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Linking TQM Critical Success Factors to strategic goal: Impact on Organizational Performance

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***Abstract*:** *This paper aims to examines and establish the relationship between critical success factors (CSFs) of total quality management (TQM), strategic goal and organizational performance. Using key enablers and drivers collectively said CSFs as measures, the suggested model appraises three dimensions of performance: financial, non-financial and operational. A total of 500 questionnaires have been distributed to a FMCGs company in India and effective sample of 165 usable completed surveys (33.0 percent usable response rate). Statistical analysis and correlation were used to predict and estimate the relationship. The model was assessed using Analysis of Moment Structure (AMOS) based Structural Equation Modeling (SEM). The findings showed that TQM practices have a significant impact on financial and operational performance.*

Keywords: *Critical Success Factors, CSFs, Performance, Total Quality Management, TQM, FMCGs*

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I. Introduction

In examining influences on performance measurement (PM) practices, greater attention must be paid to the existing systems of manufacturing & management that operate within organizations viz inventory management system, maintenance management, quality management system, financial management, supply chain management etc. In various sectors such as manufacturing and service in order to deal with changes in the marketplace and focus on product and service quality total quality management (TQM) practices have been widely acknowledged as disciplined management process. A set of guidelines TQM provides which help to improve the organization performance, G. Muruganantham et al. (2018). The today's dynamic business environment making it necessary to the organization to maintain and develop effective TQM, which allows developing effective ways to improve customer satisfaction with the product quality, providing increased efficiency and competitiveness. For measurement to be effective, it has to be linked to strategy, focusing on processes and be geared towards positive action and improvement. Zairi's (1994). Performance Measurement is to be a top-down approach, where the top level management believes in the process and implements it, on the entire organization. Incorporating the best practices of continuous performance management, first set objective and key results aligned to business strategic goal, second, check on regular basis on performance, third reach out for feedback from stakeholders, then finally evaluate performance & update objective and key results. Performance should always be measured to help to figure out if meeting strategic goals. Zairi's (1994) developed analogy of comparing measurement to the umbilical cord that links a mother to its baby is apt in this context. Mothers, in a similar manner to organizations, have to look after themselves in such a way that whatever they do and whatever they eat, is not going to harm their baby (in this case, the business). The umbilical cord, or (performance measurement), is the mechanism by which the baby grows and the relationship with the mother remains a close one. Michel J.Lebas (1995) expressed the general agreement of people on performance that what performance really means and stated that it can mean anything from efficiency, to robustness or resistance or return on investment, or plenty of other definitions never fully specified. The objectives of any performing firm or system achieves contain (1) *Goal to* be reached, as well as, (2) factors/ elements of *time* at which the target or milestones to that aim are reached and (3) rules about a preference ordering about the *ways to get there.* These three elements indicate that objectives and the definition of performance rest on the definition (choice) of a causal model linking inputs and outcomes through selected causal relationships. Performance is something each firm, each stakeholder, each organizational actor defines. Performance is never objective; it is only a way of defining where one wants to go.

The purpose of this research is to examine and establish relationship between TQM strategic goal with its drivers and enablers, which is vial of the success of TQM. It also looks for a contingent relationship between organizational performance (the outcome variable) and the match between TQM goal and the critical factors variables described above as drivers and enablers. The framework for the research is illustrated in Figure 1. The critical success factors of TQM are to align the measures and metrics to the strategic goal of the organization. The function / department level measures also need to precisely identified which provide adequate insight in to the progress towards achieving / not achieving of the goals & objectives. The next section of the

paper briefly reviews the relevant literature and develops the research hypotheses. The research method applied is described in section three. Section four presents our results. The final section concludes the paper.

Therefore, organizations must align their critical success factors with their strategic goals and to do so, they have to act upon these individuals' factors, in order to improve performance (Figure 1). From a performance perspective of implemented TQM, therefore, once the goal is aligned with the CSFs have been identified, organizations will seek to modify their CSFs and steer it towards the desired performance level with the target competency. For this purpose, performance assessors may have to adapt their previous levels of both declarative and, above all, CSFs, with support from all the level of employee (Figure 1(a) and 1(b)).

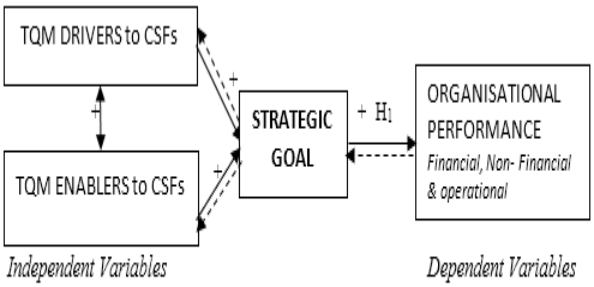

Figure 1 (a)

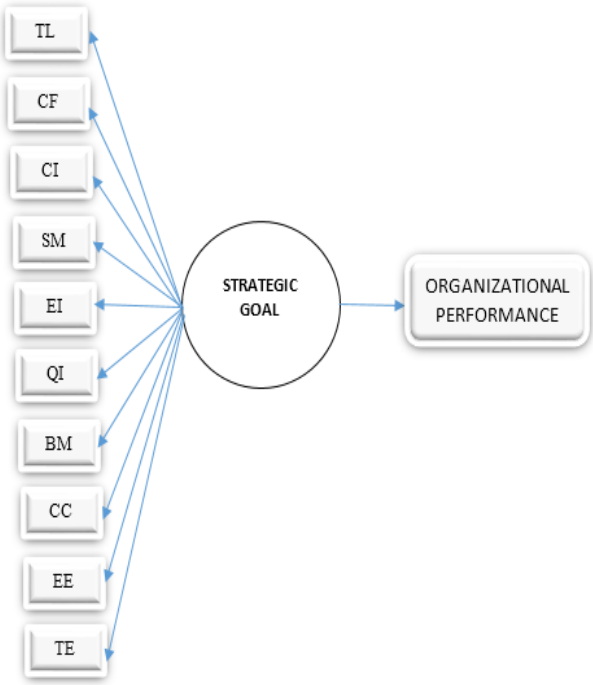

Figure 1 (a) & (b) Framework for the study

II. Literature Review And Hypothesis Development

As a prelude to the study of the relationship between TQM CSFs and organizational performance, it is first necessary to briefly present the literature on each of these concepts to identify the state of the art in the research that specifically examines this relationship.

TQM and Organizational Performance

The trace of the concept of TQM dates back to the early 20th Century when Walter Shewart, in the early 1920s, first introduced the concept of statistical process control (SPC) to monitor quality in mass production manufacturing (Shewart, 1931). Later it was followed by various quality management gurus and practitioners who all advocated with their own views and various approaches to TQM. Crosby (1979), the four absolutes, Deming (1986), fourteen points, Feigenbaum (1993), total quality control, Ishikawa (1985), quality control circles, Juran J.M. (1981), quality triology and Taguchi (1986), loss function, have prescribed different

techniques and organizational requirements for effective implementation of TQM. In a study by Adam (1994) examined multiple quality and productivity approaches are correlated to eight quality, three operating, and three financial performance measures for 187 US business firms. Results indicate a strong relationship between a quality improvement approach and performance quality. The relationship between a quality improvement approach and operating or financial performance is weaker, but significant. Productivity improvement approaches also help predict quality, operating, and financial performance. Depending upon the selected measure(s) of quality, operating and financial performance, an appropriate approach to quality improvement can also be selected. Madu et al. (1996) used an empirical study to test if there are any significant associations between quality dimensions (such as customer satisfaction, employee satisfaction and employee service quality) and organizational performance. The study aimed to validate or refute some of the claims that are largely made by quality experts and practitioners regarding the importance of total quality management to organizational success. Samson and Terziovski (1999) attempted to find the relationships between the various TQM practices, individually and collectively, and company performance of around 1200 Australian and New Zealand manufacturing organizations. The results showed that the intensity of TQM practice does contribute significantly to the performance. In another investigation, Terziovski et al. (1999) tested the relationship between TQM practice and organizational performance with and without the covariates, company size, industry type and ISO 9000 certification status. The authors concluded that there were significant differences in the relationship between TQM and organizational performance across industry type and size, especially on the effect of defect rates, warranty costs and innovation of new products.

TQM Critical Success Factors (CSFs)

The concept of Critical Success Factors (CSFs) (also known as Key Results Areas, or KRAs) was first developed by D. Ronald Daniel, in his article "Management Information Crisis" (Harvard Business Review, September-October 1961).The Critical Success Factors (CSFs) is defined as "the limited number of areas in which results, if they are satisfactory, will ensure successful competitive performance for the organization" by Rockart (1979) also concluded that CSFs are "areas of activity that should receive constant and careful attention from management". According to manufacturing management point of view CSFs can be derived through a document review and analysis of the goals and objectives of key management personnel, as well as interviews with those individuals about their specific domain and the barriers they encounter in achieving their goals and objectives. So, critical success factors may be also defined as the handful of key areas where an organization must perform well on a consistent basis to achieve its mission.(Brotherton and Shaw, 1996) advocated about the CSFs that they are the actions and processes that can be controlled by the management to achieve the organization's goals.(Rockart, 1979) considered it as a crucial to the success of a program, and if the objectives associated with these factors are not achieved, the application program will also lead to failure. Boynton and Zmud (1984), suggested that the CSFs are "those few things that must go well to ensure success". The critical success factors are essential parts that must be addressed by management or the manager to ensure that 'things must go right' for a project or activity to achieve management objectives and business growth. Critical success factors are the few key areas of activity in which favorable results are absolutely necessary for a particular manager to reach his goals. Critical success factors are the basic structural variables which will most affect the success or failure of the pursuit of strategic goals. CSFs also provide an important engine for performance goals. Munro and wheeler (1980) suggested that managers and organizations should use CSFs to achieve higher performance. (Zairi and Leonard 1994) defined TQM drivers as the critical areas of managerial planning and action that must be fostered in order to achieve effective quality management within a business unit, ensuring its successful implementation. Here short definitions are given to distinguish between them as:

Drivers - drivers are the key inputs and activities that drive the operational and financial results of an organization. Drivers vary significantly by industry, but they can all be determined using the same type of root cause analysis. Drivers impact all financial aspects of a business: revenues, expenses, and capital costs.

Enablers – Enablers are external conditions or organizational strengths that facilitate an organization's ability to accomplish its goals or objectives. Enabler of TQM system to Increase operational efficiency, empower employees to be more effective with a measurable impact on their satisfaction, generate increased revenue and profit, fix problems, increase base or loyalty by delivering improved customer-client relationships, reinvent and reinvigorate brands, products or services, improve the effectiveness of leadership or management and embed ethical or sustainable practices within organization.

A significant number of literatures on TQM critical success factors (CSFs) is available and have been adopted by organizations in their business. Few of them are summarized as

Table 1 TQM Critical Success Factors

Author	Identified Critical Success Factors	Number of factors
Carmona F. J. (2016)	Top management commitment and leadership, TQM philosophy adoption,	10

	Customer involvement, Supplier involvement, Open and flexible structure, Employee education and training, Empowerment, Benchmarking, Process improvements, Zero-defects mentality	
Fotopoulos and Psomas (2009)	leadership; strategic quality planning; employee management and involvement; supplier management; customer focus; process management; continuous improvement; information and analysis; and knowledge and education	09
Kanagi Kanapathy (2008)	Top management support ,Quality information availability, Quality information usage, Employee training, Employee involvement, Product/process design , Supplier quality, Customer orientation	08
Lenka and Suar (2008)	transformational leadership; customer orientation; human resource management; organizational culture; continuous improvement; and quality measurement	06
Vouzas and Psychogios (2007)	Total employee involvement, Continuous improvement, Continuous training, Teamwork, Empowerment, Top-management commitment and support, Democratic management style, Customer/citizen satisfaction, Culture change.	09
Yusuf et al. (2007)	leadership and commitment; customer focus; continuous improvement; get things right first time; just-in-time; competitive benchmarking; cost of quality; employee involvement; teamwork; training; communication; and recognition and reward	12
Al-Marri, Ahmed, and Zairi (2007)	top-management support; customer focus; strategy; benchmarking; employee involvement; recognition and reward; problem analysis; quality technologies; service design; services capes; service culture; social responsibility; human resource management; continuous improvement; quality department; and quality systems.	16
Mahapatra and Khan (2006)	Leadership and top-management commitment; customer focus and satisfaction; policy and strategy planning; human resource management; process management and control; product=service design and control; continuous improvement; supplier management; training; employees satisfaction; employees participation; employee appraisal, reward and recognition; quality culture; quality assurance; quality system; impact on society; teamwork; flexibility; zero defect; and benchmarking.	20
Saravanan and Rao (2004)	Top-management commitment and leadership; benchmarking; customer focus and satisfaction; service marketing; social responsibility; human resource management; employee satisfaction; service culture; service scape; continuous improvement; technical system; and information and analysis	12
Hasan and Kerr (2003),	Top management commitment , Employee involvement, Training, Supplier Quality, Quality cost, Service Design, Quality Techniques, Benchmarking, Customer satisfaction.	09
Sila and Ebrahimpour (2002)	25 CSFs is listed after analyzing 286 of 347 articles , across 76 studies	25
Motwani (2001)	top-management commitment, quality measurement and benchmarking, process management, product design, employee training and empowerment, supplier quality management, and customer involvement and satisfaction	07
Tsang and Antony (2001)	customer focus; continuous improvement; teamwork and involvement; top-management commitment and recognition; training and development; quality systems and policies; supervisory leadership; communication within the company; supplier partnership; measurement and feedback; and cultural change.	11
Kanji and Wallace (2000)	top-management commitment; customer focus and satisfaction; qualityinformationand performance measurement; human resource management; employee involvement; teamwork; process management; quality assurance; zero defects; and communication	10
Sohal and Terziovski (2000),	Leadership support, Staff involvement, Availability of money, Available information, Customer involvement, Supplier involvement, Government assistance	07
Tamimi (1998),	Top management commitment, Supervisory leadership, Education, Cross functional communications to improve quality, Supplier management, Quality training, Product/service innovation, Providing assurance to employees	08
Thiagarajan and Zairi (1997)	Leadership, Employee involvement, Middle management role, Training and education, Rewards and recognition, Teamwork, The role of employee unions, Policy and strategy	08
Black and Porter (1996),	Strategic quality management, corporate quality culture, Quality improvement measurement system, communication of improvement information, Operational quality planning, External interface management, Supplier partnerships, People and customer management, Customer satisfaction orientation	09
Zairi and Youssef (1995)	People and customer management, Supplier partnerships, Communication of improvement information, Customer satisfaction orientation, External interface management, Strategic quality management, Teamwork structures for process improvement, Operational quality planning, Improvement measurement systems, Corporate quality culture	10
Badri et al. (1995)	Role of divisional top management and quality policy, Role of quality department, Training, Product/service design, Supplier quality management, Process management/operating procedures, Quality data and reporting, Employee relations	08

Flynn, Schoeder, & Sakakibara, (1994)	Top Management Support, Quality information availability, Employee Involvement, Process/Product Design, Supplier Quality, Customer Orientation, Process Management	07

Relationship between CSFs and Strategic Goal

Hinterhuber (2004) defines strategy as a way of using the resources and capabilities of an organization, this definition was in the context of business management research and practice. But in general, the use of the term 'strategic' implies that there is an overall goal, or some specific vision concerning the nature of success. All factors and their actions contribute to a common vision, an overall goal. Setting strategic goals facilitates the identification of appropriate business strategies and focuses management attention and available resources on their accomplishment, enabling subsequent goal realization. However, little is known empirically about the extent to which strategic goals enable desired performance to be achieved and factors that may link this relationship. It is often true that the strategic goals of an organization are not achieved due to the complex interactions within the organizational hierarchy.

When managers set goals, they also implicitly consider what they need to do to be successful at achieving the goals. Thus, it is likely that managers consciously consider their CSFs during goal setting and consequently create the bond between goals and CSFs that is needed to contribute to accomplishing the organization's mission. The strong relationship between strategic goals and CSFs results from the fact that managers are the origin of both goals and CSFs. In this way, the influence of CSFs on goal achievement is made explicit, even if the actual CSFs are not. Organizations that have been successful at achieving their goals have also likely achieved their CSFs, albeit in a less observable way. Thus, goals sometimes resemble CSFs because they embody the importance of a key performance area. Usually a goal is immediately discernible from a CSF because of its specificity. A CSF for the organization may be more general and is likely to be related to more than one goal. A successful PM system plays a predominant role in assisting executives track corporate performance to determine the extent to which strategic goals have been reached (Koufteros et al., 2014). Until recently, limited work has been carried out on mechanisms required to link critical success factors with strategic goals in properly managing their performance. Hence, more research needs to be conducted to provide further insight into what integration of organizational systems and practices can help companies in attaining this strategic goal (Cleary, 2015).

Based on the literature review, a conceptual framework is developed to investigate the relationship between selected TQM critical success factors and organizational performance. The framework is depicted in Fig-1. Based on the research objective the research hypothesis is developed as;

Alternate hypothesis(H_1): There are significant positive relationships between TQM CSFs (drivers and enablers as H_{11}, H_{12}, H_{13}, H_{14}, H_{15}, H_{16}, H_{17}, H_{18}, H_{19} and H_{20}) and strategic goal.

III. Research Approach

This research adopted a cross departmental survey of existing FMCGs firm in India. Surveys allow the collection of large amount of data from a sizable population in a highly economical way. The study was used to provide analysis of how various TQM drivers and enablers, which is collectively called critical success factors contributed to the performance improvement in FMCGs firms. The characteristics of the organization differs its tool's critical success factors.

Measurement Instrument. It was decided on Top-management commitment and leadership, Customer focus, Continuous improvement and innovation, Supplier management, Employee involvement, Benchmarking, Culture and communication, Employee encouragement and motivation and Training and education to consider as the critical success factors of TQM practices based on the literature review. Multiple performance factors are also included, namely, operational performance, financial performance and non-financial performance, to cover all aspects of organizational performance. The items of the questionnaire are also prepared with the help of available literature mentioned in table 1. The items included a five point Likert-type scale anchored from (1) strongly disagree to (5) strongly agree, which indicates respondents' opinion with each item, respectively.

With the objective to establish link the TQM drivers and enablers, which emerge from the strategic goal, this study conducted as the algorithm suggested above with strict guidelines pertaining to research. Ensuring research rigor, we conducted this study adhering to strict guidelines pertaining to research.

Population, Sample and Data collection process

A sample of all the employee who were engaged for production and quality department was selected making a total of 165 respondents. The method used was systematic random sampling method because in this method each and every member of the population had an equal chance of being selected as a sample. They were asked to complete the questionnaires. The selected sample was deemed adequate for general conclusions about the entire population. The sample was also adequate for the statistical tools which were used in the data analysis.

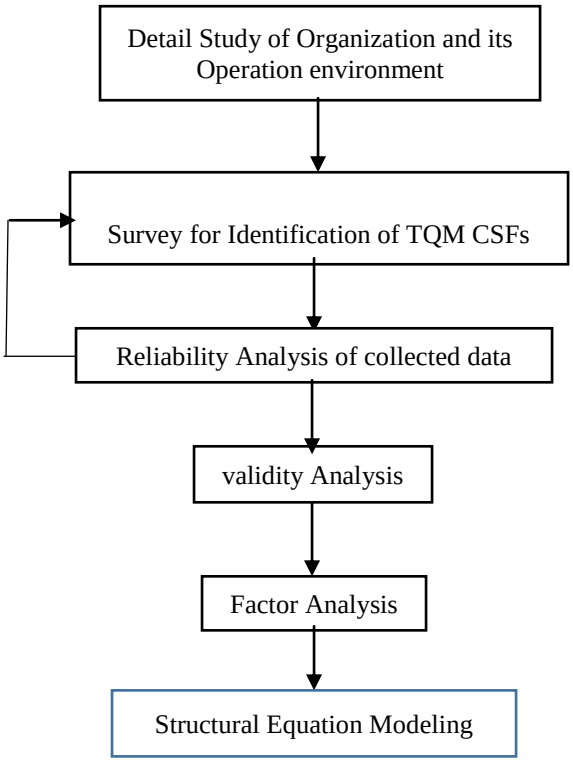

Figure 2. Proposed algorithmic steps for study of TQM CSFs

The questionnaire was considered most appropriate because it allowed for collection of data from many respondents within a short time and provided a high degree of data standardization and adoption of generalized information amongst any populations. The questionnaire consisted of both closed and open-ended questions since this led to control over the data collected. Section A of the questionnaire sought to obtain firm data. Section B sought to obtain data on the TQM drivers and enablers and Section C acquired data on the firm's performance. The respondents filled in the questionnaire as the research assistants awaited. This helped reduce the instances of non-response. Where necessary, the questionnaires were left and picked up after a week and this ensured a high proportion of usable responses.

Linking applicability

This section describes the linking of CSFs with the strategic goal, as well as how it was applied. The authors performed a pre-testing process in steps wise. First, for the purpose of assessing the face validity of the questionnaire, the authors conducted reliability analysis of the collected data. Table 9 provides a summary of this integration. Overall, this exposé provides a valuable application and template for other firms.

Identify TQM CSFs

Identifying Critical Success Factors enable to track and measure the progress toward achieving strategic goals - and, ultimately, to fulfilling organization's mission. CSFs also provide a common point of reference so that everyone knows exactly what's most important, ensuring that tasks and projects are aligned across teams and departments. The identification of critical success factors of TQM, this useful approach at this stage include brainstorming or the nominal group technique, keeping in view the goal of the organization. All feasible drivers and enablers should be identified that could potentially influence the desired outcomes. The overriding objectives of the performance assessment in case were to reduce costs along the total quality management, with however at the same time improving (or at least not deteriorating) performance levels and effectiveness. These objectives were kept in mind when considering potential TQM critical success factors for performance. After a review of potential critical success factors of TQM, we deemed the ten critical success factors as identified earlier by various researchers. These ten critical success factors, as well as their definitions and corresponding abbreviations used in the ensuing discussion, are summarized in Table 2.

Table 2. Identified Critical Success Factors (CSFs) of TQM

	CSFs Label	CSFs Code	CSFs Definition
TQM *DRIVERS*	1)Top-management commitment and leadership	TL	Top management consist of individuals with good leadership skills, who can deliver results, who are committed, who can contribute to growth of the company, who shares the vision of the company .
	2)Customer focus	CF	This meant thinking not in terms of what company sold first, but whom company sold to first. Company asked questions such as what problems do customers face, how do company address them, and what solutions will help.
	3) Continuous improvement and innovation	CI	Continuous improvement, also known as Kaizen. An organization must always continue to innovate its processes. Improvement is a continuous process and there is never an end to it.
	4)Supplier management	SM	The dyadic relationship between a buyer and its supplier, it falls short of addressing the importance of extended networks beyond the immediate dyadic relationship (i.e., how a supplier's relationship with its suppliers or other buying firms affects its performance).
	5)Employee involvement	EI	Employees, also known as internal customers form the organization. Involvement of employees thus can literally make or break mission. Make sure that the employees are motivated and are taking ownership of the objective.
	6)Quality Information /Information Quality	QI	the desirable characteristics of the system inputs; that is, management reports and Web pages. For example: relevance, understandability, accuracy, conciseness, completeness, currency, timeliness, and usability.
	7)Benchmarking	BM	Benchmarking helps organizations to identify the gaps in its performance when compared with another organization
TQM *ENABLERS*	8) Culture and communication	CC	Organizational communication—including managerial, interpersonal and other forms of communication—carries policies, strategies, instructions and information across the organization and tends to play an important role in the relationship between culture and organizational performance. Effective communication at work can be nurtured through an organizational culture that takes into account internal beliefs of employees.
	9) Employee encouragement and motivation	EE	Employee encouragement and motivation and their ability collectively participate into organizational performance and in their tasks assigned by the manger are to purpose get maximum productivity.
	10) Training and education	TE	Training and education as strategies to improve organizational effectiveness and competitiveness

Instrumental at this stage, pertaining to the reliability analysis,was that as much detail as possible for each critical success factors was collected. The opportunity to gather this information at this stage is utilized, since there is usually an underlying rationale for work persons to suggest a particular factor as being important. Specifically, for each identified critical success factor.

Reliability analysis of collected data

Variables derived from test instruments are declared to be reliable only when they provide stable and reliable responses over a repeated administration of the test. Cronbach's alpha is an index

of reliability associated with the variation accounted for by the true score of the "underlying construct." Construct is the hypothetical variable that is being measured (Hatcher, 1994). In this regard, the Cronbach's α coefficient was used to test the reliability of all the constructs and their specific dimensions. α scores for all the main variables exceeded the recommended cut-off point of 0.70 (Nunnally et al., 1967).

The higher the score, the more reliable the generated scale is. Nunnally (1978) has indicated 0.7 to be an acceptable reliability coefficient. The Cronbach's alpha values of the variables are summarized in Table 1 and Table 2. The alpha values ranges from shows good internal consistency of the data collected. The data collected in survey are evaluated for reliability using Cronbach's alpha-coefficient method. The test was conducted in SPSS Statistics v.23 software. Reliability tests were performed separately for the items of each critical success factors (10 independent variables) and dependent variables (financial, non-financial and operational performance).

Validity Analysis

Validity explains how well the collected data covers the actual area of investigation (Ghauri and Gronhaug, 2005). Validity basically means "measure what is intended to be measured" (Field, 2005). The main types of validity namely are; face validity, content validity, construct validity and criterion validity. The approach to establish content validity involves literature reviews, as for this paper and then follow-ups with the evaluation by expert. This study extracted ten prompt critical success factors of TQM for the study listed in table 2. Kerlinger, F.N (1986) argues that content validity is representative of the content. Thus, content

Table 3. Reliability Analysis of CSFs (Input variables)

Input Variables Label Code	CRITICAL SUCCESS FACTORS									
	1	2	3	4	5	6	7	8	9	10
	TL	CF	CI	SM	EI	QI	BM	CC	EE	TE
No of items	4	4	4	3	4	3	4	4	4	4
Cronbach's alpha	0.718	0.720	0.735	0.716	0.728	0.765	0.752	0.723	0.720	0.735

Table 4. Reliability Analysis of Output variables

Output Variables Label	ORGANISATIONAL PERFORMANCE		
	Financial Performance	Non-financial Performance	Operational Performance
Code	FP	NFP	OP
No of items	06	05	06
Cronbach's alpha	0.771	0.724	0.712

validity of an instrument depends on the adequacy of a specified domain of content that is sampled (Nunnally, J.C.). Bush (1985) pointed out that content validity refers to the degree that the instrument covers the content that it is supposed to measure. It also refers to the adequacy of the sampling of the content that should be measured (Polit D.F. et al. 1991). Cronbach (1971) noted, when the items of a test are judged to adequately represent well-defined domains of content, it is permissible to view responses to these items as generalizable samples of the responses examinees would exhibit if they were tested on all of the items constituting these domains. An evaluation of the theoretical and practical soundness of using each of the mentioned notions to define content validity suggested that these notions are best regarded as definitions of concepts other than content validity.

Factor Analysis

Factor analysis is a variable reduction procedure that allows one to explore the interrelationships among variables in a dataset (Dunteman, 1989; Stevens, 1996). Significant clusters of variables, or factors, are identified through optimally weighted linear combinations of observed variables that maximize the amount of explained variance. First the factor analysis was carried out to reduce the TQM drivers, enablers and strategic goal scales to a smaller number of underlying factors. For this principal component analysis was used to identify factors with eigenvalues of at least 1, Hair JF el al. (1992), and Varimax rotation was used to obtain interpretable factor loadings. Bagozzi R.P. et al. (1988) advocated in the interests of convergent and discriminant validity, only items that had a factor loading of at least 0.50 and did not have a loading in excess of 0.40 on a second factor were retained.

Reliability Analysis

Applying SPSS, the principal components analysis (PCA) was conducted to measure the underlying dimension of ten constructs. The constructs validity was measured using Bartlett's test of Sphericity and Kaiser–Mayer–Olkin (KMO) measure of the sampling adequacy of individual variables. KMO overall should be 0.6 or over to perform factor analysis (Ozdamar, 2002). According to the results of Bartlett's test of Sphericity and KMO revealed that both are significant and suitable for the factor analysis (Table 2). The cumulative variance explained is 66.59% which exceeds the acceptable limit of 60% (Ozdamar, 2002). The value of Bartlett's test of Sphericity indicate sufficient correlation between the variables, it shows 4333.93 and significant ($p > 0.000$). The factor loading of all items of each scale exceeds 0.5 (Hair, Black, Babin, Anderson, & Tatham, 1998). This data analysis demonstrates that measurements possessed an acceptable convergent validity. The composite reliability of the measurements must reach 0.6 or above (Fornell & Larcker, 1981). The results indicated that all the latent variables reached (0.817–0.88) the standard or above.

Table 5

KMO Bartlett's test.	
Kaiser–Mayer–Olkin measures of sampling adequacy	0.785
Bartlett's Test of Sphericity	

Approx. chi-square	4305.939
Degree of Freedom	435
Sig	0.00

Table 6

Goodness of fit indices	Measurement model	Structural model	Recommended value
χ 2/degree of freedom	1.156	1.782	< 3.0
CFI (comparative fit index)	0.985	0.937	>0.90
TLI (Tusker–Lewis fit index)	0.983	0.943	>0.90
IFI (incremental fit index)	0.985	0.974	>0.90
RMSEA (root mean square error)	0.078	0.072	<.08
GFI (goodness fit index)	0.930	0.943	>0.90
SRMR (root mean square residual)	0.46	0.39	<.50

Structural Equation Modeling (SEM):

The SEM model was employed to examine the relationship between constructs developed by study. Hence SEM analysis was performed by AMOS 24 version and analyses simultaneously goodness-of-fit indices. The results supported with Goodness fit indices. For the whole model statistical results shows that Chi-square/df = 1.156, CFI = 0.985, TLI = 0.983, IFI = 0.985, GFI = 0.930, RMSEA = 0.20, SRMR = 0.46 (Table 4). Hu and Bentler (1999) mentioned that RMSEA, TLI, and CFI are necessary to value for the model fit. According to the study, we hypothesized ten paths including seven TQM drivers and three enablers. Using the SEM investigated that impact of drivers, enablers and firm performance. Results exhibits all the paths are significant ($p < 0.05$). A SEM model divulges the critical success factors of TQM is directly and positively affects the strategic goal which further affect operational, financial and non-financial performances.

Table 7. Mean, Standard deviations and correlations

Variables	Mean	SD	1	2	3	4	5	6	7	8	9
1.Top-management commitment and leadership	6.09	1.65	-								
2. Customer focus	0.86	0.34	0.19*	-							
3.Continuous improvement and innovation	4.93	1.23	0.15*	0.22**	-						
4.Supplier management	5.62	1.17	0.17*	0.09	0.58	-					
5.Employee involvement	5.87	0.72	0.19*	-0.01	0.05	0.19*	-				
6.Quality Information /Information Quality	4.67	0.81	0.24**	0.04	0.02	0.14	0.24**	–			
7.Benchmarking	5.35	0.93	0.07	0.12	0.39**	0.26**	0.40**	0.16*	–		
8. Culture and communication	5.43	1.08	0.22**	0.23**	0.25**	0.21**	0.25**	0.36**	33**	–	
9. Employee encouragement and motivation	3.53	1.04	0.06	0.21**	0.22**	0.29**	0.16*	0.17*	0.19*	0.26**	–
10. Training and education	2.62	1.54	0.49**	0.28**	0.14	0.21**	0.17*	0.17*	0.17*	0.16*	0.23**

N=165 (Questionnaire distributed to 500 persons of the organization out of which 165 provided their response)
*P<0.05; **P<0.01.

The descriptive statistics for the study variables are shown in Table 8. In order to test the all ten hypotheses, mediated regression models were computed (e.g. James and Brett, 1984; Barron and Kenny, 1986). A variable is said to function as a mediator when variations in the independent variables significantly account for variations in the proposed mediator, variations in the mediator significantly account for variations in the dependent variable, and, when controlling for the mediator, a previously significant relationship between the independent variable(s) and the dependent variable decreases or becomes insignificant. One can test these conditions by regressing the mediator on the independent variable, regressing the dependent variable on the independent variable, and regressing the dependent on both the independent variable and the mediator (Barron and Kenny, 1986).

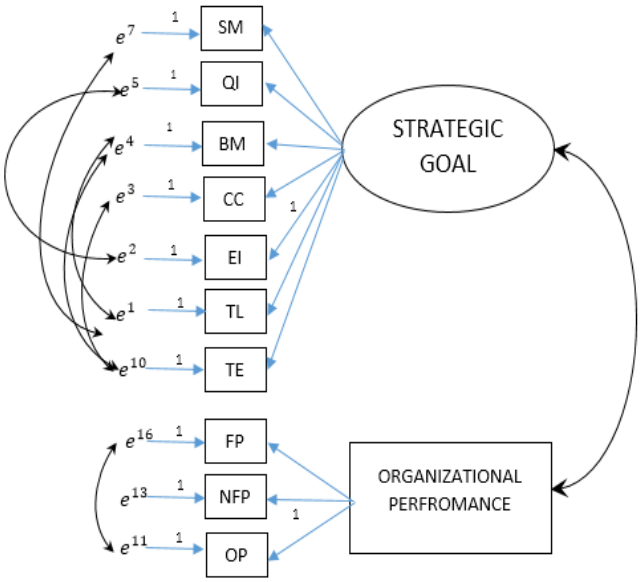

Figure 3. Measurement model for effect of TQM Strategic Goal on Organizational Performance

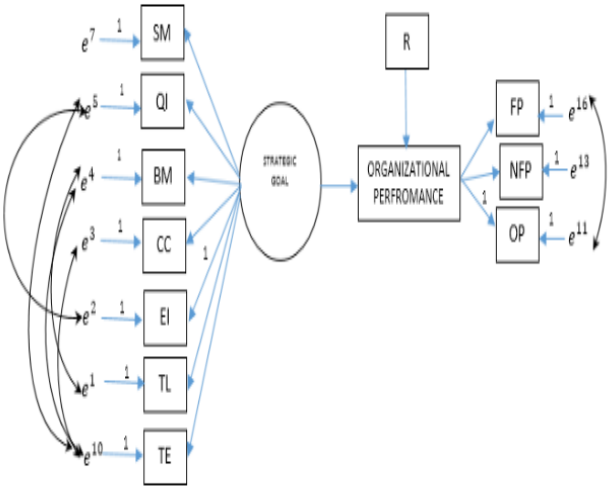

Figure 4. Structural model for effect of Critical Success Factors on Organizational Performance

Table 8. Construct Structural Model

Links in the model	Hypotheses	Standardized parameter estimate	T value	P value
SG -> OP	H_1	0.958	4.599	****
BM -> SG	H_{17}	0.218	2.222	0.026
QI -> SG	H_{16}	0.313	2.972	0.003
SM -> SG	H_{14}	0.447	3.820	****
CC -> SG	H_{18}	0.437	3.154	****
EE -> SG	H_{19}	0.589	4.399	****
TL -> SG	H_{11}	0.478	3.967	****
TE -> SG	H_{20}	0.526	3.776	****

Table 8 shows that the hypothesis H_1 is significant at $p < 0.05$. This indicates strategic goal has significant and direct effect on organizational performance. Also according to hypotheses H11 to H17, the TQM critical success factors selected has significant positive effect on Strategic Goal of TQM.

IV. Conclusion And Future Scope

Quality is considered by many researchers and industrial practitioner as one of the effective strategic weapon for improving productivity and enhancing reliability in the organization. A framework based on the attribute theory was used in an Indian FMCGs organization. The various empirical research has shown how the organizational performance is affected by various quality dimensions.

Seven TQM drivers, three enablers and three organizational performance measures were conceptualized for this study. From data analysis an empirically valid and reliable measurement instrument was developed. The purpose of this study was to link the critical success factors of TQM to the financial, non-financial and operational performance of the organization. Reliability and validity analysis was carried out for the constructs. All the factors were found to have acceptable reliability coefficients. Factor analysis was carried to test the construct validity of each of the factors.

The performance of an organization is the sum of all desired, but also undesired results, which were brought about by all efforts that were made possible within the organization, with the resources that were employed for this purpose.

Organizations should strive, as much as possible, to achieve only the results that add value. To be able to achieve only results that add value, with strategic goal we mean the specification of a certain value. the organization can follow the following steps:

First, the organization has to make sure that an individual employee knows exactly in which way he can influence the performances and how these performances add value, for this Training and education is required. Subsequently, the department or team (Top level management) in which the employee works also needs to know exactly what the team performance or department performance is and how the team or department can influence this performance, for this Quality Information is required. Here, primary activities that directly influence the performance level directly are most important. Secondary activities that have a less direct influence on the performance level (supplier management, benchmarking) are also important, but do not have an immediate impact on the results; Finally, it is necessary to define the strategic goal and critical success factors in a clear way.

Another interesting finding of this research is relationship between financial performances; non-financial performance and operational performance. The results revealed that these relationships are positive and significant.

As a future scope, this study may be extended by considering the drivers and enablers as external and internal one. As the performance of the organization vastly depends upon the critical success factors, so the externals factors must be given weightage as well as internal factors. The organizational performance may also be categorized as innovation and export performance, because FMGSs products having very short life cycle with heavy global demand.

This study, of course, is not without its limitations. First, the respondents are from same enterprise and some unbalanced distribution occurs. In future studies, we need to test our proposed model with larger and more balanced datasets. Second, the drivers and enablers vary according to the characteristics of the organization, namely, quality awareness and its impact, setting standards and requiring improvement, and collaboration, is not considered in this study. In future studies, we need to identify two clusters of TQM adopters among FMCGs industries, or non-FMCGs industries, and test our proposed model in a more robust manner. Third, we need to examine the interaction effect between the following two factors in our future studies: TQM Drivers and TQM enablers.

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