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Performance Appraisal in an Organization Using Total Quality Management (TQM)

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ABSTRACT

Total quality management is a systematic method to ensure high quality performance. The productivity and performance of any organization can also be evaluated on the basis of principles of total quality management provided a devised tool is available for such appraisal. This may reduce the cost by improving the efficiency of organization. Empirical literature review was carried out in order to assess the status of prevailing knowledge about total quality management. Use of financial and operative indicators as primary or secondary variables to appraise organizational performance allows a greater comparison between different types of industries and situations that avoids possible differences in valuation of quantities. A 10 item scale is proposed to appraise performance that includes different indicators of the achievement of the goals promulgated the experts of the total quality management. Cronbach's alpha remained high for initial model appraisal which indicates the dimensions possess with adequate reliability and validity. Index of goodness of fit provides a best fir for the model as well. Excluding three items not fit for this model after validation study, the final scale comprises seven items and is a valid and reliable measure that may be used in future studies of performance appraisal by total quality management.

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KEYWORDS: ***Performance appraisal, total quality management, model, financial variables. Operative variables.***

Introduction

The quality management is the set of coordinated activities put in place in order to direct and control the quality in an organization. In fact, appraisal and quality assessment agencies has become a priority activity not only in industry but this is also increasingly important within the scope of the government agencies and utilities (Hosono, 2015). The total quality management is a way to manage organizations focusing on quality (Hamon, 2015). It is the continuous improvement process which aims to identify, meet and

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anticipate customer needs. The total quality management, also known as TQM, is a management approach, broadcast worldwide, which it aims to improve the operational performance of organizations, providing a systematic approach to continuously improve operational activities, such so that the company complies getting better with customer requirements (Agus, 2005). The TQM guide a process of change designed to reorder the mission, culture and work practices to achieve improved continuous quality (Lilja and Richardsson, 2015). Intrigues on performance estimation (PM) in associations have eminently expanded in the most recent two decades (Wang, Heffernan & Heffernan, 2015). In developing their quality systems, organizations have followed three basic approaches: the consultants, the standardization and the awards one of the keys to the diffusion of the TQM is to be considered the only way to improvethe organizational effectiveness (Jiménez-Jiménez et al., 2015). Correct implementation of TQM has highlighted the benefits (Majstorovic and Sibalija, 2015).The starting point that justifies such statements is the consideration of quality as a competitive priority, and one of the requirements for success in the global market (Hung, Hung and Lin, 2015). The fact that the implementation of total quality management has the purpose of improve the performance of an organization, and that companies address so this implementation differently depending on their size, would suggest that the different total quality practices that would impact on the operational performance in the large,medium, and small organizations. Investments in quality improvement reduces costs, improves productivity, increases market share, provides stability in business, creates better jobs, improve products and this, is repeated continuously. Quality not only creates an advantage in value over competitors, but that it allows to charge a higher selling price per unit through differentiation (West, Ford and Ibrahim, 2015).It is necessary to determine the performance of an organization by using total quality management tools. Similarly to the argued for the quality, also defended that the total quality management has effects on the financial performance (Oakland, 2014; Kafetzopoulos and Gotzamani, 2014). Also has excelled in different work the positive relationship between improvements in manufacturing activities related to TQM and benefits such as inventories lower costs, increased flexibility,reduction of the waste, higher motivation of employees (Kaynak, 2003; Chen, 2015).

In such state of affairs, the aim of this work is to contribute to the establishment a scale that allows measuring performance in companies that have implemented the total quality management. This empirical research follows a review on the performance appraisal in management of quality. In the second part, a measuring instrument is

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proposed followed by its validation in next stage.

Review of Literature

The Performance Appraisal

The performance is a term used abundantly within the literature of the organizations, however, the concept, the level of analysis and appraisal have a great ambiguity. Performance assessment is frequently utilized as an apparatus to decide compensation conformity and in addition a chance to enhance work performance. At the point when improperly connected, performance assessments may be saw as being unjustifiable, inefficient, and disparaging. In a few associations, there has been a pattern to separate employment capacities to their most point by point level, weight every movement, judge it, and after that include all the invalid numbers to accomplish a more invalid judgment of a man's performance (Pun and Yiu, 2015). Procedure center examination had a more positive effect than an only results-arranged evaluation on rate examination fulfillment, saw evaluation precision, and desires of performance change. Subjects getting procedure evaluation input likewise demonstrated a more noteworthy change in genuine performance amid a resulting trial contrasted with subjects that did not get process criticism. The transmission of the operational benefits to financial is achieved with satisfaction customer's (Yu et al., 2013). A high satisfaction will lead to one higher rate retention of customers, and therefore to an increase in market share and profitability (Ennew, Binks and Chiplin, 2015). Investigations conducted show conflicting results as to whether the total quality practices are positively related to performance. While so meargue that the total quality manage- ment allows improve the operational performance of an organization (Baird, Jia and Reeve, 2011; Oakland, 2014), others found no statistical evidence of this relationship (Agus, 2005). There are also evidences that only some and not all total quality practices that are positively related to performance (Latif, Fiaz and Shoaib, 2014). One explanation for these results might be contradictory to the practices of total quality they have different relationship with the operating performance depending on factors such as national culture, industrial sector, and the size of the organization. Empirical studies come from the analysis of specific companies or use data excessively added, so are inadequate and have not always come to the same conclusions like increased market share; (Wang, Chen and Chen, 2012), raised prices but reduced market share (Kongolo and Dlamini, 2014) that does not have effects on the performance of the company (Chaudary, Zafar and Salman, 2014). Mohammad Mosadeghrad (2014) notes two possible causes of the diversity of the results of the studies about the financial effects of the quality. Firstly, the improvement of the quality has a direct effect on the performance of the company. Usually, it operates through intermediate factors as

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the satisfaction of the client, productivity or the image. In addition, such factors are influenced by others, and the quality may not be one of the dominant ones. As a result, the relationship between TQM and the financial result is always uncertain and contingent. In second, the quality has different operational definitions related to several aspects of financial performance. Productivity, can be found under the heading of organizational performance the satisfaction of employees, profitability, efficiency, etc. The performance is a multidimensional concept and a single item may not be able to provide an adequate understanding of the implications of further interest in the same terms. Most narrow definition of performance is one that is based on the use of financial performance indicators, profit or profitability ratios for action, among others. In this case it is a financial performance that responds to the economic objectives of the company.A broader concept to performan ceinvolves considering next to the indicators financial operating performance. With the use of both types indicators would be measured the performance of a business unit.

Operating performance is calculated through non-financial indicators as the share of the market, the introduction of new products, the quality of the product, the effectiveness of the marketing, the added value of the production and other measures of technological efficiency. The broader concept of performance is that of effectiveness organizational. It is based on the idea that the organization is made up of a set of persons or entities with different objectives which can come into conflict and measures, by both aspects related to the satisfaction of its members.

Performance appraisal have assimilated the idea of effectiveness, i.e., the degree in which the objectives of organization have been achieved. This means performance is congruent with the organizational effectiveness (Venkatraman and Prahalad, 1986; Bernardin and Wiatrowski, 2013). Along with the tangible benefits of the improvement of the performance, other factors related with the work environment, communica- tion, cooperation and the satisfaction of workers are also defended (Linna et al., 2012). Teamwork, participation, training, work etc., encourages the involvement and satisfaction of workers. Empirically, it has been demonstrated that organizational commitment is positively related to the performance and satisfaction with work, the organizational effectiveness, morale, and low rates of staff turnover (Mowday, Porter & Steers, 2013). The study indicates that in volume to 63% of the executives of the companies interviewed they believe that the involvement of the workers with TQM is associated in their organizations with their greater satisfaction and quality of life (de Menezes, 2012).

Jiménez-Jiménez and Martínez-Costa(2009) used this approach and measure effectiveness through twelve dimensions of performance: rate of growth in sales, market share, profits operating

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ratio of benefits between sales, cash operating flow, return on investment, new product development, market development, programs of reduction of costs, development staff and political/public affairs. Performance appraisal is important because the sample is formed by a variety of industries and companies with different criteria on performance (Bernardin and Wiatrowski, 2013). They advise using a subjective assessment against a concrete financial indicator "ROHMER", Agnihotri et al., (2015) in his case, develop a three-item scale to measure the effectiveness which includes the satisfaction of customers, the assurance of the desired market share and attraction of new clients. The concept most often used in research on strategy has been the financial performance, although in more recent studies has been supplemented with operating performance (Venkatraman and Prahalad, 1986). Methodology was proposed to measure the performanceof a business whereas two dimensions depending on whether the domain of the concept includes financial indicators, operating s, or both; and if the data come from sources primary, secondary or both. With these dimensions posed ten different alternatives for appraisal.

"A" and "C" cells reflect a convergence of methods given to measure the same type of indicator use both sources of data. Using both type of sources convergent validity of the measures can be tried. The cells B and D show a broad consideration the concept of performance using measures, financial and operational, although the obtained indicators come from different sources. Cells E and F are approximations special for the appraisal of performance. The cell E uses financial indicators from operational indicators of primary data and secondary data. This would be useful in the cases in which the financial indicators were difficult to obtain directly from the company for reasons of confidentiality or sensitivity. Finally, the financial indicators F use cell from primary data and indicators operations secondary data. Theoretica- lly, this option would be possible, the truth is that it is unlikely to use primary sources to establish financial indicators and not use these for the operatives.

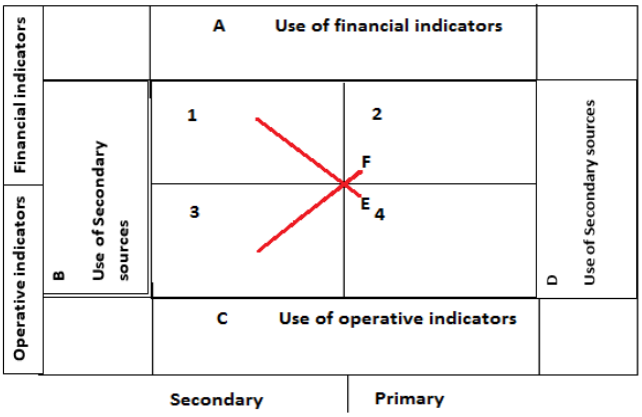

Figure 1:
The appraisal of the performance of a company

The Appraisal of Performance in Studies of Total Quality Management

According to literature on the total quality management variables and scales used for measure performance tend to not be matching, while they reflect similar concepts in some cases.

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The study of Bernardin and Wiatrowski (2013) considered the performance in three ways: (1) the performance of quality based on the percentage of defects, the ratio of the costs of quality between the sales and the satisfaction of customers; (2) the operating performance is expressed as the percentage of net profit on sales, the annual turnover and employee satisfaction; and (3) financial performance including the return on investment of the previous year and the average of the previous three years, the sales growth as an average of the three years earlier.

Wang, Chen and Chen (2012) measured the performance achieved by the implementation of the TQM through the satisfaction of the consumer. This is understood as the degree in which customers of an organization continuously perceive that their needs have been satisfied with the products and/or services of the company. They use a scale of four items, the first two to compare the relationships with customers and the quality in accordance products of the company with respect to the competitors in the industry, and the two to measure the performance of quality with regard to the rules in the last three years following industry, and the satisfaction of customers with the quality.

Zhang, Linderman and Schroeder (2014) measured the performance through the competitive advantage obtained in the manufacture: (1) the unit cost of manufacturing, (2) quick service of the goods, (3) the flexibility to change volume, (4) the rotation of the inventory, and (5) the cycle of provisioning. Along with the competitive advantage these authors used two mediating variables and representing the performance of quality: (1) the results of market of the perceived quality, and (2) the percentage of products that exceed the final inspection without reprocessing.

The results of market perceived quality is measured with the same four-item scale used by Anderson et al., (1995) to measure the satisfaction of the consumer. Schechner (2013) measured in their work performance subjective way but distinguishes between the total performance and the derivative of the Total quality management program. For the performance total used a five-item scale that calls for an assessment of the last three years if: (1) financial performance has been remarkable; (2) financial performance has been greater than the competitors; (3) the sales growth has been remarkable; (4) the profitability, It has been higher than that of the competitors; and (5) the rate of sales growth has been greater than the competitors. Financial performance derived from the program of TQM is appraised on the basis of eight items if: (1) has dramatically increased productivity of the company;(2) improved competi tive position; (3) it has increased dramatically the profitability; (4) it has dramatically increased sales; (5) it has increased dramatically overall performance; (6) has been a positive development of the Organization; (7) has had a negative

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impact on profitability; and (8) has been required to be better on the market.

Nudurupati et al. (2011) studied contribution of the business quality performance measure this subjectively using a scale, where it was asked to compare with the rest of the sector eight financial measures and/or marketing: the return on assets after taxes, the return on investment before tax, growth in the return of the investment, the growth of sales, market share, market share growth, the return on sales and return on the benefits. By relating estimations subjective with the objective data of these magnitudes are highly correlated between the two.

Cui and Hu (2012) in their work on the TQM appraises the organizational performance whereas the annual average in the past three years of the growth of the sales, the ratio of return on sales growth and the growth of the return ratio on the investment.

Concept of orientation to the total quality suggests two systems for measuring the results obtained with the total quality actions: (1) the measures of quality and (2) the measures of consumer satisfaction (Wang, Chen and Chen, 2012). Quality measures are used to meet the company's quality levels and improvements in the trends of operational performance and the quality of the organization. These measures must be obtained customers and competitors are the greatest predictors of perceived quality by the customers and their satisfaction. SERVQUAL scale is proposed to measure the quality of the products (Lee, Chiang & Chen, 2012) and for the services (Jemmasi, Strong and Taylor, 2011).

With regard to the appraisal of customer satisfaction, This should reflect the expectations and requirements, satisfaction that reach the competitors, the levels and trends of customer satisfaction, and loyalty factors quality key to obtain a higher competitiveness on the market.

Subjective appraisal of total quality management performance through six types of indicators (Chen and Chen, 2012).The quality of the products and services is measured with a scale that assesses the accuracy, integrity (possession of all parts, features or elements necessary), compliance with the requirements of customers and innovation. The financial performance is appraised using the indicators comprising return on investment, market share and capital investment.

Operating performance is appraised with a scale which includes indicators on: (1) the productivity in terms of continuous improvement of the results, benefits or profitability desired; (2) the amount of material so much waste, time or capacity of employees; (3) efficiency in the use of energy;(4) the efficient use of material, understanding size conversion of inputs(work, data and materials) products desired (products/services).

Public accountability appraisal is performed with a scale of two items: (1) absence of complaints by the Government, industry organizations about its impact on

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environment; and (2) involvement in the community by participating activities and acting as a "good neighbor".

Employee satisfaction is analyzed using six items on: the rotation of the employees, calls for change in the post work, absenteeism, and complaints to the address, surveys on satisfaction of the employees and the results the satisfaction of employees.

The satisfaction of customers with a scale of four items on the satisfaction surveys customers, on the customer satisfaction results, processes to meet the requests of customers and resolving complaints mechanisms of customers (Oliver, 2014).

Development of a scale to appraise the performance by total quality management (TQM)

Performance appraisal

A 10 item scale is proposed to appraise performance that includes different indicators of the achievement of the goals promulgated the management experts of the total quality and respond to the model of organizational effectiveness developed by Venkatraman and Prahalad (1986). These have been grouped into three categories: financial performance, operatio- nal performance and performance for workers. The items reflect the improvement of the customer satisfaction (Goetsch and Davis, 2014); the satisfaction of employees (Topolosky, 2014); the improvement of the quality of products and services (Raja et al., 2013); the improvement of profitability (Lun et al., 2015); and growth (Yuzhakov et al., 2014).

Table 1: Main characteristics of the type of appraisal used in different jobs.

WORK	TYPE OF PERFORMANCE	SOURCES	MEASURING TYPE
ADAM (1994)	Financial operative	Primary	Objective subjective
Anderson *et al. (1995)*	Operative	Primary	Subjective
Flynn, Schroeder and Sakakibara (1995)	Operative	Primary	Subjective
Powell (1995)	Financial operative	Primary	Subjective
Forker, Vickery and Droge (1996)	Financial operative	Primary	Subjective
Chenhall (1997)	Operative	Primary	Subjective
Mohr-Jackson (1998)	Operative	Primary secondary	Subjective

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Grandzol and Gershon (1998)	Financial operative and others	Primary	Subjective
Easton and Jarrell (1998)	Financial operative	Primary secondary	Objective

Different variables have been valued with a scale from 1 (extremely bad) to 7 (extremely good) in relation to the levels prior to the implementation of TQM. This type of subjective appraisal allows a greater comparison between different types of industries and situations that avoids possible differences in valuation of quantities.

Validation

The data used in this study are part of a broader research made to companies in national level implementation of total quality management. The information was obtained through postal survey and by fax sent to the person in charge of quality of the company. The sample size of 1550 enterprises was set with reference to the companies belonging to the quality management Club and those that had obtained a certification its system of quality (more than 7,500 companies). Finally 273 questionnaires valid to a mistake of the sample were obtained of the 7.35% (for a confidence level of 95% and P = Q = 0.5).

Evaluation of reliability and validity

To verify the validity and reliability of the scales used in the study has been a confirmatory factor analysis with the computer program "Lisrel VIII". The confirmatory factor analysis is a special, simplified case of structural equation analysis. It is not necessary to establish structural equations given that not is they are causal relationships between variables. Therefore, apart from the overall fit of the model, the evaluation is limited to the examination of the reliability and validity of the indicators used, thus as for the magnitude of the relationship between indicators and their respective concepts. As for the structural model, the starting point of the confirmatory factor analysis. It is the development of an appraisal for the dimensions of the performance model previously proposals. To ensure the validity of the content of our instrument it has been assumed in the review of the literature seeking to respond to the conceptual definition and reflect the dimensions that are considered relevant. Prior to the estimation of the model has been analyzed the multivariate normality of data using "Prelis" processor.

Significant differences to a level of significance of 5% both asymmetry as kurtosis. In addition, the joint assessment of both has confirmed such results. The absence of normality of data has led to consider as a method of estimation appropriate the minimum squares weighted (WLS), and consequently, to calculate the

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parent polychoric correlations and asymptotic covariance-variance as arrays of input (n = 258, exclusion of cases according to list). The main indicators of the quality of the global adjustment of the initial model are shown in Table 2.

Data on the quality of global adjustment are partially acceptable. The value of the Chi-square (X^2 = 187.04, 32 degrees of freedom) is high and has a level of significance. Statistics of 0.00 indicates that there are significant differences between the array of data and the estimated matrix. However, a drawback of the X^2 is that more than 200 sample sizes have to indicate significant differences between arrays, while for less than 100 sizes usually indicate a good fit. Therefore, its use is recommended if the sample size is between 100 and 200 cases (Hair et al., 1999). As a result, they are required other indicators to evaluate the goodness of fit. The RMSR takes a not very close to or 0.24 value indicating error between the arrays observations and dear, and the RMSEA stands at 0.13 exceeding the recommended minimum 0.08. However, the index of goodness of fit (GFI) has a value of 0.98, which is very high and suggests a good fit.

Table 2: Main indicators of the quality of the global adjustment of the initial model

The Absolute Adjustment Measures		
Chi-square	187.04	
Degrees of freedom	32	
Level of significance	0.0	Marginal
Index of goodness of fit (GFI)	0.98	Acceptable
Average quadratic residue (RMSR)	0.024	Marginal
Mean square error of approximation (RMSEA)	0.13	Marginal
Incremental Adjustment Measures		
Index of goodness of the tailored fit (AGFI)	0.97	Acceptable
Tucker Lewis index (TU)	0.98	Acceptable
Regulated adjustment (NFI) index	0.98	Acceptable
ADJUSTMENT OF PARSIMONY		
Adjusted Chi-square	5.845	Marginal
Critical N (CN)	78.79	Not acceptable

All incremental adjustment measures are acceptable with values higher than 0.9 and next to the unit. Adjusted goodness of fit (AGFI) index has a level of 0.97, the adjustment index of 0.98 (NFI) and 0.98 in

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this study. Finally, parsimony adjustment indices take marginal values. The Chi-square regulated with a value of 5.845 stands above the recommended maximum

limit of 5.0 indicating that the model is fit to use. In addition, the critical (CN) is less than 200 (78.79). Once it has evaluated the adjustment of the global model has been to assess the validity concept and the reliability of the proposed scales. Estimates of charges or coefficients of each one of the three factors, as well as the multiple correlation squared (R^2) for each variable observed.

All loads of the indicators are significant to a level of significance of the 0.05 and even more conservative values of 0.01. Therefore, all the variables are significantly related to each factor and verified the relationship proposed between the indicators and these. Similarly, the weightings are high and point out an important weight indicators on the latent variables. In addition, the reliability individual indicators exceeds 0.5 with the exception of the OPERA TIV04 variables, OPERATIV05 and WORK2, in which the variance explained each one of them with the factor does not exceed 50%. In terms of the composite reliability and variance extracted from each subscale. Cronbach's alpha was calculated additionally. The composite reliability and variance extracted three dimensions exceed the minimum acceptable, so the indicators represent to each construct. The values of the Cronbach's alpha is remained above 0.6. Initial appraisal model indicates the dimensions possess with adequate reliability and validity, although three items have a individual reliability below recommended levels.

The matrix indicates significant correlations to a level of significance of 0.05 between the three dimensions. Although there are no sufficient evidence to consider that they constitute a single construct. There have been two alternative settings whereas a single factor and two factors financial operative and workers. Measures of goodness of fit of the two (l and 2-factor) and the initial (3 factors). For absolute adjustment measures, the 3 factor model has lower the value of the Chi-square, the parameter of non-centrality (NCP), the lower RMSR, RMSEA and index of Validation expected crusade (ECVI). In terms of the goodness of the fit, model 3 index factors and the 2 in the highest value match 0.98. The three factor model gets the best fit in any of the considered absolute appraisals.

Incremental adjustment measures 1 factor model presents again worse values, although they are not very far from the other two models. The three factors model has a better performance in the AGFI, NFI and two model factors. Parsimony adjustment measures are the final set to consider. The values of regulated Chi-square and the AlC are minors to the proposed model. It is also better for the same Critical N. The results for the three types of measures favour the selection of the model of three factors or sub-

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dimensions. With the aim of improving the overall fit of the model the standardized waste was determined. This has led to the phasing out of three items of the initial scale of operational performance (OPERATIVOl, OPERATIV02 and OPERATIV03). After the elimination of every item, it has proceeded to perform multivariate normality test, the fit of the model and calculations of composite reliability and extracted variance Cronbach's alpha. The absence of normality of final indicators has influenced the use of the method of the minimum squares Weighted (exclusion of cases according to list, n = 258).

Final adjustment of data indicated a good fit of the data to the model. Except the chi-square for high sample sizes, the value of the rest of indicators remained within the recommended limits. The index of goodness of fit (GFI) presents a value of 1.00, suggesting an excellent fit, the average quadratic residue (RMSR) a value of 0.048 very close to or, i.e. errors between the arrays of observations and the estimated they are very small, and the average quadratic approximation (RMSEA) is of 0.061 less than 0.08.

Incremental adjustment measures are placed within appropriate limits. The set index of goodness of fit (AGFI) has a level of 0.99 NFI indices and 1.00 in this study, values higher than the recommended minimum level of 0.9. Also the indicators of adjustment of parsimony they establish a good fit of the final model. The adjusted 2.0009 Chi-square is within the maximum recommended limits of 2.0 to3.0, and the critical N (CN) is 306.52, more than 200.

Regarding the factor loads and individual reliability of final scales, coefficients of all variables they are significant, i.e. above the critical value of 1.96 for a level of significance 0.05, as well as to 2.576 for a significance level of 0.01. This verifies relations each indicator with its factor. In addition, the magnitude of the weights exceeded the minimum (0.4), and indicates a considerable weight of the indicator on the latent variable. As soon as individual reliability, two indicators do not exceed the recommended 0.5 but are placed in a next value (0.42). It was decided to not remove the scales because the reliability of these not it improves and the global adjustment has been good. For all the constructs, reliability indicates a good degree of consistency internal indicators since they exceed the minimum of 0.7. Cronbach's alpha of the scale of operating performance has been the only altered, and despite being somewhat more reduced that follows on the initial scale surpassing 0.7. Also the variance extracted from this factor has suffered a decline but its value is greater than 0.5, so that the indicators are representative of the latent variable. Before such results verified the reliability of the scales.

Conclusions

The performance of organization by TQM has been appraised many times. Problems that arose in lathe to the

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appraisal of the TQM has become extensible to the appraisal of performance.

Strategic literature has tried in several papers the question giving guidelines above indicators appropriate to the type of research and objectives. The work on quality management do not yet exist such investigations. In this sense, the study represents a first approximation on the status of the issue, and proposed a scale that reflects a broad domain of the term performance.

Empirical review highlights the predominance of subjective appraisal than the objective. Both have advantages and disadvantages. The objective appraisal of performance reduces the problems of predisposition to specific responses, and if the data is accessible any researcher allows comparisons and replicas of works. However, if primary sources are used, companies may be more reluctant to provide "confidential" information, or, they can hide or "make-up" data. Perceptions-based measures of an individual have as main advantage as these are applicable to a wider variety situations by filing the possible differences between sectors or industries. However, the generalization of results to broader populations is more conflicting appraisals as they tend to reflect aspects limited by the variables used. The reliability and validity of the scales must be validated before use. Most of the works include aspects both financial and operating in terms of performance. The financial results are an inescapable question in the implementation of any strategy or management system. However, quality literature has emphasized the importance of operating results as the improvement of the quality of products and services and satisfaction of the client. In fact, this has been one of their main distinctive notes. Satisfaction indicators workers despite the fact that such benefits also have been widely screened to a lesser extent have been used for another type. Thus, the real value of satisfaction of the staff has been revealed recently. Perceptions of workers are more relevant than financial measures and which are related to the real reasons why some companies are more successful than others. Therefore, the performance obtained with the total quality management should be measured with a comprehensive approach that considers indicators financial, operational and other possible organizational objectives as the satisfaction of workers. This perspective provides a more global and critical of the results achieved view. i.e., the valuation of the gain achieved with the TQM must be done by establishing a balance compensated for all the factors and interests involved. The proposed appraisal instrument includes such aspects in three dimensions. It shows that the performance is not a one-dimensional concept. The final scale comprises seven items and is a valid and reliable measure that may be used in future studies.

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