

# The Impact of Total Quality Management Implementation on Employees' Service Recovery Performance in Five-Star Hotels in Jordan

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## Abstract

The aim of this paper is to examine the impact of total quality management (TQM) implementations on employees' service recovery performance in five-star hotels in Jordan. TQM implementations and service recovery performance have received significant attention in previous research. However, the impact of TQM on service recovery performance has remained unexplored research area. A 67-item questionnaire, measuring TQM implementations and service recovery, was distributed to 400 employees in 12 five-star hotels in Jordan with a 63.5 response rate. Principle Component Analysis was utilized to determine the factor structure for both TQM and service recovery and Regression Analysis to determine the impact of TQM implementations on service recovery performance. The result revealed that the TQM implementations in five-star hotels in Jordan was implemented effectively and thus, have a positive impact on employees' service recovery performance. This result is attributed to be unique and this is due to the fact that previous studies have focused on manufacturing sector not on hotel sector in measuring either TQM implementations or service recovery performance. This paper suggests replicating the study in additional settings to determine if similar results will be obtained outside five-star-hotels in Jordan. Many of the previous studies on TQM and service recovery performance have been conducted in the context of western economies and very little research has been done in the Middle East in general and Jordan in particular. As such, there is a need to examine, from the employees' perspective, the levels of implementing TQM that are being encouraged in the hospitality industry and its effect on service recovery performance among employees towards their both employers and customers. The present paper contributes to filling the gap in the literature by measuring the TQM implementations and service recovery as a whole in a new context.

**Keywords:** Total Quality Management (TQM), Service Failure, Service Recovery Performance, Hotels, Jordan.

## 1. Introduction

Although financial crisis, rapid economic changes around the world and smart customers has created a pressure on the service organization to deliver services that are, of best quality, lowest cost and exceed customer expectations (Irfan, 2012). Normally, service failure will occur in service encounter and quality will not be high all the time. The reasons behind this are that no service system is perfect, employees make mistakes, systems breakdown and customers in the service process may cause problems for other customers. As a result, the planned service process may not achieve preferred results for customers and quality of service may not meet customers' expectations (Bell and Zemke, 1987). Consequently, service organisations need to consider methods for recovering mistakes that happen in the service encounter. The hardship of this lies in identifying and grouping appropriate methods for recovery, and also in the variability of customer perceptions of the offered services and in service provider perceptions of customer needs, as well as in their behaviours towards customers.

Hence, the realisation that service recovery is critical to the functioning of operations had led to a necessity for integrating total quality management (TQM) as potentially an effective choice in the service organisations (Irfan and Kee, 2013). To address service recovery issues and to meet the challenges set by smart

resources in adopting and implementing TQM strategies (Deming, Taguchi, Terziovski, and Zahra, 2006), for the purpose of gaining sustainable competitive advantage over their competitors (Powell, 1995), solving customer problems and changing the attitude of customers from being dissatisfied to the state of satisfaction (Al-Sabi, 2011). In the past, TQM has developed and identified as Quality Inspection, Quality Control, Quality Assurance, and TQM, TQM today is a comprehensive management approach that merges both Eastern and Western mentality, practice and the three core area of management; processes/operations management, human resources and strategic management (Dahlgaard, 1999; Dahlgaard Park, Kuang Chen, Jang and Dahlgaard, 2013).

TQM literature illustrates clearly that it is widely adopted and successful implementation aids to enhance organisational performance in almost all types of industries (Irfan and Kee, 2013). It is also evident in the literature that TQM benefited the organisations in gaining organisational performance through effective operations, financial results, customers and employees satisfaction (Brah, Tee, and Rao, 2002; Fuentes, Montes, and Fernandez, 2006; Huang and Chen, 2002; Karia and Asaari, 2006; Terziovski and Samson, 2000; Yang,

2006; Saizarbitoria, 2006 and Kongolo and Dalmini, 2014). Although recent studies verified that TQM approach is equally relevant to service sector (Samat, Ramayah and Saad, 2006), there is still a shortage of TQM in the service sector (Huq, 2005), and most of the TQM literature was related to manufacturing sector (Agus and Abdullah, 2000; Ljungstrom and Kelfsjo, 2002 and Kapuge and Smith, 2007). It is essential for the service organisation to incorporate TQM with Service recovery performance tactically and strategically to it is goal.

In the last decade there is an immense growth in the service sector around the world and according Central Intelligence Agency (CIA) database (2014), contribution of world services sector was 66.4% GDP of world economy where as Jordanian service sector is contributing 14.4% of GDP of Jordanian Economy which was 6.5% and 10.5% during the years 2012 and 2013 respectively. This indicator reflects the need for the service organisations in Jordan to adopt TQM as a strategy to improve the quality of services to their customers and diminish the need for service recovery performance. Compared to the developing and developed countries, this study is one of the first studies that establishes the link between TQM implementations and service recovery performance at five-star hotels in Jordan. This study extends the debate in the literature on TQM and service recovery performance in the context of five-star hotels in Jordan and empirical results of this study will focus on this phenomenon.

The objective of this study is to investigate the potential relationship between TQM implementations and service recovery performance at five-star hotels in Jordan. Results of this study will be extracted using multiple regression which that most simple, useful and quick technique to analyse the relationship between one dependant variable and other independent variables (Hair, Black, Babin, Anderson, Tatham, 2010). Structure of the remaining part of the paper starts with review of the literature on TQM and service recovery performance, followed by methodology section and finally, results and conclusion section highlights the finding of this empirical study.

## **2. Total Quality Management (TQM):**

As a response to real challenges such as high technology, globalisation, open international markets, and ultimately, intensifying competition many organisations have widely adopted Total Quality Management (TQM) (Anjard, 1998; and Thiagaragan et al., 2001). Many organisation started to adopt TQM as a quality and productivity improvement programmes in the early of 1980s and after the success in Japanese companies (Motwani, 2001; Kaynak, 2003; Karia and Asaari, 2006), and improving organisational efficiency within businesses (Yusof and Aspinwall, 2000).

Quality researchers have been introduced many definitions of TQM . However, different people can see TQM as different things (Eriksson and Hansson, 2003). For example, Oakland (2003: p.41) defined TQM as "a comprehensive approach to improving competitiveness, effectiveness, and flexibility through planning, organizing, and understanding each activity, and involving each individual at each level. It is useful in all types of organisation". In the context of this study, Al-Ababneh (2011: p. 34) suggested a comprehensive definition of TQM as "a management philosophy which involves a set of principles, techniques, and tools that are used for continuously improving the quality of processes, products, services and people by involving all employees to achieve superior customer satisfaction".

Thiagarajan and Zairi (1998) and Sila (2005) described that the Critical Success Factors (CSFs) of TQM as the best practices of TQM practice. Specifically, a Critical Quality Factor (CQF) is defined as a quality factor that is critical and absolutely essential to the success of TQM implementation (Thiagarajan and Zairi, 1998: p.291). The CSFs which are responsible for achieving business excellence are often linked with successful TQM implementation (Talib and Rahman, 2010). Thus, understanding TQM implementation and it is CQFs in order to determine the needed resources and commitment for achieving successful implementation (Zairi and Youssef, 1995).

Saraph et al. (1989) conducted an empirical study as the first attempt to classify and organise the CSFs of TQM in a systematic way) in both manufacturing and service organisations. They generated 120 organisational requirements (prescriptions) for effective quality management, by 162 quality managers and general managers representing 20 manufacturing and service organisations in the US.

They presented an empirical framework of these critical factors that are considered as a comprehensive set of TQM practices, which were classified into eight categories (or critical factors). These are as following: the role of quality department, the role of top management leadership, product/service design, quality data and reporting, supplier quality management, training, employee relations and process management. and. Many comparable studies followed Saraph et al.'s study to investigate the CSFs of TQM. Although there is some agreement about which critical factors constitute TQM, many studies still provided different sets of TQM factors. Each researcher confirms a selection of quality factors based on their judgement and experience in working with different organisations (Thiagaragan et al., 2001; Tari, 2005). However, there are common practices that can help to achieve the successful implementation of TQM, and these are people management, quality planning, leadership, customer focus, supplier management, process management and continuous

improvement (Claver-Cortes et al., 2008).

It was argued that very few studies have been conducted to indicate the CSFs of TQM in the hotel industry. For instance, one study was conducted by Cheung (2006) who confirmed four CSFs of TQM in the hotel industry. These were top management commitment and leadership, customer focus, employee involvement and continuous improvement. Another study was conducted by Shahbazipour (2007) who investigate the relationship between seven CSFs of TQM and successful TQM implementation in the hotel industry, specifically in three, four, and five-star hotels.

These factors were leadership, policy and strategy, information and analysis, customer focus, human resource management, supplier and partnership management, and process management. Wang et al. (2011) confirmed that TQM-adopting hotels focus on seven CSFs of TQM, and they are: leadership, employee fulfilment, internal/external cooperation, customer focus, process management, learning and continuous improvement. It can be noticed that there is no consensus between the studies in terms of what are the most critical successful factors of total quality management implementation. However, the researchers selected eight CSFs of TQM, namely: the role of quality department, top management commitment, supplier quality management, leadership support, quality planning, quality data and reporting, education and training and customer focus.

1. **The Role of Quality Department** plays an important role in facilitating quality management practices and this due to the visibility and autonomy of the quality department in an organisation that supports the effectiveness of the quality department through giving top management access to it, use of quality staff for consultation, and coordination between the quality department and other departments regarding quality management implementation (Saraph et al., 1989). It is necessary to set up a quality control system, a quality information system, a supplier-rating scheme and a quality information system because this could foster collaboration across departments by participating in cross-functional quality improvement teams, if the quality department takes it is role appropriately, and therefore quality management practices can be implemented successfully (Ho et al., 1999).
2. **Top Management Commitment** refers to the acceptance of quality responsibility by managers and this include comprehensive quality planning, quality schedule, evaluation quality and participation in quality improvement efforts (Saraph et al., 1989). Management commitment is critical factor to implement TQM practices successfully in an organisation, and therefore managers in top management must be committed to TQM implementation. consequently, they will be involved in TQM implementation as well as encouraging employee involvement in it too (Zhang et al., 2000). Therefore, top management commitment is considered as one of the major determinants of the successful implementation of TQM (Ahire et al., 1996; Tsang and Antony, 2001).
3. **Supplier Quality Management** includes supplier quality control, suppliers participating in product development, and purchasing policy emphasising quality rather than price (Saraph et al., 1989). Organisations can establish long-term cooperative relations with suppliers by focusing on good supplier quality management. The most important factors of selecting suppliers are: consider product quality, conduct supplier quality audit, give feedback on supplier performance and participate in suppliers quality activities (Zhang et al., 2000).
4. **Leadership Support** is a management task of maintaining and practicing an organisation's vision with respect to both leaders and customer requirements (Sadikoglu and Zehir, 2010). It is recognised the critical role of leadership in creating quality goals, values and systems for quality management implementation, and therefore many empirical studies confirmed that leadership support for TQM implementation is a an important factor in quality improvement (Zhang et al., 2000).
5. **Quality Planning** reported by Juran (1989) that the TQM framework includes three sets of processes, which are quality planning, quality improvement and quality control. The Trilogy of Juran focuses on setting goals, and this by identifying customer and their needs, and developing products/services and processes (Juran, 1992). Hence, quality planning uses TQM methods (i.e. practices, tools and techniques) such as quality mission/vision, quality policy, quality goals, business plan, communication strategies, strategy development and deployment, control and improve of plans (Tari, 2005; Sila, 2007). It communicates the organisation's strategy and objectives to all employees, measuring and recognising employee performance in order to make improvements and support quality programmes (Claver et al., 2003).
6. **Quality Data and Reporting** imply that the availability and the use of quality data that can help to solve their problems through feedback of quality data. Quality reporting can evaluate staff based on quality performance, and can provides timely quality measurement (Saraph et al., 1989). The availability and use of quality data could also improve the level of quality, more specifically, organisations reported that having an efficient quality reporting system enabled them to maintain data on error rates, vendors, warranty reports, customer complaints, scrap, defect or failures, cost of appraisal and cost of prevention (Motwani et al., 1994).
7. **Education and Training** includes statistical training, quality-related training for all employees, and trade

training (Saraph et al., 1989). Effective and efficient training programmes in quality educate employees and managers for quality management implementation. Thus, training in a TQM setting involves technical skills; for example, statistical process/quality control methods (i.e. control charts and Pareto diagrams), and design tools (such as design of experiments, and quality function deployment); communication; supervision skills (i.e. managerial problem-solving tools); new work procedures (teamwork); and customer relations (Flynn et al., 1994; and Goetsch and Davis, 2006). It is argued that most organisations realised that education and training are an important part of the TQM programme, and all employees should receive quality education and training in the form of 'quality awareness education' and 'quality management methods education' (Zhang et al., 2000).

8. **Customer Focus** includes different tools such as customer satisfaction surveys, analysis of customer complaints and compliments, competitor analysis, trade surveys and trials, that are working closely with key customers and market investigations (Goh and Ridgway, 1994; and Zhang et al., 2000). The main assumption to the implementation of quality management is maintaining a close relationship with customers in order to completely determine their needs, as well as taking into account customers' feedback on the current perceived product/service and how their needs are being met (Flynn et al., 1994).

The implementation of total quality management in the hospitality industry started when the American hospitality industry implemented quality assurance systems and achieved excellence outcomes (Walker and Salameh, 1990). The strategic reorientation of tourist organisations must include the achievement of competitive advantage, customer satisfaction and total quality (Camison et al., 1996). Breiter and Kline (1995) conducted a study on benchmarking quality management in hotels, they identified vision and values, customer focus and leadership as CSFs of TQM in hotels, followed by alignment of organisational systems, communications, training, implementation, and empowerment.

Other similar studies conducted in hotels to investigate the CSFs of TQM, for example, Cheung (2006), found that 63 per cent of variance of service quality explained by TQM, the study argued that TQM had a significant positive relationship with service quality, it also confirmed that TQM hotels achieved better employee relations, customer satisfaction, business performance, organisational and operational performance than non TQM hotels. In addition, TQM had a significant positive relationship with organisational citizenship behaviour and employee in role behaviour.

One more study conducted by Shahbazipour (2007) confirmed that the implementation of CSFs of TQM may have different impact on performance in different hotels, and different levels of relationship between each factor of CSFs and performance, and therefore the level of these CSFs are different from one hotel to another. For example, Iaver-Cortes et al. (2008) revealed that hotels with a high TQM commitment level had higher performance levels of factors such as managerial factors, gross operative profit, competitive performance and stakeholder satisfaction.

Mohsen (2009) on the other side identified the CSFs relating to TQM culture in five-star hotels, namely leadership, customer focus, teams, staff empowerment, training, staff suggestion, and reward schemes, and communication.

A proper Implementation of TQM provides many benefits for organisations such as eliminated defects, reduced wage and costs, reduced scrap and rework, improved service, increased productivity, fewer complaints, increased customer retention, improved employee commitment, motivation and morale, and more efficient and effective use of resources (Witt and Muhlemann, 1994; Walsh et al., 2002; Kaynak, 2003; 2006).

Another study by Antony et al. (2002) revealed similar findings to the potential benefits of successful TQM implementation. These include, improved quality, less rework, reduced costs of poor quality, increased productivity, improved customer satisfaction, improved competitive advantage, improved communication and improved employee involvement. ,and and. The main benefits of implementation of TQM in organisations could be achieved through improved training, communication, teamwork, creativity, innovation, decision making and trust (Karia and Asaari, 2006). It was empirically indicated that TQM practices enhanced job involvement, improved the level of job and career satisfaction, and encouraged greater organisational commitment.

### 3. Service Recovery Performance

Service failures are inevitable to occur in the service organisation and that is not uncommon in the service industry, especially when a high level of involvement of human contact is available (Cranage, Sujana and Godbey, 2005). When a service failure occurs, service recovery should immediately appear to make it up for the customer and avoid potential damage to the organisation. Service recovery has been studied in different ways and using different methodologies (Lewis and McCann, 2004).

In this study, service recovery is defined as "an organisationally owned process that is performed by all the employees in the organisation with the aim of identifying service failures, resolving customer problems, changing the negative attitude of dissatisfied customer to a state of satisfaction and retaining these customers" (Al-Sabi, 2011: p.45). As such, service recovery is seen as a subsystem operating under an overall organisational



system. While, the joints and bolts of this system are the service employees themselves, the doctrine that governs it is the organisational values and policies, and the hoped for final product is a satisfied customer.

Management should focus on service recovery efforts in the organisation, since failure in service recovery efforts makes the customer is dissatisfied for a second time. Consequently, the customers could be rating organisations lower than they would have immediately after experiencing the failure (Maxham, 2001), or/ and spreading negative word-of-mouth communication, defecting from the organisation for a competitor (Lewis and McCann, 2004). However, the results of service failure do not always have to be negative. For example, Magnini, Ford, Markowski and Honeycutt, (2007) and Ngai, Heung, Wong and Chan, (2007) confirmed that an effective service recovery could result in a win-win situation for the customer and the organisation.

Other researchers like Torres and Kline (2006); Magnini and Ford (2004) and Miller et al., (2000) also confirmed that well-executed service recovery could enhance customer satisfaction and loyalty; may have a direct influence on whether dissatisfied customers remain with or defect from an organisation (Yuksel, Kilinc and Yuksel, 2006); and could also lead to a higher level of satisfaction than the customer would have experienced if the service failure had not occurred (Baron and Harris, 2003; Lorenzoni and Lewis, 2004 and Schoefer, 2008). Service recovery could therefore possibly be seen as equal to, if not more important than, initially providing good service (Eccles and Durand, 1998).

Based on the Literature, service recovery identified a number of different service recovery methods (Bell and Zemke, 1987; Bitner et al., 1990; Kelley, Hoffman, and Davis, 1993; Johnston, 1995; Boshoff, 1997; Bowen and Johnston, 1999; Sparks, 2001; Dutta, Venkates, and Parsa, 2007; and Johnston and Michel, 2008). More clearly, service recovery methods can be categorised into two types; psychological service recovery and tangible service recovery. Psychological service recovery refers to attempts by the employees to resolve service failure by expressing concern for the customers and their needs. This can be achieved through acknowledging that a problem had occurred; apologising; showing empathy, listening to the customer; and/or providing reassurance that the problem had been/will be solved and should not occur again.

Tangible service recovery is defined as attempts by the employees to resolve service failure. This can be achieved by completing the primary service, re- performing the service and exchanging the product or refunding the cost in the form of compensation (Lewis and McCann, 2004; and Miller, Craighead, and Karwan, 2000; and Al-Sabi, 2011). In addition, Miller et al. (2000); Johnston and Fern (1999); and Bell and Zemke, (1987) state that psychological methods such as expressing concern by apologising and showing empathy for the customer's needs are critical and recommended in the service recovery process.

Seawright et al. (2008) stated that psychological methods are enough in some circumstance in the service failure- usually the minor ones - while customers usually expect additional effort besides an empathetic apology to rectify service failure situations. Otherwise, customers seem to be dissatisfied and believe that the apology was not sincere. Therefore, it is suggested that tangible methods are considered to be more supported and important in resolving most service failures incidents.

Tangible methods also include compensation of dissatisfied customer, including free gratis, coupon, refund, discount, upgrade, free ancillary and symbol atonement (Lewis and McCann, 2004). Accordingly, providing tangible methods can be illustrated as either the commitment of the service provider to carrying out their initial obligation to the customers or to provide fair restitution for the failure.

Implementing service recovery efforts effectively provide several benefit for the organisation such as well satisfied customer; customer retention and increase the profitability of the service organisation (Etzel and Silverman, 1981; Hart et al., 1990 and Al-Sabi, 2011).

#### **4. Total Quality Management and Service Recovery**

The main assumption in the service recovery literature is to achieve a satisfied customer. Empirically this has been examined and showed that effective service recovery performance will lead to make the customer more satisfied than if they had been served without any failures. The literature also shows that service recovery has achieved positive results in terms of it is relationship with many variables such as empowerment, word of mouth behaviour, loyalty, customer satisfaction, service quality, direct complaint behaviour, purchase intention, customer retention and many other variables (Hart et al., 1990; Bitner, 1990; Davidow, 2000; Zeithaml and Bitner 2003; Seawright, 2008; Al-Sabi, 2011), however, no attention has received for TQM implementations.

Although, the implementations of TQM on customer satisfaction, customer loyalty, employee satisfaction, organizational performance, organizational sustainability, competitive advantage, productivity, service quality, and service delivery have been tested, no single researcher has also considered service recovery performance in their studies. Most of the results of TQM implementations on the variables mentioned above have also achieved significant results. For example, a study conducted in service industry by Mercy and Taiye (2015) revealed a strong relationship between TQM implementations and customer satisfaction.

Another recent study revealed that high levels of TQM implementations have a significant and positive impact on customer satisfaction (Kim, 2016). Another point that it comes out from the previous studies

is that TQM implementations have positive impact on both service delivery and service quality which both are related strongly to service recovery. From here, this study is very keen to fill this gap and complete the main issues that are related to the service organisations. Although total quality management and service recovery have received considerable research attention especially in the developed countries in general, no studies could be found that consider the potential impact of total quality management implementations on service recovery in the hotel industry and the developing countries in particular (Powel, 1995 and Prajogo and McDermott, 2005).

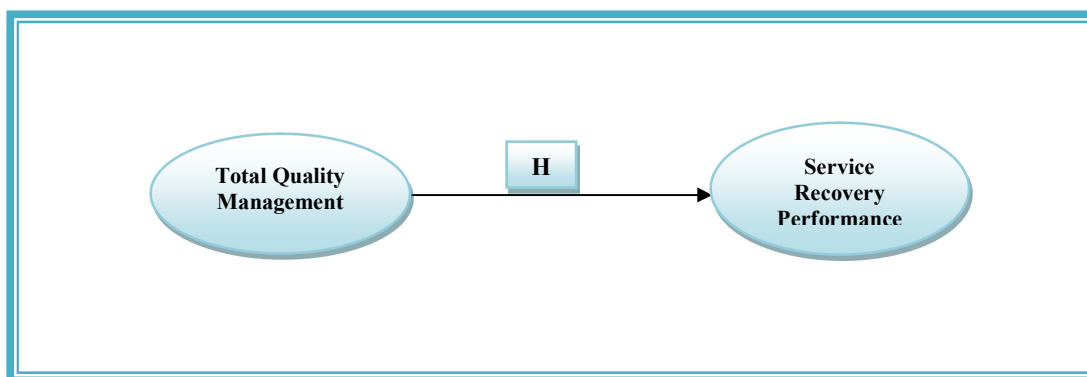
The hotel industry was chosen for this study, as this industry is perfectly convenient to measuring total quality management implementations for a number of reasons, including the fact that it is nature in terms of service inseparability, intangibility, perishability and heterogeneity is hard to be well achieved without the required attention from the employees and finally, many writers agreed that this industry involves a high level of contact with customers, which allows for the occurrence of service failure (Yoo, Shin, and Yang, 2006; and Lewis and McCann, 2004).

Accordingly, this study is considered as one of the first studies that measures the potential impact of total quality management implementations on service recovery performance at the hotel industry in Jordan. Based on the literature reviews highlighted above, the following the main hypothesis is proposed as shown in figure 1.

**H: Total quality management implementation will have a positive influence on employees' service recovery performance.**

Figure 1 illustrates the theoretical framework for this study. The independent variable was total quality management, while the dependent variable was service recovery.

**Figure 1: The Theoretical Framework**



## 5. Methodology

Several previous scales were used to measure the scales of this study. For TQM scale, 'The role of quality department', and 'quality data and reporting' selected from Saraph et al.'s (1989) scale. 'Supplier quality management' selected from Flynn et al.'s (1994) scale. 'Top management commitment', 'Customer focuses, selected from Ahire et al.'s (1996) scale. 'Education and training' selected from Zhang et al.'s (2000) scale. 'Leadership support', and 'Quality planning', selected from Claver et al.'s (2003) scale. In total, eight dimensions of TQM were assessed: the role of quality department (5 items), quality data and reporting (8 items), supplier quality management (4 items), top management commitment (6 items), customer focus (4 items), education and training (6 items), leadership support (4 items), quality planning (5 items).

Service recovery scale was measured as two dimensions as it was suggested in the literature review and has adopted the 5-item of Boshoff and Allen (2000) scale and other 20-item of Al-Sabi (2011) scale. Two dimensions of service recovery were assessed: tangible service recovery (5 items) and psychological service recovery (20 items). Two different likert scales were used for this study. TQM items were measured on a six-point Likert scale where 1= Not at all and 6= Very large extent, while service recovery items were measured on a five-point likert scale where 1= strongly disagree and 5= strongly agree. Demographic questions on gender, age, education, working department and work experience were also included in the second part of the questionnaire. The questionnaire was translated from English to Arabic using a back translation procedure.

### 5.1. Sample and procedure

The data were collected from a sample of all employees working in five-star hotels in Jordan. The sample size amounted to a total of 400 employees. The questionnaire was distributed and collected by the researchers, using a face-face approach. Of 400 distributed, 254 usable questionnaires were gathered and finally coded. This represents 63.5 percent of the total questionnaires distributed earlier. Data analysis included descriptive analysis, exploratory factor analysis, convergent and discriminant validity analysis and multiple regression analysis. All

tests were performed using SPSS.

## 6. Results:

### 6.1 Sample characteristics:

Data were analysed by using descriptive analysis in order to describe the study's sample. Table 1 presents the demographic profile of the sample.

**Table 1: Sample Characteristics (N=254)**

Characteristics		Percentage
Age:	25 or under	27%
	26-35	34%
	36-45	33%
	46-55	5%
	56 and more	1%
Gender:	Male	79%
	Female	21%
Experience: (number of years in five-star hotels)	Less than one year	7%
	2-4 years	31%
	5-7 years	30%
	8 year and more	32%
Educational Level:	Secondary School or less	63%
	Undergraduate	35%
	Postgraduate	2%
Working Department:	Front of the house	58%
	Back of the house	42%

Table 1 shows that 79% of respondents were male and only 21% were female. These numbers close to the hotels workforce statistics in Jordan, for instance, males consist of 92% and 8% is females (Jordanian Ministry of Tourism, 2015). 27% of survey respondents were 25 years of age and under, 34 % were between 26 and 35, 33% were between 36 and 45, and 6 % were 46 or over. The education reported by respondents showed 63 % had secondary school or less, 35 % had undergraduate degree and 2% had a postgraduate degree. For working department, 58% of working employees' had worked in front of the house and 42 % had worked in the back of the house. Finally, 7% percent of the respondents reported working in five star hotels in Jordan for less than 1 year, 31% between 2 and 4 years, 30 % between 5 and 7 years, 32 % reported working longer than 8 years. All aspects of this demographic profile reflect the known composition of the workforce in the Jordanian hospitality industry.

### 6.2. Validity and Reliability of the Scales

All the scales used in this study were originally developed in a western culture and successfully showed good validity and reliability results through different working contexts. However, as this study was conducted in a non-western culture, it is important to purify these scales and examine their validity and reliability.

To do so, an exploratory factor analysis was conducted to establish the construct validity and cornbach's alpha was used to assess the construct reliability. A principal component analysis with Varimax rotation was used to show the significant factor loadings for this study. The following tables present the final outcomes of the factor analysis after rotation.

**Table 2: Output of Factor Analysis for Total Quality Management**

Items	Factor loading			Communality
	Quality Policy $\alpha = .939$	Quality Commitment $\alpha = .917$	Quality Education and Training $\alpha = .910$	
QP4, A quality department is visible in our hotel.	.783	-----	-----	.764
QP5, Cost of quality data is available in our hotel.	.751	-----	-----	.748
QP12, Quality department in our hotel has access to departmental management.	.812	-----	-----	.749
QP20, Quality department in our hotel is independent.	.758	-----	-----	.746
QP21, Quality data in our hotel are always up to date.	.555	-----	-----	.553
QP28, This hotel supports coordination between the quality department and other departments.	.751	-----	-----	.801
QP35, Quality department in our hotel is effective in improving quality.	.612	-----	-----	.723
QP41, This hotel measures and recognises employees' performance in order to support quality programmes.	.569	-----	-----	.656
QC17, This hotel considers quality as the number one criterion in selecting suppliers.	-----	.593	-----	.727
QC18, Top-level management in our hotel evaluates hotel performance heavily dependent on quality.	-----	.591	-----	.708
QC23, Managers and supervisors in our hotel allow employees to make their own decisions.	-----	.687	-----	.530
QC25, This hotel relies on a small number of high quality suppliers.	-----	.698	-----	.580
QC26, Top-level managers in our hotel allocate adequate resources for improving quality.	-----	.666	-----	.759
QC33, This hotel has clear quality goals identified by top-level managers.	-----	.651	-----	.775
QC37, Top-level managers in our hotel often discuss the importance of quality at hotel-wide meetings.	-----	.657	-----	.707
QET3, This hotel encourages employees to participate in education and training.	-----	-----	.737	.749
QET6, Managers in our hotel are aware of the results of customer satisfaction surveys.	-----	-----	.743	.754
QET11, Resources are available for employee education and training in our hotel.	-----	-----	.587	.696
QET14, Customer complaints in our hotel are given to managers regularly.	-----	-----	.834	.729
QET22, This hotel actively seeks ways to improve our primary product/service in order to achieve greater customer satisfaction.	-----	-----	.750	.737
QET30, This hotel has been customer focused for the past two years.	-----	-----	.598	.655
Eigen-value	12.432	1.409	1.005	
Percentage of variance explained	59.202	6.710	4.788	
Cumulative (Total explained)	59.202	6.710	4.788	70.699

As shown in Table 2, the factor analysis presented three dimensions structure for total quality management implementations with an Eigenvalue exceeding 1. The extracted dimensions are however not



consistent with other studies that measured TQM scale in the hospitality industry.

The reason is that many studies still provided various sets of TQM factors and each researcher emphasises a selection of quality factors based on their judgement and experience in working with various organisations (Thiagaragan et al., 2001; Tari, 2005).

The first dimension is named, ‘quality policy’ and made up of three dimensions. These include: quality planning, role of quality department and quality data reporting. Item loadings on this dimension ranged from 0.57 to 0.81. The study found that the top management commitment, leadership support and supplier relationship dimensions also emerged to a single factor. The combined factor was named “quality commitment”. Item loadings were all above 0.59.

The last dimension is named, ‘quality education and training’ resulted of education and training as well as customer focus. Item loadings on this dimension ranged from 0.59 to 0.83. The obtained Cronbach alpha show that “quality policy”, “quality commitment” and “quality education and training” dimensions have clearly exceeded the minimum recommended value ( $\alpha = 0.70$ ). Following from this, these three dimensions are maintained.

**Table 3: Output of Factor Analysis for Service Recovery Performance**

Items	Factor Loading		
	Psychological Service Recovery $\alpha = .931$	Tangible Service Recovery $\alpha = .871$	Community
PSR1, I apologised for the inconvenience that the problem had brought to the customer	.849	-----	.730
PSR2, I listened to the customer and I got the point of the complaint	.894	-----	.827
PSR3, I admitted responsibility for the mistake	.777	-----	.656
PSR4, I expressed regret for the mistake that the hotel had made	.861	-----	.753
PSR5, I listened to the customer and I repeated what they wanted	.769	-----	.613
PSR6, Once the customer had the problem, I provided him or her with individual attention	.795	-----	.652
PSR8, I asked my managers to contribute to solving the customer problem	.673	-----	.509
PSR9, I told the customer what I had done to solve the problem	.524	-----	.336
PSR17, Considering all the things I do, I handled this dissatisfied customers quite well	.750	-----	.692
PSR18, I do not mind dealing with complaining customers	.681	-----	.604
TSR2, I gave compensation for a future stay in the hotel	-----	.839	.704
TSR3, I offered an upgrade to a higher room category	-----	.769	.707
TSR4, I gave compensation for the current stay in the hotel (e.g. discount, upgrade, F&B, ect).	-----	.793	.716
TSR5, I offered a discount for a higher room category	-----	.873	.800
Eigen-value	7.291	2.008	
Percentage of variance explained	52.079	14.340	
Cumulative (Total explained)	52.079	14.340	66.418

As shown in Table 3, the result of the factor analysis reveals dual-dimensional structure for service recovery performance with an Eigenvalue exceeding 1. The two dimension solution is consistent with previous studies which considered service recovery performance as dual-dimensional variable (Al-Sabi, 2011 and Miller et al. 2000). The only difference between this study and the previous studies was based on the number of the items that have been used to measure service recovery performance.

The first dimension is named in the previous studies psychological service recovery. Item loadings on this component ranged from 0.52 to 0.89. The second dimension is also named in the previous studies tangible service recovery. Item loadings on this component were above 0.76. The obtained Cronbach alpha shows that the

extracted dimensions have clearly exceeded the minimum recommended value ( $\alpha = 0.70$ ). Following from this, these two dimensions are maintained.

### 6.3. Convergent and Discriminant Validity

Following the process of checking validity and reliability of the constructs above, convergent and discriminant validity were conducted. The justification of using these two types of validity is to make sure that the results afterwards are valid. Hair et al. (2006) also pointed out that if the items within the concept are correlated (for examples 21 items of total quality management), then convergent validity is achieved, whereas, when the same items correlate with other concepts (for example service recovery performance) lower than their correlation with the summated scale of the concept they intended to measure (total quality management) then discriminant validity is achieved. Table 4 and 5 present an example of these types of validity by displaying the correlation coefficients among the 21 items for total quality management and 13 items for service recovery performance as well as the correlation between these items and summated scale of total quality management and service recovery performance. Table 4 and 5 present the final outcomes of convergent and discriminant validity of the variables of this study.

**Table 4: Convergent and Discriminant Validity of Total Quality Management**

		Correlations																						
		TQ M4	TQ M5	TQ M12	TQ M20	TQ M21	TQ M28	TQ M35	TQ M41	TQ M17	TQ M18	TQ M23	TQ M25	TQ M26	TQ M33	TQ M37	TQ M3	TQ M6	TQ M11	TQ M14	TQM 22	TQM 30	Total Quality Management	Service Recovery
Pearson Correlation	1	.763	.662	.656	.557	.745	.621	.609	.610	.617	.336	.433	.571	.610	.553	.549	.611	.550	.429	.533	.439	.782	.480	
Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
N	254	254	254	254	254	254	254	254	254	254	254	254	254	254	254	254	254	254	254	254	254	254	254	254

**Table 5: Convergent and Discriminant Validity of Service Recovery Performance**

		Correlations													Service Recovery	Total Quality Management	
		PSR1	PSR2	PSR3	PSR4	PSR5	PSR6	PSR8	PSR9	PSR17	PSR18	TSR2	TSR3	TSR4	TSR5	Service Recovery	Total Quality Management
Pearson Correlation	1	.857	.645	.722	.594	.690	.499	.300	.611	.569	.310	.406	.321	.300	.759	.455	
Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	
N	254	254	254	254	254	254	254	254	254	254	254	254	254	254	254	254	

As can be seen from the table 4 and 5 above, all the items of total quality management and service recovery performance are significantly correlated to each other and all the values among these items were above the acceptable level of 0.30. On one hand, table 4, shows that the correlation between the 21 items of total quality management and their summated scale 'total quality management' is higher than the correlation service recovery performance. While, in table 5 the 13 items of service recovery performance and their summated scale 'service recovery performance' is higher than the correlation with total quality management on the other hand, which both tables illustrate both convergent and discriminant validity. Thus, the results of convergent and discriminant validity analysis of this study indicate that all the constructs are valid.

### 6.4. Descriptive Statistics of the Study's Variables

Having established the validity and the reliability of the scales, descriptive analysis is another statistical test that was performed for the extracted dimensions and overall scales. Table 6, presents the output of the descriptive analysis.

**Table 6: Output of the Descriptive Analysis**

Scale	Extracted Dimensions	N	Mean	Std. Deviation
<b>Total Quality Management</b>	<b>Overall</b>	254	<b>4.48</b>	<b>0.768</b>
	Quality Policy	254	4.28	0.853
	Quality Commitment	254	4.43	0.827
	Quality Training and Education	254	4.84	0.792
<b>Service Recovery Performance</b>	<b>Overall</b>	254	<b>3.67</b>	<b>0.757</b>
	Psychological Service Recovery	254	3.79	0.826
	Tangible Service Recovery	254	3.37	0.931

From Table 6, it is necessary to note that all the scales of this research were computed by the means' scores of it is sub-scales. Therefore, Total quality management scale as three-dimensional was computed by summing up it is 21 items. The mean score for an overall scale is 4.48 with standard deviation (S.D) at 0.768. This illustrates the employees were believe highly that they have implemented quality policy, quality commitment and quality training and education effectively which implies in other words that the employees were highly convinced of their implementations of total quality management. At the dimensional level, the highest

score was reported by the employees for "Quality Training and education dimension " with a mean score 4.84, and S.D at 0.792. This explains that employees were well satisfied and appreciated of their education and training that they had received by their managers. In other words, managers at five-star hotels in Jordan have known how to focus on educate and train all employees at all levels in the hotels with an appraisal performance for achieving the required technical skills effectively. This followed by "Quality Commitment dimension" with a mean score 4.43 and S.D at 0.827. This also explains that the employees perception of this dimension were well received in terms of the quality policy and its content at all levels in the hotel and therefore implemented effectively. Finally, the lowest score of the total quality management dimension was reported for "Quality Policy dimension" with a mean score 4.28 and S.D at 0.853. This illustrates that the employees were highly convinced with their implementation, although it was the lowest not only in the mean score but also in the employees' perceptions of all the dimensions of total quality management.

The results of service recovery scale revealed that the mean score for an overall is 3.67 with S.D at .757. This means that the employees were able to perform the process of service recovery, to identify the problems, to resolve customer problems and to change customer dissatisfaction to a state of satisfaction and to retain these customers. At the dimensional level, it can be noted that the highest score was reported by the employees for "psychological service recovery dimension" with a mean score 3.79 and S.D at 0.826. This explains that the employees were highly preferred to use the psychological methods of service recovery more than tangible service recovery methods that scored by the employee a mean 3.37 and S.D at 0.931. In other words, the mean results of this study illustrates the sense of performing service recovery methods in terms of what is first and what is next? For example, when a customer face a problem, it is appropriate to begin with the psychological methods to rectify the problem such as; regretting and apologising for this problem, assuring that this problem will not happen again, and informing the guest what are we going to do or looking to do for correcting this problem. If all these methods were not working sufficiently in solving a customer problem, then it is very necessary to use the tangible service recovery methods that include compensation, discount, refund, upgrade, replacement and other methods.

### 6.5. Correlation Analysis among Variables

For further analysis of the relationships among the variables of the study, correlation analysis is performed. All the variables were subjected for this analysis. Correlation at this stage of the research gives an initial indicator of the relationships among the variables of the study. Table 7, presents the output of the correlations between variables

**Table 7: Output of the Correlations between Variables**

		Total Quality Management	Service Recovery Performance
<b>Total Quality Management</b>	Pearson Correlation	1	.480**
	Sig. (2-tailed)		.000
<b>Service Recovery Performance</b>	Pearson Correlation	.480**	1
	Sig. (2-tailed)	.000	

\*\*Correlation is significant at the 0.01 level (2-tailed)

As shown in Table 7, a significant correlation appears between 'total quality management implementations' and 'service recovery performance' ( $r = 0.48$ ). This indicates that total quality management implementations were implemented effectively by the employees and in return means that incidents of service failure followed by service recovery are well performed.

### 6.6. Testing Hypotheses

To test the hypotheses of this research, a multiple regression technique is performed. Multiple regression analysis is a statistical technique that can be used to analyse and measure a simple relationship between a single dependent variable and several independent variables (Hair, et al., 2010).

In other words, this measure provides an idea about how well the independent variable will contribute to the overall prediction. In this research, all the variables are metric and therefore divided into dependent and independent. Total quality management worked as the independent variable and service recovery performance worked as the dependent variable. Testing hypothesis is presented as follows:

**H: Total quality management implementations will have a positive influence on employees' service recovery.**

In this study, total quality management implementation is proposed to have a positive influence on employees'

service recovery performance. This hypothesis was tested by using regression analysis, but before performing the test, this study had checked the regression assumption of the dependent variable (service recovery performance). Table 8, presents the regression model statistics of service recovery performance.

**Table 8: Regression Model Statistics Dependent Variable: Service Recovery Performance**

Independent	Dependent				
	Service Recovery Performance				
	R	t	P Value	R <sup>2</sup>	F Ratio
Total Quality Management	0.480	8.032	0.000	.230	41.944

As shown in Table 8, the result of the regression analysis reveals that total quality management is a significant predictor of employees' service recovery performance. Statistically, it can be seen from table 7 above that the value between total quality management and service recovery performance is ( $\beta = 0.48$  and P value  $<0.01$ ).

Finally, the overall model statistic in Table 7, ( $R^2 = 0.23$ ,  $P = 0.000$ ), is supported the view that total quality management has a positive influence on employees' service recovery performance. Thus, the proposed hypothesis is accepted.

### 7. Discussion, limitations and recommendation for future research

In the literature of TQM and service recovery performance, many studies have measured these two variables in different industries but very few in the hotel industry (Irfan, 2012; Ebiringa, 2012; Irfan and Kee, 2013; Kongolo and Dlamini, 2014; Hart et al., 1990; Dutta et al., 2007; Magnini and Ford, 2004; Lewis and McCann 2004; Maxham, 2001; Cranage, Sujan and Godbey, 2005; Goh and Ridgway, 1994; Demirbag, et al., 2006). Therefore, this study is one of the first studies that measured TQM implementations and service recovery performance in the hotel industry.

In this study, which aimed to examine the influence of employees' total quality management implementations on service recovery performance in five-star hotels in Jordan, the results of the regression analysis provide a significant support for the effect of TQM implementations on employees' service recovery performance ( $R^2 = 0.23$ ,  $p < 0.000$ ). The probable explanation of this result is that the employees were fully able to handle and implement the critical successful factors of TQM effectively which in returns improve the ability of the employees to perform service recovery performance professionally. In this study, as long as total quality management is implemented well in five-star hotels in Jordan as long as there is improvements in the performance of service recovery. The results also reveal that the employees in five-star hotels in Jordan were believed that they are able to go through the process of quality policy, quality commitment and education and training quality (TQM) as well as service recovery performance.

Interestingly, this result provide a full support to the literature indicating that service recovery performance is most likely associated with an organisation that institutes an awareness of service recovery as an integral part of a quality strategy in the service operation (Bidin, 1995). In this respect, if TQM implementations were effective then service recovery performance can be considered as an important mechanism of quality strategy that allows employees to do whatever is necessary and appropriate to restore order at the point of interaction with the customer.

It is also indicated that encouragement and initiatives in the form of power and authority and the flexibility of work rules and procedures, ensures that they can perform better and probably beyond customer expectations (Bidin, 1995).

The results presented above reflect theoretical contributions to knowledge and reveal several important implications for theory and research on total quality management implementations and employees' service recovery performance. The main contribution of this study is that although previous studies have not considered research attention to study and measure the relationship between TQM implementations and employees' service recovery in the developed countries (Powel, 1995 and Prajogo, 2005), this study is one of the first studies that attempts to study and measure the potential impact between these two variables in the developing countries.

In addition, the results indicated that the total quality management implementation scale with three dimensions and service recovery performance scale with two dimensions are valid and reliable among employees working in five-star hotels in Jordan and give more support for the translated scales which can be used in future as valid measures in the developing countries.

It also showed that there is a strong relationship between employees' TQM implementations and employees' service recovery performance in five star hotels in Jordan. This result is unique due to the fact the most of the previous studies have not found this result before. In the light of the results of this study, a number of managerial implications can be highlighted.

First, it is important for the managers in all departments in the hotel to understand the need for finding

different ways to implement TQM effectively and that help to increase the performance for employee' service recovery performance. This can be done by focusing on the strength points during the implementations of the main dimensions of TQM.

For example, the first dimension is labelled 'Quality Commitment', in this dimension, it is required more improvements in terms of acceptance of quality responsibility by managers, establish quality policy for the hotels and publicise it is content to all employees at all levels in the organisation and finally to have an organised supplier control on the hotels at all levels; employees, customers and services.

The second dimension is named 'Quality Policy'. Managers are required to give access, to consult quality staff and coordinate with all departments regarding quality management implementations and to focus on hotels' goals, customers and their needs as well as services, this by communicating strategies to all employees at all levels, measure and recognising employees' performance in order to make improvements and support of quality programmes.

The third dimension is named 'Education and Training Quality'. In this study, the results revealed that this dimension was implemented effectively in five-star hotels in Jordan, however, still there is a room for improvement. Thus, managers in this dimension at all departments in the hotels are required to be not only highly educated and trained but also they must know how to focus on educating and training current and new employees at all levels in the hotels with an appraisal performance for the required technical skills; (such as statistical process/quality control methods), design tools; (such as design of experiments and quality function deployment) and communication and supervision skills; (such as customer problems- solving tools, new work procedures (team work), and employees relations.

Second, it is also necessary for managers at all levels in hotels to recognise the significant benefit is of employees' TQM implementation and employees' service recovery performance in terms of customer satisfaction, repeat visit intention, positive word of mouth and loyalty. Third, it is also important for managers to recognise the complementary role of the implementations of TQM, in providing significant results in terms of reducing the incidents of service failures followed by service recovery performance.

Although this study has identified theoretical contributions to knowledge and revealed several important implications for research on TQM and service recovery performance some limitations have arisen which may require more attention when understanding the study's findings. Dealing with them can draw and provide a clear direction for future research. Five star-hotels in Jordan, concentrating on employees, were chosen for this study and for better generalisations of the study's findings, this study suggests that testing and validating the research model of this study in other service contexts, such as restaurants, banks, hospitals, etc, both in Jordan and elsewhere, would be an interesting research area. Investigating this research model in other service contexts from both managerial and customer perspectives, rather than concentrating on the employee perspective, may expand our knowledge with regard to the relationship between TQM implementations and service recovery performance, as well as possibly requiring some modifications to the hypothesised model.

This study has measured the TQM variable and service recovery variable as a whole and that for the purpose of discovering it is effect on each other. Therefore, studying TQM and service recovery at the dimensional level and see their potential effects on each other would be an interesting research area. Moreover, future research could include empowerment approach and it is two dimensions; structural and psychological empowerment as a mediating variables between TQM and service recovery performance.

## 8. Conclusion

This paper aimed to examine the impact of TQM implementations on employees service recovery performance in five-star hotels in Jordan. Although TQM implementations and service recovery performance were tested empirically on other variables in different context such as service delivery, service quality and many others in different context, no single study have considered the potential impact of the relationship between TQM implementations and service recovery performance in five-star hotels in Jordan. Therefore, this paper tried to bridge this gap in the literature by examining the impact of total quality management implementation on service recovery performance from the employees perspective who are working in five-star hotel in Jordan. This paper has provided a significant new contribution and explored outstanding findings to the research on employee total quality management implementations and service recovery performance.

The results of this study have supported the relationship between TQM and service recovery performance. It bridged the gaps between the TQM and service recovery literature and the empirical findings. The current study was conducted only in five-star hotels in Jordan, and as such the results are not claimed to be representative. They do however provide insights that can form a clear direction of future research into this important research area. The researchers of this paper wish to other researchers and practitioners to use this contribution, build upon it, and shed further light on other important variables related to employees' TQM and service recovery performance in the hospitality industry. This paper suggests for future research to intervene empowerment and its two dimensions (structural and psychological empowerment) as a mediating variables in



the relationship between TQM implementations and service recovery performance.

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