

# PERCEPTION OF MANAGERS ABOUT THE RELATIONSHIP OF ISO 9000 CERTIFICATION WITH BUSINESS RESULTS

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## ABSTRACT

*ISO 9000 is a widely used Quality Management System in the world. The review of literature has shown contradictory findings about its relationship with the achievement of better business results. Therefore, the relationship of ISO 9000 certification with business results needs to be explored in further details. In this study, the perceptual data was collected by using self-completion questionnaire from 306 managers of textile companies located in Pakistan. According to the findings of this study, the managers perceive that certification to ISO 9000 facilitates the companies in achievement of better business results.*

**Keywords:** *ISO 9000, Quality Management System, Organisational Performance, Business Results, TQM, Quality Management.*

## 1) INTRODUCTION

ISO 9000 is a family of standards, which represents an international consensus on good quality management practices. It is a widely used Quality Management System. Millions of manufacturing and service organisations are certified to this quality standard. According to International Organisation for Standardisation (ISO), the number of companies certified to ISO 9001:2008 in the last few years is increasing in all over the world (ISO Survey, 2009).

ISO 9000 consists on a set of standardised requirements for the establishment of a quality management system. It is developed by ISO, which is established in 1947 (ISO, 2011). The first set of standards for the promotion of quality in goods and services in UK industries was introduced by the British Standards Institute (BSI) in 1979, whereas ISO released its first ISO 9000 quality standard series in 1987, based on BS 5750 (Sroufe and Curkovic, 2008). In the ISO 9000 family of standards, ISO

9001:2008 provides a set of standardised requirements for a quality management system. This standard provides a tried and tested framework which is based on the eight quality management principles; leadership, involvement of people, customer focus, continual improvement, mutual beneficial supplier relationship, factual approach to decision making, system approach to management and process approach (ISO 9000:2005).

The argument of ISO is supported by many studies. For example, Geodhuys and Sleuwaegen (2013) claim that international standard certificate bring efficiency gains and quality signalling which help to raise productivity and sales performance. Similarly, Wu and Jang (2013) concluded that by knowing customer that the organization is ISO certified, directly enhance consumer's perceived quality and brand image and indirectly improve consumer's brand attitude, brand preference, and then purchase intention. Masakure, Henson and Cranfield (2009) conducted research in the textile sector of Pakistan; they claim that export performance is positively associated with certification of ISO 9000. They further highlight that certification to ISO 9000 plays a vital role in establishing credibility in the exporting environment. Terziovski and Power (2007) also report significant effects of ISO 9000 certification on business results. Martinez-Costa, Choi and Martinez (2009) identify that the companies certified by the ISO 9000:1994 and ISO 9001:2000 versions of the standard have shown significantly better scores on dimensions like unit product costs, satisfaction of customers and quality of design. Curkovic and Pagell (1999) identify that ISO 9000 certification can result in greater efficiencies, cost reduction, and improved productivity. Recently, Mangiarotti and Riillo (2014) identified that the Certification accelerates the innovation propensity in manufacturing sector by envisaging the technological aspects.

However, the literature has shown contradictory findings related to effect of ISO 9000 certification on organisational performance (Psomas, Pantouvakis and Kafetzopoulos 2013; Karapetrovic, Fa and Saizarbitoria, 2010; Masakure, Henson and Cranfield, 2009; Dick, Heras and Casadesus, 2008; Benner and Veloso, 2008; Terziovski and Power, 2007; Magd and Curry, 2003 and Curkovic and Pagell, 1999). For example Dick, Heras and Casadesus (2008) cannot find any solid evidence that the relationship of ISO 9000 certification to the business performance. It is therefore required

to study the relationship of ISO 9000 certification with organisational performance in further details.

This study provides the empirical evidence about the relationship of ISO 9000 Certification with the organisational performance from the textile sector of an under researched country; Pakistan. In this study, based upon the findings of previous literature, it is hypothesised that:

**H1:** Certification to ISO 9000, Quality Management System is associated with business results.

## **2) RESEARCH METHODOLOGY**

### **2.1) Population, Sample Size, Respondents & Questionnaire Design**

This study was conducted in the context of textile companies of Pakistan. The member companies of All Pakistan Textile Mills Association (APTMA) were taken as population of this study. There are three hundred and seventy five textile mills are members of this association. These textile companies are located in all four provinces of Pakistan and belong to all categories (e.g. spinning, weaving, garments, composite etc.). The members list of APTMA is taken as the sampling frame for this study. These textile companies are located in different geographical regions of the country. Fifty-six percent of APTMA member textile companies are located in the Punjab. Thus, it was decided that all the member organisations of APTMA located in the province of Punjab would be considered as the sample for this study.

According to Saunders et al. (2009, p.219) if the population size is 400, then the minimum sample size for confidence interval of  $\pm 5\%$ , should be 196. In the current study, the population size is 375 and the sample size is 210, which is sufficient to achieve a confidence level of  $\pm 5\%$ . A total of one thousand and fifty questionnaires were sent to the sample companies. The sample size of this study seems adequate in comparison to other studies. For example, Hussain, Akhtar and Butt (2009) sent 201 questionnaires to cotton spinning mills in Pakistan. Kaynak (2003) sent 1,884 questionnaires to both the manufacturing and service sectors. Bou-Llusor et al. (2009) was based on 446 responses from service and manufacturing companies.

The senior managers from multi-departments including Quality, Operations, Finance, Sales & Marketing and Human Resources were selected as the respondents for this study. Similar respondents were selected by Feng et al. (2006), Prajogo and Sohal (2003); Ho, Duffy and Shih (2001) and Flynn, Schroeder and Sakakibara (1994). Other research has collected the data from CEOs/quality directors/quality managers (e.g. Bou-Llusar et al. 2009; Douglas and Judge, 2001; Rao, Raghunathan and Solis 1999).

The questionnaire for this study was developed on the basis of EFQM excellence model's criteria. The enabler criteria are taken as the proxy for TQM practices and result's criteria for business results.

### **3) ANALYSIS OF THE DATA**

A total of 1,050 questionnaires were sent to 210 companies. A total of 75 questionnaires from 15 companies were returned as undelivered and 306 completed questionnaires were returned from 105 companies. Thus, the response rate was 50.5% company wise and 31.8% respondent wise. Five questionnaires were excluded from the final analyses because a major part of the data were missing from these questionnaires.

Table 4.1 indicates that maximum respondents belong to spinning companies (59%) followed by weaving (20%), finishing (10%), garments (6%) and composite (5%). The responses were according to the textile composition in Pakistan. As the majority of companies in Pakistan are spinning companies; therefore, the majority of responses came from this sector. The majority of responses were received from the companies having employees between 100 to 1000 employees.

Table 1: Profile of the Sample

Type of the sample textile companies		Size of company		Manager and employee awareness of TQM		Job designation of the respondents	
Spinning	59%	Small (100-500)	44%	Excellent	5%	Production Manager	37%
Weaving	20%	Medium (500-1000)	42%	Very good	31%	Quality Assurance Managers	27%
Finishing	10%	Large (Above 1000)	14%	Good	61%	Financial Managers	5%
Garments	6%			Poor	2%	Human Resource Managers	8%
Composite	5%			Know nothing	1%	Sales Managers	9%
						Any other	13%

Only 14% respondents belong to the companies having employees more than 1000.

The majority (37%) of respondents were production managers followed by Quality Assurance Manager (27%). The majority (61%) of the respondents think that employees and managers of the sample companies have good awareness of TQM, 31% think very good, and 5% claim excellent knowledge of TQM. There were only 2% of respondents answering poor and 1% saying that they know nothing about TQM.

The overall results show that the respondents perceive that both employees and managers of the companies have awareness of TQM.

### 3.1) Results

The result of the Chi-square test are shown in Table 2. The assumptions of Chi-square concerning the minimum expected cell frequency was checked. Kinnear & Gray (2010), Pallant (2007) and Argyrous (2005) state that at least 80% of cells must have a frequency of 5 or more. Similarly, they mention that the value of Significance level (**p-Value**) should be less than 0.05 for significant results.

The endnote of Table 2 indicates that none of the cells has an expected count less than 5, which means that 100% cells have an expected count of more than 5. Thus, according to Pallant (2010), the basic assumption for the chi-square test for independence is satisfied.

*Table 2: The Results of Chi-Square on the Relationship of ISO 9000 Certification with Business Results*

	Value	df	Significance level (p-Value)
Pearson chi-Square	7.861 <sup>a</sup>	2	.020
Likelihood Ratio	9.010	2	.011
Linear-by-Linear Association	7.774	1	.005
N of Valid Cases	301		

*a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 7.49.*

The overall results from Table 2 indicate that the difference in achieving business results across ISO 9000 certified and non-certified textile companies is statistically significant ( $\chi^2 = 7.861, p = 0.020, df = 2$ ), thus there is a relationship between the achievement of business results and certification to ISO 9000. Therefore, hypothesis *Ha2* is accepted.

#### **4) DISCUSSION ON RESULTS**

This study underlines that according to the perception of managers, ISO 9000 certification is associated with organisational performance. The result of this study indicate that ISO 9000 certified companies had better business results compared to non-certified companies.

Many studies corroborate the findings of this study. For example, Karapetrovic, Fa and Saizarbitoria (2010) conducted a longitudinal survey in 1998, 2002 and 2006. They collected data from companies based in Catalonia. Their findings bear out the results of the current research. They indicate that these companies achieved a significant increase in customer satisfaction, along with a decrease in defects and customer complaints.

Masakure, Henson and Cranfield (2009) offer empirical evidence from the textile, leather, agro-food and fisheries sectors of Pakistan. They collected data over the period 2000 to 2004. They propose that ISO 9000 certification

has a positive effect on organisational performance in terms of export sales. They stress that certification to this standard plays a vital role in establishing organisational credibility in the international market. In the current study the researcher has not specifically investigated the relationship of ISO 9000 certification with export sales; however, the variable of business results includes the overall increase in the company sales. Therefore, the findings of Masakure, Henson and Cranfield (2009) support the results of current study to some extent.

Lin and Jang (2008) support the findings of this study. They showed empirical evidence from Taiwanese companies that certification to ISO 9001 helps in the improvement of organisational performance. They propose that the constructs of the ISO 9001 standard like top management commitment, quality planning, continuous improvement and operational performance have a direct effect on business results. Many other studies like Srivastav (2010), Sun (2000), and Curkovic and Pagell (1999) provide empirical evidence to the claim that ISO 9000 certification can improve organisational performance.

However, there are many studies whose findings are contradictory to the results of the current study. For example Heras, Gavin and Casadesus (2002) indicate that there was no improvement in the organisational performance after getting ISO 9000 certification. Wayhan, Kirche and Khumawala (2002) have more specifically highlighted that there was no significant relationship between ISO 9000 certification and the financial performance of the companies. Similar results were reported by Han, Chen and Ebrahimpour (2007).

A detailed review of studies whose findings differ from the present research indicates that there are many differences in the methodology and approach adopted to investigate this relationship. For example, Heras, Gavin and Casadesus (2002) have taken an entirely different definition of organisational performance compared to the present study. They only consider the actual sales and profitability as indicators of performance whereas this research uses a comprehensive definition of organisational performance by considering the customer, people, society, financial and non-financial results together in one construct. Similarly Wayhan, Kirche and Khumawala (2002) have only taken financial results as the indicator for the organisational performance. Thus, the findings of those studies are not comparable with the current study.

The other possible reason for this variation in the findings could be the difference in the context of these studies. None of these studies are conducted in the textile sector or in the context of Pakistan. For example Han, Chen and Ebrahimpour (2007) conducted their study in the electronics, chemical and electrical equipment and components companies of the United States. Heras, Gavin and Casadesus (2002) did research in Spain and the data was collected from both manufacturing and service industries.

Masakure, Henson and Cranfield (2009) consider that adoption of certification to ISO 9001 is a function of firm, market, sector, product characteristics and regulatory pressures. In absence of regulatory compulsions and contractual requirements, the organisations need to be convinced that their existing systems are not adequate enough to achieve the desired organisational goals. Therefore, performance benefits from ISO 9001 certification vary, depending on the level of commitment and motivation towards the implementation of ISO 9001.

## **5) CONCLUSION**

This study provides empirical evidence that certification to ISO 9000 is associated with the achievement of business results. These findings are in accordance to the findings of many earlier studies like Karapetrovic, Fa and Saizarbitoria (2010), Srivastav (2010), Masakure, Henson and Cranfield, (2009), Lin and Jang (2009), Terziovski and Power (2007), and Chow-Chua, Goh and Wan (2003). This supports the premise of ISO that certification to ISO 9000 leads organisations to higher levels of performance. As majority of the studies from different country and organisational context supports the findings of this study thus universality of ISO 9000 is established. Certification to ISO 9000 might improve the credibility and image of companies in the international and local market, which might help to increase the overall sales of the companies. Similarly, smooth organisational processes with less waste helps the organisations to improve their profitability.



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