

# Testing the Validity of the Theoretical Model for TQM CSFs in hospitality Industry and their impact on Customer Loyalty,

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**Abstract:** Total quality management (TQM) is a management philosophy which focuses on the work process and people, with the major concern for satisfying customers and improving the organizational performance. It involves the proper coordination of work process which allows for continuous improvement in all business units with the aim of meeting or surpassing customer's expectations. It emphasizes on totality of quality in all facets of an organization with the aim of reducing waste and rework to reduce cost and increase efficiency in production and service. Total quality management (TQM) has become popular in the hospitality industry. It proposes to elicit the cooperation and loyalty of employees for the sake of corporate goals via an educational, motivating and positively rewarding relationship entered into by managers with their subordinates. The aim of the study is to test and validate the introduced theoretical model in the first part of the research, the validity of such a model can provide guidance for managers, decision makers and quality practitioners aiming to implement TQM in 5-stars hotels business to achieve their quality objectives, a comprehensive review of literature on Leadership, human resource management, customer focus, supplier relationship management, process management, training and education, teamwork, organizational culture, benchmarking and communication were carried out to accomplish the objectives of this part of the research, a group of five 5- stars Egyptian hotels was used as a case study for primary data collection, the statistical package for social science (SPSS) approach was used for hypotheses testing, Furthermore, a future scope of this study is also presented at the end of the research.

**Index Terms-** Leadership, human resource management, customer focus, supplier relationship management, process management, training and education, teamwork, organizational culture, benchmarking, communication.

## 1-INTRODUCTION

Total quality management (TQM) is an integrated management approach that aim to continuously improve the performance of products, processes, and services to achieve and surpass customer's expectations. To accomplish this objective, some key factors that contribute to the success of TQM efforts are to be identified. These key factors are often termed as critical success factors (CSFs).

In the first part of this study a pilot study was conducted in five well known quality – oriented 5 – stars Egyptians hotels, the aim of this study was to try to benefit from the quality management experience possessed by these hotels managers particularly in the field of TQM practices and applications to help in identifying the TQM critical success factors with the greater direct and positive effect on 5-stars hotels performance using service quality as a performance indicator in order to establish a long term relationship between the hotels and their customers based on loyalty, so as to achieve this purpose, the pilot study was proceeded through 3 steps, where each step is based on the previous one,

### A- Step number 1:

Interviews were conducted with the top managers of these hotels in order to find answers for 2 main questions.

The first question was about the most common internal and external customer complaints exist in the 5- star hotels business that indicates to a shortage in a hotel performance?

The second question was about the hotels managers' point of view of the right mix of TQM critical success factors among those 22 factors affecting service industries, which helped in minimizing the above stated problems through enhancing the service quality as a main indicator to the level of hotel performance?

### B- Step number 2:

A constructed questionnaire was disseminated over 10 middle level and front line managers in each of the five hotels (50 questionnaires) to detect their awareness of the relative importance of the implemented TQM critical success factors that was used to handle internal and external customer's complaints through enhancing service quality offered by the hotels.

### C- Step number 3:

A 25 structured performance appraisal forms were introduced to each of the 5 hotel top managers with a total of 125 appraisal forms, to measure the impact of each of the implemented TQM CSFs on the staff performance, as to ensure the effectiveness of those TQM CSFs identified by hotels managers in step no (1&2) on quality of service as an indicator for hotels performance.

### Results:

#### As for step number 1:

The interviews that were conducted with the top managers revealed a considerable number of the most common internal and external customer complaints in 5-stars hotel business that should be effectively encounter through quality of service to achieve customers satisfaction, a great portion of these complaints are shown in the first part of the study (see IJSER magazine volume 4, issue 2, February edition)

The interviews that were conducted with the top managers of the five Egyptian Hotels also revealed a number of 15 critical success factors among those 22 factors effecting service industries with a greater relative importance to 5-stars hotels business performance. (Where their means were above 3 according to 5 likert scale), as shown in table (1).

**Table 1: the means are arranged in a descending order**

TQM critical success factors for 5-stars hotels business	MEAN
1- Leadership.	4.35
2- Customer focus.	4.21
3- Continues improvement.	4.18
4- Quality improvement.	4.05
5- Teamwork.	4.00
6- Organizational culture.	3.95
7- Benchmarking.	3.80
8- Information and analysis.	3.75
9- Training and education.	3.62
10-HRM practices.	3.52
11- Employee empowerment.	3.41
12- Employee involvement.	3.37
13- Communication.	3.15
14- Supplier relationship management.	3.05
15- Process management.	3.01

**As for step number 2:**

Due to the findings of the first step, the researcher designed a questionnaire composed of 15 constructs expressing the TQM CSFs with the highest means.

The internal reliability of each construct of the gathered 50 questionnaire forms with its different number of statements was measured; Cranach's alpha is calculated for each construct. In this model 15 constructs were focused on,

The table below shows that only 10 constructs among the 15 chosen ones have Cronbach's alphas larger than 0.7 (a level considered "acceptable" in most social science research) as shown in table (2).

**Table 2: The internal reliability of all constructs**

Constructs	Alpha cronbach	No. of items
1- Leadership.	0.821	8
2- Teamwork.	0.813	3
3-Training and education.	0.801	3
4-HRM practices.	0.795	3
5-Customer focus.	0.783	5
6-Organizational culture.	0.775	5
7- Benchmarking.	0.752	3
8- Communication. .	0.740	3
9-Supplier relationship management.	0.735	3
10--Process management. .	0.718	5

After checking the reliability of the items, it was needed to take the averaged scores of items for each of the 15 constructs stated in table (1) as the final score upon which we conducted further analysis. Table (3) shows the 10 TQM CSFs of the highest means.

**Table 3: The means and standard deviations arranged in a descending order**

TQM critical success factors for 5-stars hotels	Mean	St. dev	raking
1- Leadership.	3.887	0.147	1
2- Teamwork.	3.746	0.140	2

3- Training and education.	3.664	0.040	3
4-HRM practices.	3.604	0.006	4
5- Customer focus.	3.587	0.0115	5
6- Organizational culture.	3.541	0.098	6
7- Benchmarking.	3.445	0.020	7
8- Communication.	3.420	0.007	8
9- Supplier relationship management.	3.335	0.055	9
10- Process management.	3.171	0.013	10

It was clear from the previous results that there exists a relative importance for critical success factors when applying in 5-stars hotel business.

**As for step number 3:**

To study the impact of critical success factors on performance appraisal, the researcher used the gathered 125 performance appraisal forms to develop a multiple regression model, where performance appraisal is considered the dependent variable and the selected 15 critical success factors are considered the independent variables, the results obtained from the analysis shows that:

From analysis of variance, it is clear that the model is significant since (P-value=0.000, which is less than 0.05), this result is confirmed by (F calculated=11.507) which is greater than (F tabulated= 1.759)

From the coefficients of the model the researcher found that:

10 of the identified critical success factors which are leadership, customer focus ,benchmarking, process management ,supplier relationship management, organizational culture, HRM practices, training and education , teamwork and communication have a (P-value which ranges between 0.0002-0.0005) that are less than 0.05 which means that they have a direct and positive impact on performance appraisal.

From the analysis it was found that the rest 5 critical success factors which are quality improvement, employee involvement, continues improvement, information gathering & analysis , employee empowerment have a (P-value ranges between 0.123-0.567) that are more than 0.05 which means that they have no significant impact on performance appraisal.

**Research model and hypotheses**

Based on the above results, a conceptual framework was developed and a research model had been proposed to examine the extent to which the 10 TQM CSFs are implemented in 5-stars hotels business and to explore the relationships between identified TQM practices and company's performance by measuring the 'service quality' as a performance indicator. The proposed TQM research framework is depicted in Figure 1. This research model suggested that the greater the extent to which these TQM practices are present, the service quality of 5-stars hotels

business will be higher which will lead to a higher customer's satisfaction and loyalty. In this theoretical research framework, the independent variables are TQM practices and the dependent variables are service quality, customer satisfaction and customer loyalty respectively.

The main objective of the study was to establish the TQM implementation and evaluation model for 5-stars hotels business. The four research question of this study was articulated as follows:

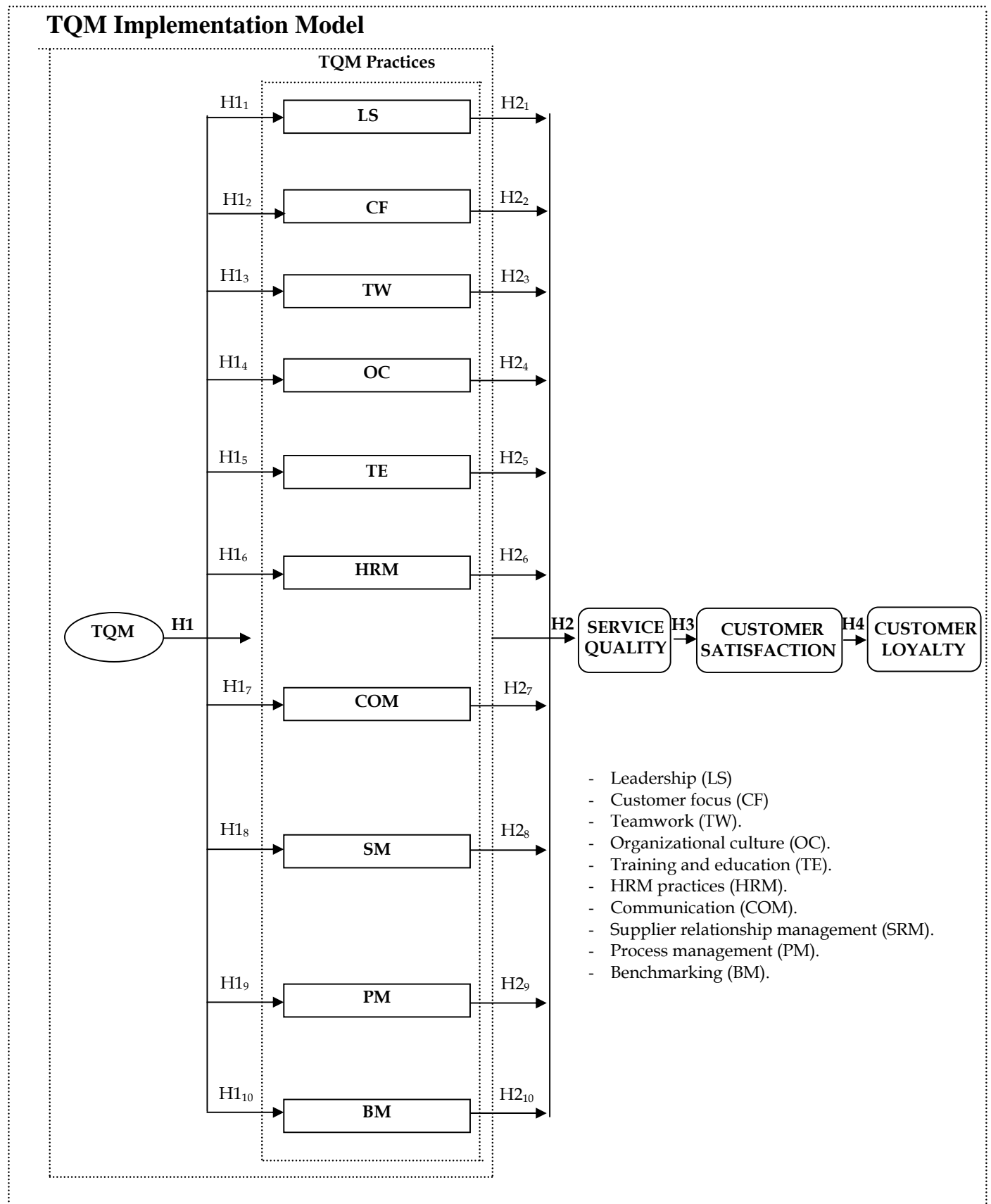
- 1- What are the most important TQM CSFs effecting the 5-stars hotels business?
- 2- Is there a relationship between the identified CSFs and service quality?
- 3- Is there an impact in applying the identified CSFs on customer satisfaction?
- 4- Is there an impact in applying the identified CSFs on customer loyalty?

Though, there exist a number of TQM practices but the identified 10 practices were selected as the study result and were nominated for better quality oriented results. That led to the following hypotheses:

- H1: There should not be any significant difference in the 10 TQM CSFs implemented by 5-stars hotels
- H1<sub>1</sub>: Leadership practices in 5-stars hotels are significantly implemented.
- H1<sub>2</sub>: Customer focus in 5-stars hotels is significantly implemented.
- H1<sub>3</sub>: Teamwork in 5-stars hotels is significantly implemented.
- H1<sub>4</sub>: Organizational culture in 5-stars hotels is significantly implemented.
- H1<sub>5</sub>: Training and education in 5-stars hotels is significantly implemented.
- H1<sub>6</sub>: HRM practices in 5-stars hotels are significantly implemented.
- H1<sub>7</sub>: Communication in 5-stars hotels is significantly implemented.
- H1<sub>8</sub>: Supplier relationship management in 5-stars hotels is significantly implemented.
- H1<sub>9</sub>: Process management in 5-stars hotels is significantly implemented.
- H1<sub>10</sub>: Benchmarking in 5-stars hotels is significantly implemented.
- H2: There is a significant positive relationship between identified TQM practices with Service quality of 5-stars hotels.
- H2<sub>1</sub>: Leadership practices are positively correlated with Service quality.
- H2<sub>2</sub>: Customer focus practices are positively correlated with Service quality.
- H2<sub>3</sub>: Teamwork practices are positively correlated with Service quality.
- H2<sub>4</sub>: Organization culture practices are positively correlated with Service quality.
- H2<sub>5</sub>: Training and education practices are positively correlated with Service quality.
- H2<sub>6</sub>: HRM practices are positively correlated with Service quality.
- H2<sub>7</sub>: Communication practices are positively correlated with Service quality.
- H2<sub>8</sub>: Supplier relationship management practices are positively correlated with Service quality.
- H2<sub>9</sub>: Process management practices are positively correlated with Service quality.
- H2<sub>10</sub>: Benchmarking practices are positively correlated with Service quality.
- H3: There is a direct correlation between service quality and customer satisfaction
- H4: There is a direct correlation between customer satisfaction and customer loyalty.

The framework for the hypotheses as presented in figure 1:

### TQM Evaluation Model



## 2- Literature review

### 2-1-Leadership:

There are various definitions of leader or leadership and some of them are as follows:

"Leader is someone who can take a group of people to a place they don't think they can go. Leadership is we, not me; mission, not my show; vision, not division; and community, not domicile." Bon Eaton, CEO Daimler Chrysler.

(Kotter, 1996) describes leadership as "a process for influence, without forcing, one or several groups of people in one direction".

(Wiberg, 1992) discusses the difference between management and leadership. Management, according to (Wiberg, 1992), is to orientate an operation in the surrounding world. Leadership is personal and deliberate influence on co-workers to perform a work result.

Modern management concepts, such as TQM, are built to a great extent on co-worker involvement. One role of the management is to create conditions for facilitating involvement from all members of the organization in, for instance, decision-making processes, empowered work teams or through delegated authority.

For TQM to be introduced successfully there has to be top management commitment and this is to be demonstrated through active involvement, setting clear goals and a vision for the organization and integrating TQM into the strategic quality planning process. Everything starts with a committed and passionate leader of the business organization, a leader who is really committed to making fundamental changes (Steven Stanton in Watts, 1996; Thiagarajan & Zairi, 1997). Senior managers are actively involved in promoting the importance of quality and customer satisfaction and they devote a substantial part of their time to quality-related issues.

Each manager, including the president, must establish a personal vision for the TQM effort. Managers should be expected to work hard at defining what their vision is, both as individuals and as the collective management team. The management team, especially upper management, will be viewed as being those who are ultimately accountable for the success or failure of the TQM program, and they are responsible! These managers need to be empowered to create their visions, openly discuss them, and link their actions and behaviors to the TQM effort (Anjard, 1998).

Researchers have stressed the importance of organizational leadership as being fundamental to the success of firms, even more so for industries that is global and dynamic. The hospitality industry is complex, dynamic, and global; as a result it becomes challenging for the firms of the industry to sustain their competitiveness on a continuous basis. The key to being a leader lies in the firm's ability to manage change as suggested by (Olsen, West and Tse, 1998). Given the forces of change that have impact on businesses within the hospitality industry, it is essential to identify firms leadership characteristics that help in sustaining competitive advantage in a dynamic global/ local environment.

### 2-2-Training:

"Training is the process that provides employees with the knowledge and the skills required to operate within the systems and standards set by management." (Sommerville, 2007).

"Training, in the most simplistic definition, is an activity that changes people's behavior." (McClelland, 2002).

Training is a technology that transforms the individual into a useful subject by making him/her visible and controllable in order to reduce the gap between the current and the expected state (Kelemen, 2003).

The main objective of any training programs is to transfer work-related skills, knowledge, or information to staff in order to improve their performance (Janes, 2003).

Training is also beneficial for both staff and managers. Some organizations find that organizational change, organizational culture, competition, guest demands to improve quality, product expansion, or problems, staff suggestion and technological changes stimulates the need for training. However, there are some barriers to training. They are lack of time, high staff turnover, high business demands, cost, and a lack of training resources (Janes, 2003).

Staff training is a significant part as well as the key function of Human Resource Management and Development; it is the crucial path of motivating employees and increasing productivity in the business. (McClelland, 2002)

The role of training in TQM implementation is crucial to any change effort according to the literature (Taylor & Wilson 1996). Introducing new systems such as TQM when people do not have the fundamental skills to work in the new system is a prescription for disaster (Thiagarajan & Zairi, 1997). There should be no doubt that for TQM to succeed, the entire workforce must acquire new knowledge, skills and abilities. Training and education based on total quality must be planned and provided if this is to be realized (Thiagarajan & Zairi, 1997). Top management of best organizations, recognizing the link between education and successful TQM, also focus their implementation process around it (Thiagarajan & Zairi, 1997).

In modern hotel business, it is all about competence in people, and especially the employees' qualities. The level of service quality depends on the qualities of employees. The qualities are about knowledge, skills and thoughts which lead to a hotel's survival and development. Therefore, staff training is essential in many ways; it increases productivity while employees are armed with professional knowledge, experienced skills and valid thoughts; staff training also motivates and inspires workers by providing employees all needed information in work as well as help them to recognize how important their jobs are. (Yafang Wang, 2008.)

While most organizations train their employees in functional and managerial skills, TQM hotels focus their training efforts on quality.

### 2-3-Customer Focus:

For organizations to be successful in today's marketplace, they need to be customer-focused. This can be achieved by delivering superior value to their target customers (Kotler et al., 1999). Organizations are created to achieve objectives, missions, or visions but they will only do so if they satisfy the needs, requirements and expectations of their stakeholders. Their customers, probably their most important stakeholder, will be satisfied only if they provide products/services that meet their needs, requirements, and expectations. Customer focus means directing organizational resources into satisfying customers and understanding that profitability or avoidance of loss comes from satisfying customers. The approach means that everyone in the organization needs to be customer focused, not simply the top management (Hoyle, 2007).

Effective customer focus demands organization-wide commitment, appropriate managerial and employee behavioral performance, and the implementation of effective strategies, within the marketplace (Strong, 2006).

Even when management fully understands customer expectations, service quality problems may occur. This is because management may believe that they know better about community requirements and that it is impossible or impractical to meet all of the expectations. The organization did not set its service specifications according to customer needs; instead, it allowed the service to suffer because of an assumption about who knows best (Rawlings, 2008). Since the possibility of having organizations in search for a customer focus strategy is present (Liang and Tanniru, 2007).

The primary purpose for introducing TQM is to achieve complete customer satisfaction. This will in turn impact on business organizations' level of competitiveness and prosperity.

Satisfying customers' requirements better than the competition can be widely recognized today as a key to success in the marketplace (Peters, 1989). (Peters and Waterman, 1982) emphasize that best organizations align their corporate strategies to their customers' requirements (Thiagarajan & Zairi, 1997). An external customer service program should include providing customers with timely information and quick responsiveness to complaints, and maintaining a corporate goal to reduce the quantity of questions or complaints while recognizing all successful efforts by employees in providing outstanding service (Kasul and Motwani, 1995; Motwani 2001).

The power now enjoyed by customers has raised expectations, and these expectations often determine whether customers will stay at a particular hotel, according to (Cooper et al., 1996). Customers are travelling more widely, returning with new ideas and new standards regarding accommodation provision. This means that hotel customers are becoming much more discerning and demanding. Competition has thus increased in the hotel industry around the globe, and this has forced hotels to offer better amenities, superior service, and loyalty

programs at a price that reflects value (Chaisawat, 1998; Presbury et al., 2005).

### 2-4-Human resource management:

As Gary Dessler described "HRM is the policies and practices involved in carry out the 'people' or human resource aspects of a management position, including recruiting, screening, training, rewarding and appraising." These practices and policies include conducting job analysis, selecting suitable and required candidates, orienting new employees, plans and implementation of training and developing, managing salaries, providing employees' benefits and awards etc. (Dessler, 2006).

A number of commentators suggesting that only the integration of HRM and TQM managed organization will be able to survive in the future (Redman and Mathews, 1998). The HR professionals played a central role in creating and communicating the TQM vision of the company (Palo and Padhi, 2005)

Therefore, the human resource function must take the lead in activities such as job design and teams that promote cooperation empower employees to provide information, participation and autonomy, select employees that can adapt to the organizational culture, foster programs of training and development with quality goals and define appraisal and compensation policies which support quality targets. A fruitful cooperation between HRM and TQM can produce better organizational results. The alignment of HR and quality policies, such as creating and communicating the TQM vision, preparing the organization and employees for TQM implementation and generating quality awareness among the employees across all levels, functions, and departments, should contribute to an increase company performance (Palo and Padhi, 2005).

The role of the HRM department is therefore central to the success of total quality. TQM and HRM are in pursuit of the same goals - productivity, profitability, a customer-oriented company and a motivated workforce (Herbig, 1994).

Human resources play four important roles in TQM hotels: strategic partner, quality manager, change agent, and employee advocate (Partlow, 1996).

The hotel industry is undoubtedly a labor-intensive industry. Its success depends "on the social and technical skills of its personnel, their ingenuity and hard work, their commitment and attitude" (Gabriel, 1988; Anastassova and Purcell, 1995; Mohinder & Katou 2007).

It is also true that in a labor-intensive industry, the effective utilization of human resources can give an organization its competitive edge (Schneider and Bowen, 1993; Mohinder, 2004). "By effectively linking HRM with organizational objectives and needs, human resources can be recruited, developed, motivated and retained towards gaining a competitive advantage" (Cheng and Brown, 1998; Mohinder & Katou, 2007).

Thus, the success of the hotel industry depends on the quality of its employees and their effective management in order to assist the organization to achieve its objectives (Berger and Ghei, 1995).

### 2-5-Teamwork:

Teamwork typically involves groups of interdependent employees who work cooperatively to achieve group outcomes (Parker and Wall, 1998). Effective team implementation can enhance the motivational properties of work and increase job satisfaction. However, the job satisfaction of team members is determined by multiple factors such as the composition of the team, group processes within the team, and the nature of the work itself (Campion et al., 1993; Gladstein, 1984). Because these factors operate in combination, there is no simple process through which teamwork influences job satisfaction.

Teamwork is a critical element if TQM is to succeed (Crosby 1989). Teamwork promotes a bottom-up thrust for quality improvement and delivers synergistic enhancement of quality efforts (Thiagarajan & Zairi, 1997). Successful organizations are run with teams – for solving problems, for improving quality, for introducing new processes and products (Hoevermeyer, 1993).

Compared to employees who work individually, effective teams tend to have higher morale and productivity, and take pride in the job and the company. Employees who involve themselves in quality group activities are also better convinced of the benefits of the quality process (Thiagarajan & Zairi, 1997).

Quality teams are often interdepartmental, and a quality assurance system makes it difficult for divisions to see themselves as independent operations (Partlow, 1993).

"The company has learned that not everyone wants the responsibility of being on a strategic-planning team and that some managers are better suited to a team approach--particularly as facilitator or coach--than others (Partlow, 1993).

"We use screening methods in hiring to determine who shares in our values, and we use predictive instruments to tell if people are well suited to teamwork. That's a breakthrough," he said. "We also spent more time building the relationship of the team. We took for granted that if you were already a good Ritz-Carlton employee, you already understood our concept of lateral service. So when we put a group of cross-functional people together in a team, we figured they would just naturally work together as a team and go forward. But what we found was that we had to spend more time to allow the team members to get to know each other and learn how to build and maintain support before they could really get the kind of improvement we wanted (Partlow, 1993).

According to (Breiter et al., 1995), Bergstrom's team workshop focuses on recognizing individual strengths, the principles of building a successful team, day-to-day team techniques, and how to put those techniques into action. The problem-solving session teaches participants how to solve problems, whether personal or professional, effectively and a five-step method, beginning with analysis and ending with implementation, provides the framework for the workshop (Breiter et al., 1995).

### 2-6-Communication:

Earlier studies indicated that communication is an essential element in the practice of internal communication within an organization. (Woodruffe, 1995) defines internal communication as treating employees with an immense value through the practices of programs to attain organizational objectives. Internal communication should not hinder the understanding of the overall organizational functions but establish clear communication linkages and internal relations to strengthen the organization. At one time, internal communication was considered a backwater in the communication world. (Michael, 1995) states that in the past, top management seldom revealed its plans to employees because they did not have to know necessarily but in a today's changing business environment, an employee communication function needs to be compelling, thus, organizations can take a look at communicating with employees. Several structures and policies need to be followed to ensure the effectiveness of internal communication such as employers ensuring that employees receive copies of strategies, plans, missions, and goals to be reached, besides that (Howard, 2000) states that, employers need to make face-to-face communications with the internal publics to maintain their effective internal communication.

It is in fact that the backbone of their internal communications programs. Moreover, it could help managers to develop a positive working relationship with their employees, as it offers for an enhanced two-way communication.

The more communication is integrated organization-wide, the better it would be for the culture of TQM inside the organization as people's attitudes and behaviors are clearly influenced by communication levels (Oakland, 2003). The key feature of communication is that it helps managers and staff achieves organizational objectives by facilitating information-sharing between them both (Johnston et al., 2007).

For sharing information to be successful, management should target the right audience with the right message in the right way at the right time. Failure to communicate effectively creates unnecessary problems, resulting in confusion, loss of interest and eventually in declining quality through apparent lack of guidance and stimulus (Oakland, 2003). If an organization aims to introduce a TQM culture in its operations, appropriate levels of communication would be required for managers to explain to their staff the need to focus on processes and improving their performance. Managers also need to share information about the new culture with their staff to reduce their resistance to its adoption (Oakland, 2003).

Generally, a development in a hotel industry is likely to affect communication needs and patterns. The rapid developments in the hotel industry can be concluded as the crowing of effective communication. Employees in a hotel industry are duty bound to communicate effectively to their customers (Proctor and Doukakakis, 2003).

Hotel staff should have the opportunity to share information with their managers (bottom-to-top). This information can be in the form of ideas, suggestions and

comments that staff quotes on how to improve the quality of service in the hotel they work in.

### 2-7-Organizational culture:

The term corporate culture is one of the most frequently used cliché's, with precise definitions varying within the normative literature. (Johnson and Scholes, 1984) define corporate culture as being 'the deeper level of basic values, assumptions and beliefs that are shared by members of an organization'. These values, assumptions, attitudes and beliefs are reflected within an organizational culture. In fact, they are manifested in many ways such as the rites, rituals and routines that take place within an organization, the language used the stories, legends and myths that are told and re-told, the symbols, logos and artifacts that are found throughout the company. Therefore, an organizational culture is considered to be a set of collective norms that govern the behavior of people within the company. An organizational culture is characterized by members' shared ability to understand specific concepts within the organization (Karathanos, 1998).

The key feature is that culture is taught to new members as the correct way to behave, thus perpetuating organizational survival and growth (Maull et al., 2001).

A strong organizational culture enables the smooth flow of information and nurtures harmony among its members (Karathanos, 1998). Improvements in work culture and internal communication thus improve customer (internal and external) satisfaction, which is essential for market growth and profitability in the long term (Lakhe and Mohanty, 1994).

According to (Miconnet, 2001), a new common set of core values based on mutual agreement must be formulated to establish the quality culture proposed in TQM. According to (Hill, 1991), it is the task of the top management to design a structure and establish a culture that will maximize the effective participation of all employees in the pursuit of quality (Dygert, 2000) claims that the development of a quality culture in an organization most often requires a dramatic change in the way people in the organization see the world and their roles in it.

While TQM has separate origins from the culture movement, the two fields have recently converged with the idea that to achieve "excellence" and "quality", it is necessary either to change or work with the culture of an organization (Lewis, 1996). Implementation of TQM requires changes to the shared assumptions, frames of reference, and understanding that most organizations have developed through interaction with their environment. These changes will impact basic beliefs and values that employees hold about work. (Ngowi, 2000) This is why many companies are now attempting to identify their organizational culture prior to implementing their TQM programs (Maull et al., 2001).

The implementation of TQM is not an easy task, as it requires a total change in organizational culture, shifting of responsibility to management, and continuous participation of all in the quality improvement process (Lakhe and Mohanty, 1994).

### 2-8-Process Management

A process is a series of interconnected activities that takes input, adds value to it and produces output. It's how organizations do their day-to-day routines. Your organization's processes define how it operates.

Much of the work within an organization can be looked upon as a process, which means a repetitive sequence of activities (Bergman & Klefsjo, 2003). The goal of the process is to produce products or services, which should satisfy the customer. The corollary of focusing on processes is that the focus is not on results. Instead the result is the dependent variable. The result comes from whatever process is followed; process drives result (Shiba et al., 1993). The process generates data that indicates how well the process is satisfying its customers. This means that we should not look upon every single piece of data, for instance a customer complaint, as something unique but instead as a part of the statistics, which can give information about how well the process is working and how it can be improved (Bergman & Klefsjo, 2003). The process orientation and focus has become even more focused on in the currently dominating improvement program Six Sigma.

Processes define how organizations function and projects are the means by practices have been described as perhaps the most important management idea of the last 20 years (Cole and Scott, 2000). The notion of process management can be traced back to the evolving quality movement and its advocated shift in focus from product characteristics (i.e. the output) to process characteristics (i.e. how value is actually created in organizations) (Shewhart, 1931). This shift was emphasized further by the next generation of scholars in the quality movement, suggesting that the whole organization should be viewed as a system of processes (Ishikawa, 1985; Deming, 1988; Juran, 1989). With this view as a basis, process management involves concerted efforts to define and map processes; identify bottlenecks and improve; and designate process owners (POs), thus creating a management structure for the value flow that crosses between departments (Benner and Tushman, 2003).

It is not enough for an organization to do better than it did previously. The external demands an organization faces are continuously increasing. Consequently, an organization needs to continually try to improve the quality of its product and processes (Imai, 1997; Bergman & Klefsjo, 2003). The continuous improvement of the process leads to customer satisfaction, which results in an external quality improvement. The continuous improvement of the process also leads to fewer defects, which results in an internal quality improvement (Dahlgard et al., 1994).

If employee involvement is a key to the attainment of customer satisfaction, managing by process is a key to engaging an organization's employees to take responsibility for what they are doing in relation to satisfying the customers (Oakland and Beardmore, 1995; Juran, 1993; Thiagarajan & Zairi 1997).

## 2-9-Supplier relationship management

Most organizations today are faced with increasing competitive challenges and opportunities. To become or remain competitive, organizations have had to learn to adapt and improve performance in numerous ways, including rapid product development (faster to-market), reducing delivered costs, and providing higher product and service quality. As the discipline of supply chain management continues to evolve, there is an increasing awareness of how customers can effectively work through suppliers to achieve the needed performance and business results (Stephen K. Hacker, 1999).

In the evolution of the customer-supplier dynamic, we have seen a significant change in the nature of relationships between customers and suppliers. In the past, customers commonly relied upon their power to award business or to take it away in supplier relationships, often setting up win-lose conditions. As a result, adversarial climates frequently developed (Jeff T. Israel, 1999).

Today, more and more buyers and sellers come together for mutually beneficial reasons based less on the customer's power and more on a symbiotic relationship based on value exchange. When the buyer-seller relationship becomes strategic in nature, we can describe the customer and supplier as "business partners". At this point, trust becomes a central component to customer-supplier relationships. A significant level of mutual intention is required for organizations to proceed in trust building initiatives. Trust can be very fragile. Once business partners start down the trust-building road, direct and implied promises must be kept. Failure to stay the course can lead to a deterioration rather than improvement of trust (Laurent Couturier, 1999).

In any alliance between two organizations, trust is an essential ingredient to the success of the joint endeavor (Cyr 1999; Norauskys 1998). When a high level of trust exists, each party is convinced the other is committed to mutual success. This feeling is strengthened by the fact that their successes are often interdependent. A customer with a high level of trust is a customer that tends to increase purchases. A supplier that does well has the resources and commitment to produce a quality product of value for the customer. Both companies win when they create and sustain a climate for cooperation and trust.

Developing a positive trust attitude encourages your counterpart to reciprocate trust toward you (De Furia, 1996). When customers and suppliers trust each other, the degree of complexity of their negotiations decreases (Buttler, 1999). This allows them to discuss important matters for mutual success rather than a host of little details (which may relate to concerns of how to control the other's behavior). Thus in the presence of trust, negotiations consume less time and resources.

A major task in improving supplier performance was to change these unsatisfactory relationships (Langfield-Smith and Greenwood, 1998). With trust, sensitive and proprietary information is offered freely with little fear of abuse of sensitive technical information. The customer receives higher value and higher quality products.

No total quality process is complete if it does not address the issues related to the process of managing suppliers (Elshennawy et al., 1991). This notion stems from the quality management philosophy of "prevention rather than detection". TQ organizations aim for "design and purchase" quality, rather than "inspecting" quality to produce services and products that meet customer requirements (Thiagarajan & Zairi, 1997).

## 2-10-Benchmarking

Benchmarking is an integral part of a total quality process (Bank, 1992; Beadle and Searstone, 1995; Bendell et al., 1993; Kleiner, 1994; Mitchell, 1995). But what is benchmarking? A continuous, systematic, process of evaluating companies recognized as industry leaders, to determine business and work processes that represent best practices, establish rational performance goals (Zairi, 1994).

The primary objective of benchmarking is performance improvement. Identifying opportunities for performance improvement by comparing one organization's performance with that of another is a reflex of TQM (Bank, 1992). (Zairi, 1994) draws the link between TQM and benchmarking: TQM is the wheel of improvement for doing an internal value-adding activity for the end customer. Benchmarking ... is the external activity for identifying opportunities and ensuring that the wheel of improvement is turning in the right direction and is making the necessary effort towards the end destination, i.e. achieving high standards of competitiveness.

Many best organizations are using benchmarking as a tool for obtaining the information to be used in the continuous improvement process, and to gain competitive edge (Booth, 1995; McNair and Leibfried, 1992). They are attracted to it because it stimulates and challenges the improvement process (Smith, 1994).

According to American productivity and quality center (APQC), "benchmarking is the process of identifying, understanding and adapting outstanding practices and processes from organization anywhere in the world by a firm to improve its performance" (APQC, 1993). In other words, best practices are the benchmarks that should be adopted by a firm as the standards to exercise operational control. The performance of an organization can be evaluated continually till it reaches the best practice level by using benchmarking. However, benchmarking offers firms a tangible method to evaluate performance (Kazmi, 2007).

## 3-Research Methodology:

To fulfill the requirements of the study, four main points were taken in consideration and should be clarified before proceeding into the steps of the research as follows:

- Fifty employees from each of the 5 hotels (a total of 250 employees) were selected with at least 15 years experience in the 5- stars hotels business, those employees whom may be considered as an experts in the field of concern should have spent at least 3 years of their career working at a well known quality- oriented 5-stars hotels, for this reason the total number of

employees in the selected five hotels was as big and convergent as possible see table (4).

**Table 4: the numbers of rooms and employees in 5 hotels**

Selected hotels	5	Number of employees in each hotel	Number of rooms in each hotel
Hotel 1		823	548
Hotel 2		732	488
Hotel 3		765	510
Hotel 4		805	537
Hotel 5		715	357
Total numbers		3840	2440

- The distribution of the selected employees (experts) over the managerial structure of each of the five hotels whether vertically (top management, middle managers, front line managers, etc....) or horizontally (head of divisions, head of departments, head of sections, captains and heads of chiefs ,etc....) was considered
- The geographic distribution in selecting the 5 hotels was taking in consideration to benefit from the diverse in age, gender, education and cultural background of the external customers in evaluating the quality of different packages of services offered by the 5 selected hotels as shown in table below.

**Table 5: the geographic distribution of the 5 hotels**

Hotels	location	Miles away from capital
Hotel 1	Cairo which is the capital and , is also a big commercial and industrial city	0
Hotel 2	Alexandria which is a commercial city located on the Mediterranean coast; it is a domestic resort and also it possesses a big harbor.	137.5 (north)
Hotel 3	Sharm alsheikh which is a famous resort located on the red sea coast	312.5 (east)
Hotel 4	Aswan which is a famous city possesses about 80% of ancient Egyptian monuments	625 (south)
Hotel 5	Between Luxor-Aswan where both cities are located on the Nile river banks	Nile cruise floating hotel

- Furthermore two crucial values were to be determined , the first was the expected value of quality of service accepted in 5-stars hotels, and through investigating references and institutions concerned of that matter such as the European consumer centre network(ECCN) and the national tourist board for England(NTBE), it was found that it ranges between 85 - 100% or between 4.25 – 5 on Likert scale, the second was the expected acceptable value of the degree of implementation of the selected 10 TQM CSFs in order to achieve the desired quality of service for 5-stars hotels , and through a series of interviews with seven of quality experts especially in the field of concern , it was estimated in average as a range

between 87 – 100% or between 4.35 – 5 on Likert scale, therefore the researcher selected the value 4.25 for quality of service and 4.35 for TQM CSFs degree of implementation to be used for the purposes of the research.

**Finally the research was preceded through 3 steps as follows.**

#### Step 1

In order to test the main hypothesis H1 and its 10 sub-hypotheses H1<sub>1</sub> to H1<sub>10</sub>, a questionnaire composed of 10 constructs representing the chosen 10 CSF was disseminated over the selected hotels experts (250 questionnaires), as to determine to what degree the 10 TQM CSFs were implemented in the 5 hotels.

#### Step 2:

In order to test the main hypothesis H2 and its 10 sub-hypotheses H2<sub>1</sub> to H2<sub>10</sub> it was important to evaluate the quality of service offered by the hotels from the professionals point of view, so the researcher communicated the Egyptian ministry of tourism to obtain this necessary information as appraised by auditing companies hired especially for that matter.

#### Step 3:

In order to test the two main hypotheses H3 and H4, a questionnaire composed of 4 parts was disseminated over a calculated sample size of (380) of hotels customers as will be shown below.

-The first part of the questionnaire was used to describe the demographic characteristic of the customers.

-The second part composed of 22 questions to measure the 5 dimensions of quality of service identified by (Parssuraman, 1980) as perceived by the hotels customers. (These 5 dimensions are reliability, assurance, tangibles, empathy and responsiveness).

-The third part composed of 5 questions to measure the degree of customer satisfaction.

-The fourth part composed of another 5 question to measure the degree of customer loyalty.

#### 4-Results:

##### As for step 1:

To measure internal reliability of each construct of the gathered 250 questionnaire forms with its different number of statements, Cranach's alpha was calculated for each construct. In this model, 10 constructs were focused upon; the Cronbach's alphas were calculated according to equation number (1).

$$\alpha = \frac{k}{k-1} \left[ 1 - \frac{\sum S_i^2}{S_t^2} \right]$$

##### Where:

K is the number of Constructs test.

Si<sup>2</sup> is variance responses to each Constructs of the test

St<sup>2</sup> is variance of the total answers of Constructs of the test.

The table below shows that the 10 constructs for this model have Cronbach's alphas larger than 0.7 (a level considered "acceptable" in most social science research).

**Table 6: The internal reliability of all constructs**

Constructs	Alpha cronbach	No. of items
1- Leadership.	0.823	8
2- Teamwork.	0.833	3
3-Training and education.	0.812	3
4-HRM practices.	0.787	3
5-Customer focus.	0.780	5
6-Organizational culture.	0.785	5
7- Benchmarking.	0.762	3
8- Communication. .	0.745	3
9-Supplier relationship management.	0.735	3
10--Process management. .	0.728	5

**- Testing the first main hypothesis H1**

The means and standard deviations of the employee's answers extracted from the gathered 250 questionnaires are shown in table below:

**Table7: means and standard deviations of the 5 hotels.**

TQM critical success factors for 5-stars hotels	hotel 1		hotel 2		hotel 3		hotel 4		hotel 5		Perceived mean, st.dev of each of the 10 TQM CSFs for the 5 hotels	
	Mean	STD	Mean	STD	Mean	STD	Mean	STD	Mean	STD		
1- Leadership.	4.22	0.647	4.31	0.751	3.67	0.840	3.06	1.110	3.23	1.235	3.70	0.92
2- Customer focus.	3.89	0.832	4.15	0.801	3.39	1.335	2.85	1.345	3.77	1.092	3.63	1.08
3- Teamwork.	4.00	0.594	3.77	1.013	3.08	0.954	3.11	1.491	3.31	0.751	3.45	0.96
4- Organizational culture.	3.50	1.958	4.46	0.660	3.92	0.641	4.00	0.594	3.74	0.970	3.92	1.00
5- Benchmarking.	4.70	0.483	3.83	0.707	3.90	1.449	4.06	0.843	3.38	1.121	4.00	0.92
6- Training and education.	4.17	0.681	4.06	0.802	3.62	0.768	4.11	0.676	2.90	1.370	3.80	0.86
7-HRM practices.	4.06	0.802	4.00	0.594	4.30	0.675	3.38	1.121	3.62	0.768	3.90	0.79
8- Communication.	4.40	0.516	3.92	1.320	4.10	1.370	4.17	0.618	3.08	0.954	3.93	0.96
9- Supplier relationship management.	4.60	0.843	4.38	0.650	3.70	1.337	4.22	0.548	3.83	0.707	4.15	0.82
10- Process management.	4.54	0.660	3.62	0.768	4.50	0.707	3.78	0.732	2.31	1.320	3.75	0.84
Perceived mean, st.dev of the 10 TQM CSFs for the 5 hotels.	4.21	0.801	4.05	0.81	3.82	1.01	3.65	0.91	3.32	1.029	3.81	0.92

The results in table (7) showed that the perceived mean value of the implemented 10 TQM CSFs is equal to (3.81) which is a moderate value, and that the standard deviation is equal to (0.92), this calculated mean is less than the expected mean value which was estimated before by (4.35) according to Likert scale, so it is clear that there is a gap existence between them.

To confirm this result the researcher developed a one sample T-test that revealed a significant difference between the perceived value of the implemented 10 TQM critical success factors and of the expected value through calculating (P value=0.00) which is less than (0.05) which mean that the null hypothesis is rejected and the alternative hypothesis is accepted, also by measuring the value of (T calculated= -9.28) it is less than the value of (T tabulated= -1.970).

These results were ensured by measuring the value of (confidence intervals = 3.695; 3.92) which did not include the value of (zero).

- **From the above results it is clear that the first main hypothesis H1 is rejected.**

#### **-Testing the 10 sub-hypotheses H1<sub>1</sub> to H1<sub>10</sub>**

The researcher developed 10 one sample T tests, and the results are shown in table (8).

**Table 8: one sample T test**

CSFs	Mean	St.DEV	T	P value	C.I
1- Leadership.	3.70	0.92	-11.17	0.00	3.58;3.81
2- Customer focus.	3.63	1.08	-10.54	0.00	3.49;3.76
3- Teamwork.	3.45	0.96	-14.82	0.00	3.33;3.56
4- Organizational culture.	3.92	1.00	-6.80	0.00	3.79;4.04
5- Benchmarking.	4.00	0.92	-6.02	0.00	3.88;4.11
6- Training and education.	3.80	0.86	-10.11	0.00	3.69;3.90
7-HRM practices.	3.90	0.79	-9.01	0.00	3.80;3.99
8-Communication.	3.93	0.96	-6.92	0.00	3.81;4.04
9- Supplier relationship management.	4.15	0.82	-3.86	0.00	4.04;4.15
10- Process management.	3.75	0.84	-11.29	0.00	3.64;3.85

It is clear from the table that for all tests (P value= 0.00) which is less than (0.05), also all the values of (T calculated) which ranges between (-14.82 & - 3.86) are less than (T tabulated=-1.970), these results are ensured by the values of (C.I) that ranges between (3.33& 4.11) which did not include the value of (zero).

- **From the above results it is clear that the 10 sub-hypotheses H1<sub>1</sub> to H1<sub>10</sub> are rejected.**

#### **As for step 2**

The feedback from the Egyptian ministry of tourism revealed that the 5 selected hotels were audited through the last two months of year 2012, and the service quality offered was evaluated for each hotel, The results in table (9) below shows that the perceived mean value of service quality is equal to (3.43) which is a moderate value, and is less than the expected mean value of service quality which

was estimated before by (4.25), so it is clear that there is a gap existence between them.

**Table 9: the mean values of service quality for 5 hotels**

Hotels	Mean values for each of the 5 hotels
Hotel 1	3.717
Hotel 2	3.621
Hotel 3	3.415
Hotel 4	3.235
Hotel 5	3.170
Service quality mean value for the 5 hotels	3.43

(Source: Egyptian ministry of tourism)

#### **- Testing the second main hypothesis H2**

The researcher developed Pearson correlation matrix between the mean value of 10 TQM critical success factors and the mean value of service quality, the results revealed a direct and strongly positive relationship between them, their values ranges between (0.738 & 0.856) and significance with (P value = 0.00), and indicate that as the mean value of the implemented TQM CSFs increases the quality of service increases.

Also, a multiple regressions model was developed between the 10 TQM critical success factors as independent variables and service quality as dependent variable, and the results revealed that the model is significant through a (P value= 0.00) which is less than (0.05), and confirmed by (F calculated = 6.678 ) which is greater than (F tabulated = 1.870 ), also the effect of the 10 TQM CSFs on the service quality was proved through the P values for the coefficients of the multiple regression which ranges between (0.000 & 0.003) that is less than (0.05), so it is clear that all of the 10 TQM critical success factors have a positive impact on service quality, to ensure the previous results the coefficient of determination was calculated and its value was ( $r^2= 82.35\%$ ) and that confirm all of the 10 TQM critical success factors have a strongly positive impact on service quality,

- **From the above results it clear that the second main hypothesis H2 is accepted.**

#### **- Testing the 10 sub-hypotheses H2<sub>1</sub> to H2<sub>10</sub>**

The researcher developed a 10 simple regression models between the quality of service as dependent variable and each of the 10 TQM CSFs as independent variable, and the results showed that all models proved to be significant through (P value) that ranges between (0.003 & 0.008) which is less than (0.05), and confirmed by (F calculated) which ranges between (7.358 & 9.256) that are greater than (F tabulated = 3.879), also the coefficients of determination  $r^2$  were calculated and it ranges between (33% & 55%), these results mean that each of the 10 TQM CSFs positively affect the service quality.

- **So it is clear that the 10 sub- hypotheses H2<sub>1</sub> to H2<sub>10</sub> are accepted.**

#### **As for step 3:**

To measure internal reliability of each construct of the questionnaire form with its different number of statements, Cranach's alpha was calculated for each construct. In this

model, 7 constructs are focused on, the Cronbach's alpha are calculated according to equation number (1).

The table below shows that all the constructs for this model have Cronbach's alphas larger than 0.7 (a level considered "acceptable" in most social science research).

**Table 10: internal reliability for all constructs.**

Constructs	Alpha cronbach	No. of items
Reliability	0.821	4
Assurance	0.813	5
Tangibles	0.801	4
Empathy	0.795	5
Responsiveness	0.783	4
Customer satisfaction	0.775	5
Customer loyalty	0.752	5

The researcher determined the Sample Size for customers through the following.

First: without taking into account the research population using equation number (2):

$$n = \frac{t^2 p(1-p)}{d^2}$$

**Where:**

n: is the sample size required

t: is the number of standard units,  $\pm 1.96$  for the 95 % confidence level.

p: is the proportion of vocabulary having the characteristics in question that are 50%.

d: is the limit of error of 5% to 95% confidence level.

$$n = \frac{1.96^2 \times 0.5(1-0.5)}{0.05^2} = 384.16 \cong 385$$

The researcher found the required sample size  $n = 385$ .

Second: the size of the sample was determined taking into consideration the size of the community using equation number (3).

$$n1 = \frac{n}{1 + n/N}$$

**Where:**

n1: sample size modified with size of research community.

n : sample size without taking into account research community

N: size of research community existing in the chosen population and due to the statistics presented by the managers of the selected 5 hotels, the researcher found that (11800) customers had stayed in the hotels between 15/12/2012 – 15/1/2013.

$$n1 = \frac{385}{1 + 385/11800} \cong 373$$

From the above result the researcher chosen a sample size of 380 customers representing the five hotels, and a 380

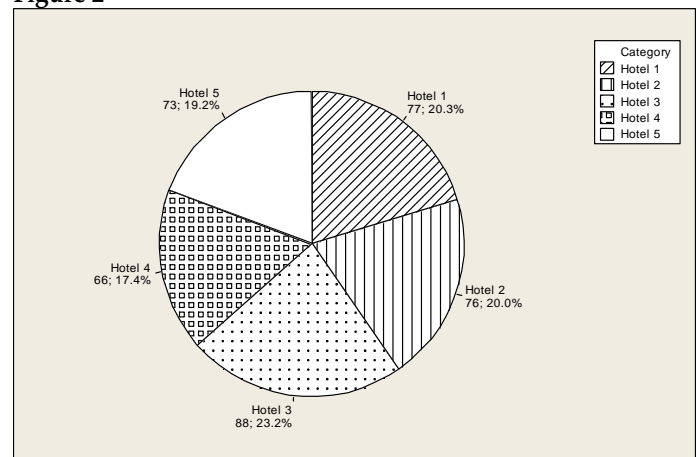
questionnaire forms were distributed over the customers, the number of questionnaires that was distributed to each of the 5 hotels customers are shown in table (11).

**Table 11: number of questionnaires introduced for each hotel.**

Hotels	No. of customers stayed between 15-12-2012 / 15-1-2013	No. of questionnaires introduced for each hotel
Hotel 1	2411	77
Hotel 2	2381	76
Hotel 3	2774	88
Hotel 4	2019	66
Hotel 5	2213	73
Total	11800	380

Pie chart in figure (2) shows the number and percentage of questionnaires distribution over the customers of the 5 hotels.

**Figure 2**



### Descriptive analysis of the sample

The analysis includes the demographic variables for personnel of the study sample:

- Gender
- Age
- Qualification

### Gender:

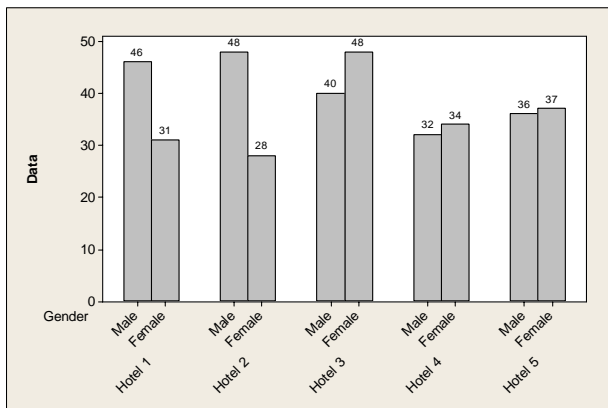
It is the distribution of personnel on the sample according to the variable gender.

Table (12) shows the number and percentage of males and females who had replied the questionnaires over the 5 hotels

Par chart in figure (3) shows the distribution of the respondent's males and females over the 5 hotels. .

**Table 12: Sample Distribution of Members According to Gender**

Gender	Hotel 1	Hotel 2	Hotel 3	Hotel 4	Hotel 5	Frequency	Percentage %
Male	46	48	40	32	36	202	53%
Female	31	28	48	34	37	178	47%
All	77	76	88	66	73	380	100%

**Figure 3****Age:**

It is the distribution of personnel on the sample according to the variable age

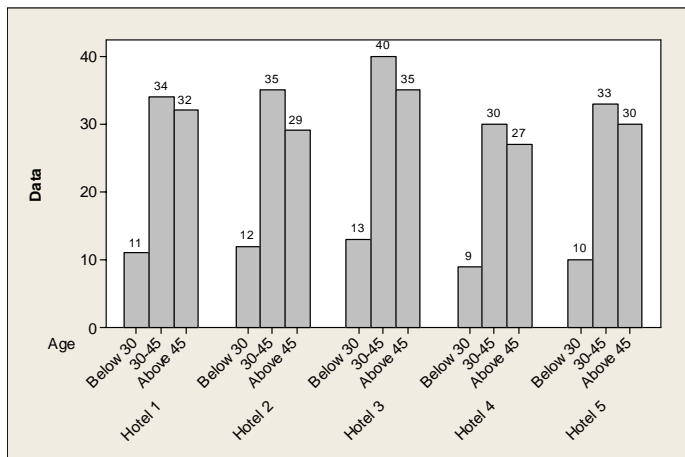
More than 85% of respondents were over 30 years, which is an evidence for the presence of personnel with experience

The percentage of young personnel is less than (15%)

Table (13) and figure (4) represents data.

**Table 13: Sample Distribution of Members According to Age**

Age	Hotel 1	Hotel 2	Hotel 3	Hotel 4	Hotel 5	Frequency	Percentage%
Below 30	11	12	13	9	10	55	14.5%
30-45	34	35	40	30	33	172	45.3%
Above 45	32	29	35	27	30	153	40.2%
Total	77	76	88	66	73	380	100%

**Figure 4****Qualification:**

It is the distribution of personnel on the sample according to the variable qualification

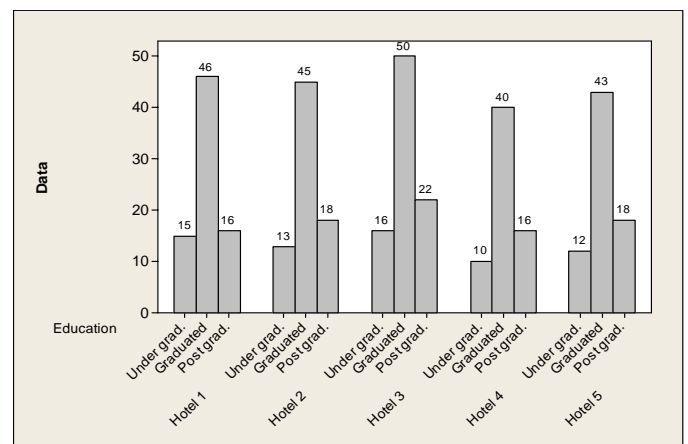
More than 80% of respondents were highly qualified, which is evidence for the presence of qualified personnel in the sample.

The percentage of personnel with low qualification is less than (20%).

Table (14) and Figure (5) represent data.

**Table 14 Sample Distribution According to Qualification**

Age	Hotel 1	Hotel 2	Hotel 3	Hotel 4	Hotel 5	Frequency	Percentage%
Under grad.	15	13	16	10	12	66	17.4%
Graduated	46	45	50	40	43	224	59%
Post grad.	16	18	22	16	18	90	23.6%
Total	77	76	88	66	73	380	100%

**Figure 5****- Testing the third main hypothesis H3.**

The means and standard deviation of the customer's answers from the gathered 380 questionnaires are shown in table (15) below.

**Table 15: means and standard deviations of the 5 hotels.**

Variables		hotel 1		hotel 2		hotel 3		hotel 4		hotel 5		Perceived mean, st.dev of each of the 5 service quality dimensions, customer satisfaction and loyalty.	
		Mean	STD	Mean	STD	Mean	STD	Mean	STD	Mean	STD		
5 Dim.s of Service quality	Reliability	4.12	0.667	4.06	0.851	3.92	0.741	4.00	0.594	3.45	0.910	3.91	0.75
	Assurance	3.98	1.447	4.21	0.801	3.74	0.860	4.15	0.476	3.10	0.954	3.84	0.91
	Tangibles	4.00	0.594	3.31	0.751	4.00	0.594	3.78	0.970	4.02	0.584	3.82	0.70
	Empathy	4.35	1.353	3.23	1.235	3.60	0.678	2.90	1.365	2.93	1.270	3.40	1.18
	Responsiveness	4.17	0.483	4.54	0.660	3.40	1.121	3.08	0.954	3.00	1.320	3.64	0.91
Perceived Service Quality for the 5 hotels.		4.12	0.91	3.87	0.86	3.73	0.80	3.58	0.87	3.33	1.01	3.73	0.89
C. satisfaction		4.04	0.801	3.60	0.678	3.35	0.675	3.21	1.126	3.03	0.920	3.44	0.84
C. loyalty		3.87	1.092	3.30	0.655	3.22	1.025	3.17	1.135	2.95	1.275	3.30	1.04

The researcher developed Pearson correlation matrix between the mean value of the 5 dimensions of service quality and the mean value of customer satisfaction, the results revealed a direct and strongly positive relationship between them, their values ranges between (0.812 & 0.941) and significance with (P value = 0.00), and indicate that as the mean value of the quality of service dimensions increase the value of customer satisfaction increases.

Also, a multiple regressions model was developed between the 5 dimensions of service quality as independent variables and customer's satisfaction as dependent variable, and the results revealed that the model is significant through a (P value = 0.000) which is less than (0.05), and confirmed by (F calculated = 8.567) which is greater than (F tabulated = 2.238), also the effect of the 5 dimensions of quality of service on customer's satisfaction was proved through the P values for the coefficients of the multiple regression which ranges between (0.000 & 0.004) that is less than (0.05), so it is clear that all these dimensions have a positive impact on customer's satisfaction, to ensure the previous results the coefficient of determination was calculated and its value was ( $r^2 = 85.43\%$ ) and that confirm all of the 5 dimensions of quality of service have a strongly positive impact on customer's satisfaction ,

The researcher developed a 5 simple regression models between the customer satisfaction as dependent variable and each of the 5 dimensions of service quality as independent variable, and the results showed that all models proved to be significant through (P value) that ranges between (0.003 & 0.005) which is less than (0.05), and confirmed by (F calculated) which ranges between (8.235 & 9.654) that are greater than (F tabulated = 3.866), also the coefficients of determination  $r^2$  were calculated and it ranges between (30% & 45%), these results mean that each of the dimensions of service quality positively affect customer's satisfaction.

- **From the above results it clear that the third main hypothesis H3 is accepted.**

#### - Testing the fourth main hypothesis H4

The researcher calculated Pearson correlation between the mean value of the customer's loyalty and the mean value of customer's satisfaction , the result revealed a direct and strongly positive relationship between them, their value equal (0.88) and significance with (P value = 0.00), and indicate that as the mean value of customer satisfaction increases the value of customer loyalty increases.

Also, a simple regression model was developed between customer's loyalty as dependent variable and customer satisfaction as independent variable, the results revealed that the model is significant through a (P value = 0.000) which is less than (0.05), and confirmed by (F calculated = 7.123) which is greater than (F tabulated = 3.866), so it is clear that customer's satisfaction has a positive impact on customer's loyalty, to ensure the previous result the coefficient of determination was calculated and its value was ( $r^2 = 88.67\%$ ) and it confirm that customer's satisfaction has a strongly positive impact on customer's loyalty.

- **From the above results it clear that the fourth main hypothesis H4 is accepted.**

#### 5-Conclusion:

Retaining customers in hospitality industry has become a major objective for quality experts and practitioners. TQM CSFs are considered to be essential for gaining customers satisfaction in order to achieve mutual benefits of all parties. This research was conducted to empirically examine the impact of implementing TQM CSFs on 5-stars hotels performance using service quality as an indicator as to achieve customer loyalty.

**The findings of this part of the research can be summarized as below:**

- According to the analysis of the gathered data, it is obviously clear that the 10 TQM CSFs are not effectively

implemented in these hotels, as their calculated mean values are less than the expected mean value.

- The evaluation of service quality offered by the selected 5 hotels, whether through professional's appraisal or through investigating the hotel customers point of views showed that the perceived mean values of the offered service quality is less than the expected mean value.
- It was also proved that there is a strongly positive relationship between the implemented 10 TQM CSFs and the service quality offered by the selected hotels, so as the degree of implementation of the 10 critical success factors increases the value of service quality offered increases and vice versa.
- Data analysis also revealed that the levels of both customer's satisfaction and customer's loyalty are less than the expected ones.
- Furthermore a strongly positive relationship exists between both service quality and customers satisfaction and between customer's satisfaction and customer's loyalty, so as the level of service quality increases the levels of both customer's satisfaction and loyalty increase.

The above results can be briefly explained, that the low degree of implementation of the 10 selected TQM CSFs caused a low level of perceived service quality, which in return led to a low levels in both customers satisfaction and loyalty, and this prove that the proposed theoretical model is valid to be used.

However despite the overall findings produced in this study, there are still open opportunities for further studies to ensure the validity of the theoretical model, so as a future work the researcher will investigate the causes that led to the shortage in implementation of the selected 10 TQM CSFs, an improvement plan will be carried out in coordination with the top managers of two of the previously selected 5 hotels (hotels 3&5), then after the completion of the improvement process, the validity of the proposed theoretical model will be re-tested, and once more the statistical package for social science (SPSS) approach will be used for hypothesis testing.

#### 6- References:

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