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Relationship between TQM Elements and Organizational Performance: An Empirical Study of Manufacturing Sector of Pakistan

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Abstract

This study empirically reveals the influence of the TQM elements comprising leadership, people management, process management, customer focus, information & analysis and strategic planning on the organizational performance in the manufacturing sector of Pakistan. The data were collected through a questionnaire survey from the 160 managers and employees of the manufacturing firms. Results using SPSS support the hypotheses that there is a positive relationship between the TQM elements and performance of Pakistani manufacturing firms. Furthermore, it is also found that customer focus is perceived as a dominant TQM practice for enhancing quality performance. Moreover, this study also provides a valuable knowledge to the top managers. Practical implementations along with the limitations have also been discussed in this study.

Keywords: Total Quality Management (TQM), leadership, Pakistan, organizational performance, people management.

1. Introduction

Quality has become one of the most important drivers of today's fierce competition (Almansour, 2012). Increasing demand for better quality by customers have caused more and more companies to realize that they will have to provide high quality products or services in order to successfully compete in the marketplace. Thus, gaining market competitiveness through better organizational performance has become the primary

vehicle behind the marketing of quality products and services (Jaramilo et al., 2005). In the mid-1980s, W. Edwards Deming, Joseph Juran and Kaoru Ishikawa (Hackman and Wageman, 1995) introduced the core ideas of TQM which are accepted as an integrated strategy for improving product/service quality to compete and provide strategic advantages in the market (Evans and Lindsay, 1995; Dean and Bowen, 1994; Garvin, 1991; Demirbag, Tatoglu, Tekinkus and Zaim, 2006). However from the last two decades, TQM has received great attention (Jung and Wang, 2006). Much literature has been written on TQM and its value in improving performance of manufacturing firms suggesting that TQM implementation is positively associated with firm's operational performance in terms of cost, quality and flexibility (Choi and Eboch, 1998; Cerio 2003). This Implication of TQM in manufacturing sector has also been narrated by Sharma and Kodali (2008) by stating that significance of TQM in manufacturing sector cannot be denied because it is an important tool for bringing excellence in the firm. Many companies of Japan and Europe have gained or regained their competitive advantage based on TQM principles. Companies which were facing decline in their performance not only restored their position but also have increased their profitability and market share by applying TQM approach in their business. Ford, Harley-Davidson and Xerox are some of them. Thousands of other companies applied the similar practices and have increased their market share and profitability. However, there are few manufacturing companies, which ignore the elements of TQM and still succeed (Samson and Terziovski, 1998). Hence, performance improvements resulting from the implementation of TQM are in fact mixed. Moreover, though, continuous attention have been given to TQM in industrialized countries including USA, Japan, UK and other European countries, however, from the last decade researchers have started studying total quality management in developing countries (Temtime, 2003; Hoang et al., 2006; Das et al., 2008; Khanna et al., 2010; Satish and Srinivasan, 2010; Al-Swidi and Mahmood, 2012) including Pakistan but still little is known about TQM practices and their effects in Pakistani manufacturing industries. For Pakistan's economic health relating to manufacturing products, TQM is regarded as an important mean for the improving the quality of the products (Hassan et al., 2012).

Manufacturing sector of Pakistan contributes an important role in the economy and bears a significant importance. This sector is the third largest sector of Pakistan after services and agriculture. It plays a vital role in the economy of Pakistan. Its contribution in the GDP of Pakistan is 18.7%. Industrial Policy 2012 of Pakistan claims at least 8% annual growth and more than 100% value addition in manufacturing sector. About 75 percent of Pakistan's exports comprise of the manufacturing goods and this sector needs to be strengthened (www.finance.gov.pk). Therefore Government of Pakistan with an aspire to turn Pakistan into a factory for world rather than shop has developed national industrial policy with an objective of competitiveness, growth and value addition in the Pakistan's manufacturing sector. Moreover government of Pakistan has also launched Prime Minister Quality Award, in which professional appraisals will be carried out based on TQM standard similar to international state sponsored norm for Performance Excellence (http://www.moip.gov.pk). Thus TQM for Pakistani manufacturing firms is regarded as a major vehicle behind the accomplishment of quality performance and strategically and tactically a key ingredient for gaining a competitive advantage over their rivals within the Pakistan and across the world.

The quality awards criteria are the most commonly used technique for classifying TQM elements. They provide benchmark by which organizations can evaluate their quality management method, their deployment and end business results. In this research, Malcolm Baldrige National Quality Award (MBNQA) 1987 which was established by the U.S government for providing quality leadership has been used to determine the effectiveness of TQM in Pakistani manufacturing firms. Many researchers used this award e.g. Zhang (2000) identified 11 TQM elements on the basis that it is the best-established and recognized framework for quality improvement. Similarly Black and Porter (1996) established a list of ten factors that are described as critical to TQM. Likewise, Saraph et al. (1989) establish the eight factors and in the study of Samson and Terzioviski (1998) six factors of TQM were used. Similar to the above researchers, this study includes the six elements for description and classification of TQM. The current study aims to empirically investigate the relationship between these six TQM elements (leadership, process management, people management, strategic planning, customer focus & information and analysis) and the organization performance in the various manufacturing industries of Pakistan. Moreover, it also intends to examine that whether these elements of TQM are valid and reliable for measuring performance. Furthermore, this paper also intends to find that in the manufacturing sector of Pakistan which TQM elements have greater managerial association with the organization performance.

2. Theoretical Framework and Hypotheses Building

2.1 Total Quality Management

2.1.1 Leadership

This element is considered as an important tool of TQM as it examines the senior executives, leadership and personal involvement to provide direction for maintaining and building a system that enhances organizational performance. Leadership is liable for the setting of goals that leads the organization towards increased performance. Deming (1986) and Juran (1989) provided that leadership is responsible to implement a quality process in the organization. For quality issues it is more responsible than workers. Furthermore, Timothy, Andy and Victoria (2011) provided that leadership guides the people to meet the goals and targets. Moreover, the core purpose of leadership is to give support, encouragement, and deals with the problems from the front end in the organization.

2.1.2 People Management

For any firm, their people are most important to them. Without their support, manager finds decline in their performance and productivity. To remain competitive, organization must train and manage their people to improve their skills & abilities which results in increased performance. Delaney and Huselid (1996) found that human resource management strategies have a positive effect on the organizational performance. Similarly, Delery and Doty (1996) argue that optimal HRM strategies improve the organization performance. Moreover, study of Li (2000) found that HRM strategies such as training, information sharing and participative management are helpful in enhancing the performance of a firm. Khan (2010) considered the human resource as a tool to enable the organization to use its resource efficiently and effectively that in turn boost the organizational performance dynamically. In the same context, Vanhala and Ahteela, 2011

study concludes that effective management enables their subordinates to do their job successfully that in return increase the firm performance efficiently.

2.1.3 Customer Focus

Customers are the important asset for any company. In order to be successful, organizations have to design their products according to the needs of customers. Customization is the key for achieving profitable growth (Asikhia 2010). Similarly, Kotler (2004) study asserts that organization can achieve profitable growth by building high customer lifetime value. His findings further emphasizes that organization must move from the level of studying customer segments to shaping their products according to the customers' needs and wants. In the same context the study of Barah and Tee (2002) stated that managing customer relation, recognizing their needs and demands increases the organizational performance and eventually results in long term success. However, Evans and Lindsay (1995) study portray customer focus as how efficiently the organization determines the current and future need of customer, their requirements and expectations.

2.1.4 Process Management

Process management deals with how organization designs and introduces the product and services. It integrates production and delivery requirements that include relationship management with the suppliers (Barah andTee, 2002). Deming (1986) said that improvement in the quality lies in the handling and controlling of the process. Many organizations found major improvement in the performance through the process redesigning and reengineering.

2.1.5 Information and Analysis

For understanding and improving performance of organization the information and analysis provide effective measurement. It classifies the way by which organization analyzed the performance data and understands the overall performance of the organization (Barah and Tee, 2002). Philosophy of TQM stresses on the decision making based on facts, which includes analysis of information about customer needs, operational problems, and the success of improvement attempts. Moreover, it describes that how management sees information processing as a useful ingredient for improving organizational performance (Dean and Bowen, 1994). The survey question on information and analysis will describe that up to what extent benchmarking is conducted throughout the organization, over different categories that define competitiveness in business.

2.1.6 Strategic Planning

Strategic planning focuses on the strategies for the success of firm. Plans are made for attracting customers and improving the performance of business (Evans and Lindsay, 1995). Main purpose of planning is to make emphasis on the quality to enhance performance. Difference between the TQM perspective of strategic planning and corporate strategic planning is that corporate strategy defines that which customer is to be focused; on the other hand, TQM perspective deals with how to compete with different customers. It defines the core purpose of the organization.

2.1.7 Organizational Performance

Organizational performance focuses on the quality performance and operational performance of the firm. In this study, it is taken as dependent variable. The current study will find the effect of TQM variables on this element. Moreover, the variable organizational performance has the items relating to customer satisfaction, employee morale, productivity, quality of output and delivery performance.

2.2 Relationship between TQM and Organization Performance

Many researchers studied the impact and relationship of TQM with the performance of the organization. Anurangam, Ooi and Fong's (2008) study shows that TQM elements like leadership, process management, information and analysis and customer focus is positively related to the quality performance. Similarly, Wang, Jen, Ling's (2010) study found that leadership and the human-resource management both have a significant positive effect on the performance of the organization. Furthermore, with the help of visionary leadership, subordinates will apply their hidden potential more positively towards the organization and hence performance will be improved. Timothy, Andy. & Victoria's 2011 recent study shows that transactional leadership which includes the exchange process relates positively to the organizational performance. Moreover, the results of Timothy, Andy & Victoria's 2011 study show that there is a positive and significant effect of transactional leadership on the organization performance. In the same context, Sandbakken (2006) stated that leadership is most important to the organizational performance. Furthermore, the study describes about the transformational leadership in which leader develops and shares vision for future. Findings show that there is a strong positive and significant relationship between transformational leadership and performance of the firm. Joiner (2006) concluded that degree of TQM implementation is positively related to organization performance. His findings show that the more you implement TQM, the greater would be the performance. Further, the greater the firm satisfies the customer needs, motivates its employees and makes continuous improvement; the higher would be the performance. Pinho (2007) justified this by relating the TQM and organizational performance. His empirical study also shows that there is positive relationship between the above two. More the organization implements TQM, greater would be the performance. He also describes that customer orientation is also positively related to the performance. Miyagawa & Yoshida (2010) made a conclusion that the extent of implementation of TQM factors including leadership, quality of information, implementation of the strategies, human resource management & meeting expectation of the customers has a significant effect on the performance. Correlation exists between the implementation of the TQM, and the performance but causal relationship is difficult to prove. Asikhia (2010) showed the importance of the customer orientation which is vital for the performance of the firm. Customer orientation provides the firm a better understanding of the market and the needs of the customer, by satisfying these needs the firm can improve the performance. Study concludes that performance of the firm depends on how well they see their customers. Valmohammadi's (2011) study on the manufacturing sector concludes that the TQM factors such as leadership, process management and customer focus affect on the organizational performance. Results show that there is a positive impact of these variables on the performance. Leadership enhances the performance and has a positive significant effect. Process management positively correlates with the performance and

same is the customer focus. In the same context, Fotopoulos and Psomas's (2010) study also reflected that TQM elements like customer focus and satisfaction and employee involvement positively and significantly relate to the performance of the firm. In the past, the study of Tan et al. (1999) examined that the use of TQM tools and practices positively affect performance. The study illustrates that performance depends on TQM and management commitment. According to Woon (2000), TQM implementation relating to the productivity leadership, process management, customer focus and satisfaction have a positive impact on organizational performance. Khan' (2011) recent study shows that performance can be predicted by the TQM elements, and these elements improve the performance of the firm. Salaheldin (2008) showed that TQM strategic tactical and operational factors have a positive impact on the performance of the organization. His study also revealed that these factors not only directly and positively relate to the organization performance but also to the financial performance of the firm. Abdullah, Tari and Akhtar (2010)'s study found that overall performance of the firm is positively and significantly affected by the soft factor of TQM like management commitment, customer focus, people management and relationship with the employees.

All the above studies show the positive relationship between TQM and the organizational performance. All these studies have statistically significant results ($p < .05$) with positive correlation (r) ranging from 0.188 to 0.798 and adjusted R square (R^2) ranging from 0.007 to 0.968 as shown in Table 1. Thus, the literature exposed above would lead us to formulate the following hypothesis:

H1: The relationship between the leadership and the organizational performance is positive and significant.

H2: The relationship between the people management and the organizational performance is positive and significant.

H3: The relationship between the customer focus and the organizational performances positive and significant.

H4: The relationship between the process management and the organizational performance is positive and significant.

H5: Information and analysis has a positive and significant effect on the performance of the organization.

H6: Planning has a positive significant effect on the performance of the organization.

3. Literature Review

Table 1: literature review

Study	**Literature examining the impact of TQM Practices on Firm Performance**	**Sig**	**r**	**R^2**
Arumugam, Ooi And Fong (2008)	Leadership and quality performance are positively related to each other. Process management and quality performance are positively related to each other. Information & analysis and quality performance are positively related to each other.	p p p p	0.41 0.30 0.21 0.44	

	Customer focus and quality performance are positively related to each other.			
Wang, Jen Ling (2010)	**H1.** On organizational performance, leadership style has a significant positive impact. **H2.** On organizational performance, human resource strategies has a significant positive impact.	p p		0.037 to 0.386 0.007 to 0.265
Timothy, Andy T. Victoria O.and Idowu A. (2011)	**H1.** Effects of transactional leadership styles on follower/organizational performance.	p		0.968929
Sandbakken (2006)	**H1.** The relationship between transformational leadership and organizational performance is positive.	p		.75
Joiner (2006)	**H1:**The degree of implementation of TQM practices associated with organization performance is positively related.	p	0.63	.09
Pinho (2007)	**H1.**The higher the total quality management (TQM) implementation, the greater the performance of the firm.	p	.18to .302	
Miyagawa and Yoshida (2010)	**H1:**The extent of implementation of TQM is significantly related to the business performance	p		.267 to .721
Asikhia (2010)	**H1:** customer orientation and firm performance are significantly positive related to each other.	p		0.71
Valmohammadi (2011)	**H1:** In Iranian manufacturing SMEs Quality leadership positively impacts organizational performance. **H2.**In Iranian manufacturing SMEs Process management positively impacts organizational performance. **H3.**In Iranian manufacturing SMEs Customer focus positively impacts organizational performance.	p p p		0.262 0.214 0.072

Fotopoulos and Psomas (2010)	**H1:** TQM practices such as employee involvement, customer focus, customer satisfaction has positive effect on organizational performance.	p	0.395 to 0.764	
Tan et al. (1999)	H1: The use of TQM tools and practices positively affects performance.(Performance measures1) H2: The use of TQM tools and practices positively affects performance.(Performance measures2)	p p		0.4406 0.5085
Woon (2000)	**H1:**TQM implementation level of productivity Leaders such as leadership, process management, customer focus and satisfaction has positive impact on organization	p	0.58to 0.70	
Khan (2011)	**H 1.** TQM predicts organizational performance	p	.798	.636
Salaheldin (2008)	**H1:**TQM'S strategic ,tactical and operational factor has a direct and positive effect on the operational performance **H2**: TQM'S strategic, tactical and operational factor has a direct and positive effect on the financial performance	p p	.55 .58	
Abdullah et al. (2010)	**H1:**Soft factors like management commitment, customer focus, supplier relationship and people management dimensions (such as employee involvement, training and education, supplier relationship and reward and recognition) have positive significant effect on overall organizational performance.	p	.237 to .391	

Note: r= Pearson Correlation coefficient, $R^{2\,=}$ Adjust R square

4. Data Collection, Measurement Scale and Analysis

As this study examines the relationship between six elements of TQM (independent variables) and Organizational Performance (dependent variable) in the manufacturing sector of Pakistan, the data was collected from manufacturing industries of Pakistan comprising Beverages, Pharmaceuticals, Chemicals, Textile, Electronics, Cement sector and others (oil and ghee mills, sugar mills and plastic factories) in the major cities of Pakistan (Multan, Lahore, Karachi, Faisalabad, Gujranwala and Islamabad). The data were collected across the companies that have various numbers of employees ranging from 100 to 1000.

A survey questionnaire was followed for the data collection, developed by Samson and Terziovski (1997). It consisted of 53 survey questions along with company demographic questions. The questionnaire represented six dimensions of TQM and Organizational

performance. Five-point likert scale was used, starting from: 1-strongly disagree, 2-disagree, 3-neutral, 4-agree, 5-strongly agree, to measure the items. All the questions are shown to be reliable and valid in the previous research of Samson and Terziovski, 1997.

Questionnaires were sent to the top executives including general managers, production and marketing managers working in 220 manufacturing firms of Pakistan. Out of 220 questionnaires only 167 were received back filled. Hence the response rate came out to be 76%. Among 167 questionnaires 7 were not correctly filled and excluded for further consideration. Therefore, the actual response rate came out to be 72%.

In this study, statistical software SPSS version 17 has been used for factor and reliability analysis. Factor loadings and Chronbach's alpha of elements of TQM and organizational performance have been produced individually and are shown in Table 2 and Table 3 respectively. Factors with low factor loading were dropped out from the analysis. Out of 40 items, 11 were dropped out i.e. 3 items from leadership, 4 from people management and 2 each from process management and organizational performance.

By analyzing the results with the help of SPSS, study found that leadership (3 items has been excluded out of 6 due to low loading) has Chronbach's alpha=0.729, variance explained 65.054% and Kaiser-Meyer-Olkin (KMO) 0.683. However, people management (3 items has been excluded out of 7) have Chronbach's alpha=0.863, variance explained 78.70% and KMO 0.733. Moreover, all items of customer focus showed significant factor loadings and possess Chronbach's alpha=0.766, variance explained 46.300% and Kaiser-KMO 0.768. Similarly in strategic planning all items had significant factor loadings, having Chronbach's alpha of 0.833, variance explained 63.50% and KMO 0.541. While in process management (1 item has been excluded out of 5), has Chronbach's alpha of 0.778, variance explained 69.312% and KMO 0.683. Furthermore, Information and analysis have a Chronbach's alpha of 0.714 variance explained 64.020% and KMO 0.596.

While the dependent variable, i.e. organizational performance (2 items has been excluded out of 7) have Chronbach's alpha of 0.753, variance explained 50.825% and KMO is 0.753 respectively.

Table 2: Reliability Analysis

Construct	**Factor**	**Alpha if item deleted**
Factor 1: Leadership Cronbach's alpha: .729	At this site we proactively pursue continuous improvement rather than reacting to crisis' 'fire-fighting' Ideas from production operators are actively used in assisting management Environmental ('green'). protection issues are proactively managed at this site	.671 .619 .637
Factor 2: people Management Cronbach's Alpha: .863	Employee satisfaction is formally and regularly measured Our Occupational Health and Safety practices are excellent Employee flexibility, multi-skilling and training are actively used to support improved performance	.793 .788 .838

Factor 3: Customer Focus Cronbach's Alpha: .766	We know our external customers' current and future requirements (both in terms of volume and product characteristics) These customer requirements are effectively disseminated and understood throughout the workforce In designing new products and services we use the requirements of domestic customers We have an effective process for resolving external customers' complaints Customer complaints are used as a method to initiate improvements in our current processes We systematically and regularly measure external customer satisfaction	.741 .728 .700 .744 .733 .744
Factor 4: Planning Cronbach's Alpha: .833	We have a mission statement which has been communicated throughout the company and is supported by our employees We have a comprehensive and structured planning process which regularly sets and reviews short and long-term goals Our plans focus on achievement of 'Best Practice' When we develop our plans, policies and objectives we always incorporate customer requirements, supplier capabilities, and needs of other stakeholders, including the community. We have a written statement of strategy covering all manufacturing operations which is clearly articulated and agreed to by our Senior Managers Our site's manufacturing operations are effectively aligned with the central business mission	.755 .820 .801 .811 .826 .820
Factor 5: Process Management Chronbach's Alpha: .778	Our suppliers work closely with us in product development We work closely with our suppliers to improve each others' processes Our suppliers have an effective system for measuring the quality of the materials they send to us	.741 .629 .725
Factor 6: Information and Analysis Chronbach's Alpha: .714	Other firms' product quality and procedures Other firms' human resource practices and policies Other firms' processes in bringing new products to market	.759 .446 .625
Factor 7: Organizational performance Chronbach's Alpha: .753	Productivity Defects as % of productivity volume Warranty claims cost as % of total sale Cost of quality as scrap & rework as % of sale Delivery in full on time to customer	.748 .707 .696 .683 .708

Table 3: Factor analysis

Factor	Factor loads	Variance explained	KMO
Factor 1: Leadership		**65.054**	**.683**
At this site we proactively pursue continuous improvement rather than reacting to crisis' 'fire-fighting'	.820		
Ideas from production operators are actively used in assisting management	.810		
Environmental ('green'). protection issues are proactively managed at this site	.789		
Factor 2: people Management		**78.70**	**.733**
Employee satisfaction is formally and regularly measured	.895		
Our Occupational Health and Safety practices are excellent	.897		
Employee flexibility, multi-skilling and training are actively used to support improved performance	.869		
Factor 3: Customer Focus		**46.300**	**.768**
We know our external customers' current and future requirements (both in terms of volume and product characteristics)	.652		
These customer requirements are effectively disseminated and understood throughout the workforce	.700		
In designing new products and services we use the requirements of domestic customers	.780		
We have an effective process for resolving external customers' complaints	.635		
Customer complaints are used as a method to initiate improvements in our current processes	.671		
We systematically and regularly measure external customer satisfaction	.634		
Factor 4: strategic Planning		**63.50**	**.541**
We have a mission statement which has been communicated throughout the company and is supported by our employees	.978		
We have a comprehensive and structured planning process which regularly sets and reviews short and long-term goals	.763		
Our plans focus on achievement of 'Best Practice'	.797		
When we develop our plans, policies and objectives we always incorporate customer requirements, supplier capabilities, and needs of other stakeholders, including the community	.753		
Our site's manufacturing operations are effectively aligned with the central business mission	.659		
Factor 5: Process Management		**69.312**	**.683**
Our suppliers work closely with us in product development	.807		
We work closely with our suppliers to improve each other's processes	.871		
	.818		

Our suppliers have an effective system for measuring the quality of the materials they send to us			
Factor 6: Information and Analysis		**64.020**	**.596**
Other firms' product quality and procedures	.694		
Other firms' human resource practices and policies	.885		
Other firms' processes in bringing new products to market	.810		
Factor 7: Organizational Performance		**50.825**	**.753**
Productivity	.583		
Defects as % of productivity volume	.734		
Warranty claims cost as % of total sale	.753		
Cost of quality as scrap & rework as % of sale	.778		
Delivery in full on time to customer	.700		

5. Findings

5.1 Correlation Analysis

As already discussed in the theoretical part that the basic aim of this study is to examine the relationship among TQM elements and firm performance; Table 4, therefore, presents correlation matrix along with mean and standard deviation of study variables. The significant correlation results show (**correlation is significant at the 0.01) that each element of TQM is significantly correlated with organizational performance confirming initially all the hypotheses of this study.

Table 4: correlation analysis

Number	Mean	Standard Deviation	1.Le	2.PM	3.CF	4.Pl	5.PRM	6. IA	7.OP
1.LE	4.0604	.69627	1	.151	.423**	.476**	.464**	.013	.460**
2.PM	3.1042	.83443	-	1	.210**	.099	.043	.088	.187*
3.CF	3.9115	.55794	-	-	1	.671**	.544**	.051	.706**
4.Pl	3.8799	.62556	-	-	-	1	.620**	.106	.530**
5.PRM	3.8479	.67588	-	-	-	-	1	.071	.515**
6. IA	4.1750	.61764	-	-	-	-	-	1	.178*
7.OP	3.9200	.61356	-	-	-	-	-	-	1

Correlation is significant at the 0.01 level (2-tailed).
**. Correlation is significant at the 0.05 level (2-tailed).
LE: Leadership, PM: People Management, CF: Customer Focus, PL: Planning, PRM: Process Management, IA: Information and analysis, OP: organizational performance.

5.2 Regression Analysis

Linear Regression analysis has been used to examine the effects of elements of TQM on organizational performance. Some major findings of regression analysis as shown in Table 5 for each hypothesis are as follows:

Leadership has significant positive effect on organizational performance. Significant adjusted R^2 value in Table 5 shows that leadership explained 20.7% of the variance in organizational performance. Moreover, standardized coefficient β and T values are also significant ($p<0.05$). Hence, H1 is supported.

People management has significant positive influence on organizational performance. The significant values of T and standardized coefficient β, ($p<0.05$) are shown in Table 5. People management explained 2.9% of the variance in organizational performance. Therefore, H2 is supported.

Customer focus relates positively to organizational performance explaining the 49.5% of variance in organizational performance as shown in table 5. The significant values of T and standardized coefficient β, ($p<0.05$) reflects the positive effect of customer focus on organizational performance. Hence H3 is supported.

Planning has a significant positive effect on organizational performance. The significant adjusted R^2 value in Table 5 shows that planning explained 27.6% variance in organizational performance. Moreover, standardized coefficient β and T values are also significant ($p<0.05$), which confirms H4.

Process management has a significant positive effect on organizational performance. Significant adj R^2 value in table 5 depicts that process management explained 26.1% of variance in organizational performance. Similarly, the standardized coefficient β and T values are also significant ($p<0.05$). Hence, H5 is supported.

Finally, information and analysis has a significant positive effect on organizational performance. In Table 5, significant adj R^2 value explains the 2.5% of the variance in organizational performance. In the same way standardized coefficient β and T values are also significant ($p<0.05$). Hence, H6 is supported.

Table 5: Regression Analysis

Hypotheses	**P**	Adjusted R^2	Standardized coefficient β	t
H1	.000	.207	.460	6.510
H2	.018	.029	.187	2.389
H3	.000	.495	.706	12.534
H4	.000	.276	.530	7.847
H5	.000	.261	.515	7.561
H6	.025	.025	.178	2.270

6. Discussion and Conclusion

The study examines the impact of TQM elements i.e. leadership, people management, customer focus, process management, strategic planning and information & analysis on the organizational performance in manufacturing firms of Pakistan. Furthermore, research was conducted to know that whether these TQM constructs are reliable and valid for enhancing the organizational performance and which of the elements of TQM has greater influence on organizational performance. The sample drawn was 120 manufacturing companies of Pakistan. Findings of this study affirm its title that TQM elements play a vital role in achieving the higher organizational performance in manufacturing sector of Pakistan. Moreover, the results of correlation analysis portray that all the variables of the study except the information and analysis are positively and significantly correlated to dependent variable i.e. firm performance (see Table 5). However, the results demonstrate that customer focus is a quality management practice that influences greater to the organization performance comparing to other variables of this study. Customers are the central point for quality improvement. Customer satisfaction and meeting their requirements are key elements of quality management (Benson et al., 1991). That's why it is important for the companies to focus on customer needs and demands in order to remain successful. Anurangam et al., (2008) research also found that customer focus plays a vital role in improving the performance of the firms. Furthermore, results of the study support the work of previous researchers (Miyagawa and Yoshida 2010; Joiner 2006; Pinho 2007) in term of positive and significant relationship between the TQM and performance.

6.1 Managerial Implications

Regarding managerial perspective, the results of this study empirically reveal the influence of the TQM elements comprising leadership, people management, process management, customer focus, information & analysis and strategic planning on the

organizational performance in the manufacturing sector of Pakistan. Therefore, companies should develop reward and recognition programs to motivate employees to participate in different activities and provide better opportunities such as teamwork, better communication and give feedback to employees. Role of top management is also considered as very important for the successful implementation of TQM. Managers are responsible for building strong relationship between employees and customers. Leadership is also responsible to make quality improvement in planning to determine organizational objectives, goals and vision. Moreover, they are also responsible to determine the organizational culture and make plans to implement the continuous improvement programs in order to meet customers' expectations. Priorities of employees should meet for the purpose to enhance net profit & revenue and to reduce quality costs. Thus effort drawn in all variables of TQM will be fruitful for the firm's performance.

Based upon above discussion, this study is of great importance for the managers and administrators as it provides important guidelines for improving performance. The empirical evidence in shape of association between the elements of the TQM and organizational performance shows that the firms that give importance and resources to TQM can achieve higher level of performance in the organization.

6.2 Further Research Implications

Though this research is large and comprehensive yet it also suffers from some limitations. Firstly, the data is collected using questionnaire technique. Most of the people may not take it seriously; hence provide information based on their perception which may lack factual position. Therefore structured interviews should be done for quality of information to be obtained. Secondly, information related to the 'customer focus' was obtained from the respondent rather than the customers themselves. Due to this, data might not be reliable and research findings can be biased. Therefore in future, information relating to customer should be obtained from customers themselves. Lastly this study examines different large manufacturing sectors containing Beverages, Pharmaceuticals, Chemicals, Textile, Electronics, Cement sector and others (oil and ghee mills, sugar mills and plastic factories) but it exclude the small and medium enterprises (SMEs). So, in order to find more comprehensive relation between TQM and organization performance in manufacturing sector of Pakistan SMEs should also be considered in future research.

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