
THE INFLUENCE OF TOTAL QUALITY MANAGEMENT ON STAR HOTEL PERFORMANCE

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Abstract

The tourism and travel industry in India is growing at a drastic pace and is having a countable contribution to the GDP. The Foreign Tourists Arrival to India has increased by 23.77% since last 5 years yet in Karnataka state there is a downtrend in Tourist Visit. The major components of tourism and travel industry includes destination, food and accommodation, guides and brokers etc. and among them food and accommodation is provided by hotels which is a vital influencing factor in comforting the tourists away from nest and plays a leading role in boosting the tourist traffic to the destination. Therefore it pinches the question on to what extent the star hotels are providing quality services and how hotels are performing to support the tourism and travel industry. Hence the study focused on empirically investigate implementation of Total Quality Management which is the most used quality management technique for providing quality services among the star hotel and its impact on hotel performance.

The sample of star hotels was selected through tippet random sampling technique and the data was collected through structured TQM questionnaire which were distributed to hoteliers and employees. The hypothesis was tested with SEM analysis and the elements of TQM practices showed a positive relationship with key performance indicators of star hotels. Further the present study suggests the importance of proper planning and communicating as priority before starting TQM implementation, opting the right leadership style and consistency in innovation and management for reaping the benefits of TQM and improving hotel performance.

Key Words-- Total Quality Management (TQM), Key Performance Indicator (KPI), Star Hotels, Customer Satisfaction

I. Introduction

Incredible India, the country which is well known for its rich cultural heritage and diverse traditions, has made it one of the tourism hotspots for both foreign as well as domestic tourists. In India, the tourism and travel industry are growing at a drastic pace (Jauhari, 2009; Malik & Asima, 2014) and has become one of the major drivers of Indian economy as it is the lion share contributor for the key economic indicator, i.e. Gross Domestic Product. The tourism and travel industry has contributed US\$ 251.64 billion which is 9.2% of India's GDP in the year 2018 (Knoema Enterprise Data Solutions, 2018) and is forecasted to rise more than 10% by 2027. Hence, the pivotal role played by the tourism and travel industry can be leveraged in the economic development of the country with relevant support and supervision. (Abdullah, Razak, & Jaafar 2014).

As per the data provided by Ministry of Tourism, Government of India, it can be observed that the number of Foreign Tourists Arrival to India has increased by 23.77% since last 5 years (India Stats, 2019). Yet in Karnataka, during the same period there is a decrease in the number of tourists visit by 14.58% and in case of domestic tourists visit in India, it has been observed that the number of visitors' growth rate is reducing from last two years from 38.70% to 19.07% YOY which is nearly 50% in 2018. The major components of tourism and travel industry includes destination, food and accommodation, guides and brokers etc. and among them food and accommodation is provided by hotels which is a vital influencing factor in comforting the tourists away from nest and plays a leading role in boosting the tourist traffic to the destination. Therefore it pinches the question on to what extent the star hotels are providing quality services and how hotels are performing to support the tourism and travel industry.

And further mentioning about the competition for the star hotels, in the recent times the demand is being shifting from start hotels to the new disruptive innovation in the segment that is OYO rooms which is capturing the market of giant star hotels as the OYO rooms are able to provide the similar services as star hotels by understanding the service needs and demands and remodeling the unbranded hotels with the touch of technology at much affordable price which has made it more attractive to all the customers like youngsters, domestic and foreign tourists and travelers. With this regard, the star hotels are striving towards excellence with the motive of better service quality and to increase the customer base by adopting different quality management practices. The concept of service quality has emerged from Total Quality Management. TQM being most used quality management approach and philosophical practice direct the organizations, to develop a quality climate within by bringing together all the employees and making them to set high standard with their work efforts in every operation to deliver quality and value to the stakeholders so that the prime objective of modern organisation is achieved with satisfied customers. And it is also essential for the hotels to implement an effective TQM system for continuous quality improvement. Continuous service quality improvement is an integral part contributing to the overall performance of the organization.

Stipulated quality is guaranteed by the system of TQM (Trent & Monczka, 1999) and well-defined TQM system results are quality services. Therefore with this background, the study is focused on an empirically investigation of implementation of TQM and its relationship with hotel performance.

II. Theoretical Framework

Many star hotels have started implemented Total Quality Management which is helping the organisation in understanding and delivering expected customers' service with consistency quality so as to increase their customer base and retain the existing customers along with increasing the brand loyalty. Hence, from the various review of literature and based on the opinions of hotel experts regarding TQM practices, the following six elements are identified which are the MBQNA 2018 Standard (ASQ,2018); Leadership, Strategy, Customers, Measurement, Analysis and Knowledge Management, Workforce and Operations for investigating the TQM elements influence on Key Performance Indicator of star hotel.

- **Leadership:** Empirical studies show that it is one of the important TQM critical success factors for hospitality industry. In fact, a few researchers say it ranks number one as an element of TQM. The top management leadership is actively involved in the process of planning of organizational objectives and communicating the same to the lower level management as they frame the objectives in order to achieve quality service which is the first step of rendering service. The performance and the commitment of the top management leaders has a significant effect on the performance of the organization. (Brah & Ying, 2006).
- **Strategy:** Strategy refers to the course of action adopted by the organization to achieve its objectives. It is essential to adopt the right strategy to achieve success. In TQM it plays a major role in achieving the targeted quality and to increase the performance of the organization (Curkovic et. al, 2003). Researchers found that strategic planning has a significant effect on the performance of the organization.
- **Customers:** The philosophy of TQM is customer centric. Without a customer there is no reason for any organization to function. Customer satisfaction is a vital factor and it as regarded as the core issues of better business results. In the TQM practices, the requirements of the customers are identified and strategies are planned accordingly to achieve them. (Brah et al, 2000).
- **Measurement, Analysis and Knowledge Management:** Hotels have big data about their customers. It is essential to manage and use this data efficiently. Using this data for a productive purpose will have a positive impact on the performance of the company. Data management is the need of an hour as the amount of data available is infinite. The hotels should have a comprehensive data management system to make the best use of the available data. One of the components of hotel's data base is customer feedback. The feedback of the customers can be analyzed and processed to know the expectations of the customers. This data can be used to render better quality services.

- **Workforce:** Workforce is an important asset of any organization. They play an important role in functioning of the organization. They are the major contributors of quality betterment and organizational performance. (Aquilani et al, 2017). Efficient and well-trained employees increase the performance of the organization. The TQM framework with respect to workforce includes empowerment, efficient training, healthy recruitment procedures, and safety practices.
- **Operations:** Standardized operating standards are very essential to achieve the organizational goals. Researchers discourse that for a business to run smooth, operations play a major role. The operations of an organization should be carried out efficiently as it is directly related to the performance of the organization. The process carried out should be cost effective. The operations should be standardized, monitored and evaluated.

On the other hand mentioning about an impact of TQM practices on the performance of the hotel can be measured by considering the vital indicators which depicts the success or failure of the organisation after implementing the TQM. Therefore, ten key performance indicators have been identified in the study to qualitatively investigate the influence of TQM elements on hotel performance.

- **Hotel Popularity:** When any service organisation is able to implement a quality practice and provide a consistent standard service to its customer, it leads to increase in customer satisfaction, which leverage in influencing a positive word of mouth promotion of the organisation and its popularity. And maintaining a high popularity is only possible with a top quality service. Hence hotel popularity is a one of the outcome of quality practices.
- **Client's Satisfaction:** The biggest challenge for all the service organisation is to retain the existing customers and find new customers by meeting their expectation with ever changing new demands without compromising on quality of service and cost. Hence keeping the customer satisfied is a key performance indicator which clearly shows the results of your organisation performance directly impacting the revenue.
- **Hotel Reservation:** Increase in number of reservation of hotel is a sign of progress and being in demand in the market by facing competition, which is possible only when your customers are satisfied by the service provided and hence becomes a key performance indicator to measure the progress of the organisation and the increase in revenue and brand popularity.
- **Food & Beverage Sales:** The value of food and beverages ordered from the guests in the hotel shows the catering performance of the hotel. It also adds heavily to the revenue of the hotel. Hence it becomes an important performance indicator.
- **Average Daily Rate:** The average tariff rate on a given day is the average daily rate. It gives true indication of the performance when analyzed individually. It can be used to make a comparison of the performance with the past records or seasons.

Average Daily Rate = Total Room Revenue / Total Rooms Occupied

- **Occupancy Rate:** A simple mechanism to measure the percentage of room occupied over a period of time with the rooms available in the hotel.

Occupancy Rate/Percentage = Rooms Occupied / Rooms Available

- **Revenue per Available Room:** RevPAR is very useful in measuring the performance but one needs to analyze this indicator in the correct context. It is measured by comparing the average daily room revenue generated with the available rooms in the hotel. It depends significantly on the factors specific to the industry.

$$\text{RevPAR} = \text{Total Room Revenue} / \text{Total Rooms Available}$$

- **Revenue per Occupied Room:** RevPOR is the income generated from a hotel room that has been occupied by a guest. These incomes are the room cost, room services (laundry, drink, food etc.) This sum is divided by the total number of rooms that are occupied. The difference between this and Average Daily Rate (ADR) is that ADR does not include expenses of food.
- **Waiting time for service:** When the TQM practices are followed religiously in an organisation over a time, it benefits the organisation by reducing the waiting time for delivering the services to the customer and helps in increasing the service efficiency and helps in better customer satisfaction. Hence, Reduction in waiting time for service is a key performance indicator.
- **Cost:** By implementing TQM effectively in the organisation, the errors in operation can be reduced along with minimizing wastage and hence leading to reduction in cost of operation which depicts the key performance indicator of the organisation.

The figure 1, the conceptual framework of research linking TQM practices and KPI consists of 16 constructs namely from H₁ to H₆ represents TQM elements and H₇ to H₁₆ represents KPIs of star hotels.

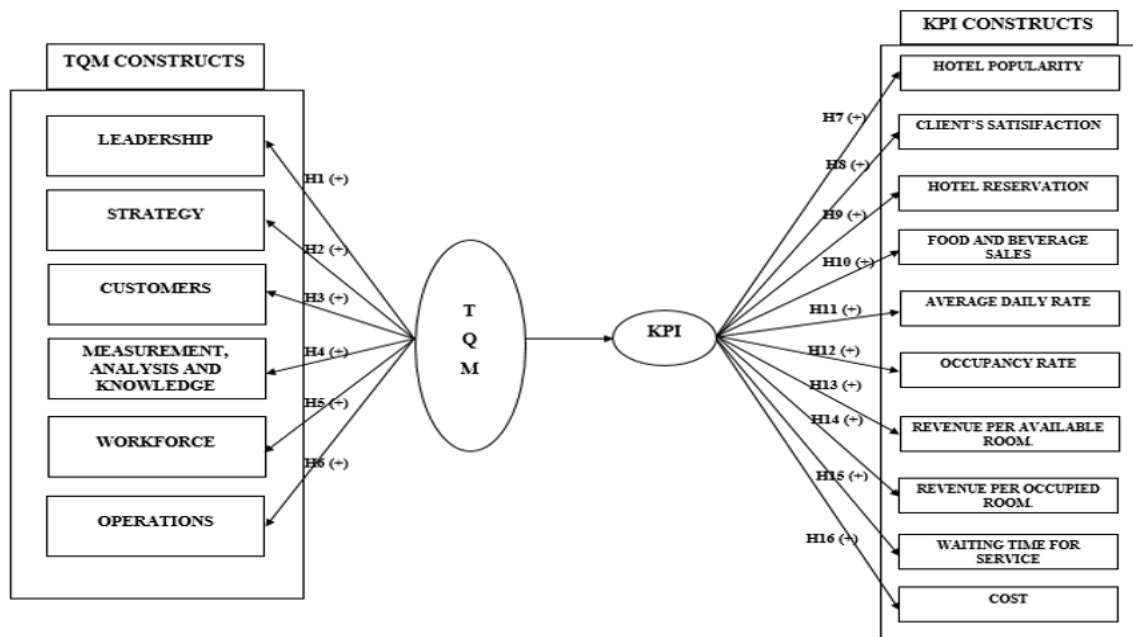


Figure 1 :The Conceptual Framework Linking TQM Practices and KPI

The figure 1 gives overview about the constructs with the objective of examining the influence of TQM on Key Performance Indicators of star hotels. With this investigation, the study aims at

providing a practical solution to help hoteliers better organise, strategize and utilize their resources in ensuring the better implementation of their quality management programmes and leverage the same through improved key performance indicators.

III. Methodology

For the data collection in this study, 25 star hotels of Karnataka were selected based on tippet random sampling technique out of 213 approved star hotels (Population) as per data are given by Karnataka Department of Tourism. The structured TQM questionnaire was developed and sent to all the hotel employees after getting hotel's permission, which constituted to around 980 questionnaires. Out of which the researcher received 513 questionnaires and among them only 500 were properly filled and found usable for the analysis and the number of sample size 500 (50*10 cases/observations) was also found sufficient for the Structural Equation Model (SEM) i.e. based on the number of observed variables loadings in to the SEM model which is 50 and the rule of thumb suggests minimum of 5 to 10 cases or observations per indicator to determine the adequate sample size (Wolf et al., 2013; Westland, 2010). The data collection was done during the period 1st November 2019 to 5th December 2019.

For the TQM analysis, the researcher has utilized the model of Malcolm Baldrige Excellence Framework for Business and Service Criteria (ASQ, 2018). The structure of the MBNQA has six structural criteria or elements representing the critical aspects of Quality Management. These criteria are generally accepted as a model of TQM in the Service Industry and hence the researcher has developed the TQM questionnaire based on the same six criteria.

The Cronbach Alpha value of TQM questionnaire was 0.711 and was considered reliable as the value of 0.7 and above is considered to be satisfactory. (Lee Cronbach, 1951). The content validity was done by giving the developed questionnaires to the five industrial experts and three academic experts from hotel management and their relevant suggestion was considered.

IV. Results and Discussion

For testing the hypothesis the two step analysis that is examining the measurement model followed by investigating the influence of structural model is carried out.

4.1 Adequacy and Appropriateness of Measurement Model

The construct adequacy of the questionnaire was evaluated by performing Bartlett's test of sphericity and Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy for sample was 0.807 and for the good and significant analysis items with 0.40 and less communality values were eliminated (Like Customers Element) and factors above that were considered for factor loadings for analysis where the constructed model was found admissible. And the appropriateness of the measurement model was tested using goodness of fit measures after the minimum of model was achieved. There are various measures for testing the fitness of model and the important measure being Normed fit index, Comparative fit index, Tucker–Lewis index, Root mean square error of approximation, Parsimony-fit index was considered for the study. The summary of the measurement model fit indices is presented in the Table 1.

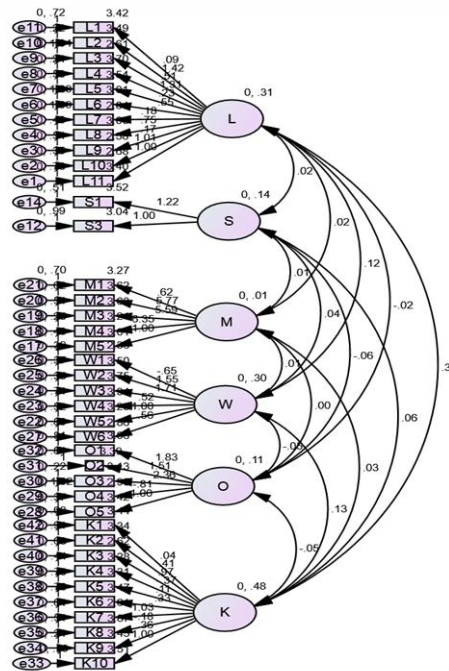


Figure 2: Measurement Model of TQM and KPI

Note: *L-Leadership; S-Strategy; M-Measurement, Analysis and Knowledge Management; W-Workforce; O- Operations; K- Key Performance Indicators*

Table 1: Showing the Results of Measurement Model of Fit Indices of Between TQM Elements and KPI of Star Hotels

Sl. No	Model Fit Indices	Abbreviation	Observed Values	Recommended Critical Values	Basic Interpretation	Sources
1	Chi-square	χ^2	12581.813 @ $p = .000$	$p < 0.05$	p -value should be less than 0.05	Hu & Bentler 1999; Byrne, 2013; Kline, 2015; Singh & Sharma, 2016
2	Normed Chi-Square	χ^2 / df (CMIN/df)	18.314	1.0- 5.0	Less than 1 is a poor model fit; more than 5.0 reflects need for improvement	
3	Normed Fit Index	NFI	.223	0-1	Value closer to 0.95 reflect a good fit model	

4	Comparative Fit Index	CFI	.230	0-1	Value closer to 0.95 reflect a good fit model
5	Tucker–Lewis Index	TLI	.169	0-1	Value closer to 0.95 reflect a good fit model
6	Root Mean Square Error of Approximation	RMSEA	.186	< 0.08	Value less than 0.08 indicates a good fit model

(Source: Computed Value)

From the table 1, it can be inferred on the grounds of observed values, that the measurement model is a recursive model where the scope for improvement is found and the minimum was achieved through the analysis which is proved based on the observed values that is the *p*-value of the model is found to be less than 0.05 which means the model is statistically significant, the Normed chi-square (CMIN/df) is observed as 18.314 which is more than 5.0 (maximum of recommended value) indicating the need for improvement. Further the Normed fit index is observed at 0.223 which is in the accepted range of 0-1 and reflecting an average fit as the number is not very close to 0.95 (recommended value). The Comparative fit index is observed as 0.230 which is again in the accepted range of 0-1 and reflecting an average fit as the number is not very close to 0.95 recommended value along with Tucker–Lewis index which shows the observed value of 0.169. Lastly the Root mean square error of approximation is depicting a value 0.186 which is more than 0.08 recommended value, showing need for improvement to call a good fit model. By the above, it can be concluded that the measurement model is not an excellent fit model but the minimum was achieved based on the recommended values (Hu & Bentler 1999; Byrne, 2013; Kline, 2015; Singh & Sharma, 2016). And it allows with confirmation to the researcher to carry the further analysis as the minimum was achieved in the recursive measurement model.

V. TQM Implementation and KPI

This Structural Equation Model evaluates the level of impact between the variables that is, the elements of TQM practices and the key performance indicators of star hotels. In this model analysis, for the construct validity, only the standardized loadings of the factors above 0.04 were considered and in AMOS all the critical path value that is the *t*-value was found to be more than or exceeding ± 1.96 implying the statistical significance @ 95% level of significance which is shown in table 2.

5.1 Hypothesis Testing

H_0 : The Elements of Total Quality Management practices are not positively correlated with key performance indicators of star hotels.

H_1 : The Elements of Total Quality Management practices are positively correlated with key performance indicators of star hotels.

Further the analysis examined and confirms the factors through Structural Equation Model of TQM elements and KPI along with this the researcher was concerned and interested in testing the relationship between the two TQM elements that is leadership and its relationship with operations out of interest which aroused during the observation in some of the star hotels as many hotel experts opined during their opinion sharing discussion that the leadership plays a vital role in implementing TQM and operations and hence in the SEM model the same can be observed. The hypotheses testing and SEM analysis are shown in table 2 and figure 3.

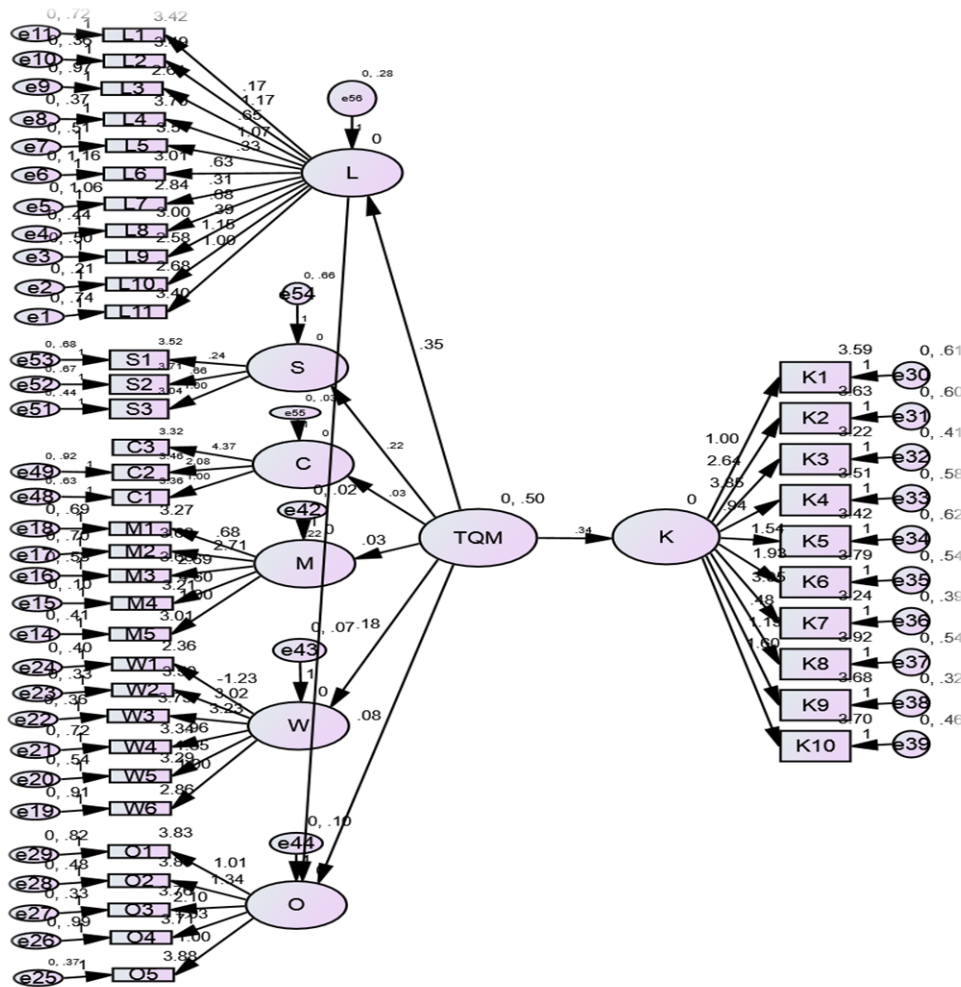


Figure 3: Structural Equation Model of TQM Implementation and KPI

Note: *L-Leadership; S-Strategy; M-Measurement, Analysis and Knowledge Management; W-Workforce; O- Operations; K- Key Performance Indicators*

Table 2: Hypotheses Testing (CFA)

Hypotheses	Path Coefficient	<i>t</i> -value	<i>p</i> -value	Results
TQM → L	.351	7.200	***	<i>Supported</i>
TQM → C	.031	2.372	.018	<i>Supported</i>
TQM → S	.225	3.275	.001	<i>Supported</i>
TQM → M	.034	2.464	.014	<i>Supported</i>
TQM → W	.182	5.042	***	<i>Supported</i>
TQM → O	.077	2.313	.021	<i>Supported</i>
TQM → K	.343	6.205	***	<i>Supported</i>
L → O	-.218	-4.632	***	<i>Supported</i>

Note: *** *p*-value < 0.05

From the above table 1.2, the proposed hypotheses were validated as the results are admitting the H₁, the elements of TQM practices are positively correlated with key performance indicators of star hotels. The path coefficient value for leadership to TQM Implementation was found $\beta = 0.351$ with *t*-value more than 1.96 (Calculated *t*-value 7.200) and *p*-value less than 0.05 (Calculated *p*-value 0.00) making the first TQM element statistically significant. For the second element customers, value of path coefficient was 0.031 and *t*-value was 2.372 at *p*-value being 0.18 (less than 0.05). For the third element strategy, value of path coefficient was 0.225 and *t*-value was 3.275 at *p*-value being 0.01 (less than 0.05). For the fourth element Measurement, Analysis and Knowledge Management, value of path coefficient was 0.034 and *t*-value was 2.464 at *p*-value being 0.14 (less than 0.05). For the fifth element workforce, value of path coefficient was 0.182 and *t*-value was 5.042 at *p*-value being 0.00 (less than 0.05). For the sixth element operations, value of path coefficient was 0.077 and *t*-value was 2.313 at *p*-value being 0.021 (less than 0.05). Lastly, the influence of TQM on KPI, value of path coefficient was found at value 0.343 and the critical ratio being 6.205 with 0.00 significant *p*-value. Yet on the association of relationship between leadership and operation, there is a presence of inverse relation as the coefficient value is -0.218, which means increase in leadership may have decreasing operational efficiency while implementing TQM. Hence, it can be understood that all the construct had the *t*-value higher than 1.96, making the results statistically significant. Further, with all constructs having *p*-value less than 0.05 makes the researcher to reject the null hypotheses. And the influence of TQM elements on TQM implementation and KPI was evident based on regression weights showing liner relationship between TQM elements on TQM implementation to KPI; Impact results were as follows, leadership has the highest impact ($\beta=0.351$), strategy has second highest impact ($\beta=0.225$), workforce has third highest impact ($\beta=0.182$), operations has fourth highest impact ($\beta =0.077$), measurement, analysis and

knowledge management and customers has the last two places on impact with coefficient value $\beta = 0.034$ and $\beta = 0.031$ respectively.

VI. Managerial and Theoretical Implication

The findings of the investigation sheds light on the managerial implication for the star hotels as follows. Firstly, as the relationship between elements of TQM practices with KPIs is proposed as positive and the result was signified with a validity of hypothesis implying that results of Structural Equation Model are strongly supporting the hypothesis. It is advisable to be consistent in the TQM practices and hotel executives are suggested to do planning for services, products and process improvement. Moreover, the inspection of the quality of service, product, process and control should be done frequently to help the organisation to better perform and meet the set quality and economic goals.

Secondly, as there is a presence of inverse relationship between leadership and operation meaning increase in leadership may have decreasing operational efficiency while implementing TQM practices in star hotels. It is advisable for the service organisation executives to show stronger responsibility in providing appropriate work environment along with the focus on innovation and employee participation in management. And also, to apt better leadership style to lead the hotel staff with firm and friendly organisational behavior so that operational efficiency will not curb on effect of leadership.

Lastly, the effectiveness of the TQM model also depends largely upon the leadership style of the top management who are responsible for designing and implementing an organisational culture which reflects TQM practices. And it can be concluded that the utmost benefits of the TQM practices can be achieved by exhibiting strong commitment by the management and employees who should work collectively for building a quality culture with consistency which thrives for continuous improvement based on customer expectation and market trend, along with proper control mechanism for long term sustainability.

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