DOES QUALITY ADMINISTRATION PRACTICES IMPACTS ITEM QUALITY AND FUNCTIONAL EXECUTION

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ABSTRACT
Today fabricating associations are battling in profoundly serious worldwide business climate. To accomplish supportability the associations should be focused on ceaseless take a stab at greatness. The review means to investigate the effect of value the executives rehearses on item quality and functional execution through a study. The study pointed after getting the reactions significantly from Directors, Associate Chiefs and Leaders across drug, car and hardware creation units. The result of the review underwrites that quality administration rehearses gradually affects item quality and functional execution.

KEY WORDS: TQM (Total Quality Management), Quality Management Practices, Product Quality, Operational Performance.

INTRODUCTION

Organizations today, focuses on customer value, efficiency and speed to become globally competitive. The long-term sustainability of any organization depends on its commitment to continuous improvement. Quality is consistent, long-term, on-target performance of products and services in the hand of the customer. To satisfy customers, their needs must be considered throughout the entire planning, design, development, manufacturing process, delivery and after sales service.

Quality, as a profession and the managerial process associated with the quality function, has been introduced during the second-half of the 20th century, and has evolved since thereafter. Over this period, only few other disciplines have seen as many changes as the quality profession.

With the increasing importance and cost of implementing Quality Management Practices it has thus became necessary to investigate whether Quality Management Practices has any significant impact on Products Quality and Operational Performance pertaining to production units.

To decide upon impact of Quality Management Practices on products quality, two parameters namely products Performance and products durability is been considered. Again other two parameters such as Process Streamlining and Productivity (output) is been considered for evaluating impact of Quality Management Practices on Operational Performance.

Therefore, the present study deals with following two aspects of Organizational performance: ‘Operational Performance’ and ‘Perceived Product Performance’.

KEY WORDS: Quality Management Practices, Productivity and Operational Performance.

REVIEW OF LITERATURE

Performance measures are important parameters which helps in effective management. Operational performance can be defined as the extent to which business operations has met the organizational goals as well as the customer needs. Thus it is inevitable for any given business organization to follow performance measures, as it helps to control, identify problems and fix the performance.

As per Deming if something needs to be improved it is necessary that we should first measure it. Organizational performance can also be referred as measures of how financial goals and market oriented goals are achieved by the organization. Traditional organizational performance measures mainly revolves around financial performance measures which may provide blurred facts about organizational performance.
The study conducted by Andow H. & Dabo Z. (2019) elaborates that quality management practices influence product quality leading to customer satisfaction and customer retention. Bin Shen, Yifan Cao & Xiaoyan Xu (2020) affirmed that

quality management practices helps the production units to differentiate their products so as to gain competitive advantage over competitor's products.

Gambi L. et. al. (2020) endorses that TQM practices motivates the companies to innovate products as well as services, therefore the companies should properly adopt and implement quality management practices so as to gain long term survival of business. Petcharit A., Sornsaruht P. & Pimdee P. (2020) in their study stressed that quality management practices helps the companies to adopt to changes in customer preferences and business environment, as it saves companies products to become obsolete as well as it helps companies to adopt to and external environment changes.

The study performed by Yu G. J. et. al. (2017) affirms that there exists positive effect of TQM on organizations performance which also impacts the growth of sales and revenue. As per the study conducted by Sahoo S. (2020), quality management support practices were found impacting manufacturing performance. As per the survey conducted by Akanmu M. et. al. (2020) reaffirmed that strategic implementation of quality management leads to sustainable organizational performance.

Therefore, as per the above given descriptions, the study aims 'to investigate the effect of Quality Management Practices upon operational performance' and 'to investigate the effect of Quality Management Practices upon Quality of the Products'.

OBJECTIVES OF THE STUDY

1. To Study the Impact of Quality Management Practices on Operational Performance of Manufacturing Units.
2. To Study the Impact of Quality Management Practices on Quality of the Product.

Hypothesis:

I. H0: There is significant Impact of Quality Management Practices on Operational Performance of Manufacturing Units.

H1: There is no significant Impact of Quality Management Practices on Operational Performance of Manufacturing Units.

II. H0: There is significant Impact of Quality Management Practices on Quality of the Product.

H1: There is no significant Impact of Quality Management Practices on Quality of the Product.

RESEARCH METHODOLOGY

A pilot study was carried out with six different manufacturing firms (3 Automobile, 1 Pharmaceutical and 2 Electronics Units). The respondents were from different departments of the respective Units. Again the respondents were categorized according to their respective positional ranks into 3 categories i.e Managers, Assistant Managers and Executives.

In all from each Manufacturing Unit 6 Departments were considered, namely Production Department, Production Planning & Control Department, QA & QC Department, Purchase Department, HR Department and Stores Department. From each department 3 respondents were under consideration i.e Manager, Assistant Manager and Executive. Therefore total numbers of respondents were 108.

Following Parameters were analyzed for measuring impact of Quality Management Practices on Operational Performance of Manufacturing Units:

1. Streamlined Manufacturing Process.
2. Manufacturing Productivity.

Similarly, for measuring impact of Quality Management Practices on Quality of the Products following parameters were considered:

1. Products Performance.
2. Durability of the products.

The responses were collected with the help of structured close ended questionnaire, the responses were analyzed with the help of Likert's Scale and the Hypothesis was tested with the help of Chi-Square test at 5% Significance level.

Limitation of the Study:

The study is strictly confined to 'private production units' in Pune region.

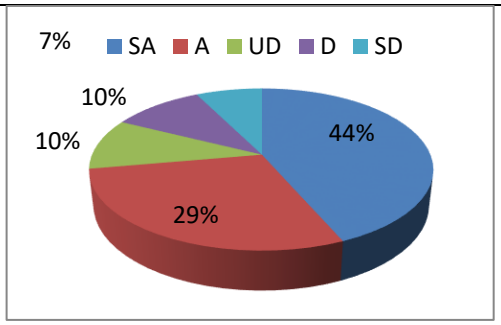
Data Analysis & Interpretation:

Part I: Operational performance

Q1.1. Quality Management Practices helps to streamline Manufacturing Process?

Table 1.1.

Category	SA	A	UD	D	SD	Total
Managers	19	8	3	4	2	36
Assistant Managers	13	10	2	6	5	36
Executives	15	13	6	1	1	36
Total	47	31	11	11	8	108



***(Expected Frequency Table 1.1): -**

Category	SA	A	UD	D	SD	Total
Managers	15.7	10.3	3.7	3.7	2.6	36
Assistant Managers	15.7	10.3	3.7	3.7	2.6	36
Executives	15.7	10.3	3.7	3.7	2.6	36
Total	47.1	30.9	11.1	11.1	7.8	108

Degree of Freedom{ (m-1) (n-1) } = (3-1) (5-1) = 8.

Table X^2 Calculations 1.1:

O	E	O-E	$(O-E)^2/E$
19	15.7	3.3	0.693
8	10.3	2.3	0.513
3	3.7	0.7	0.132
4	3.7	0.3	0.024
2	2.6	0.6	0.138
13	15.7	2.7	0.464
10	10.3	0.3	0.008
2	3.7	1.7	0.781
6	3.7	2.3	1.429
5	2.6	2.4	2.215
15	15.7	0.7	0.031
13	10.3	2.7	0.707
6	3.7	2.3	1.429
1	3.7	2.7	1.970
1	2.6	1.6	1.230
		X^2	11.764

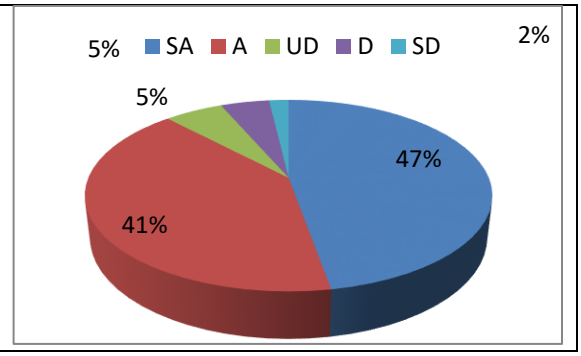
Interpretation 1.1:

The tabular 95% value of X^2 (Degree of Freedom = 8) is 15.507, so the value obtained 11.764 is Significant at 5% level. Therefore it can be concluded that Quality Management Practices helps to streamline Manufacturing Process.

Q1.2. Quality Management Practices leads to Increase in Manufacturing Productivity?

Table 1.2.

Category	SA	A	UD	D	SD	Total
Managers	20	12	2	2	0	36
Assistant Managers	18	15	1	1	1	36
Executives	13	17	3	2	1	36
Total	51	44	6	5	2	108



***(Expected Frequency Table 1.2): -**

Category	SA	A	UD	D	SD	Total
Managers	17	14.7	2	1.7	0.6	36
Assistant Managers	17	14.7	2	1.7	0.6	36
Executives	17	14.7	2	1.7	0.6	36
Total	51	44.1	6	5.1	1.8	108

Degree of Freedom{ (m-1) (n-1) } = (3-1) (5-1) = 8.

Table X^2 Calculations 1.2:

O	E	O-E	$(O-E)^2/E$
20	17	3	0.529
12	14.7	2.7	0.495
2	2	0	-
2	1.7	0.3	0.052
0	0.6	0.6	0.600
18	17	1	0.058
15	14.7	0.3	0.006
1	2	1	0.500
1	1.7	0.7	0.288
1	0.6	0.4	0.266
13	17	4	0.941
17	14.7	2.3	0.359
3	2	1	0.500
2	1.7	0.3	0.052
1	0.6	0.4	0.266
		X^2	4.912

Interpretation 1.2:

The tabular 95% value of X^2 (Degree of Freedom = 8) is 15.507, so the value obtained 4.912 is Significant at 5% level. Therefore it can be concluded that Quality Management Practices leads to Increase in Manufacturing Productivity. Since

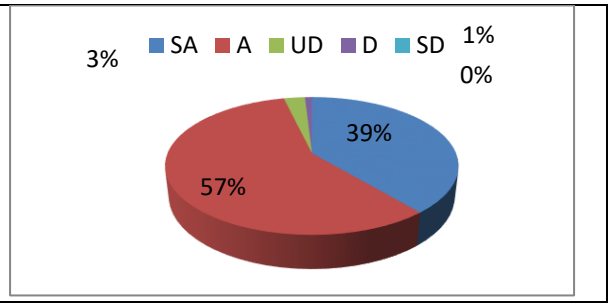
the calculated chi square value of Parameter I (Streamlined Manufacturing Process) is 11.764 which is less than table value 15.507, and the calculated chi square value of Parameter II (Manufacturing Productivity) is 4.912 which is again less than table value 15.507. Hence H0 (There is significant Impact of Quality Management Practices on Operational Performance of Manufacturing Units) is accepted.

Part II. Product Quality

Q2.1. Quality Management Practices ensures Products Performance?

Table 2.1.

Category	SA	A	UD	D	SD	Total
Managers	16	18	2	0	0	36
Assistant Managers	14	20	1	1	0	36
Executives	12	24	0	0	0	36
Total	42	62	3	1	0	108



***(Expected Frequency Table 2.1): -**

Category	SA	A	UD	D	SD	Total
Managers	14	20.7	1	0.3	0	36
Assistant Managers	14	20.7	1	0.3	0	36
Executives	14	20.7	1	0.3	0	36
Total	42	62.1	3	0.9	0	108

Degree of Freedom{ (m-1) (n-1) } = (3-1) (5-1) = 8.

Table X^2 Calculations 2.1:

O	E	O-E	$(O-E)^2/E$
16	14	2	0.285
18	20.7	2.7	0.352
2	1	1	1
0	0.3	0.3	0.3
0	0	0	-
14	14	0	-
20	20.7	0.7	0.023
1	1	0	-
1	0.3	0.7	1.633
0	0	0	-
12	14	2	0.285
24	20.7	3.3	0.526
0	1	1	1
0	0.3	0.3	0.3
0	0	0	-
		X^2	5.704

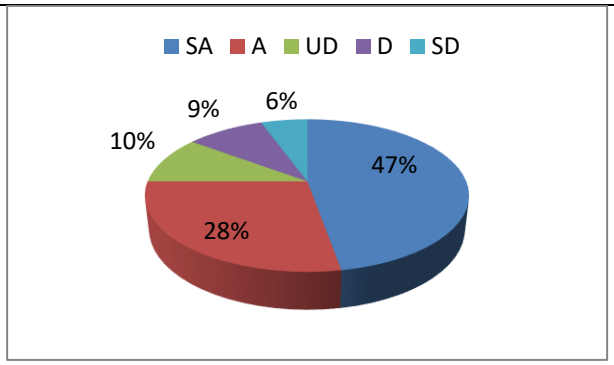
Interpretation 2.1:

The tabular 95% value of X^2 (Degree of Freedom = 8) is 15.507, so the value obtained 5.704 is Significant at 5% level. Therefore it can be concluded that Quality Management Practices ensures Products Performance.

Q2.2. Quality Management Practices helps making Products Durable?

Table 2.2.

Category	SA	A	UD	D	SD	Total
Managers	19	12	3	2	0	36
Assistant Managers	17	9	4	4	2	36
Executives	15	9	4	4	4	36
Total	51	30	11	10	6	108



***(Expected Frequency Table 2.2): -**

Category	SA	A	UD	D	SD	Total
Managers	17	10	3.7	3.3	2	36
Assistant Managers	17	10	3.7	3.3	2	36
Executives	17	10	3.7	3.3	2	36
Total	51	30	11.1	9.9	6	108

Degree of Freedom{ (m-1) (n-1) } = (3-1) (5-1) = 8.

Table X^2 Calculations 2.2:

O	E	O-E	$(O-E)^2/E$
19	17	2	0.235
12	10	2	0.400
3	3.7	0.7	0.132
2	3.3	1.3	0.512
0	2	2	2.00
17	17	0	-
9	10	1	0.100
4	3.7	0.3	0.024
4	3.3	0.7	0.148
2	2	0	-
15	17	2	0.235
9	10	1	0.100
4	3.7	0.3	0.024
4	3.3	0.7	0.148
4	2	2	2.00
		X^2	6.058

Interpretation 2.2:

The tabular 95% value of X^2 (Degree of Freedom = 8) is 15.507, therefore the value obtained 6.058 is Significant at 5% level. Therefore it can be concluded that Quality Management Practices helps making Products Durable. From the above calculations it has been observed that chi square value of Parameter I (Products Performance) is 5.704 which is less than

table value 15.507, and the calculated chi square value of Parameter II (Durability of the Products) is 6.058 which is again less than table value 15.507. Hence H0 (There is significant Impact of Quality Management Practices on Quality of the Product) is approved.

CONCLUSION

1. Quality management Practices are used in all areas of a company from the products that are manufactured to the customer services provided by the employees. Corporate teams often work on projects designed to improve the overall company's value. It is an ongoing continuous process, and is significant for the success of any company. It can be implemented on several different levels of the organization.
2. Product Quality being considered as technological issue which was being neglected so far in Management Studies, also majority of studies has evaluated Product Quality only on the basis of customer preference and satisfaction. Thus the study also confirms that Quality Management Practices are followed by the companies so as to make products that will perform as intended by the manufacturer.
3. Companies must test the quality of their products to make sure they are at least on par with what is expected. Customers who have purchased products or services from a given company for a period of time will expect a certain benchmark level of quality and durability.
4. Which is why value management is a continual process that must be adhered to on a regular basis. It has also become a part of everyday operations for many businesses and is implemented into their normal agendas. The idea is that if products or services can continuously be improved upon, the longer the company who makes those products or services will remain and grow in business. Also, the elimination of process wastes through trained employees has emerged as a crucial factor for productivity Improvement.

   Thus, the above research clarifies the significant and relative Impact of Quality Management Practices on Products Quality and Operational Performance.

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