national movement as it is in Japan, to develop quality, it is not possible to make companies get into this movement. Its time for India not to become volume player like China but to become quality player like Japan.

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