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## THE DEMING PRIZE-THE ROUTE TO IMPROVING PERFORMANCE

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**Abstract:** *Business excellence models provide a framework for excellence to the organizations. The study examines the quality initiatives taken by Indian auto component Industry to win the world's highest award of quality, 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.*

**Keywords:** *Business Excellence, Deming prize, Total Quality Management*

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## **INTRODUCTION**

The TQM concept refers to company-wide quality assurance from supplier to customer using system approach of documented sets of procedures and control of process variability in a team spirit with top management commitment. "Leadership" is a process of creating a vision for the future, and developing a strategy for moving towards that vision. Vision is the foundation for creating right focus in the company. The role of Leadership metamorphoses into that of a change agent, working for "clock building, not time telling". Leadership in a TQM system is not a single individual; it is the top management team that leads and provides systems and platform for the organization to operate. Leadership is the degree of which top management sets up QM objectives and strategies, provides and allocates necessary resources, contributes in quality improvements efforts, and assesses QM implementation and performance.

## **QUALITY JOURNEY IN INDIA**

It is known fact that that concept of quality has been around for a long time, but the stress on the word quality in every aspect of life i.e. in business, service or social life has increased in the last few decades. Quality has awakened all the nations, industries and organizations around the world. The word "quality" means different things to different people. The ranges of meanings include that quality is excellence, value, conformance to specifications, conformance to requirements, fitness for use, customer satisfaction. The taj Mahal, located in Agra, is one of the Seven Wonders of the World, the konark sun Temple in Orissa, are the testimony to the rich cultural heritage are all Architectural marvels which boost of high degree of excellence and excellent quality. Indian companies are also participating in the quality race, although slowly. They are facing a challenge from the multinational companies since the Government of India implemented the policies of liberalization, privatization and globalization. In the light of this, the Indian companies are in dire need of new ideas, approaches and techniques for attaining a competitive edge. Industry associations like the Confederation of India (CII), Federation of Indian Chambers of Commerce and Industry (FICCI), Indian Statistical Institute (ISI), Nasscom, and specialized institutions like National Productivity Council (NPC) have a part of their organizations devoted to helping the industry in the formulation and implementation of quality management programmes, education and training programmes and provide consultancy services. The bureau of Indian standards, has



also established quality standards in accordance with international system standards, with main task of product standardizations. Today we witness a world that has changed a world that has changed dramatically since the nineties. Globalization is here to stay.

## INDIAN AUTOMOBILE INDUSTRY

In early 80's Government of India, making a turning point for the automobile sector, announced some of liberal policy changes as Maruti Udyog Limited (MUL), a joint venture with Suzuki Motors Ltd. of Japan was set up and Indo-Japanese joint ventures were set up in two- wheeler industry like Hero Honda, TVS Suzuki, Escorts Yamaha, Kinetic Honda etc. Further, the delicensing of auto sector in 1993 opened up the gates to a virtual flood of international automakers into the country to tap the large population base of more than one billion people. This revolution brought a greater systems emphasis, more market orientation\customer focus, continuous improvement culture, latest tools & technique and practices of TQM and top management commitment towards quality.

The automobile industry is one of the core industries in Indian economy, whose prospect is reflective of the economic resilience of the country. With 4 percent contribution to the GDP and nearly 5 percent of the total industrial output, the automotive industry has become a significant contribution to the exchequer. Continuous economic liberalization over the years by government of India has resulted in making India as one of the prime business destination for many global automotive players. The Indian automobile industry comprises of the automobile and auto component industry.

India is the largest three-wheeler market and second largest two –wheeler market in the world and is the fourth largest and fastest growing passenger car market in Asia. India is also the second largest producer of motorcycles in the world. The percentage distribution of different types of vehicles in total production is tabulated in table: 1

**Table 1: Indian Auto Production**

Type of Vehicles	Percentage Production (in %)	Number of Vehicles(2011-12)
Two Wheelers	77%	13,435,769
Three Wheelers	3%	513,251
Passenger Cars	15%	2,618,072
Commercial Vehicles	5%	809,532

Indian companies such as Bharat Forge, Brakes India and Sundaram Clayton Limited have moved into high value added areas of production. According to the Automotive Component

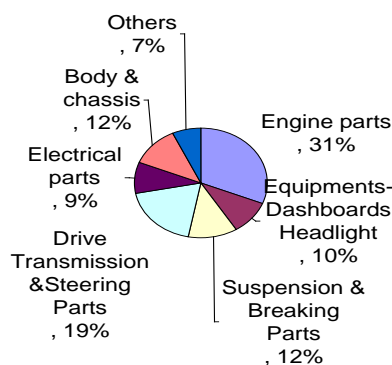


Manufacturers Association (ACMA), the Indian auto component manufacturers would see and exponential growth in output over the next decade. They have become reliable suppliers to global manufacturers such as Toyota, Honda, Suzuki, General Motors, Ford, Cummins, Volvo and Daimler Chrysler. Instead of a high production rate of the vehicles in India, the share of export in total output is low. The complete vehicle export share is lower than the auto components export. The auto component industry can be divided into six main segments, which are illustrated in table.2

**Table: 2 Segments of Auto Component Industry**

S.No.	Segment	Component
1.	Engine Parts	Components piston, piston rings, cylinder, and fuel delivery system like, carburetor, diesel- based fuel delivery systems, engine valves.
2.	Electrical parts	Starter motors, generators, spark plugs and distributors.
3.	Drive transmission and steering parts	Gears, wheels, steering systems, axles and clutches.
4.	Suspension and Breaking Parts	Brakes and leaf springs, Shock absorbers.
5.	Lighting and dashboard equipment	Headlights and dashboards instruments.
6.	Others	Sheet metal components and plastic molded parts

These auto components produced in India and the production range of these components in shown graphically represented in Fig.1



**Fig.1 Indian Auto Components Markets**



The size of auto component industry in India is around USD 34.7 billion and has growth at 26% p.a. since FY05.

The automobile Industry is one of the largest industries with deep forward and backward linkage and hence has a strong multiplier effect. Among the forward linkages the key generators of employment are the oil industry, distribution, after-sales service network and supply of spares and replacement by the auto component industry. Other critical forward linkages include auto finance and leasing industry. As for the backward linkages, the automobile industry is the largest consumer of raw material like CR/HR steel, aluminum and Zink alloys, and also of high value of rubber and plastics. Moreover, the automobile industry is the most important driver of machine tool industry, the bed-rock of industrial growth.

Significant number of auto component companies are focusing on global best practices like 5-S, Kaizen, TPM, 6-SIGMA etc.

**Table: 3 Auto Component Manufacturers- Quality Certification and Recognitions**

Category	ISO 9001	TS 16949	ISO 14001	OHSAS 18001	JIPM	Deming Award	TPM Award	Japan Quality medal	Shingo Silver Medallion	QS 9000
No. of Firms	576	467	208	105	3	12	15	2	1	34

## THE DEMING PRIZE IN INDIAN INDUSTRY

India's interest about TQM came about by years of selfless contribution of one Japanese Professor yoshikazu tsuda, invited by confederation of Indian industry (CII) to introduce TQM to Indian manufacturing industry. He was the guide assigned by Japanese union of scientist and engineers that is responsible of the promotion of TQM in Japan & the world over. After the successful implementation TQM in Sundram Clayton, Professor Tsuda set up two clusters of 20 maruti's suppliers to take them this journey. The resounding success of several Indian manufacturing and service firms in recent times has invariably been linked to excellent practices to quality management. If you consider the auto-component manufactures in India, many of them won the Deming Award for quality, the largest number outside Japan. Similarly, India has the largest number of CMM Level 5-certified Software Company in the world. With such international recognition in quality, these two sectors of our industry were able to compete globally. Indian companies seem to be in the favorites



list of the Deming Awards (termed as the Nobel Prize in the world of manufacturing) of Japan. The Japanese Union of Scientists and Engineers (JUSE) Started the Deming prize in 1951. 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 figuring in the Deming prize list, with Sundaram Clayton's brakes division claiming the honor first. India today has the maximum number of Deming award winning firms outside Japan, with mostly coming from the auto component industry. These quality initiatives have significantly contributed to the growth of auto component industry.

1998	Sundram-Clayton Limited, Brakes Division
2001	Sundaram Brake Lining Limited
2002	TVS Motor Company Limited
2003	Brakes India Limited, Foundry Division Mahindra and Mahindra Limited, Farm Equipment Sector Rane Brake Linings Limited Sona Koyo Steering System Limited
2004	SRF Limited, Industrial Synthetics Business Business Lucas- TVS Indo-Gulf Fertilizers Limited
2005	Krishna Maruti Limited, Seat Division Rane Engine Valves Limited Rane TRW Steering System Limited, Steering Gear Division
2007	Aashi India Glass Limited, Auto Glass Division Rane (Madras) Limited
2008	Tata Steel Limited
2010	National Engineering Industries Limited (India)
2011	Sanden Vikas ( India ) Limited The Deming Grand Prize
2012	Tata Steel Limited (India) Rane (Madras) Limited (India) Lucas-TVS Limited (India)

**Table: 4 List of India Deming Prize Winners**



## **SUCCESS FACTORS LEADING TO RECOGNITION**

The top management led the 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.

All employees participate in TQM activities. The workmen participate in improvement through quality control circles (QCCs) and suggestion schemes. Executives and managers participate in improvement teams (SIT) and cross functional teams (CFT).

Indian auto component organizations benchmarked themselves against the best practices, which revealed that while that while they were at par with respect to external failures, product life cycle management, process control, productivity and surface utilization, they needed to improve in the areas of energy efficiency and output to input ratio.

The defect rate in the manufacturing process at auto component industry decreased substantially and customer returns came down as a result of these quality control initiatives. Auto component companies noticed many tangible and intangible benefits in their journey of TQM. There were all-round improvement in customer satisfaction, new product development, supplier satisfaction, employees and their family satisfaction, breakthrough achievement in business results. Organizations believe that Deming Prize is not only a ticket for TQM journey towards organizational excellence. Quality goals are moving targets. It knows that its future lies in further improving the product quality and productivity along reducing costs and implementing lean manufacturing systems and TPM.

The present study has resulted in the following valuable lessons:

1. Globalization has thrown new challenges as well the opportunities.
2. Implementation of TQM leads to improvement in performance.
3. Culture is an important issue for the success of TQM.
4. Awards models provide a roadmap, a framework for excellent.

## **FUTURE PLAN**

The Indian auto component industry is expected to maintain its strong growth momentum. Much of its future growth prospects would depend on its ability to delivery orders in future. The auto component industry will continue to play role in the export market. The auto component industry future plans aim at:



1. Developing advanced technology and multi-project management capability to develop new products for the Indian and international markets.
2. Achieving global competitiveness levels in costs.
3. Improving suppliers and dealer capabilities.
4. Training leaders for key positions for supporting business growth.
5. Access world markets by leveraging partnership.

## **CONCLUSION**

Compulsion of competitive business environment is not merely to do well, but to do well than the competitiveness. This challenging situation is compelling industries to opt for new strategies leading to superior performance: the goal of TQM system. This 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 provides the vehicle for change and transformation by making the organization more customers focused people driven, flexible and committed to continuous improvement. Sundram Clayton is a competitive company and is transforming for globalization. It has adopted strategic approach to managing quality. Indian industry is facing stiff competition from rivals like, china, korea, and many other nations. It is high time that is focused more upon attaining world-class standards in terms of the quality of its products and services. Of late, Indian companies have demonstrated many successes on this front, such as winning Deming prizes. We must understand that although but companies have won the crucial battle of saving their home turf, the war is still not over as long as we do not make our stronghold in the international arena. So far, our companies have been attaching the highest priority to attaining ISO certifications, but they keep in mind that if ISO clauses are not implemented seriously, the companies may be deceiving themselves. The crux of the issue is that whatever quality philosophy we follow, be it TQM, Six Sigma, ISO 9000, or something else, we must have a continuous zeal and serious intentions of improving the quality of our products and services.

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#### **Web-links**

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2. <http://www.iuse.or.jp/e/deming>
3. [www.acmainfo.com](http://www.acmainfo.com)
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