

ISO IMPLEMENTAION & RESEARCH SERVEY ON AN INDIAN AUTOMOBILE INDUSTRY

Ashwani Sharma¹ & Dr. Sunil Dhingra²

Abstract-Internal Service Quality has a great effect on the external services so now a days various manufacturing industries are trying to improve their internal service quality (ISO).The research work is focused on selection and ranking of ISO dimensions using TOPSIS technique for five service units in an auto manufacturing industry. It will help the management to focus on weak and strong ISO dimensions. It will also to enhance the external quality of product. In this research work, the methodology is based on Gap Based Model. In this model, gap between expectations and perceptions is measured. Then TOPSIS technique is applied on gap for the ranking of ISO dimensions. In this study, sampling is done. In sampling, questionnaires are distributed among the employees in selected units. In order to collect data, the SERVQUAL questionnaire is used. This contains some questions which are asked employees expectations and perceptions about delivered service. Ranking of ISO dimensions is done using TOPSIS method.

1. INTRODUCTION

ISO is a top of the Standards. It was formed by the. Guidelines are provided for a wide range of society by these standards. These organizations include production, Planning, switching, printing, forestry and Technology, ISO was first established in 1947, in Switzerland, for the developing of economically, technical, and standardize corporation between medium of countries (Bureau of Business Practice). Later in 1979 the ISO Committee (ISO/TC 176) was formed to make a set of direction in order to bring together and quality industries. ISO has affiliation in more than 90 countries. It is interesting to know that the word ISO is standard of quality and environmental spaces. The words “same as” can be implied to mean the customer gets what they expects values. In our category of quality .we has learned that if the customer gets what they expect, this is considering quality. Therefore, the base ISO stands for quality.

2. HISTORY OF ISO 9000 STANDARDS:

The developed countries started producing their own standards for specifying the Varity of products manufactured. In 1972, BSI UK published BS4891- A guide to quality assurance. This standard was used as basic guidance for companies willing to set up quality system.

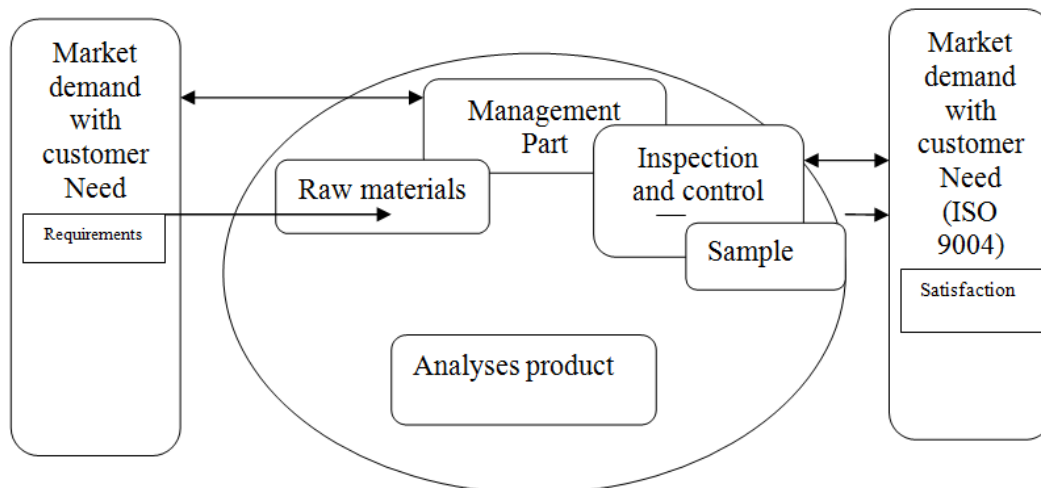


fig. No. -6.2 Process Approach

¹ PG student, Mechanical Department, MIT Mohri

² Assistant professor, Mechanical Department, UIET KUK

3. PDCA CYCLE AND PROCESS APPROACH:

❖ PDCA, these cycle are progressive nature

PDCA is related for better planning method to b used, and totally control the quality TCQ process

- "PLAN "Main focus on the model are satisfaction of the consumer and customer and fulfill the demand of the organization
- "Do" at a time apply the mthod .
- "Act" these act are gradually changes at time to time with according demand

4. DATA COLLECTION:

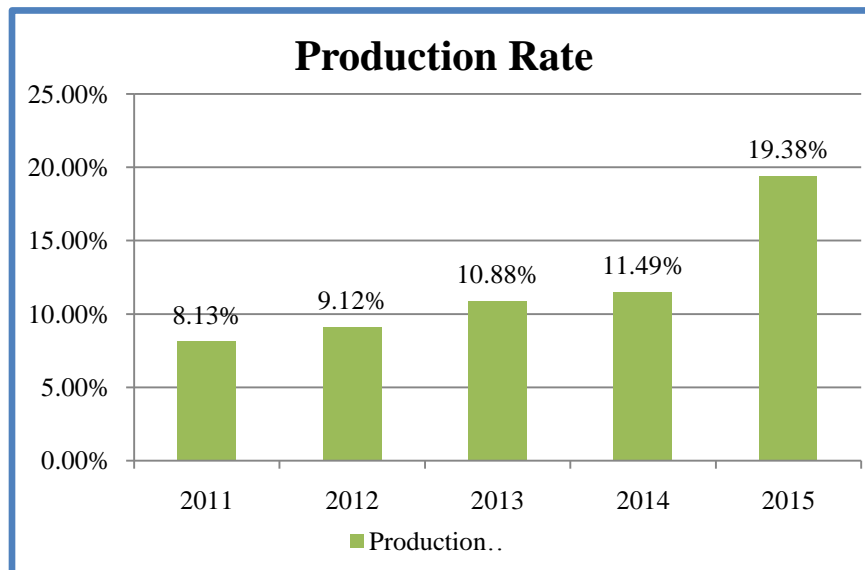
Industrial vist are main role play in data collection. Data collection is very important to represent the problem in the industry the production process observe and role of staff to be considerd after analysis the problem area are detected with easily recommendation the solution

5. ANALYSIS OF DATA:

- Determine, collect and analyze appropriate data to
 - Expermental procee are more effective
 - Identify area of daily improvement
 - Providing data record

Yearly Production Increase Rate (%)

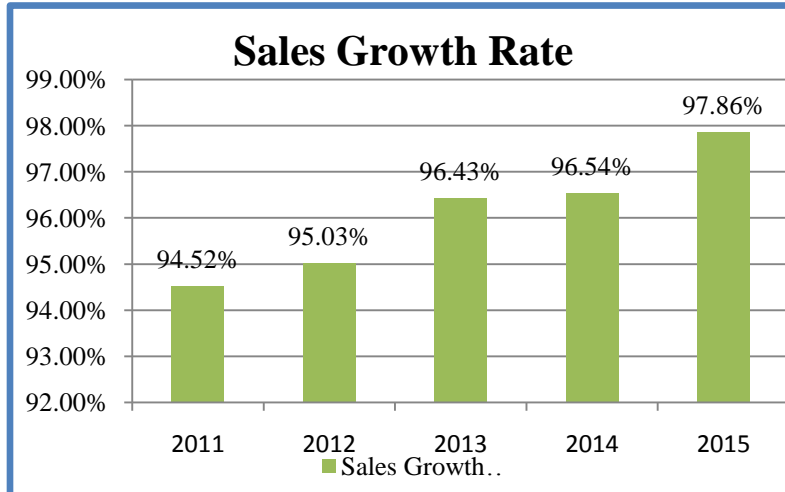
Year	Production (set)	Growth Rate
2011	7679154	8.13%
2012	8379154	9.12%
2013	9290485	10.88%
2014	10357611	11.49%
2015	12365115	19.38%



Graph b/w Production Increase Rate (%) and Time (Year)

Table-Yearly Sales Increase Rate (%)

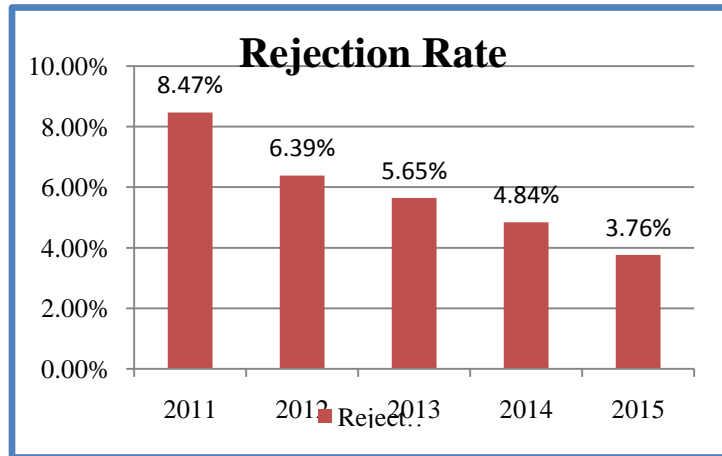
Year	Sales (set)	Growth Rate
2011	7,258,132	94.52%
2012	7,963,043	95.03%
2013	8,958,788	96.43%
2014	9,998,995	96.54%
2015	12,100,098	97.86%



Graph b/w Sales Increase Rate (%) and Time (Year)

Table-Yearly Rejection Decrease Rate (%)

Year	Rejection (set)	Rejection Rate
2011	650,726	8.47%
2012	535,092	6.39%
2013	525,017	5.65%
2014	501,347	4.84%
2015	464,465	3.76%



Graph b/w Rejection Rate Decrease (%) and Time (Year)

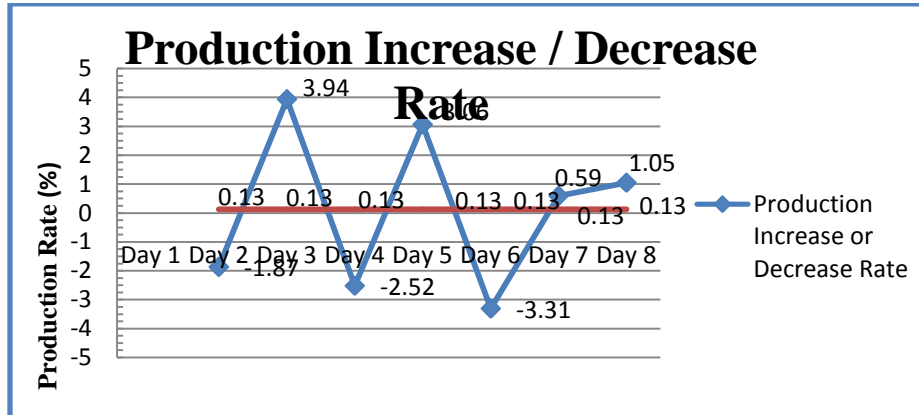
6. PRODUCTION AND REJECTION SURVEY FOR CELL -12

For the manufacturing of brake shoe there are twelve no. of manufacturing cells in the industry and each cell contain two types of press machines namely **Hind Machines & Wanda Machines**. Each Hind machine has 8 sections whereas each Wanda machine has 6 sections. There are total 48 sections in each manufacturing cell whichever may be the type of machine. Production is accomplished in the form of sets and each set contain 4 items.

Table-Daily Production Survey Report (Cell-12)

Day	Production (Set)	Increase or Decrease in Production (Set)	Production Increase or Decrease Rate (%)
1 st	4265	-	-
2 nd	4185	-80	-1.87 %
3 rd	4350	165	3.94 %
4 th	4240	-110	-2.52 %
5 th	4370	130	3.06 %

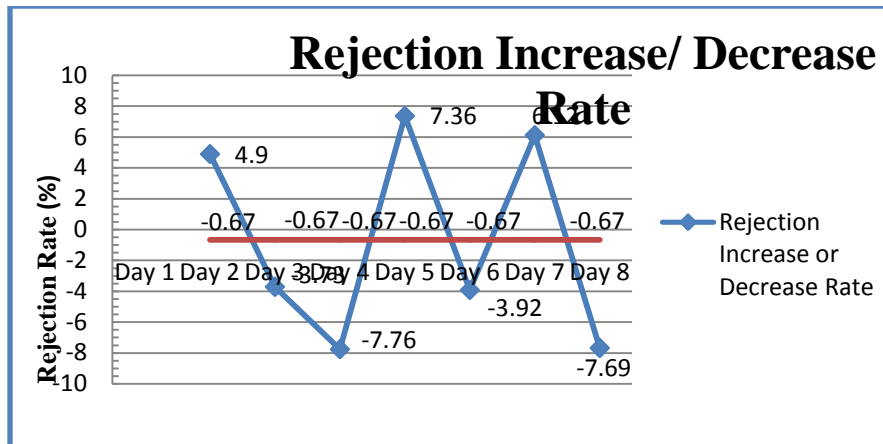
6 th	4225	-145	-3.31 %
7 th	4250	25	0.59 %
8 th	4295	45	1.05 %



Graph b/w Production Increase Rate and Time

Table-Daily Rejection Survey Report (Cell-12)

Day	Rejection (Set)	Increase or Decrease in Rejection (Set)	Rejection Increase or Decrease Rate (%)
1 st	102	-	-
2 nd	107	5	4.90
3 rd	103	-4	-3.73
4 th	95	-8	-7.76
5 th	102	7	7.36
6 th	98	-4	-3.92
7 th	104	6	6.12
8 th	96	-8	-7.69



Graph b/w Rejection Decrease Rate and Time

7. RESULTS

After study the all factors of ISO 9001:2000 implemented in industry a sharp result comes out that industry is continuous improvement of quality of products, process and services. We saw that the rejection rate, rework of the industry is decrease and the Quality standard, Sale & Production of product in the industry increase year by year continuously. Production increase 8.13% to 19.38%.

1. Sale increase 94.52% to 97.86%.
2. Rejection rate decrease 8.47% to 3.76%.

3. Rework rate decrease 3.42% to 0.71%.

These are the changes which are observed after analyzing the last few years' data of the company after the implementation of ISO.

1. Per day average Production increase rate = 0.13 %

2. Per day average Reduction decrease rate = 0.67 %

8. SCOPE FOR FUTURE WORK

International organization for Standardization (ISO) can play a vital role to bring a quality revolution in Indian industries owing to its ability to comprise the advanced and sophisticated quality improvement in systematic manner used by different organizations. This approach may be helpful to find out the ways and means to improve the present situation in Indian by developing the specific time bound quality improvement action plans.

Moreover, ISO seems to generate awareness about the quality in every sector of Indian industries. But its effectiveness depend upon interpersonal behavior of Indian work force in work situation, people's socialization behavior pattern, personality traits, attitude and values as told by quality manager. In general, there is need to use concept of ISO more and more to reap its maximum benefits. More and more cases must be critically examined.

9. REFERENCES

- [1] Durai Anand Kumar, Dr. V. Balakrishnan, 2011 "A Study on ISO 9001 Quality Management System Certifications — Reasons behind the Failure of ISO Certified Relationship of ISO 9001:2000 quality system certification with operational and business performance a survey in Australia and New Zealand-based manufacturing and service companies". Vol. II & Version 1.0.
- [2] Juan Jose Tull, Jose Francisco Molina-Azorin², Maki Heras³, 2012, "Benefits of the ISO 9001 and ISO 14001 standards". Vol. 5(2), 297-322.
- [3] Joseph Iwaro and Abrahams Mwashu, 2012, "The effects of ISO certification on organization workmanship performance". Vol. 19, No. -1, 53-67.
- [4] Matjaž Maletic Manja Podpečan Damjan Maletic, 2014, "ISO 14001 in a corporate sustainability context: a multiple case study approach", Management of Environmental Quality: An International Journal, Vol. 26 Iss 6, 872 – 890.
- [5] Rouhollah-alreza Nematollahi, Abbas Abbasi and Mohammad Ali Forghani, 2014, "The Impacts of Implementing ISO Certification 9000 Series on Productivity of Barez Industrial Group" Int Journal of Social Science and Management Volume 1, Issue 1, 15-26
- [6] Sik Sumaedi and Medi Yarmen, 2015, "The Effectiveness of ISO 9001 Implementation in Food Manufacturing Companies: A Proposed Measurement Instrument" Procedia Food Science 3, 436-457.
- [7] Jacqueline Ochieng David Muturi Samuel N. Njihia , 2015, "The impact of ISO 9001 implementation on organizational performance in Kenya", The TQM Journal, Vol. 27 Iss 6, 761 – 771.