Study of the Role of Total Quality Management in Productivity Enhancement in Indian Insurance Sector

Gauri Chauhan

Assistant Professor, CH Institute of Management & Commerce, Indore

Dr. Geeta Nema

Reader, International Institute of Professional Studies, DAVV, Indore

Abstract

Today where price of a product or service is not considered the only parameter in purchase decision but other things such as quality and reliability are now the overriding factors which customers consider while exercising choice. Not only this, a wide variety of choices that are available to the customers because of integration of the world economy as one has made factors like quality , reliability and continuous improvement of paramount importance. Fulfillment of customer specifications, dependability of service and speed of delivery are the distinguishing factors of organizational success. The role of service sector in economic development is increasing with an accelerated pace. Financial services like banking and insurance are the backbone of any nation's economic development. The growth of which is possible only through continuous quality improvement.

Thus the purpose of this study is to find out the role of TQM in enhancing the productivity in insurance sector. An effort is made in the current study to understand the various quality practices adopted by insurance organizations, also to identify the variables contributing to enhancing productivity among insurance employees. The sample frame is comprised of the employees working in different insurance companies of Indore. The data was collected from the Indian Insurance companies through structured questionnaire and is analyzed by various statistical tools including chi- square test, correlation, percentage analysis and the findings are presented in the form of tables and graphs. The results of the study suggest that TQM has a great role in enhancing the productivity in insurance sector. It reveals the quality practices followed by insurance sector which are Quality Information, Quality Circle, Benchmarking, Quality Function Deployment, Statistical Process Control etc. Application of TQM concepts in the organization increases the productivity of the employees by reducing duplication of work, wastage and also minimizing errors.

Keywords: Total Quality Management, Productivity, Quality Practices, Insurance sector.

Introduction

With a large number of choices in the form of products and services the customer is no longer bound to purchase from a single manufacturer or service provider. Customers are in no condition ready to tolerate errors, poor quality, unreliable goods and late deliveries. Thus, in such a scenario where tolerance level for shoddy workmanship is so low, survival of an organization is very difficult. Only those organizations

which are continuously working for improvements in quality can remain in market. In order to compete with other organizations, a business unit must improve its quality. Organizations which have used continuous process improvement as a tool to compete with other organizations have benefitted to a large extent in terms of customer satisfaction, reduced errors, increased output, profit and market share (Shehzad Akhtar, 2014). It is evident from literature that TQM is widely adopted and its successful implementation helps to improve productivity in almost all types of industries.

TQM is the process of involving everyone and all aspects of an organization in continuous improvement through team work. TQM is a process which continuously works in the direction of improving products and services by improving business processes and systems and preventing errors (Faisal Talib Z. R., 2010). TQM concept can be explained with the help of the following chart:

Total	Quality	Management
 Covers all functional areas. Covers all employees at all levels. It is employee-centered. Covers all others- Suppliers, Customers, Who have a stake in the organization. 	 Conformance to customers needs expectations, quality service, Fitness for use Customer satisfaction 	 Effective utilization of: men matchines material methods money time Work towards continuous improvement in all spheres and activities of an organization.

The top level management plays the most vital role in implementation of TQM, as strategies are formulated by the top level management which is then spread out to all the levels. The policy of TQM covers each and everyone associated with the firm-from suppliers to customers and from owners to the workers. It works in the direction of improving quality in such a way that it ultimately leads to customer satisfaction. Initially TQM was implemented in manufacturing firms only but with time it was recognized that if used in service organizations it can result into greater efficiency and other such related benefits. So now TQM is being implemented in service sector also. TQM focuses on continuous improvement, customer feedback, reduction of wastage etc, thus helping the service organizations to continuously improve and upgrade their services. Thus the organizations which implement TQM stay ahead of the organizations which do not implement TQM.

TQM Defined: Indian Statistical Institute, Hyderabad defined TQM as follows: "TQM is an integrated organizational approach in delighting customers (both internal and external) by meeting their expectations on a continuous basis through everyone involved with the organization working on continuous improvement in all products, services and processes along with proper problem-solving methodology."

Elements of TQM: (Bhat, 2008) The basic elements of TQM concept are:

- Management commitment to quality
- Focus on customer requirement and expectations
- Preventing defects rather than detecting them
- Quality measurement
- Continuous improvement approach
- Root cause corrective action
- Employee involvement and empowerment
- Synergy of teamwork
- Process improvement
- Thinking statistically
- Benchmarking
- Inventory reduction
- Value improvement
- Supplier teaming
- Training

Productivity: It is very closely affected by the accessibility of resources which are termed as inputs. This means, it is a measure of the performance of an organization. An organization which has high productivity means it systematically uses its inputs, like material, capital and labor. Productivity is said to be increased when increased output is received with the same input or same output is received with reduced quantity of input (Tangen, 2002). In other words productivity can be defined as a ratio of total annual output out of the total annual cost; thereby any fact that may positively affect annual revenue or negatively affect total annual costs will positively enhance the productivity. Fardos Hussain and Rachi Jain, and Shegen Fan, 1997 in their studies advocated the positive impact of total quality management practices on productivity.

Indian insurance industry: Insurance industry emerged in India in 1818 with the inception of Oriental Life Insurance Company in Calcutta. A seal of approval was given to the British Insurance Act in 1870, after the failure of Oriental life insurance Company in 1834. The Bombay Mutual (1871), Oriental (1874) and Empire of India (1897) were started in the Bombay Residency in the last three decades of the nineteenth century. However overseas insurance companies like Royal Insurance, Albert Life Assurance, Liverpool and London Globe Insurance had a commanding position over Indian insurance companies in terms of business. The insurance sector underwent many structural changes in between 1914 to 1938 with a view to protect the interests of the insured public and also in order to exercise effective control over the activities of insurers. Implementation of these changes resulted in emergence of large number of companies leading to increased level of competition. Many companies were also accused of exercising unfair trade practices. The decision to nationalize insurance sector was taken by the Government of India because of these conditions. On 19 January 1956 life insurance sector was nationalized leading to formation of Life insurance corporation which absorbed 254 Indian and foreign insurers in all.

General insurance came to India in the year 1850 as a legacy of British occupation, with the creation of Triton insurance company Ltd. The first Indian general insurance company which transacted all classes of general insurance business was Indian Mercantile Insurance Ltd. On 1 January 1973 the general insurance industry was nationalized.

Insurance sector was opened for the private sector in early 1994 on the basis of recommendations of R N Malhotra Committee on insurance deregulation. In order to regulate and control the insurance industry, Insurance Regulatory and Development Authority (IRDA) was formed in 1999.

Today there are a total of 24 life insurance companies and 30 Non-life insurance companies operating in India (IRDA,

2007). With these many insurers working in the country the competition has increased at a tremendous rate. Thus, in a scenario where a customer has so many options available, he does not tolerate any error. Errorless service is only possible with the implementation of practices like Total Quality Management.

In insurance, banks and other financial institutions a quick and upto date services are required by customers. Errors are not permissible in these services. In service sectors customers are more sensitive to quality and delivery of services than in manufacturing sectors because customers are in direct contact with service provider (Shehzad Akhtar, Nov 2014)

In view of the changed competitive scenario in the insurance industry, this paper attempts to assess total productivity growth in the industry because of the implementation of Total Quality Management using various analytical tools such as chi square test, correlation etc. This paper presents the role of Total Quality Management in enhancing the productivity of insurance sector and describes the results obtained from the study.

Review of Literature:

Globalization of world trade, increasing competition and availability of number of options, because of increasing demands of customers, who now want customized products and services have resulted into giving quality the top priority in various organizations.

According to (Feigenbaum, 1999), quality can be improved by transforming the quality which has gone wrong. The study reveals that an organization can move ahead of its competitors by implementing total quality management, as its proper implementation results in improving sales and revenue, helps in improving design, and focusing on weak processes in order to strengthen them and protecting strong areas.

(Prajogo Daniel I., 2003), compared the relationship between total quality management (TQM) and innovation performance with quality performance. The findings of the study suggested that TQM has a positive and significant relationship with quality of the product and in innovation of it. It also shows that with improvement in the performance of quality, innovation performance also improves.

(Psychogios, 2007) attempted to evaluate the awareness of managers and their understanding of TQM concept in organizations and to develop a measure for doing so. From review of the literature nine soft factors were identified for further study. These elements or principles were involvement of everyone in an organization, continuous improvement, team working, empowering the employees, continuous training, customer satisfaction, top management commitment and support, open and participative management style and organizational culture. After an investigation and analysis of data three main factors emerged. These factors are- concept of continuous training and improvement are included in Factor A. Factor B is composed of factors related to empowerment and involvement of employees and Factor C consists of variables such as top-management commitment & support, democratic management style, citizen's satisfaction and culture change. Thus the study provided with three valid statistical components of TQM.

(Thaddeus Litie Njie, 2008) investigated whether the objective of TQM i.e. improvement in quality and customer satisfaction can be better accomplished if the employees are empowered to be responsible for quality of work done by them. Secondary data was collected from various journals in order to carry out the study. The results show that there is a noteworthy relationship between top management and employee empowerment. It also shows that managers involve the employees in decision making process but don't like to empower them with authority in decision making. It can be concluded that for improving the skills and knowledge of the employees they should be provided with proper training. They would feel motivated and satisfied with their jobs when they are provided with proper training. It is also concluded that the commitment of top management should be such that they empower the employees to handle any type of problems so that the customer's complaints can be easily solved. Old traditional management style should no longer be used where the employees did not have any say in any decision but just had to obey what was being ordered.

(Mihai Draghici, 2010) explored and identified the most common complications, hurdles and troubles that organizations, particularly service organizations come across while implementing and adopting both Total Quality Management and Six Sigma. The six sigma process is studied in the paper and the method to reach the six sigma quality is also suggested in the study. For successfully implementing Six Sigma in the organization use of DMAIC approach is suggested. It can be concluded from the study that both TQM and Six Sigma have their own advantages, TOM concentrates on the customer related aspects and on the other hand Six Sigma focuses on reducing defects and improving quality of all the products as well as processes. It is suggested that TQM and Six Sigma can have a great impact in an organization when used together.

(Pattanayak, 2011) focused on importance of TQM in banking industry. Performance of a bank can be improved by application of TQM as it helps in reducing costs, satisfying customers, increasing revenues, and empowering employees. The study reveals that customer satisfaction is very crucial for success of banking industry which can be achieved by implementation of TQM. (Kalra Neha, 2013) conducted an empirical study in order to identify the critical success factors for TOM in Indian Automotive industry. A model is proposed in the study to examine the effect of improvement in quality of products and services, quality of culture and critical success factors of Total Quality Management on Indian automotive industry. The various critical factors identified and studied were Supplier focus & Satisfaction, Policy & Strategic Planning, Human Resource Focus & Satisfaction, Process Management & Control, Customer Focus & Satisfaction, Information Management, Quality Leadership and Organization Specific Business Results. The findings of the study show that the sub-contractor category was still not responding to the changing needs of the market scenario. Rejection rate is very high because of weak corrective and preventive actions. Factors which are considered to be most important elements of TOM such as considering suppliers as partners, sharing of information with the employees and proper communication of goal in the organization are not practiced in the organizations. It can be concluded that the identified critical success factors should be implemented so as to improve the performance of the industries.

(Mwaniki Carolyne, 2014), found that top management involvement is very important for the successful implementation of TQM. The study indicated that processes improved financial performance of the banks. The study revealed that training is very important for employees as they can perform their duties better. The result of the study shows that one of the crucial factors for effective leadership is strategic management. Top management plays a crucial role in TQM implementation, their support through providing staff with clear visions, resources, training and encouragement of team work will translate into improved financial performance of National Bank of Kenya.

(Kongolo, 2014) investigated TQM implementation in Swaziland's sugar industry and its impacts on customer service delivery. The sample size of the study comprised a total of 200 employees, and a questionnaire was administered to the respondents by the researcher. The variables used in the study for rating include increased profit margins, improved quality product, improved productivity, enhanced service delivery and customer satisfaction. Both alternative hypotheses, that TQM has enhanced service delivery in Swaziland sugar industry and that it has contributed to organizational growth and performance in Swaziland sugar industry, were accepted. The results of this study support the idea that total quality management is a technique that assists firms to perform at a higher level. Finally, the results of this study suggest that primary focus of Swaziland sugar industry was on increased profit margins and improved quality product. The main focus of TQM implementation is on customer satisfaction. When customers are satisfied, then profit margins will increase

together with the rest of the main components of operations. TQM has impacted positively on the ability of Swaziland sugar industry to provide better services to its customers. The quality of its products has improved, making it possible to attract more customers as they are satisfied with service and the products. TQM has enhanced sugar industry's service delivery and customers are satisfied and willing to buy the industry products even at a high price. Thus TQM has also impacted positively on the industry's performance and growth. The profit margins have increased leading to a possibility of an increase in the market share for sugar.

(Akhtar Shehzad, 2014) examined whether application of total quality management has any impact on service sector of Pakistan. After exploring the elements of TQM and organizational performance both of these broad segments are divided into narrow segments and a questionnaire is prepared with the help of these elements. For conducting the research service organizations chosen were from banking, hospitality, airlines and telecommunication industries in Pakistan. Data, which was collected through interviews from the chosen organizations, was then analyzed. After analysis it was found that the managers had a positive response towards application of Total Quality Management in service organizations as well as its impact on organizational performance. Usage of various quality tools like continuous improvement and training and education is emphasized in the study. It is pointed that these tools can prove to be very helpful in increasing profits, satisfaction level of customers, output and market share. The study also revealed that most of the quality tools like training and education and performance appraisal are already being used in the service organizations. It also shows that leaders play a crucial role in improving the quality of service. In solving problems employees are also involved and majority of the organizations are having modern technology as well as dynamic organization structure to manage the quality and continuously improving the processes. So the study is in agreement with the favorable impact of TQM on performance of service organizations and shows that it is being implemented in service organizations in Pakistan.

Objectives of the Study:

- To study awareness about TQM concept among insurance employees.
- To understand the various quality practices adopted by insurance organizations.
- To study the variables contributing to enhancing productivity among insurance employees.
- To find out correlation between TQM practices and employee productivity.

Hypothesis:

H0: Application of TQM does not have a positive impact in enhancing the productivity among insurance employees.

H1: Application of TQM has a positive impact in enhancing the productivity among insurance employees.

Research Methodology:

Research Design:

The research design adopted in the present study is Descriptive Research Design. The studies that describe the characteristics of individuals or group are Descriptive research. This research design is preferred as the purpose of the study is to study the awareness about TQM concept and the various quality practices adopted by insurance employees.

Sample Size and Sampling Method:

The target population of the study comprises of Indian insurance companies. A total of 200 structured questionnaires were distributed to the insurance companies on the basis of convenience sampling. However only 100 questionnaires were received back out of which only 65 were taken as valid responses and used in the data analysis.

Research Questionnaire:

A structured questionnaire was used in the study. The questionnaire consisted of three sections. First section contains the demographic information of the respondents. Second section collects information about the awareness and application of TQM related training programs among the employees and the third section gives information about various TQM practices employed in the organizations and their impact on enhancing the performance of the companies with respect to enhancing employee's productivity.

Data Analysis:

After coding the responses it was recorded into Statistical Package for Social Sciences (SPSS) version 16.0 for critically assessing all the valid questionnaires. Data is analyzed using various statistical tools like graphs, pie charts, frequency distribution table that helped to describe and explain the findings of the study. The other methods used are Pearson correlation and chi square test for testing hypothesis.

Results and Discussion:

Profile of Respondents:

Demographic study includes age group, gender, level of qualification, nature of employment, duration of working in the same organization. Over half of the respondents were male (76.9%). Majority of respondents belong to the age group 36-50. As regards the level of qualification is

concerned nearly half are educated upto the level of graduation (47.7%) and post graduation (43.1%). Majority **T** 1 1 1 D

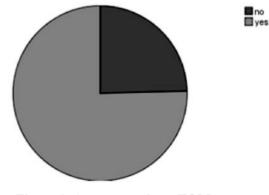
of the respondents i.e. (60%) are working in the same organization for more than 2 years.

Table 1: Demographic Profile						
Profile	Respondents	Category	Frequency	Percentage		
Gender	65	Female	15	23.1		
		Male	50	76.9		
Age	65	20-35	34	52.3		
		36-50	27	41.5		
		Above 50	04	06.2		
Educational Qualification	65	UG	06	09.2		
		G	31	47.7		
		PG	28	43.1		
Nature of Employment	65	Permanent	57	87.7		
		Temporary	08	12.3		
Duration of working in the	65	< 2 years	26	40		
same organization		>2 years	39	60		

The question wise data analysis is presented as under: Awareness about Concept of TQM

Table 2: Awareness about TQN	Table 1	Awareness	about	TQM
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		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	16	24.6	24.6	24.6
	Yes	49	75.4	75.4	100.0
	Total	65	100.0	100.0	



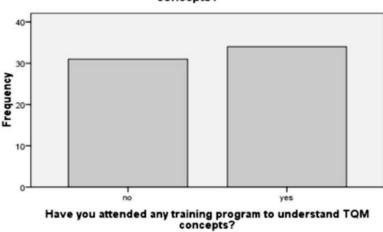
Are you aware about the concept of TQM?

Figure 1: Awareness about TQM concept

The results show that 75.4% (table 2) of the respondents are aware about the concept of TQM. It shows that majority of the employees are familiar with the concept of total quality

management.

Training to understand TQM concept



Have you attended any training program to understand TQM concepts?

Figure 2: Training attended by the employees for TQM

Table 3: Training attended by employees to understand TQM concept

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid no	31	47.7	47.7	47.7
yes	34	52.3	52.3	100.0
Total	65	100.0	100.0	

Table 3 shows that training is provided to the employees in most of the companies i.e. 52.3% which implies that the top level of the management is committed towards TQM and is putting efforts in making the employees aware about TQM

which also shows that most of the employees are aware about the TQM concept.

Quality Consciousness towards employees

		Frequency	Percent	Valid Percent	Cumulative Percent
Vali d	no	7	10.8	10.8	10.8
	yes	58	89.2	89.2	100.0
	Total	65	100.0	100.0	

Table 4: Quality consciousness towards employees

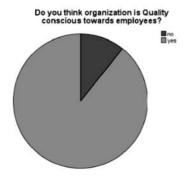


Figure 3: Quality Consciousness

Table 4 shows that 89.2% i.e. majority of the employees think that organization is quality conscious towards employees. That means organizations are taking measures to improve the quality of working conditions.

Quality practices adopted by Insurance Organizations

Different types of certifications are obtained by various insurance companies. Most of the organizations i.e. 70.8% companies have ISO 9001 certification. ISO 9002 certification is obtained by only 18.5% of the companies. Other certification i.e. ISO 9003 and QS 9000 are obtained by very few organizations which show that ISO 9001 is mostly obtained by the insurance organizations. Meeting of quality circle takes place monthly in most of the organizations and 10-15 numbers of people are involved in

the quality circle of most of the organizations. 92.3% of the organizations have Quality information system which shows that insurance organizations are applying quality practices and are also quality conscious. 96.9% i.e. majority of the respondents find that their performances are properly measured in the organization. Technical process like Statistical process control is also applied by majority of the organizations. Out of various other quality practices adopted by insurance organizations Quality Cost analysis is the majorly adopted practice followed by Business Process Reengineering and Quality circle. But Quality practices like Quality Function deployment, Benchmarking and ISO 14000/EMS are implemented by very few insurance organizations.

ITEM	RESPONSE	FREQUENCY	PERCENTAGE
Certification obtained by	ISO 9001	46	70.8
company	ISO 9002	12	18.5
	ISO 9003	2	3.1
	QS 9000	5	7.7
	Total	65	100
No. of people in Quality Circle	<10	7	10.8
	>10	31	47.7
	>15	7	10.8
	Can't say	20	30.8
	Total	65	100
Frequency of meeting of quality	Weekly	12	18.5
Circle	Biweekly	06	9.2
	Monthly	43	66.2
	yearly	04	6.2
	Total	65	100
Quality Information system	Yes	60	92.3
	No	5	7.7
	Total	65	100
Performance Measurement	Yes	63	96.9
	No	2	3.1
	Total	65	100
Application of SPC(Statistical	Yes	57	87.7
Process Control)	No	8	12.3
	Total	65	100
Other quality practices	Quality Circle	11	16.9
	ISO 14000/EMS	2	3.1
	QFD	6	9.2
	BPR	13	20.0
	Benchmarking	5	7.7
	Quality Cost Analysis	28	43.1
	Total	65	100

Table 5: Quality practices adopted by Insurance Organizations

Benefits after implementation of ISO/TQM

Majority of the employees feel that there is about 10-20% difference in sales as well as profit after implementation of TQM. Also the study shows that customer satisfaction is improved to an extent of about 10-30% while some

respondents feel that there is a significant difference in customer satisfaction to more than 50% after TQM implementation. It implies that TQM has a positive effect in improving performance as well as productivity of an organization.

Table 6: Benefits after implementation of ISO/TQM					
BENEFIT	RESPONSES	FREQUENCY	PERCENTAGE		
Sales improved after	0-5% more than before	4	6.2		
implementation	5-10% more than before	13	20		
of TQM	10-15% more than before	22	33.8		
	15-20% more than before	18	27.7		
	20-30% more than before	6	9.2		
	More than 50%	2	3.1		
Profit Margin improved after	0-5% more than before	8	12.3		
implementing TQM	5-10% more than before	14	21.5		
	10-15% more than before	15	23.1		
	15-20% more than before	20	30.8		
	20-30% more than before	6	9.2		
	More than 50%	2	3.1		
Customer Satisfaction	0-5% more than before	4	6.2		
improved after implementing	5-10% more than before	4	6.2		
TQM	10-15% more than before	19	29.2		
	15-20% more than before	13	20		
	20-30% more than before	13	20		
	More than 50%	12	18.5		

Table 6: Benefits after implementation of ISO/TOM

Correlation analysis between TQM practices and Employee Productivity

Table No. 7 indicates that Employee Productivity is highly correlated with TQM practices. This can be clearly inferred

from the noteworthy correlation coefficient of 0.88. This implies that proper implementation of TQM practices results in increased employee productivity.

Table 7: Correlation analysis between TQM practices and Employee Productivity

ITEMS	VALUE	TQM	PRODUCTIVITY
		PRACTICES	
TQM	Pearson Correlation Sig.	1	.880
Practices			
Productivity	Pearson Correlation Sig.	.880	1

Hypothesis Testing

H0: Application of TQM does not have a positive impact in enhancing the productivity among insurance employees.

H1: Application of TQM has a positive impact in enhancing

the productivity among insurance employees.

The above hypotheses are tested using chi square test in order to asses whether TQM has a positive impact on the organization or not.

	Value	Degree of Freedom	Asymp. Significance (2-sided)	Exact Significance (2-sided)	Exact Significance (1-sided)
Pearson Chi- Square	8.132	1	.004		
Continuity Correction ^b	5.392	1	.020		
Likelihood Ratio	6.983	1	.008		
Fisher's Exact Test				.015	.015
Linear-by- Linear Association	8.007	1	.005		
N of Valid Cases	65				

 Table 8: Chi-Square Tests

a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 1.31.

b. Computed only for a 2x2 table

From table No. 8 it may be interpreted that the Chi square value of 8.132 at degree of freedom 1 is working out to be 0.015. This value is less than 0.05. In the light of this the null hypothesis is rejected. Thus it may be concluded that application of TQM has a positive impact in enhancing the productivity among insurance employees.

Conclusion:

The findings of the study reveals that majority of the employees of insurance sector are aware about the concept of TQM. Study also shows that most of the insurance organizations provide training related to total quality concepts to the employees. Most of the insurance companies have obtained ISO 9001 certifications while the other certifications such as ISO 9002, ISO 9003 and QS 9000 certifications are obtained by very few companies. The study shows that meeting of quality circle is held monthly in most of the organizations.

The study also revealed various quality practices adopted by the insurance industries. Processes like quality information system, statistical process control and performance measurement are implemented to a great extent apart from these some other practices like Quality Circle, ISO 14000/EMS, QFD, BPR, Benchmarking and Quality Cost Analysis are also followed. Out of these practices the most commonly used practices are Quality Circle, Quality Cost Analysis and Business Process Reengineering while the other practices like ISO 14000/EMS and Benchmarking are followed by very few organizations. The study also revealed that most of the respondents agreed that the estimated sales improvement, profit margin improvement and customer satisfaction improvement was found to be 10-20% more after implementation of TQM which shows that performance of the organization can be improved after implementation of TQM. The findings of the study also revealed that application of TQM is highly correlated to productivity enhancement of the insurance sector which implies that with the application of TQM concepts the organization productivity can be enhanced. The study thus shows that application of TQM has a positive impact on the organization.

The study recommends that insurance organizations must implement TQM practices in order to improve their productivity. Other certification apart from ISO 9001 like ISO9002, ISO 9003 and QS 9000 should also be obtained by the companies as these will help the company in performing better than its competitors.

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