



**Arab American University
Faculty of Graduate Studies**

**The Impact of Total Quality Management
Implementation on the SERVQUAL-Based Perceived
Quality Level: (A Case Study of Palestinian Elevator
Management Companies)**

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**This thesis was submitted in partial fulfilment of the
requirements for the Master's degree in
the Quality Management**

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Thesis Approval

The Impact of Total Quality Management Implementation on the SERVQUL-Based Perceived Quality Level: (A Case Study of Palestinian Elevator Management Companies)

By

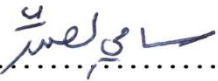
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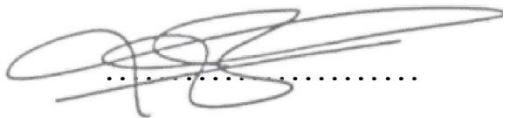
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Declaration

I declare that no portion of the work referred to in the dissertation has been submitted in support of an application for another degree or qualification of this or any other university or institute of learning.

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Dedication

To my faith in God,

I acknowledge the divine guidance and strength that have sustained me throughout this endeavor. My faith has provided me with the hope and courage to overcome challenges.

I dedicate this work to the higher purpose I believe in.

To my beloved family,

Your unwavering love, support, and sacrifices have been the bedrock of my journey.

You've been my source of strength and inspiration. Without your belief in me, none of this would have been possible. Thank you for always being there.

To my dedicated advisor,

Your guidance, expertise, and commitment to my success have been invaluable. You've not only shaped my academic journey but also inspired me to reach higher. Your mentorship has made a lasting impact on my life.

To my cherished friends,

You've been with me through the highs and lows, offering encouragement and understanding. Your camaraderie has made this journey memorable and enjoyable. I'm grateful for the laughter, support, and friendship you've shared.

With heartfelt gratitude,

Jenan hamadah.

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Last but not least, I acknowledge the broader academic community and the body of knowledge that has been built over years. This thesis is a product of the collective wisdom and contributions of countless scholars, researchers, and practitioners in the field.

In closing, I am deeply grateful to everyone who has played a part in this endeavour. Your contributions have not only shaped this thesis but have also enriched my personal and intellectual growth.

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Abstract

This thesis focuses on the implementation of Total Quality Management (TQM) to enhance perceived services quality in Palestinian elevator management companies. It aims to tackle the pressing issue of meeting rising customer expectations and resolving organizational challenges, ultimately improving customer satisfaction.

More specifically, the study aims firstly, to conduct a comprehensive exploration of TQM practices within Palestinian elevator management companies, meticulously assessing the extent of their integration within these entities; secondly, to analyze the relationship and assess the impact of implementing TQM principles on Perceived Quality Level based on the SERVQUAL model.

The SERVQUAL model encompass five dimensions. These are empathy towards customers, responsiveness to their needs, the reliability of elevator services, the tangibility of services rendered, and the assurance provided by elevator management companies.

This study employs a descriptive analytical research approach using both qualitative and quantitative methods. Data collection involves preliminary interviews with relevant institutes, structured interviews with a sample of elevator companies, and a SERVQUAL-based questionnaire to assess perceived service quality levels. The data is analyzed using SPSS software. Additionally, a literature review from various sources contributes to a well-rounded research methodology. The study aims to provide valuable insights to improve perceived service quality in the elevator management industry.

In summary, our findings highlight a positive link between TQM practices and increased Perceived Quality Level, emphasizing the importance of holistic quality management. The research uncovers significant disparities in performance across various elevator

management companies, directly impacting perceived services quality Level. The core message underscored by this research highlights the paramount significance of simultaneous attention to both internal quality management and services quality, facilitating a comprehensive evaluation of company performance. Elevator management companies that excel in both these aspects consistently attain the highest level of success, while performance disparities serve as indicators of specific areas in need of improvement.

In conclusion, this research strongly advocates for the widespread adoption of TQM practices among Palestinian elevator management companies. This strategic integration improves the quality of service, goes beyond customer expectations, and establishes a strong competitive advantage in an industry that is constantly changing. By adopting and putting these recommended strategies into action, elevator management companies have the opportunity to cultivate long-lasting customer relationships, achieve operational excellence, and make a lasting impact in the continually changing marketplace.

Keywords: Total Quality Management (TQM), SERVQUAL, Service Quality, Palestinian Elevator Industry.

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Chapter One

Introduction

1.1 Overview

This chapter introduces the research topic in general. It defines the main concepts and key words in order to give the reader an insight into the total quality management topic and service quality. Moreover, it presents the developed objectives of the research, the questions that we aim to answer and build the research hypothesis.

In the current competitive business environment, organizations are motivated to adopt diverse management ideologies and approaches aiming to improve their overall performance, as they aim to consistently achieve excellent performance. This thesis aims to investigate the impact of implementing TQM on customer satisfaction, focusing on the context of Palestinian elevator management companies.

1.2 Total Quality Management (TQM)

(TQM) is an approach that is gaining attention nowadays, it's a concept in which the management and employees collaborate to continuously enhance the quality of goods and services provided by the organizations. (Sayyad, 2017). Neo, Mikobi & Mushavhanamadi (2021) suggested that TQM is a systematic approach for organizations to improve their management practices to meet their customer's expectations and develop support and sustainability. Rahman & Hamdan (2017) also stated that when applying TQM, a theory is developed which covers various aspects in managing businesses, including continuous improvement, creating strong relationships with internal and external customers, cost reduction, and quality improvement, and this will be reflected in the company's overall performance. Moreover, TQM practices help achieve strategic performance and customer

satisfaction. The importance of TQM practices concluded in improving an organization's entire systems and this continuous improvement of processes is enhanced by key factors such as; employee assurance, administration, and procedures. (Neo, Mikobi & Mushavhanamadi. 2021).

TQM went through developing stages throughout the history of management world, which is worth taking an overview of this TQM establishing journey. In its nascent stages, production was grounded in quality control, commonly referred to as craft production (Lahidji & Tucker, 2016). During this era, emphasis was placed on meticulously scrutinizing products for quality, and the discernible disparity between customer demands and limited supply was evident. The primary focus was directed toward the final products, entailing the elimination of any defective items, which would at times result in the wastage of entire production quantities (Weckenmann, Akkasoglu, & Werner, 2015). The late 1800s marked the advent of mass production in Europe, subsequently spreading to the United States (Lahidji & Tucker, 2016). With the proliferation of manufacturing and mechanized labor in the 1900s, a paradigm shift occurred from product-centric to system-oriented (or process-oriented) management strategies (Weckenmann, Akkasoglu, & Werner, 2015).

In pursuit of enhanced control over processes, Walter Sheward advocated for the incorporation of statistical methods and the adoption of sampling techniques, replacing the conventional practice of 100% production and thereby mitigating substantial wastage costs. Meanwhile, Japan emerged as a beacon of successful management methodologies, influencing quality visionaries like Edward Deming. Japan's implementation of continuous improvement techniques, notably by Toyota, culminated in the formulation of the lean concept (Lahidji & Tucker, 2016).

Providers within the industrial landscape subsequently honed their focus on cost reduction and the streamlining of operational processes, giving rise to the development of quality management tools such as the Plan-Do-Check-Act (PDCA) cycle introduced by Deming. Statistical process control (SPC), a statistics-based approach, gained prominence as an integral component of quality management strategies (Weckenmann, Akkasoglu, & Werner, 2015). Juran's contributions ushered in the notions of quality planning and control within the realm of management (Lahidji & Tucker, 2016).

The escalating need for comprehensive documentation of quality management contributed to the establishment of models like ISO 9000, complemented by certifications awarded to organizations adhering to stringent quality standards and prerequisites. As the landscape of quality management methods and standards continued to evolve, the focus expanded to encompass employees, leadership, customer satisfaction, and all factors germane to operational processes. This broader outlook gave rise to the concept of Total Quality Management (TQM), often aligned with frameworks like the European Foundation for Quality Management (EFQM) (Weckenmann, Akkasoglu, & Werner, 2015). By the 1990s, the lean system, the teachings of quality thought leaders, and the ISO model had collectively risen to prominence as cornerstones of the ongoing pursuit of continuous improvement.

To better achieve customer satisfaction, Nguyen and Nagase (2019) propose that Total Quality Management (TQM) and perceived service quality (PSQ) are crucial. They help improve a business's worth and competitiveness in the market. TQM affects customer satisfaction by making the business's offerings more valuable. To ensure customer satisfaction, companies need to focus on several things like being reliable, having a clear physical presence, carrying out TQM activities independently, and responding promptly. All these factors shape how customers view the quality of service (Nguyen & Nagase, 2019).

1.3 Perceived Service Quality

“Keeping customers pleased pays off since they are truly the king” (Hill & Brierley, 2017).

It is crucial to remember that customer satisfaction is closely tied to service quality, which in turn influences consumers' choices regarding which repair business to select. Madu (2018). Hill, & Brierley, J. (2017) highlighted the orientation toward customer focus by modern businesses, that is, successful companies tend to consider customer satisfaction as a considerable effort needing objective. Customers nowadays compare the value received from a company's services with other providers services, and that's why companies need to exceed customers' expectations by implementing programs and tools to measure customer satisfaction and perceived services quality. However, this would benefit companies by determining gaps between customers' expectations and perceived services, set goals to improve the provided services, and many other benefits.

Expanding upon the significance of exceeding customer expectations and measuring quality level of services, it's noteworthy to mention that various models and frameworks have been developed to systematically evaluate service quality and customer satisfaction. Ali and Raza (2017) draw attention to the SERVQUAL model proposed by Parasuraman et al. in their series of studies (1985, 1988, 1991, 1994). This model introduces a structured approach to comprehensively understand and assess the dimensions contributing to service quality. The dimensions outlined within the SERVQUAL framework include *tangibility*, *reliability*, *responsiveness*, *assurance*, and *empathy*.

These dimensions represent critical aspects that collectively shape customers' perceptions of the quality of services they receive. "**Tangibility**" refers to the physical appearance of facilities, equipment, and personnel, which can influence the overall service experience. "**Reliability**" underscores the consistency and dependability of service delivery,

highlighting the importance of fulfilling promises and meeting customer expectations consistently. "**Responsiveness**" pertains to the willingness and ability of service providers to assist customers promptly and address their needs in a timely manner. "**Assurance**" or "confidence" focuses on the knowledge, professionalism, and courtesy displayed by service providers, instilling a sense of trust and confidence in customers. Finally, "**empathy**" emphasizes the ability of service providers to understand and respond to customers' individual needs and concerns, demonstrating a genuine commitment to customer well-being. (Ali and Raza, 2017) (Naik, Gantasala & Prabhakar, 2010)

1.4 Elevators Management Companies in Palestine

Elevator management companies represent a vital sector that is dedicated to upholding the seamless and efficient operation of elevators within various operational contexts. Their primary focus revolves around the delivery of both corrective and preventive maintenance services, typically on a contractual basis, to establishments such as hospitals, hotels, universities, and residential buildings. This niche within the business landscape is driven by the overarching goal of ensuring the continuous functionality of elevators, a fundamental aspect contributing to the smooth operation of these diverse facilities.

The intricate tapestry of regulations and oversight that govern elevator management companies in Palestine is a testament to the significance of safety and quality within this industry. Among the authoritative bodies that shape and uphold the standards for elevator safety, the Palestine Standards and Metrology Institution (PSI) assumes a prominent role. PSI, with a steadfast commitment to ensuring the safety of elevator systems, has established a set of core standards. These standards encompass various aspects of elevator operation, catering to both hydraulic and electric systems (PSI, 2022). By providing a framework for

adherence to safety benchmarks, PSI plays a pivotal role in maintaining the well-being of individuals who interact with elevators in a myriad of settings.

The Palestinian Civil Defence (PCD), operating as the regulatory authority overseeing the elevator services sector, echoes this commitment to safety. In line with its mandate, the PCD conducts a comprehensive assessment process at regular intervals, typically every six months. This assessment serves as a litmus test to evaluate the compliance of elevator management companies with safety protocols and operational standards. The outcomes of these evaluations profoundly influence the issuance of elevator operator's licenses, which confer the authority to continue providing elevator services. Reflecting the dynamic nature of this industry, data provided by the PCD underscores the presence of approximately 70 elevator management companies dispersed across different governorates of Palestine. This distribution across regions highlights the widespread necessity of elevator management services and emphasizes the industry's role in facilitating the seamless functioning of numerous establishments throughout the country.

1.5 Problem Statement

According to Aldweik (2018), elevator companies aim to provide the best customer service to attract a large customer base. Elevators require continuous maintenance and attention as they are a necessary service for customers. Being responsive to maintenance calls and ensuring high service quality are critical aspects of success in a highly competitive environment. Elevator management directly affects the service experience for elevator users and indirectly influences the customer base of elevator companies. Xu and Li (2016) concluded that the main concern in the hotel industry is customer backlash due to inadequate

elevator services, which can strain the relationship between hotel management and elevator service providers. Therefore, the quality of services plays a significant role.

Song and Sakao (2017) argued that sustainability in technology companies, such as elevator management companies, is crucial. They suggested that adopting quality standards is essential to maintain the quality of services. Furthermore, quality management is a key element for elevator management companies in maintaining customer satisfaction.

Moreover, addressing the issue of Total Quality Management (TQM) in elevator management companies is of paramount importance for maintaining and improving service quality. Failing to address this issue can have detrimental consequences, including customer dissatisfaction, damage to reputation, reduced customer loyalty, increased competition, legal risks, and strained business relationships. Therefore, elevator management companies must understand the importance of implementing TQM practices to meet customer expectations and operate effectively in a competitive market.

As someone who works in this field and has an overview of the challenges and obstacles faced in providing preventive maintenance services, the goal is to achieve high-end service quality, leading to customer satisfaction. This is a critical aspect due to the fierce competition in this sector and the sensitivity of the services that elevator management companies provide. In light of these considerations, the central research problem tackled in this study revolves around emphasizing the significance of implementing Total Quality Management (TQM) practices within elevator management companies. The aim is to effectively address and surmount the multifaceted challenges encountered in this industry, particularly concerning the quality and consistency of the services offered. By doing so, it not only fosters a positive outcome for the customers who rely on these services but also significantly contributes to the overall satisfaction of end-service consumers. This research examines how adopting and

adhering to TQM practices can serve as a pivotal driver for elevating service quality and operational efficiency, which, in turn, would result in enhancing customer contentment.

In conclusion, this research underscores the vital role that TQM practices play in the elevator management sector, as they stand as a linchpin for not only meeting but exceeding customer expectations. This, in effect, paves the way for heightened levels of satisfaction among customers and end-service consumers, ultimately bolstering the industry's competitiveness and overall service excellence.

1.6 Research Objectives

The main goal of this research is to investigate the impact of implementing Total Quality Management (TQM) practices on customer satisfaction in a selected sample of Palestinian elevator management companies.

To accomplish this main goal, the following detailed objectives have been formulated:

- 1- To assess to which extent TQM practices are being utilized in a selected sample of elevator management companies in Palestine.
- 2- In order to assess to which extent the implementation of TQM practices relates to perceived service quality in Palestinian elevator management companies, the following sub-objectives are addressed:
 - 3- To assess the relationship between TQM practices implementation and *tangibility* of the service provided.
 - 4- To assess the relationship between TQM practices implementation and *reliability* of elevator services.
 - 5- To assess the relationship between TQM practices implementation and *empathy* toward customers.

- 6- To assess the relationship between TQM practices implementation and *responsiveness* to customer's needs.
- 7- To assess the relationship between TQM practices implementation and *assurance* in elevator management companies.

By addressing these specific objectives, this research aims to provide valuable insights into the impact of TQM practices on customer satisfaction and help enhance the quality of elevator management services in Palestinian companies.

1.7 Research Hypotheses

The main hypothesis for this study assumes that there is that there are no statistically significant differences in customer satisfaction based on the implementation of TQM practices in elevator management companies in Palestine. To assess the validity of these hypothesis, the following sub-hypothesis are suggested:

- 1- Null Hypothesis (H0): There is no significant difference in perceived service quality level based on the implementation of TQM practices in elevator management companies in Palestine.
- 2- Null Hypothesis (H0): There is no significant relationship between the implementation of TQM practices and *empathy* demonstrated by elevator management companies towards their customers in Palestine.
- 3- Null Hypothesis (H0): The implementation of TQM practices does not significantly affect the *responsiveness* of elevator management companies to customer needs in Palestine.

- 4- Null Hypothesis (H0): There is no significant relationship between the implementation of TQM practices and the *reliability* of elevator services provided by management companies in Palestine.
- 5- Null Hypothesis (H0): The implementation of TQM practices does not significantly impact the *tangibility* of the service provided by elevator management companies in Palestine.
- 6- Null Hypothesis (H0): There is no significant relationship between the implementation of TQM practices and the *assurance* customers have in elevator management companies in Palestine.

These research hypotheses allow for testing the relationships and effects of TQM practices on perceived service quality dimensions in elevator management companies in Palestine.

1.8 Importance of the Study

Tennant (2017) emphasized the importance of service quality, suggesting that a crucial aspect of quality is ensuring that the service provided to customers meets their expectations. Similarly, Pasomas and Jaca (2016) proposed that the higher the priority given to quality management, the greater the potential for the development of services in the company, resulting in favorable reviews from customers. Additionally, Waddock et al. (2017) emphasized the significance of Total Quality Management (TQM) in maintaining the flow of management processes within companies, highlighting its importance in service companies (Zameer et al., 2015). Customer satisfaction is critical for the existence and sustainability of a business (Hamzah & Shamsudin, 2020). Therefore, this work aims to assist other researchers in analyzing the behaviors and factors associated with elevator management companies in assessing customer satisfaction as a practical implication.

Another critical aspect linked to theoretical applications is the role of management and their effective use of TQM to enhance the services provided to customers, thereby improving customer satisfaction with the services offered. To determine whether improvements are required, particularly in the elevator sector, service organizations must now ascertain whether customers are satisfied with the quality of their services. This requirement is closely tied to the increasing demand for elevator maintenance services in Palestine.

According to Parasuraman et al., service quality (SERVQUAL) is a multidimensional construct comprising reliability, responsiveness, tangibility, assurance, and empathy (1988). Investigating the degree to which customers of elevator management companies in Palestine are satisfied with each of these aspects of service quality is an issue that deserves further examination.

1.9 Thesis Structure

The thesis is structured as follows:

Chapter One- Introduction: This chapter establishes the research context, defines research aims and objectives, and formulates research hypotheses. It guides the research approach and outlines essential elements for the subsequent chapters.

Chapter Two- Literature Review: Building upon the established aims and objectives, this chapter delves into critical aspects of service quality in Palestinian elevator management companies, along with Total Quality Management (TQM). It reviews existing research, journals, books, and contributions from relevant scholars.

Chapter Three- Methodology: This chapter outlines the research methods employed, considering both primary and secondary data collection techniques within the research

framework. These methods are selected to investigate the most pertinent areas for this research.

Chapter Four- Data Analysis and Findings: Data collected and results obtained are examined and analyzed to derive the findings. This involves the use of tools such as thematic analysis, deemed most suitable for data analysis and discussion.

Chapter Five- Discussion, Conclusion, and Recommendations: This chapter summarizes key findings and conclusions, offering insights into the factors associated with the research outcomes. It also provides recommendations aimed at improving the performance of Palestinian elevator management companies.

Chapter Six- Research Limitations: The researcher addresses challenges encountered during the research process, encompassing issues related to data extraction, literature review, data collection, and other limitations that have arisen.

Chapter Two

Literature Review

2.1 Overview

This chapter explores the relationship between Total Quality Management (TQM), services quality, and the SERVQUAL model, with a focus on Palestine's elevator sector."

2.2 Concept of Total Quality Management

Total Quality Management (TQM) is an important concept that goes beyond regular business practices. It's about how managers and employees work together to improve things. Their goal is to always make the things that organizations offer better in quality. TQM is like a smart plan for organizations that want to get better at what they do. One of the main reasons why TQM is effective is because everyone in the organization participates. This creates an environment where making customers happy is not just an idea, but a goal that everyone works towards. TQM isn't only about making small changes here and there. It actually changes everything in an organization. It's like a song that keeps improving. Things like making employees strong, having good management, and having efficient ways of working are all part of TQM (Neo, Mikobi & Mushavhanamadi, 2021).

Rahman and Hamdan (2017) provide a detailed analysis of TQM's impact on various aspects of business. A significant aspect is a complete plan for how a business operates. This plan is based on TQM's principles and aims to always get better. TQM also helps in building positive relationships within and outside the organization. These relationships create a team of people who all care about the same goals. This helps the organization save money and produce better-quality items. TQM leads to an organization's success by combining content employees and satisfied customers with effective strategies (Rahman & Hamdan, 2017).

Sayyad (2017) clarifies that TQM has big objectives. It's not just about making customers happy. It's also about making things faster, cheaper, and better. TQM is like a promise to always improve and provide the best to everyone involved. In their study, Dubey and Gunasekaran (2015) identified four soft dimensions required for effective TQM implementation: human resources, quality culture, motivating leadership, and relationship management, and proved the validity of these soft TQM-generated dimensions. The study supports the notion that TQM may provide any organization with a long-term competitive advantage. This is critical for managers who want to successfully apply TQM for business performance.

2.3 Exploring Main TQM Models

TQM has evolved into various approaches and models aimed at enhancing organizational performance. Anvari and Moghimi (2012) delved into the impact of TQM and Lean Production (LP) and highlighted the influence of the Toyota Production System. LP focuses on creating value for consumers while minimizing waste, emphasizing waste avoidance and shortening the manufacturing cycle. Lean also stresses the importance of prioritizing value-adding tasks driven by customer demand.

Six Sigma, an approach aiming to eliminate variation, is widely adopted in various industries. This methodology, originating at Motorola and associated with General Electric, focuses on maintaining near-flawless processes, with rigorous training and measurement against customer requirements. LeMahieu, Nordstrum, and Cudney (2017) elucidate the education and assessment process integral to Six Sigma, where statistical methods help pinpoint process inputs contributing to undesired variance and defects.

Oakland, Oakland, and Turner (2021) introduced a comprehensive TQM model encompassing the 'four Ps' and 'three Cs.' The 'four Ps' involve Planning, emphasizing the development of policies, resource allocation, and quality prioritization; Performance, creating a robust measurement framework; Processes, focusing on process understanding, management, design, and improvement; and People, emphasizing human resource management for cultural transformation and teamwork.

The 'three Cs' - Culture, Communication, and Commitment - play an essential role, seamlessly integrating with the 'four Ps.' When combined, this holistic approach creates a strong foundation for achieving superior organizational performance. Drawing on a century's worth of foundational work, the TQM model serves as a solid basis for addressing all facets of an organization's structure and functioning to navigate the challenges of the twenty-first century.

2.4 Leveraging Quality Award Frameworks for (TQM)

Numerous enterprises adopt quality award frameworks as essential guides in their pursuit of Total Quality Management (TQM). Notable examples of these frameworks include the Malcolm Baldrige National Quality Award (MBNQA) and the European Foundation for Quality Management (EFQM) Excellence Model, as highlighted by Bou-Llugar, Escrig-Tena, Roca-Puig, and Beltrán-Martín (2009).

One such framework is the "Deming Prize," as described by Oakland, Oakland, & Turner (2021). This comprehensive approach focuses on a detailed and demanding process, incorporating fourteen management-enhancing suggestions. It redefines TQM as a systematic tool used by entire businesses to effectively achieve organizational goals, delivering high-quality goods and services that satisfy customers in terms of both time and cost. The Deming Prize encourages organizations to think independently, set ambitious

goals, and be motivated to work diligently, serving as a catalyst for management change and growth.

Another significant framework is the Malcolm Baldrige National Quality Award (MBNQA), as detailed by Mai, Ford, and Evans (2018). MBNQA encompasses six critical domains within organizational processes, including leadership, customer orientation, information and data analysis, workforce engagement, strategic development, and operational focus. This holistic framework is designed to facilitate the pursuit of organizational excellence, emphasizing the interplay between leadership, customer focus, and strategic planning. The MBNQA, developed by the National Institute of Standards and Technology (NIST), consists of seven core components, including leadership, strategic planning, customer-centricity, measurement, analysis, and knowledge management (MAKM), workforce engagement, operational excellence, and outcomes, as pointed out by Peng and Prybutok (2015).

The Baldrige Performance Excellence Program, represented by its prestigious crystal award, spans six sectors: Manufacturing, Service, Health care, Education, Non-profit, and Small Businesses. It aims to enhance organizational performance, encourage the sharing of best practices, and provide a valuable resource for understanding, managing, and planning performance, fostering a culture of continuous learning (Oakland, Oakland, & Turner, 2021). By embracing these principles and employing the Baldrige framework, organizations can aspire to achieve excellence and continually improve their operations.

2.5 Contributions of Leading Gurus of TQM

The field of quality management has been significantly influenced by a group of visionary individuals known as quality management gurus. These experts have made pioneering contributions to the principles and practices of quality improvement in various industries. The table below provides a concise overview of the contributions of some of the famous and

prominent quality management gurus. Their insights have played a vital role in shaping modern quality management practices and continue to serve as valuable sources of inspiration for organizations striving for excellence.

Guru	Contributions	Reference
Shewhart	Pioneered statistical control methods for quality improvement.	Shewhart, W. A. (1931). Economic Control of Quality of Manufactured Product.
Deming	Introduced the PDCA (Plan-Do-Check-Act) cycle and the 14 Points for management.	Deming, W. E. (1986). Out of the Crisis. MIT Press.
Juran	Focused on quality planning, improvement, and control, and introduced the Juran Trilogy.	Juran, J. M. (1989). Juran on Leadership for Quality: An Executive Handbook. Free Press.
Crosby	Emphasized the concept of "Zero Defects" and advocated for prevention over inspection.	Crosby, P. B. (1979). Quality Is Free: The Art of Making Quality Certain. McGraw-Hill.
Feigenbaum	Coined the term "Total Quality Control" and contributed to the development of Total Quality Management (TQM).	Feigenbaum, A. V. (1991). Total Quality Control. McGraw-Hill.
Ishikawa	Introduced the Ishikawa Diagram (Fishbone Diagram) for problem-solving and emphasized employee involvement in quality.	Ishikawa, K. (1985). What Is Total Quality Control? The Japanese Way. Prentice-Hall.

Taguchi	Pioneered robust design and the Taguchi Loss Function to minimize quality variation.	Taguchi, G. (1993). Taguchi on Robust Technology Development: Bringing Quality Engineering Upstream. ASI Press.
Shingeo	Known for his contributions to the Toyota Production System (TPS) and the concept of "Just-In-Time" manufacturing.	Shingeo, S. (1988). Toyota Production System: Beyond Large-Scale Production. Productivity Press.
Ohno	A key figure in the development of the Toyota Production System (TPS) and the concept of eliminating waste (Muda).	Ohno, T. (1988). Toyota Production System: Beyond Large-Scale Production. Productivity Press.
Imai	Introduced the concept of "Kaizen" (continuous improvement) and emphasized workforce involvement in quality improvement.	Imai, M. (1986). Kaizen: The Key to Japan's Competitive Success. McGraw-Hill.

2.6 International Standards

ISO 9001:2015 Quality Management System

In the context of ISO standards, their evolution over time has been driven by the ever-changing demands of the business environment. Laura, Federica, and Gilberto (2019) shed light on this evolution by emphasizing the role of ISO 9004 in providing recommendations for organizations seeking long-term performance excellence within the challenging and dynamic modern landscape. Regardless of an organization's size or the nature of its offerings, ISO standards like ISO 9001:2015 have played a pivotal role in shaping Quality

Management Systems (QMS). ISO 9001:2015, as observed by the same authors, signifies a remarkable advancement in the QMS domain. It stands as a guiding force for organizations across diverse industries, urging them to seamlessly integrate quality management into their overarching business strategies.

This evolution of ISO standards aligns with the observations made by Weckenmann, Akkasoglu, and Werner (2015). They highlight the growing demand for meticulous documentation in quality management, which led to the development of frameworks like ISO 9000 and the establishment of certifications recognizing organizations meeting stringent quality criteria. As quality management practices and standards progressed, so did the scope of emphasis, expanding to encompass critical aspects such as personnel, leadership involvement, customer satisfaction, and all facets relevant to operational procedures.

ISO standards have evolved in response to the complex and ever-changing business environment, transitioning from a compliance-focused approach to a holistic and strategic perspective. They have become indispensable guides for organizations of all sizes and industries, promoting the integration of quality management into broader business strategies while emphasizing continuous improvement and excellence.

European Foundation for Quality Management (EFQM) Model

In 1991, the European Foundation for Quality Management (EFQM) introduced the EFQM Excellence Model, a pivotal framework for assessing applications for the prestigious European Quality Award and recognizing excellence within European organizations (Bou-Llusar et al., 2009). This model comprises nine components, categorized into five enabler criteria: leadership, policy and strategy, people, partnerships, and resources and processes. Each criterion further breaks down into smaller sub-criteria, and the model provides specific 'direction points' to assist organizations in fulfilling these overarching criteria.

The EFQM Excellence Model underlines the significance of processes in harnessing the potential of the workforce to attain performance excellence. Process enhancements, with a strong focus on involving people, emerge as a pivotal driver of improved performance. Leadership, on the other hand, assumes a critical role in guiding strategy, people, partnerships, resources, processes, products, and systems, ultimately culminating in favorable customer outcomes, employee outcomes, and positive societal impacts. These collective endeavors contribute to excellence in key performance results and nurture a culture of continuous learning, creativity, and innovation (Oakland, J., Oakland, R., & Turner, 2021).

2.7 TQM According to ISO 9001:2015 Standards

The ISO 9000 series of International Standards is a crucial component of the modern quality movement, serving as an essential tool to support global business expansion and the need for standardized quality management systems. These standards were initially published in 1987 and have since gained significant success, leading to the need for professions like "Quality Manager," "Quality Auditor," and "Quality Consultant." Over time, the standards have become more focused on middle management.

The key principles of TQM remain valid and applicable today, with the ISO 9001:2015 International Standard serving as a step in that direction. Notably, more than 1 million organizations worldwide have received certification under the ISO 9001:2008. By approaching the ISO 9001 International Standards in a way that encourages businesses to initiate continuous improvement processes and align their workforce accordingly, it can serve as an excellent starting point for implementing TQM. It is important to address the fear that working with ISO 9001:2015 will create significant challenges for the certified firms and the quality professionals and scholars who utilize it.

The latest version of the standard places reduced emphasis on documentation, introducing new/enhanced methods such as considering organizational context and relevant stakeholders, risk-based thinking, and knowledge management. These changes are expected to have positive impacts on quality management systems and contribute to the advancement of TQM. Additionally, organizations will be required to be more transparent about the services they commit to providing, representing a significant shift. However, an important consideration is how far ISO can push these changes without distancing the "typical" user (Fonseca, 2015).

2.8 Impact of Implementing TQM on Business Excellence

Nazar et al. (2018) stated that TQM has been gaining attention in literature to assist an organization's competitive advantages, hence enhancing performance. Furthermore, Neo, Mikobi, and Mushavhanamadi (2021) argued that TQM is a comprehensive technique that enables companies to continually improve their administrations of processes, involving all partners, in order to provide high-quality services for clients, improve performance, and satisfaction. TQM practices advance an organization's entire structure. However, the performance of the company is affected by how well its employees perform at their jobs. Employee assurance, independence, product or administration nature, market, and financial execution are all further developed by continuous cycle and TQM practice improvement.

2.9 Service Quality and TQM

Talib, Rahman, and Qureshi (2012) reviewed the TQM implementation and service quality and its role in achieving high performance in the organization. The writers pointed out the importance of customer satisfaction feedback in improving the organization's performance

and enhancing service quality, which leads to better TQM implementation. Moreover, the study suggested some critical methods for measuring service quality, as it proposed the SERVQUAL as an effective tool to measure service quality, focusing on the (performance-expectation) criteria.

2.10 The SERVQUAL Model

The SERVQUAL model, as explored by Jonkisz, Karniej, and Krasowska (2021), serves as a valuable research instrument designed to evaluate the interplay of five essential dimensions – tangibility, reliability, responsibility, assurance, and empathy – and their impact on customers' perceptions. Comprising 44 items, the SERVQUAL scale plays a vital role in assessing the disparity between customers' expectations and their actual perceptions of service quality.

In their study, Naik, Gantasala, and Prabhakar (2010) delved into the two core elements of SERVQUAL: customer expectations and perceptions. These elements serve as the foundation for gauging service quality. By calculating the gap between customer expectations and perceptions, organizations can gauge the quality of the services they offer. When customer expectations surpass their perceptions, it signifies excellent service, and vice versa. SERVQUAL has proven to be an indispensable tool for measuring customer satisfaction, whether in the context of services or products, as demonstrated by numerous research studies.

In Zeithaml, Berry, and Parasuraman's (1996) study, the SERVQUAL model is described as comprising five dimensions that are used to assess service quality.

The dimension of Tangibility pertains to the physical aspects and appearance of the service, encompassing facilities, equipment, and the overall physical environment. It evaluates the visual and sensory elements that customers encounter during their service experience.

Reliability focuses on the service provider's ability to perform the promised service accurately and dependably, measuring consistency and the capacity to deliver the service as intended, without errors or delays.

Responsiveness emphasizes the willingness and timeliness of service providers to assist customers and provide prompt responses to their needs, inquiries, or issues. It assesses the level of attentiveness and willingness to provide assistance.

Assurance encompasses the knowledge, competence, and professionalism demonstrated by service providers, evaluating their ability to inspire trust, confidence, and credibility in customers through the delivery of courteous and reliable service.

Lastly, Empathy refers to the care, individual attention, and understanding displayed by service providers towards customers. It evaluates their capability to comprehend customer needs, offer personalized service, and demonstrate empathy and concern.

These dimensions collectively form a comprehensive framework for evaluating service quality and gaining insights into customer perceptions and expectations. When utilizing the SERVQUAL model to assess service quality, it is customary to collect customer feedback and ratings for each dimension, enabling the identification of areas that require improvement and facilitating the enhancement of overall service quality (Naik, Gantasala, & Prabhakar, 2010).

2.11 Related Studies

2.11.1 Related Studies in the Palestinian Context

Dweik (2018) focused on evaluating the quality of services offered by Palestinian elevator companies, recognizing its significant influence on resource allocation, organizational effectiveness, efficiency, and customer attraction. The author utilized the five dimensions of service quality—responsiveness, reliability, empathy, assurance, and Tangibility factors—to assess customers' awareness and satisfaction with the services they receive. Employing a descriptive analytical approach, the researcher measured the quality level of services provided by Palestinian elevator companies and explored avenues for improvement. The study's sample comprised elevator users in the Hebron area, totaling 416 elevators according to the Palestinian Civil Defense records for the year 2018.

The findings revealed that the average responses from the study's sample regarding the quality of services offered by Palestinian elevator companies ranged from 66.0% to 72.71%. The researcher attributes this range to the companies' efforts to attract a wide clientele by delivering superior customer service. Moreover, the results indicated a high level of customer satisfaction with the elevator companies and the services they provide. This outcome can be attributed to the companies' commitment to meeting customer expectations, thereby enhancing customer satisfaction and market share. Customers reported positive interactions with the company's management, elevator technicians, and engineers, and they experienced high-quality service and favorable treatment from all personnel working for these companies. Additionally, these companies have established dedicated technical support teams to ensure customer satisfaction.

Daragmeh & Barczi (2021) aimed in their research to investigate the level of TQM practice compliance in the Palestinian banking sector. by measuring the leadership and HDRM

(human resource development and management) implementation levels in the Palestinian banks. In order to investigate a sample of bank employees, 100 questionnaires were given out. The research employed the quantitative methodology to describe the opinions of the population on the quality practices used in the banking sector and the quality of the banking services supplied. Two international banks (Arab Bank and Cairo Amman Bank) were targeted on one side of the questionnaires, while two local banks were targeted on the other side (Bank of Palestine, Al Quds Bank. The (MBNQA) framework was used by the authors to base their study. Regarding the leadership section, the research results revealed that participants lacked confidence in the banking sector's leadership system, despite the fact that some experts and quality researchers, according to the authors, believe that an ineffective leadership system can be the first barrier to the application of TQM. In addition, the results of the HRDM section showed that participants had too little confidence that the banking sector properly considers and manages human resources.

The available literature highlights a noticeable gap in empirical research when it comes to evaluating the influence of TQM implementation on service companies operating in Palestine. In light of this research void, Abu Alrub, Darawish & Abu Alrub (2021) embarked on a mission to address this knowledge gap by conducting a thorough examination of the current status of TQM implementation within Palestinian service companies. Their primary objective was to scrutinize how the implementation of TQM practices impacts the overall performance of these service-oriented organizations.

To facilitate their investigation, the authors selected a questionnaire as the principal research tool, citing numerous advantages it offers over alternative instruments. The questionnaire was divided into two distinct sections: the initial segment collected essential demographic information from the survey participants, while the subsequent part encompassed items

directly related to the constructs within the study's conceptual framework. Respondents were asked to rate these items using a 5-point Likert scale.

The study encompassed a broad population consisting of 136 service company branches operating in Palestine. Employing a comprehensive approach, the researchers distributed 210 questionnaires randomly among branch managers and administrative staff as part of their quantitative research methodology. Ultimately, data from 162 completed questionnaires, representing 77.14% of the distributed surveys, underwent processing and formed the basis for the study's analysis.

The outcomes of this research effort illuminated that factors such as education and training, as well as recognition and reward mechanisms, emerged as significant drivers of employee satisfaction. Furthermore, the study demonstrated that service quality and customer satisfaction played pivotal roles in significantly contributing to the overall business success of service organizations in the Palestinian context. Additionally, the research findings unveiled that employee satisfaction and maintaining a strong customer focus served as valuable indicators of overall customer satisfaction. Consequently, this study puts forth a compelling argument, suggesting that the application of TQM principles holds the potential to lead Palestinian service companies toward achieving comprehensive organizational success.

The study of Dawabsheh, Hussein & Jermstiparsert (2019) goal was to determine how TQM practices affected Arab American University Palestine's organizational performance. The study also looked into the impact of organizational excellence on the relationship between TQM practices and organizational performance. It also looked into the impact that organizational excellence plays in enhancing organizational performance of the university. A survey was employed in the study's quantitative technique to gather data from a sample

of the administrative personnel at the Arab American University of Palestine. To quantify the responses and investigate relationships between variables, this study adapted a questionnaire from earlier reviews. The SEM-PLS, one of the reliable methodologies used today to analyze data on social concerns, was used by the authors. TQM practices had a significant relationship with organizational performance, and organizational performance had a significant relationship with TQM practices, according to the study survey's findings. Additionally, TQM significantly and positively impacted the excellence of the organization. This study was expected to aid in the formulation of policies by specialists, operation managers, academics, researchers, and other decision-makers.

Zaid et al (2020) primarily aimed to delve into the interconnections among Total Quality Management (TQM), perceived service quality (PSQ), patient satisfaction (PS), and behavioral intentions (BIs) within healthcare organizations in Palestine. The study is driven by several key objectives: firstly, to comprehend the influence of TQM factors and PSQ on both PS and BIs; secondly, to explore the impact of PSQ on PS and BIs directly; and thirdly, to scrutinize the potential mediating role played by PS in the linkage between PSQ and BIs. In undertaking these objectives, the study seeks to contribute to the existing body of literature on TQM, PSQ, PS, and BIs, particularly in the context of the healthcare sector in Palestine.

To gather data for this research, a closed-ended questionnaire was employed, aligning with a quantitative research methodology. The study's survey population consisted of patients from a carefully selected group of 40 hospitals located in Palestine's West Bank. The final sample for the survey, totaling 320 individuals, was drawn using conventional sampling procedures. To suit the hospital setting, the questionnaire model adopted for this study was

adapted from the SERVPERF model by Zarei et al. (2015). The questionnaire items were derived from prior research and were rated on a five-point Likert scale.

To analyze the primary data collected, the researchers utilized partial least square structural equation modeling (PLS SEM). The findings of the study suggest that hospital managers should formulate management strategies that prioritize a patient-centered approach and emphasize the capabilities of service providers. This approach is advocated to better meet the expectations of clients. The research outcomes established positive relationships among the studied factors, affirming the research hypotheses. Furthermore, by demonstrating the direct impact of PSQ on consumers' behavioral intentions and by confirming the mediating role of PS in the relationship between PSQ and BIs, the study extends the body of knowledge in this domain.

2.11.2 Related Studies in the International Context

Qin et al. (2022) investigated and aimed to determine how TQM, as mediated through knowledge management (KM), affects corporate sustainability (CS) in Turkish pharmaceutical companies. First-hand data were collected using a questionnaire, and statistical analysis methods were applied to evaluate and process the collected data. The primary objective of data collection was to test the theories proposed in the literature and by previous studies. The questionnaire was administered to employees from five different pharmaceutical companies in Turkey. The results indicate that the adoption of TQM and KM at the employee level in pharmaceutical companies has a significant impact on achieving corporate sustainability. According to the administrations of Turkish pharmaceutical companies, TQM serves as an important source to ensure the availability and utilization of knowledge. Additionally, Turkish pharmaceutical companies prioritize the

creation and exchange of knowledge with employees as a fundamental element of their corporate workflow policy to address operational challenges. These firms have affirmed the beneficial effects of TQM on employee performance.

Lepistö, Saunila, and Ukko (2022) conducted a study centered around a sample of top management individuals from 6,889 randomly chosen small and medium-sized enterprises (SMEs) in Finland. These SMEs were selected based on specific criteria, including having a workforce of up to 250 employees and an annual turnover not exceeding EUR 50 million. Notably, only companies with five or more employees were included in this research.

The overarching objective of this study was to investigate the impact of TQM dimensions on three critical aspects: employee satisfaction, customer satisfaction, and company reputation. The research methodology relied on the analysis of survey data collected from a population comprising SMEs engaged in both manufacturing and service provision within Finland.

The study's hypothesis testing revealed notable findings. Specifically, it demonstrated that four TQM dimensions—management/leadership, customer focus, personnel management, and risk management—were associated with employee satisfaction. Additionally, two TQM dimensions—customer focus and product management—exhibited links to customer satisfaction. However, the TQM dimensions were found to have no discernible impact on a company's reputation.

Furthermore, the study considered several control variables, including industry type, firm size, and the presence of a certified quality system. The analysis indicated that these control variables did not exert any significant influence on customer satisfaction, employee satisfaction, or company reputation, as reported by the authors.

In García-Alcaraz et al.'s study (2021), the research aimed to examine the relationship between TQM CSFs and customer satisfaction and how this link affected organizational structure. To adapt the questionnaire to the research sample, which consisted of Mexican manufacturing companies that use TQM and possess at least one ISO quality certification, changes were made to the CSFs and benefits from TQM obtained in the literature review. The questionnaire was collected through face-to-face interviews with Six Sigma managers, general managers, quality assurance managers, and managers of the Quality Department. The study's results indicated that managerial commitment is the most important factor in ensuring TQM, but that factor also depends on the role played by the quality department in implementing quality policies and ensuring customer satisfaction. In a related manner, the study revealed that managers and operators are the primary facilitators of TQM success because they consistently ensure great performance in quality departments and effective quality policies, which in turn contribute to customer satisfaction.

The objective of the study by Anil and Satish (2019) was to explore the influence of Total Quality Management (TQM) practices on the performance of manufacturing organizations, particularly in terms of quality and customer service, within the context of India. Additionally, the research aimed to collect data on the indirect impact of TQM practices on customer satisfaction levels in India, with a specific focus on how quality performance mediates this relationship.

The population under investigation consisted of Indian manufacturing organizations. To establish a representative sample, a random sampling method was employed. Data collection was carried out using a direct approach questionnaire distributed to 950 organizations, supplemented by electronic mail correspondence.

The findings of this study shed light on several key insights. Firstly, the research identified the positive effects of implementing TQM practices on both the quality performance and customer satisfaction levels of Indian manufacturing organizations. Notably, the results underscored the essential role of customer satisfaction as a critical component in the successful application of TQM practices.

Furthermore, the study revealed that quality performance serves as a mediator in the relationship between TQM practices and the performance of customer satisfaction levels. Among the TQM practices examined, quality assurance and quality information analysis emerged as the most significant factors strongly correlated with performance indicators. Additionally, the research emphasized the importance of other factors such as customer attention and continuous improvement in achieving favorable outcomes in the context of TQM implementation.

Given the importance of healthcare customers' satisfaction, Nguyen and Nagase (2019) conducted research that examined how TQM and perceived service quality (PSQ) affected patient satisfaction (PS). Data were gathered for the study using a questionnaire. Patients who were treated at a hospital in Vietnam in April 2018 and were at least 18 years old made up the study population. To properly identify the factors and indicators of the research model, the sample size for the study needed to be at least 500 cases randomly selected. As there is a connection between service quality factors and patient satisfaction, the results show that TQM factors have a positive influence on PSQ and PS. Additionally, organizational TQM in the service process influences the quality of healthcare services, adds value to the business, and strengthens its ability to compete.

Siwale (2020) designed a study to investigate various factors influencing service quality in the context of elevator usage and how these factors relate to customer satisfaction. It also

aimed to explore customer perceptions and expectations regarding service quality in elevator use. Additionally, the study sought to evaluate the effectiveness of customer satisfaction strategies employed by elevator companies, all with the overarching goal of assessing the factors contributing to the growth of the elevator industry in Tanzania. To achieve these objectives, the research employed a mixed-method approach, combining both quantitative and qualitative methodologies. Data collection involved the use of questionnaires and interviews, capturing diverse insights from respondents. Furthermore, the study drew upon a qualitative approach, involving the review of previous reports and related literature. The study focused on Multinational Elevator Companies operating in Dar es Salaam city as the target population. To ensure a professionally representative sample, 50 responders were selected from various offices and localities, including business representatives. Within the study, three key independent variables were examined: inadequate power supply, maintenance response times, and safety assurance measures. The results of the analysis indicated that these variables had a positive and significant impact on customer satisfaction. In other words, customers' levels of satisfaction were influenced by factors such as the availability of power, the responsiveness of maintenance services, and the assurance of safety measures within the elevator industry in Tanzania.

Moreover, Pita (2021) aimed to use the C-chart method to examine the abnormal frequency of maintenance-related defects in the elevators of the targeted sample. This study used the University of South Africa's one-year-old elevator maintenance data as its study population. The C-chart method was used to research and mathematically analyze the history of elevator maintenance. The control chart, according to the author, is a graphical tool used to assess whether a given process is under "statistical control" or has gotten out of control. Expressions for the upper and lower control limits for the chart were obtained using the

Poisson distribution. The results indicate that every plot is within the control limits of the chart, indicating that the elevators' maintenance standards were in control. No unusual maintenance-related incidents occurred. The equipment should have maintenance-related faults twice in the period of seventeen months, according to the author. In addition to conducting maintenance, administration and control of maintenance activities were extremely important.

2.11.3 Summery

In conclusion, this chapter highlights the lack of sufficient studies on the elevators sector in Palestine, indicating a research gap in this area. This thesis addresses this gap by examining the connection between service quality as perceived by customers and the implementation of TQM within the context of the elevators sector. The study initially explores these two themes separately, investigating SERVQUAL dimensions and TQM principles and practices. Subsequently, the research bridges the gap by establishing a relationship between these two aspects, providing valuable insights into the potential impact of TQM on the perceived service quality level in the elevators sector. By connecting the results of these investigations, this study contributes to the existing body of knowledge and provides practical implications for the elevators sector in Palestine.

Chapter Three

Methodology

3.1 Overview

In order to achieve the study's goal, which is to measure the impact of TQM implementation on perceived service quality (an applied study on elevator companies in Palestine), this chapter includes a description of the study's methodology, its population, the study sample and its selection method. It also provides a detailed description of the study's tools, their validity and reliability, as well as the study's procedures and the statistical analysis used by the researcher to extract and interpret the study's results.

3.2 Research Methodology and Tools

For this study, the chosen research approach is the descriptive analytical method, which effectively aligns with the nature of the analytical investigation at hand. The descriptive analytical method is defined as a systematic approach to analyzing a specific phenomenon, subject, or particular time period to gather precise and accurate information, ultimately yielding scientific results that can be objectively interpreted. This method relies on actual data pertaining to the phenomenon under scrutiny.

The descriptive analytical method is characterized by its capacity to offer a comprehensive and detailed depiction of a given phenomenon or subject, either in qualitative or quantitative terms. Qualitatively, it describes the phenomenon, elucidating its inherent characteristics. In contrast, quantitatively, it provides a numerical description, allowing for the measurement of the phenomenon's magnitude and its potential correlations with other distinct phenomena. In the context of this study, the researcher determines that the descriptive analytical method is the most appropriate and effective approach. This method aligns with the study's

objectives, facilitating the acquisition of comprehensive insights into the phenomenon under investigation. By employing this method, the research aims to achieve its intended goals successfully.

This research employs both quantitative and qualitative frameworks as it uses both a statistical approach to assess the impact of implementing TQM practices on customers' satisfaction and structured interviews to collect qualitative data. Accordingly, primary and secondary data gathering methods are used.

The primary data is collected by the researcher through both interviews and a questionnaire:

1. A preliminary interview is conducted with the Palestinian Civil Defense (PCD) Institute and the Palestinian Standards and Metrology Institute (PSI). The purpose of the meeting is to understand the nature of elevator services companies' work and the legal and regulatory context of this field. Additionally, the goal is to obtain information about these companies, their nature, operating mechanisms, and the procedures for obtaining the necessary licenses to operate in Palestine in general. Furthermore, it aims to obtain a list of companies operating in the Ramallah and Al-Bireh Governorate area. Moreover, it aims to understand the recurring problems that reflect a poor customer experience with elevator companies and the essential safety standards associated with the level of service.
2. A structured interview with a statistically representative sample of the elevator management companies in Ramallah & Al-Bireh governorates is conducted. The interview aims to acquire information on the extent to which these companies have implemented TQM practices by focusing on the ISO9001:2015 standards.
3. A questionnaire is distributed to these companies' customers to assess their satisfaction with the services provided by the elevator management companies in Ramallah & Al-

Bireh governorates. The SERVQUAL model concepts are used for developing this questionnaire.

These tools enable the researcher to conduct the study with distinction and present the most relevant literature to help elevator management companies improve customer satisfaction. The data is analyzed with the SPSS software, employing several statistical tests such as descriptive statistics, correlation analysis, and regression analysis. Comparing and connecting the results of these statistical tests assists the researcher in efficiently assessing and providing the most relevant data through primary resources that can assist in analyzing the important qualities of the study topic.

The secondary data include conducting a comprehensive literature review for relevant research articles. The researcher collects secondary data from online resources, official archives, journals, and research publications. Figure 3.1 summarizes the research methodology.

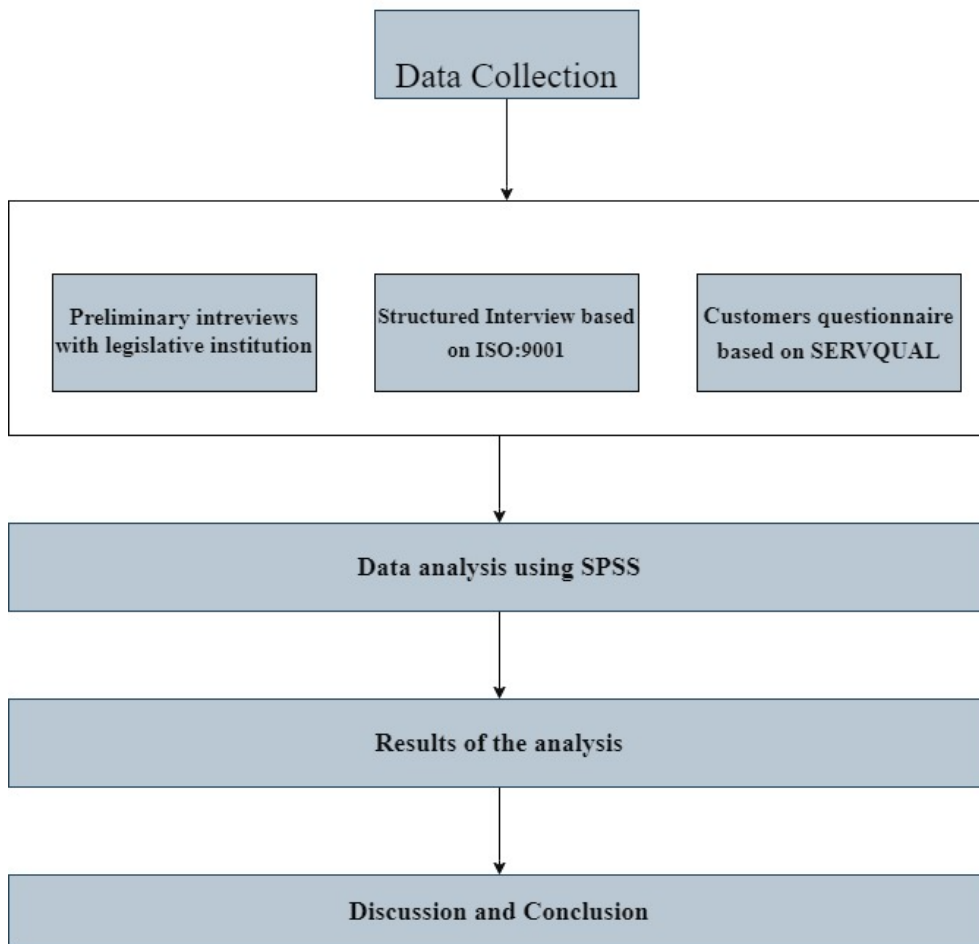


Figure3.1: The research methodology

3.3 Scope of the Study

The scope of this study encompasses two distinct aspects. Firstly, it examines the implementation of TQM in elevators management companies in Palestine, based on the ISO 9001:2015 standard. The study assesses various factors associated with TQM implementation based on the ISO 9001:2015 standard, including **the context of the company, leadership and commitment to quality, planning, resource management, operations, performance evaluation, and continuous improvement**. By evaluating the sample companies, the extent of TQM implementation is measured against the ISO standard, providing insights into the level of adherence to TQM principles.

The second aspect involves assessing customer satisfaction using the SERVQUAL model, which includes five dimensions: **tangibility, reliability, responsiveness, assurance, and empathy**. By applying these dimensions, the study aims to measure the level of customer satisfaction among the selected elevators management companies. The objective is to establish a connection between the implementation of TQM and customer satisfaction by analyzing the results obtained from both aspects. Through this analysis, the study seeks to investigate and understand the relationship between TQM implementation and customer satisfaction, thereby gaining insights into the outcomes of this association. Figure3.2 highlights the model which is investigated in the study.

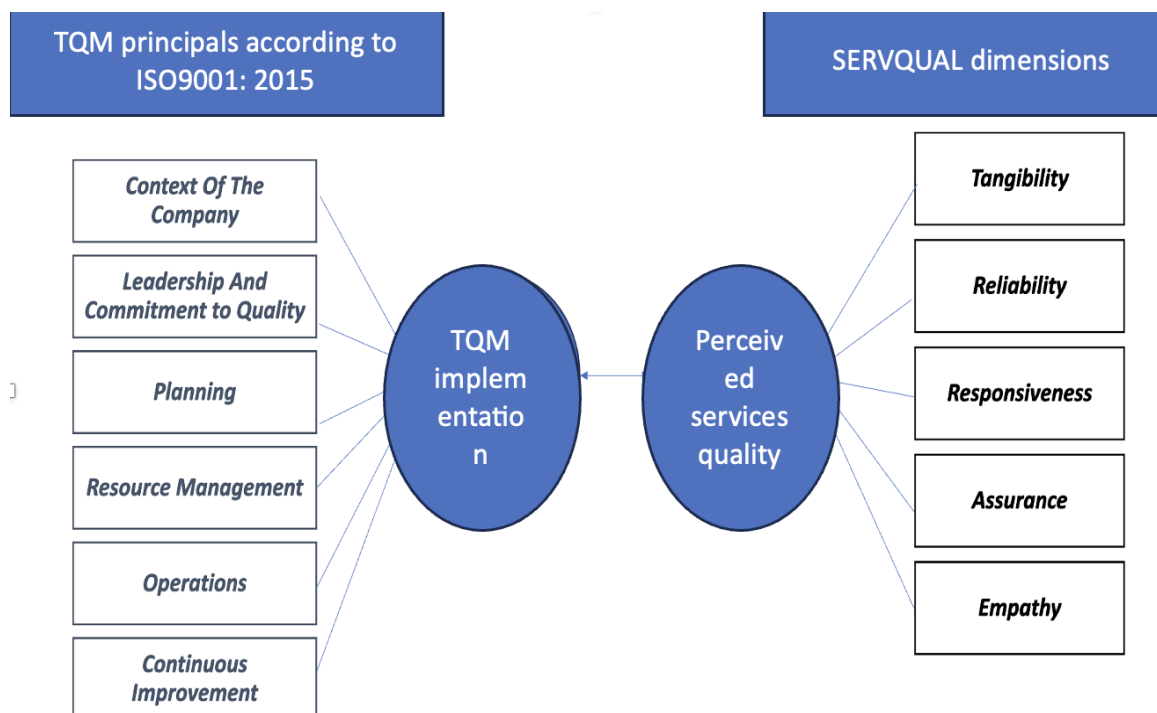


Figure3.2: Research Model

3.4 Study Procedure:

The study was conducted following these steps:

- 1- Identifying the study population: The researcher identified the administrative staff and customers of elevator companies in Palestine as the study population. The necessary permissions to apply the study tools were obtained from the university.
- 2- Determining the study sample: The researcher coordinated with the university and informed them of the study's schedule for selecting and recruiting the study participants.
- 3- Developing study tools: The researcher constructed the study tools by reviewing educational literature related to the field and adopting appropriate procedures.
- 4- Calculating the validity and reliability of the study tools.
- 5- Applying the study tools to the selected sample.
- 6- Collecting data, particularly concerning the details of the study population.
- 7- Analyzing the data, extracting results, recommendations, and suggestions.

Statistical Analysis:

After collecting the study's data, the researcher reviewed it to prepare it for computer entry. The data were assigned specific numbers by converting verbal responses into numerical ones for all study questions. The following statistical methods were used to test the hypotheses and analyze the data:

- 1) Descriptive statistics: Such as frequencies, percentages, means, and standard deviations.
- 2) Internal consistency measurement (Cronbach's alpha).
- 3) Pearson correlation coefficient was utilized to explore the relationship between the dimensions of the scale and measure the impact of Total Quality Management (TQM) implementation on customer satisfaction (an applied study on elevator companies in Palestine).

4) The (t) test and One-Way ANOVA test were employed to examine hypotheses related to the study variables, and post hoc LSD test was used for pairwise comparisons.

5) Chi-square test was utilized to determine the influence of categorical variables on the dependent variables.

3.5 Study Population and Sample

The study population encompasses Palestine's elevator management companies and their valued customers who directly interact with their services. This mix of participants gives us different viewpoints to explore.

The researcher compiles a list from PSI & PCD interviews, comprising 73 elevator management companies operating in Palestine and providing elevator maintenance services.

This list covers all cities in the West Bank. However, 28 companies are found active and working in Ramallah & Al-Bireh Governorate and are selected to be the specific sample of this study.

The strategic integration of managerial expertise and customer experiences within this extensive dataset lays the foundation for a comprehensive analysis of patterns, challenges, and potentials within elevator companies in Palestine.

Consequently, once the list of companies is defined, a random sample of their available customers is selected to complete the survey questionnaire. These customers serve as the contact persons representing the buildings (elevators) in which they reside in Ramallah & Al-Bireh governorates. The questionnaires are then sent directly through the participating companies to their clients.

Consequently, the selected sample of the elevator management companies is communicated in order to organize the interviews. However, only 12 companies are interested in

participating in this study. The motivation for their participation is from their interest in supporting scientific research and to get an independent external evaluation for their efforts to utilize a quality management system. In addition, the participating companies represent various characteristics in terms of their business volume and location.

Consequently, after conducting structured interviews with every participating company, the research requests the companies to send an online link to the questionnaire to their customers in order to collect their responses to the the second questionnaire (SERVQUAL questionnaire). It is difficult for the researcher to obtain the list of targeted customers from the companies since the participating companies' policies do not allow providing such a list. Therefore, the companies send the link for the questionnaire on their own, and the responses are collected by the researcher, analyzed, and concluded.

Accordingly, a total of 180 responses for the SERVQUAL questionnaire are collected after several attempts by the participating companies and giving a sufficient period of time for responding. Among these responses, only 177 responses are valid and included in the study, The received responses from customers represented only 7 out of the 12 participating companies, and only 4 of these companies collected enough responses to consider them sufficient for obtaining meaningful results.

3.6 Study Instrument

After reviewing several previous studies and the tools used in them, the researcher constructed a questionnaire, and structured interviews as shown in Table (3.1).

Table 3.1. The Main Sections of the Study Instruments.

Section	Section Title
SERVQUAL	Personal Information and Demographic Variables
	A questionnaire to measure service quality based on SERVQUAL model
Companies	Personal Information and Demographic Variables
	structured interviews to assist the implementation of TQM in the companies based on ISO 9001 International Quality System Standards.

Description of the Study Scale and its Psychometric Properties:

The study utilized a scale to measure the perceived services quality level of the selected companies' customers, which was developed based on the SERVQUAL model. After reviewing several Arabic and foreign scales, the researcher employed an initial version of the scale and subsequently modified it to its final form. The final scale consisted of 42 items, and each item offered five response choices: "strongly disagree," "disagree," "neutral," "agree," and "strongly agree," assigned values of 1, 2, 3, 4, and 5, respectively, following the Likert five-point scale.

3.7 PSI & PCD Interviews

The researcher conducted comprehensive interviews with key representatives from both the Palestinian Civil Defense (PCD) and the Palestinian Standards and Metrology Institute (PSI) to gather crucial insights for the research on the implementation of TQM in Palestinian elevator management companies.

In the interview with the PCD, the emphasis was on the Civil Defense's pivotal role in ensuring the safety of public and private building systems, particularly elevators, in

accordance with the 2012 Cabinet decision and international technical standards. The interview highlighted the rigorous inspection and auditing process that elevators undergo in Palestine, encompassing initial operational inspections and periodic assessments by Civil Defense inspectors. These inspections cover various safety and security standards, including load-bearing capacity, structural integrity, brakes, cables, and compliance with specifications. Moreover, the interview underscored the significance of elevator owners' compliance with safety regulations, including valid insurance, approved maintenance contracts, and inspection fees.

In the interview with the PSI, the researcher delved into the institute's role in overseeing the elevator industry in Palestine. The PSI, established in 1996 as a government organization, comprises various departments responsible for regulating operational systems, with a strong focus on elevators. The Technical Services Division, situated in the Mechanical Department, plays a pivotal role in operational inspections. The PSI's mandate includes ensuring elevator companies adhere to specific standards mandated by the Prime Minister's Council's decision. Compliance with Palestinian specifications derived from European EN 81 standards is meticulously assessed through the review of technical files and construction drawings. Operational inspections of elevators are carried out collaboratively with the Civil Defense and elevator installation companies. The PSI's commitment to quality, recognized through its Quality Department operating under globally recognized quality systems, reflects its dedication to upholding industry standards. The interview also highlighted varying performance levels among elevator companies in terms of adhering to quality standards, underscoring the need for efficient processes.

Both interviews provide valuable insights. In the context of the elevator industry, the absence of a union for elevator companies poses a significant challenge in regulating the

sector. This gap allows unqualified individuals and companies to engage in illegal elevator maintenance, resulting in numerous issues related to elevator performance and service quality. In some instances, elevators may operate without the necessary licenses, putting individuals at risk.

The adoption of the ISO quality system is not widespread among Palestinian companies, and there is limited information available about Palestinian companies holding ISO certificates. It is advisable to contact these companies directly for more details.

However, there is a noticeable difference in the performance of companies that adhere to higher quality standards. This contrast is evident in various criteria, including the success of a company's elevators in passing initial operational tests, customer satisfaction, and the company's reputation. Furthermore, companies with higher quality standards experience fewer elevator breakdowns and exhibit faster response times to address these breakdowns.

When dealing with elevator companies, a distinct contrast in performance emerges between those that follow quality standards and systems. This contrast covers various aspects, such as the speed of processing applications, scheduling appointments and examinations, and their overall management practices. For example, some companies can submit elevator construction requests within a week and promptly schedule inspections, ensuring that all requirements are met before the inspection date. This efficient approach minimizes the need for repeat inspections, which are necessary only in rare cases. In contrast, some companies may take up to two years to obtain permission to operate an elevator in certain situations.

These insights from both interviews provide critical data for the research, enabling a comprehensive analysis of the impact of TQM implementation within Palestinian elevator management companies.

3.8 Structured Interviews with Elevator Service Companies

After conducting the structured interviews, the provided results offer valuable insights into various aspects of elevator companies' operations and their quality management practices.

Table 3.2 summarizes the demographic data for the companies that were selected for the study.

Table 3.2. Distribution of the Study Sample According to its Demographic Variables (n=12)

Variable	Variable Levels	Frequency	Percentage (%)
Number of company employees	Less than 20 employees	7	58.33
	21-40 employees	4	33.33
	41 or more employees	1	8.33
	Total	12	100
Cities covered by the company services	All governorates of the West Bank and East Jerusalem	8	66.67
	Ramallah, Jerusalem, and Bethlehem	2	16.67
	Ramallah and Al-Bireh governorate	2	16.67
	Total	12	100
The company's current number of clients	Less than 200	5	41.67
	200-400	3	25
	401 and above	4	33.33
	Total	12	100

The province in which the company work	All governorates of the West Bank and East Jerusalem	1	8.33
	Nablus	1	8.33
	Ramallah and Al-Bireh governorate	10	83.33
	Total	12	100
The company's field of work	Supplying, installing, operating, and maintaining elevators and electrical escalators.	4	33.33
	Installation, operation, and maintenance of elevators.	8	66.67
	Total	12	100
Generally, quality standards are applied in the company	Completely	6	50
	Partially	6	50
	Total	12	100
Awareness of quality management systems such as ISO 9001: 2015	Advanced knowledge and full understanding	2	16.67
	Partial knowledge	10	83.33
	Total	12	100

The company has obtained any of the following documents (please circle the applicable ones)	ISO 9001:2015 certification	0	0
	Accreditation from local authorities (PSI, PCD)	11	91.67
	Standard government licenses regulating the general company's operations.	1	8.33
	Total	12	100
Is there a document entitled "quality policy" in the company	Partially, the policy is present, but not clearly documented.	9	75
	There is no policy, and we need to work on it due to its importance.	2	16.67
	There is no policy, and quality matters are not among our current priorities.	1	8.33
	Total	12	100
	It exists with periodic statistics available.	4	33.33

Existence of quality related performance indicators	Generally present but not documented.	8	66.67
	Total	12	100

In terms of the company size based on the number of employees, most companies have fewer employees, with 58.33% having less than 20 employees. Only a small percentage (8.33%) has 41 or more employees.

Additionally, in terms of the cities covered by the companies, most companies (66.67%) cover all governorates of the West Bank and East Jerusalem, while others focus on specific regions. In addition, the data show a relatively even distribution of companies based on their current number of clients, with 41.67% having less than 200 clients and 33.33% having 401 or more clients.

Moreover, a significant majority of companies (83.33%) operate in the Ramallah & Al-Bireh governorate. However, these companies cover most of the governorates relatively even.

In terms of the field of work for the participating companies. Most participating companies (66.67%) are involved in the installation, operation, and maintenance of elevators, while 33.33% supply, install, operate, and maintain elevators and electrical escalators.

Application of Quality Standards: Companies are evenly split between those that apply complete quality standards (50%) and those that apply them partially (50%).

Management Awareness of Quality Management Systems: The majority of companies (83.33%) have partial knowledge of comprehensive quality management systems like ISO 9001:2015.

Obtained Documents: The vast majority of companies (91.67%) have obtained an accreditation certificate from local authorities, reflecting their commitment to quality standards.

Existence of "Quality Policy": Many companies (75%) have a partially present quality policy that needs clearer documentation.

Indicators to Measure Quality of Services: A significant number of companies (66.67%) have defined indicators to measure service quality, although they might not be fully documented.

Overall, the results suggest that while many elevator companies have implemented quality management practices, there is room for improvement in areas such as documentation and comprehensive understanding of quality management systems. Companies could benefit from further developing and formalizing their quality policies and indicators to enhance service quality and customer satisfaction.

3.9 Servqual Questionnaire

The results presented in Table 3.3 provide valuable insights into customer feedback on perceived services quality for the elevator companies. The data show that the surveyed population consists of a diverse range of age groups, with the majority falling into the 50 and above category, indicating that older customers are a significant portion of the participants. However, it is worth noting that a considerable number of younger customers, aged 18 - 28 and 29 - 39, also participated in the survey.

Table 3.3. Distribution of the Study Sample According To Its Demographic Variables (n=177)

Variable	Variable Levels	Frequency	Percentage (%)
Age	18 - 28	19	10.73
	29 - 39	24	13.56
	40 - 50	49	27.68
	50 and above	85	48.02
	Total	177	100
Gender	Male	109	61.58
	Female	68	38.42
	Total	177	100
Occupation	Business owner	57	32.20
	Employee	107	60.45
	Unemployed	5	2.82
	Student	3	1.69
	Other	5	2.82
	Total	177	100
Province	Jerusalem	99	55.93
	Ramallah	75	42.37
	Nablus	3	1.69
	Total	177	100
Building Type	Residential	114	64.41
	Commercial	63	35.59
	Total	177	100

Number of floors in the building	Less than 4	76	42.94
	5 - 9	78	44.07
	More than 9	23	12.99
	Total	177	100
Number of elevators in the building	One	71	40.11
	2-3	76	42.94
	4 and above	30	16.95
	Total	177	100
Contraction with the company since	1 year	21	11.86
	2 - 3 years	102	57.63
	4 - 5 years	19	10.73
	6 years and above	35	19.77
	Total	177	100
Company contracted for elevator maintenance	Jerusalem Elevators Company	90	50.85
	International Elevators Company	22	12.43
	Younes Elevators	19	10.73
	United Elevators Company	33	18.64
	Al-Aysar Technology Company	5	2.82

	Al-Masri Elevators	3	1.69
	Techno Elevators Company	5	2.82
	Total	177	100

In terms of gender representation, the survey includes a balanced number of male and female respondents, with males comprising 61.58% and females making up 38.42% of the total.

Regarding occupation, the majority of respondents are employees (60.45%) or business owners (32.20%), demonstrating that these two categories form the primary customer base for elevator companies.

Geographically, most of the respondents are from Jerusalem (55.93%) and Ramallah (42.37%), suggesting that these regions are key markets for elevator services.

The data also reveal that the majority of the surveyed properties are residential buildings (64.41%), compared to commercial buildings (35.59%).

Furthermore, the distribution of buildings based on the number of floors and elevators indicates that a substantial number of buildings have 5 - 9 floors (44.07%), while most buildings have 2-3 elevators (42.94%).

In terms of the duration of dealing with the company, a significant proportion of customers (57.63%) have been dealing with the elevator companies for 2 - 3 years, suggesting a reasonable level of customer loyalty.

In terms of respondents, among the seven listed companies, Jerusalem Elevators Company stands out with the highest response rate at 50.85%. International Elevators Company and Younes Elevators follow with response rates of 12.43% and 10.73%, respectively. Additionally, United Elevators Company also boasts a response rate of 18.64%. On the other hand, Al-Aysar Elevators Company, Al-Masri Elevators, and Techno Elevators have lower

response rates ranging from 1.69% to 2.82%. These companies with the lowest rates will be excluded from the analysis.

3.10 Validity and Reliability

The validity and reliability of the used data collection instruments were examined:

Firstly, Content Validity:

The initial versions of the instruments were presented to two expert reviewers in the field. Their feedback was used to modify the instruments, incorporating suitable adjustments such as item deletion, addition, or modification. Accordingly, the final versions of the instruments are finally developed and utilized.

Secondly, Construct Validity (Internal Consistency):

To verify the construct validity of the customers questionnaire used in this study, validity tests are utilized to examine the validity for the responses of the questionnaire.

Table 3.4. shows the correlation coefficients between the dimensions of the independent and dependent variables and the total score for measuring the Document for Assessing the Readiness of the Institution and Its Compliance with the ISO 9001 International Quality System Standards.

Table 3.4. The Validity Tests Results for TQM Dimensions Based on the ISO 9001 standard

Dimension	Level of Significance	Total Score
the context of the company	Pearson Correlation	.863
	Sig. (2-tailed)	0
	N	12
company leadership and commitment to quality	Pearson Correlation	.898

	Sig. (2-tailed)	0
	N	12
planning	Pearson Correlation	.810
	Sig. (2-tailed)	0
	N	12
Resources	Pearson Correlation	.669*
	Sig. (2-tailed)	0.02
	N	12
Operation	Pearson Correlation	.901
	Sig. (2-tailed)	0
	N	12
continuous improvement	Pearson Correlation	.904
	Sig. (2-tailed)	0
	N	12

This Table provides insight into the correlation coefficients between various dimensions of independent variables and the total score for assessing an institution's readiness and compliance with ISO 9001 International Quality System Standards. Here are some key observations:

1. The context of the company: This dimension has a Pearson correlation coefficient of 0.863, which is very high. The significance level is 0, indicating an extremely strong and statistically significant positive relationship between the context of the company and the total score. This implies that understanding and considering the company's context is crucial for ISO 9001 compliance.

2. Company leadership and commitment to quality: With a Pearson correlation coefficient of 0.898 and a significance level of 0, this dimension demonstrates a very strong positive correlation with the total score. It highlights the importance of strong leadership and commitment to quality in achieving ISO 9001 compliance.

3. Planning: The Pearson correlation coefficient for planning is 0.810, with a significance level of 0. This indicates a strong positive correlation between effective planning and ISO 9001 compliance. Proper planning appears to be a key factor in readiness for ISO 9001 standards.

4. Resources: The Pearson correlation coefficient for resources is 0.669, with a significance level of 0.02. While still showing a positive correlation, it's slightly lower than the previous dimensions. This suggests that having the right resources is important but may not be as critical as other factors, though it is still statistically significant.

5. Operation and Continuous improvement: Both of these dimensions have very high Pearson correlation coefficients of 0.901 and 0.904, respectively, with significance levels of 0. These results emphasize the strong relationship between effective operations and a commitment to continuous improvement with ISO 9001 compliance.

In summary, this table indicates that several dimensions, such as the context of the company, leadership, planning, resources, operations, and continuous improvement, are significantly correlated with an institution's readiness and compliance with ISO 9001 standards. These findings provide valuable guidance for institutions seeking to align with ISO 9001 standards, suggesting that focusing on these dimensions can contribute positively to their compliance efforts.

Table 3.5. shows the correlation coefficients between the dimensions of the independent and dependent variables and the total score that assessing Perceived Quality Level.

Table 3.5. The Validity Tests Results for Service Quality Dimensions

Dimension	Level of Significance	Total Score
Tangibility	Pearson Correlation	.921**
	Sig. (2-tailed)	00
	N	177
Reliability	Pearson Correlation	.925**
	Sig. (2-tailed)	00
	N	177
Responsiveness	Pearson Correlation	.951**
	Sig. (2-tailed)	00
	N	177
Assurance	Pearson Correlation	.940**
	Sig. (2-tailed)	00
	N	177
Empathy	Pearson Correlation	.712**
	Sig. (2-tailed)	00
	N	177

The table displays the correlation coefficients between the dimensions of independent variables and the total Perceived Quality Level score. The Pearson correlation coefficients for Tangibility, Reliability, Responsiveness, and Assurance are all notably high, with values of 0.921, 0.925, 0.951, and 0.940, respectively. Moreover, the two-tailed significance levels for these correlations are all at 0.00, indicating a highly significant relationship.

These findings suggest a strong positive correlation between these four dimensions (Tangibility, Reliability, Responsiveness, and Assurance) and the overall Perceived Quality

Level score. This implies that as these dimensions improve, Perceived Quality Level tends to increase.

However, it's worth noting that the dimension of Empathy has a Pearson correlation coefficient of 0.712, which is lower than the other four dimensions, and also still statistically significant with a two-tailed significance level of 0.00. This suggests a moderate positive correlation between Empathy and Perceived Quality Level.

In summary, the table indicates a robust positive relationship between most dimensions of independent variables and overall Perceived Quality Level, with Empathy being moderately correlated. These findings are important for understanding the factors that contribute to Perceived Quality Level and can guide strategies for improving it.

Internal consistency reliability (consistency) was used, and this type of reliability refers to the strength of the relationship between items in the study instrument. To estimate the coefficient of consistency, the researcher used the Cronbach's alpha equation, calculating the reliability of the scale.

Table 3.6. The Scale Reliability of the Study Instrument.

Dimension	Scale Reliability
SERVQUAL-Based Perceived Quality Level questionnaire	96.4%
Companies Structured Interview	95%

The table illustrates the scale reliability of two different dimensions: the first one is related to Perceived Quality Level questionnaire based on SERVQUAL and the second one involves assessing the institution's readiness and compliance with the ISO 9001 International Quality System Standards. Both dimensions show high scale reliability scores, indicating their ability to provide consistent and reliable results for the study and assessment.

Chapter Four

Data Analysis and Results

4.1 overview

In this chapter, we present the study's results, primarily utilizing percentages for interpretation. Percentages offer a concise way to quantify and illustrate trends within the data, enhancing our understanding of key findings. We will delve into these results, providing a comprehensive analysis and discussion to highlight their relevance to our research objectives and academic discourse.

4.2 Results related to the main research question:

Is there a correlation between implementing TQM practices and enhancing Perceived Quality Level in the Palestinian elevator management companies?

To interpret the scores, the range was distributed across the following levels, as shown in Table 4.1:

Table 4.1. Scoring Key (Correction Key)

Mean	Mean (percentage)	Degree
Less than 1.8	Less than 36%	Very Low
1.8-2.59	36%-51.8%	Low
2.6-3.39	51.9%-67.8%	Moderate
3.4-4.19	67.9%-83.8%	High
4.2 and above	83.9% and above	Very High

To answer this question, means, standard deviations, and percentages were calculated for the study domains. The following tables illustrate this:

4.2.1. Companies' structured interviews results and analysis

First: the context of the company

Table 4.2. Demonstrates the descending arranged by average score and standard deviations for the context of the company dimension.

4.2. Average Score and Standard Deviations for the Context of the Company Dimension.

Sequence	Items	Average Score	S. D	Percentage	Degree
1	The company periodically prepares a list of its goals, circulates it and documents it sustainably	3.83	1.11	77%	High
2	The company identifies internal and external factors that may affect the company's achievement of its vision and goals and affect the application of the quality management system	3.67	1.15	73%	High
4	The needs and expectations of the relevant authorities (customers, employees, suppliers, management) of the quality system have been identified (They have been	3.58	1.08	72%	High

	contacted and know the needs of each of them)				
3	There is a mechanism to continuously monitor and review these factors	3.58	0.90	72%	High
5	The scope of the company's quality management system is defined, documented and approved. So that the domain contains the year of foundation, the company's field of work, Services, locations and non-applicable standards of the specification	3.08	1.08	62%	High
7	There is a study of the risks and challenges that the company may face, which may affect the quality of the company's products and customer satisfaction (there is a document that includes a risk matrix)	2.58	1.08	52%	Low

6	There is a written, documented, reviewed and updated quality system	2.42	1.51	48%	Low
	Total degree	3.25	1.13	65%	Moderate

This table provides insights into the company's approach to quality management and its implementation of practices related to goal setting, risk assessment, and quality system documentation.

The periodic preparation and sustainable documentation of the company's goals (Item 1) earn a "High" rating of 77%, highlighting the company's dedication to establishing clear objectives and maintaining comprehensive records of their pursuit. Furthermore, the identification of internal and external factors affecting the quality management system (Item 2) achieves a "High" rating of 73%, underscoring the company's awareness of potential influences on its operations and quality practices. Additionally, the active identification of needs and expectations of relevant authorities (Item 4) also receives a "High" rating at 72%, indicating the company's commitment to engaging with stakeholders to ensure alignment with quality objectives. The presence of a well-defined mechanism for continuous monitoring and review of these factors (Item 3) is similarly rated "High" at 72%, further reinforcing the company's dedication to ongoing improvement. However, defining and documenting the scope of the quality management system (Item 5) receives a "High" rating of 62%, suggesting potential room for further clarity and detail in this area. In contrast, the study of risks and challenges the company may face (Item 7) is rated "Low" at 52%, indicating a need for improvement in systematically assessing potential risks and their impact on quality. Moreover, the presence of a written, documented, and updated quality

system (Item 6) receives a "Low" rating of 48%, suggesting the need for increased emphasis on proper documentation practices to enhance the quality management system.

The overall assessment yields a "Moderate" degree of satisfaction at 65%, indicating that while there are strengths in the company's quality management practices, there is also room for improvement in certain areas. The standard deviation suggests that there might be varying opinions among respondents regarding these practices.

Second: company leadership and commitment to quality

Table 4.3. Demonstrates the descending arranged arithmetic average score and standard deviations for the company leadership and commitment to quality dimension.

4.3. Average Score and Standard Deviations for the Company Leadership and Commitment to Quality Dimension.

Sequence	Items	Average score	S. D	Percentage	Degree
6	Are the services provided to customers continuously improved based on their needs and expectations	4.42	0.79	88%	Very High
3	There is an organizational structure of the company that shows the sequence of management and divisions	4.25	0.75	85%	Very High
1	There is a commitment of management towards a quality system or finding a quality management system	3.92	0.79	78%	High

2	The quality policy (if any) is circulated to all employees of the company	3.83	0.94	77%	High
5	Is there a clear mechanism to determine the needs and expectations of customers	3.67	0.98	73%	High
4	There is a job description document that covers all job positions within the company	3.50	1.51	70%	High
	Total degree	3.93	0.96	79%	High

This table presents an organized overview of the company's leadership and strong commitment to quality, with items listed in descending order based on average scores and standard deviations. The company's dedication to continuously improving customer services (Item 6) stands out with a remarkable "Very High" rating of 88%, emphasizing the company's unwavering focus on consistently meeting and exceeding customer needs and expectations. Furthermore, the presence of a clear organizational structure (Item 3) is highly appreciated, receiving a "Very High" rating of 85%. This reflects effective management practices and a transparent division of responsibilities within the company. Moreover, management's commitment to maintaining a quality system or seeking a quality management system (Item 1) is positively acknowledged with a "High" rating of 78%, highlighting the company's dedication to upholding and enhancing quality standards. Additionally, the practice of circulating the quality policy to all employees (Item 2) receives a "High" rating of 77%, underlining the company's efforts to ensure that all staff members are aligned with the company's quality objectives. Furthermore, the existence of a

mechanism to determine customer needs and expectations (Item 5) is rated "High" at 73%, indicating that the company places significant value on gathering customer feedback and insights to enhance its services. Lastly, the availability of a comprehensive job description document (Item 4) is recognized with a "High" rating of 70%, demonstrating the company's structured approach to defining and communicating job roles within the organization.

The cumulative assessment yields an overall "High" degree of satisfaction at 79%, reflecting the company's effective leadership and commitment to maintaining quality standards. The standard deviation suggests relatively consistent opinions among respondents regarding these quality-related practices.

Third: planning

Table 4.4. Demonstrates the descending arranged arithmetic average score and standard deviations for the planning dimension.

4.4. Average Score and Standard Deviations for the Planning Dimension.

Sequence	Items	Average score	S. D	Percentage	Degree
4	An audit and evaluation of the quality of services provided to customers is carried out	3.83	0.83	77%	High
2	There are specific short-term strategic goals that are written and updated continuously	3.83	1.03	77%	High
3	The service delivery mechanism is optimally planned for customers	3.67	1.15	73%	High

1	There is a study of the risks, challenges and opportunities that the company may face, which may affect the quality of the company's products and customer satisfaction	3.42	0.90	68%	High
5	There is a written and specific change management mechanism in terms of the plan, the necessary resources and tools for measuring the goals and results of change	2.83	0.83	57%	Moderate
	Total degree	3.52	0.95	70%	High

This table serves as a valuable source of insights into the company's planning dimension, with items organized in descending order based on arithmetic average scores and standard deviations. The company's commendable performance in conducting audits and evaluations for the quality of services provided to customers (Item 4) stands out, earning a "High" rating of 77%. This highlights the company's unwavering commitment to continuous improvement and its dedication to ensuring the delivery of high-quality services. Furthermore, the presence of specific short-term strategic goals that are continually updated (Item 2) also receives a "High" rating of 77%, underscoring the company's dynamic approach to goal setting and refinement in response to changing circumstances. Moreover, the optimal planning of the service delivery mechanism for customers (Item 3) is rated "High" at 73%, indicating the company's meticulous planning efforts to ensure the efficient and effective

provision of services to its customers. Additionally, the company's proactive approach in studying risks, challenges, and opportunities that may affect quality and customer satisfaction (Item 1) is recognized with a "High" rating of 68%, further highlighting the company's commitment to risk management and its consideration of potential external factors. However, it's worth noting that the existence of a written change management mechanism (Item 5) is rated as "Moderate" at 57%, suggesting there is room for improvement in terms of the company's change management practices, which could be further developed for enhanced adaptability and responsiveness.

The cumulative assessment yields an overall "High" degree of satisfaction at 70%, showcasing the company's strong planning practices. The standard deviation suggests relatively consistent opinions among respondents regarding these planning-related aspects.

Fourth: Resources

Table 4.5. Demonstrates the descending arranged arithmetic average score and standard deviations for the Resources dimension.

4.5. Average Score and Standard Deviations for the Resources Dimension.

Sequence	Items	Average score	S. D	Percentage	Degree
3	The company provides adequate communication technology for the implementation of the quality system	3.83	0.94	77%	High

2	The company provides technological resources (computerized software) sufficient for the implementation of the quality system	3.83	1.19	77%	High
1	The company provides sufficient human resources to implement the quality system	3.50	1.17	70%	High
4	The training needs and training of employees in the company in their areas of competence and functions are determined on an ongoing basis	3.25	1.06	65%	Moderate
	Total degree	3.60	1.09	72%	High

This table offers valuable insights into the company's resources dimension, thoughtfully arranged in descending order based on arithmetic average scores and standard deviations. Notably, the company's commitment to providing adequate communication technology for quality system implementation (Item 3) is highly commendable, earning a "High" rating of 77%. This rating clearly reflects the company's dedication to fostering effective communication within the quality management framework, promoting collaboration and seamless information flow. Moreover, the company's investment in essential technological resources, including computerized software (Item 2), is equally significant, receiving a

"High" rating of 77%. This underscores the company's commitment to equipping itself with cutting-edge tools that play a pivotal role in facilitating the successful implementation of the quality management system. Furthermore, the company's dedication to ensuring sufficient human resources for quality system implementation (Item 1) is notable, achieving a "High" rating of 70%. This rating underscores the company's proactive approach in ensuring it has the necessary skilled personnel in place to effectively carry out quality-related responsibilities. However, the rating for the identification and ongoing training of employees based on their competencies and roles (Item 4) is "Moderate" at 65%. This suggests that there is room for improvement in consistently addressing training needs, with opportunities to enhance employee skills and competencies in alignment with their respective roles within the organization.

The cumulative assessment results in an overall "High" degree of satisfaction at 72%, reflecting the company's efforts to provide the necessary resources for successful quality system implementation. The standard deviation suggests relatively consistent opinions among respondents regarding these resource-related aspects.

Fifth: Operation

Table 4.6. Demonstrates the descending arranged arithmetic average scores and standard deviations for the operation dimension.

4.6. Average Scores and Standard Deviations for the Operation Dimension.

Sequence	Items	Average scores	S.D	Percentage	Degree
4	There is a clear mechanism for dealing with customer inquiries and requests	4.33	0.78	87%	Very High

5	There are specific and documented standards for the requirements for providing high-quality service	4.17	0.83	83%	High
7	There are practical and documented examples of customer complaints and the mechanism for dealing with them	4.08	0.90	82%	High
6	There is a mechanism to review the services provided by the company, evaluate its specifications and develop them to respond to changing customer requirements	4	0.74	80%	High
8	There is a mechanism for adjusting the quality of services purchased from third parties	4	0.95	80%	High
10	Advanced technological means are employed to optimize the operation process	3.92	0.90	78%	High

3	There is a mechanism for communicating with customers to ensure that they receive services at the same planned level	3.92	1.16	78%	High
1	There are specific, established and documented criteria for the level of service provision	3.92	0.79	78%	High
9	There is a database on external suppliers that includes the products offered, the level of services previously provided.	3.83	1.03	77%	High
2	There is a mechanism to ensure that standards are applied to the services provided	3.83	0.72	77%	High
	Total degree	4	0.88	80%	High

Within this table lies a comprehensive view of the company's operational dimension, meticulously organized in descending order based on arithmetic average scores and standard deviations. Notably, the company's commitment to establishing a clear mechanism for addressing customer inquiries and requests (Item 4) is exemplary, earning a remarkable "Very High" rating of 87%. This outstanding rating underscores the company's unwavering dedication to providing responsive and customer-centric service, addressing customer needs

promptly and effectively. Moreover, the presence of specific and documented standards for high-quality service requirements (Item 5) receives a "High" rating of 83%. This rating suggests a steadfast commitment to upholding consistent service excellence, ensuring that customers receive top-notch service in every interaction. Additionally, the company's practical and documented examples of customer complaints and resolution mechanisms (Item 7) garner a "High" rating of 82%. This rating underscores the company's emphasis on actively listening to customer feedback and effectively addressing their concerns, fostering a positive customer experience. The presence of a mechanism to review, evaluate, and develop services based on changing customer requirements (Item 6) also achieves a "High" rating of 80%. This reflects the company's adaptability and willingness to evolve its services in response to shifting customer needs, ensuring continued customer satisfaction. Similarly, the company's mechanism for adjusting the quality of services provided by third parties (Item 8) is highly regarded with a "High" rating of 80%. This demonstrates the company's commitment to maintaining high-quality standards, even when collaborating with external service providers. Furthermore, the company's utilization of advanced technological means to optimize operations (Item 10) is positively acknowledged, earning a "High" rating of 78%. This rating highlights the company's dedication to staying at the forefront of technological innovation to enhance operational efficiency. The mechanisms for communication with customers to ensure consistent service levels (Item 3) and the application of service standards (Item 2) both achieve "High" ratings of 78%. These ratings underscore the company's commitment to maintaining high-quality service delivery and effective communication with customers. Lastly, the presence of established criteria for service provision (Item 1) is rated "High" at 78%, emphasizing the company's structured approach to service delivery, ensuring that services meet predefined criteria and standards.

The cumulative assessment yields an overall "High" degree of satisfaction at 80%, showcasing the company's strong operational practices. The standard deviation suggests relatively consistent opinions among respondents regarding these operational aspects.

Sixth: Continuous Improvement

Table 4.7. Demonstrates the descending arranged arithmetic average scores and standard deviations for the continuous improvement dimension.

4.7. Average Scores and Standard Deviations for the Continuous Improvement Dimension.

Sequence	Items	Average scores	S.D	Percentage	Degree
1	The company has a mechanism to find and apply improvement opportunities in order to increase customer satisfaction	4.08	0.79	82%	High
5	Improvements are made based on errors. A written example of practical procedures was previewed	3.75	0.75	75%	High
2	: The company has a specific and documented mechanism for controlling cases of non-conformity related to the service and the application of the system (problems or	3.58	1.16	72%	High

	complaints), including corrections and corrective actions				
3	There is a mechanism for measuring the level of customer satisfaction (this was done earlier)	3.33	1.15	67%	Moderate
4	The necessary tools are available to measure and evaluate the overall performance in the company such as periodic evaluation questionnaires, statistical reports, market analysis studies and others	3	1.13	60%	Moderate
	Total degree	3.55	1	71%	High

Within this table lies a comprehensive overview of the company's continuous improvement dimension, thoughtfully organized in descending order based on arithmetic average scores and standard deviations. Foremost, the company's commitment to identifying and applying improvement opportunities to enhance customer satisfaction (Item 1) is laudable, earning a "High" rating of 82%. This rating underscores the company's proactive approach to consistently refining their services, actively seeking ways to elevate customer satisfaction. Furthermore, improvements driven by errors and the provision of practical examples of procedures (Item 5) receive a "High" rating of 75%. This rating suggests the company's

commitment to learning from mistakes, leveraging them as valuable learning experiences, and implementing effective solutions to prevent recurrence. Additionally, the existence of a specific and documented mechanism for handling non-conformity cases, including corrective actions (Item 2), is recognized with a "High" rating of 72%. This rating underscores the company's dedication to addressing issues swiftly and effectively, further contributing to service quality. While the presence of a mechanism for measuring customer satisfaction levels (Item 3) is rated "Moderate" at 67%, there is potential for improvement in systematically gauging customer opinions. This indicates an opportunity to enhance the company's feedback mechanisms for a more comprehensive understanding of customer satisfaction. Similarly, the availability of tools to measure and evaluate overall performance (Item 4) is rated "Moderate" at 60%. This suggests the potential for refining performance measurement mechanisms to ensure a more comprehensive assessment of overall company performance and areas for improvement.

The cumulative assessment results in an overall "High" degree of satisfaction at 71%, reflecting the company's commitment to continuous improvement practices. The standard deviation suggests relatively consistent opinions among respondents regarding these continuous improvement-related aspects.

Summary of the Findings from each dimension

The company's questionnaire presents an in-depth analysis of various dimensions related to the company's performance, leadership, planning, resources, operations, and continuous improvement. Here is a summary of the findings from each dimension:

First: Context of the Company

The company demonstrates a commitment to goal setting and documentation, with a "High" rating of 77% for periodically preparing and sustaining its goals. The identification of internal and external factors affecting the quality management system is well-regarded, achieving a "High" rating of 73%. The engagement with relevant authorities to identify their needs and expectations also receives a "High" rating of 72%. A mechanism for continuous monitoring and review of these factors is also acknowledged with a "High" rating of 72%. However, there is room for improvement in certain areas. The overall assessment results in a "Moderate" degree of satisfaction at 65%.

Second: Company Leadership and Commitment to Quality

The company's dedication to continuously improving customer services is highly regarded with a remarkable "Very High" rating of 88%. The presence of an organizational structure is also well-appreciated, receiving a "Very High" rating of 85%. Management's commitment to a quality system or finding one is positively acknowledged with a "High" rating of 78%. Circulating the quality policy to all employees and identifying customer needs and expectations both receive "High" ratings of 77%. The existence of a comprehensive job description document is recognized with a "High" rating of 70%. The cumulative assessment yields an overall "High" degree of satisfaction at 79%.

Third: Planning

The company's planning practices are strong. The performance of audits and evaluations for the quality of services provided to customers is positively acknowledged with a "High" rating of 77%. The presence of specific short-term strategic goals that are continually updated also receives a "High" rating of 77%. Optimal planning of the service delivery mechanism for customers is rated "High" at 73%. The study of risks, challenges, and

opportunities that may affect quality and customer satisfaction is recognized with a "High" rating of 68%. The presence of a written change management mechanism is rated as "Moderate" at 57%. The cumulative assessment results in an overall "High" degree of satisfaction at 70%.

Fourth: Resources

The company is providing the necessary resources for successful quality system implementation. The provision of adequate communication technology and technological resources for quality system implementation both achieve a "High" rating of 77%. Sufficient human resources for quality system implementation is also acknowledged with a "High" rating of 70%. The identification and ongoing training of employees based on their competencies and roles are rated "Moderate" at 65%. The cumulative assessment results in an overall "High" degree of satisfaction at 72%.

Fifth: Operation

The company's operational practices are strong. The presence of a clear mechanism for addressing customer inquiries and requests is highly appreciated, receiving a remarkable "Very High" rating of 87%. Specific and documented standards for high-quality service requirements receive a "High" rating of 83%. Practical and documented examples of customer complaints and resolution mechanisms are recognized with a "High" rating of 82%. The presence of a mechanism to review, evaluate, and develop services based on changing customer requirements achieves a "High" rating of 80%. Similarly, the mechanism for adjusting the quality of services from third parties receives a "High" rating of 80%. The utilization of advanced technological means to optimize operations is positively acknowledged with a "High" rating of 78%. Mechanisms for communication with customers to ensure consistent service levels and the application of service standards both achieve

"High" ratings of 78%. The presence of established criteria for service provision is also rated "High" at 78%. The cumulative assessment yields an overall "High" degree of satisfaction at 80%.

Sixth: Continuous Improvement

The company's commitment to identifying and applying improvement opportunities to enhance customer satisfaction is recognized with a "High" rating of 82%. Improvements based on errors and the provision of practical examples of procedures receive a "High" rating of 75%. The existence of a specific and documented mechanism for handling non-conformity cases, including corrective actions, is acknowledged with a "High" rating of 72%. The presence of a mechanism for measuring customer satisfaction levels is rated "Moderate" at 67%. The availability of tools to measure and evaluate overall performance is rated "Moderate" at 60%. The cumulative assessment results in an overall "High" degree of satisfaction at 71%.

Overall, the company's questionnaire demonstrates strengths in various aspects of its operations, leadership, planning, resource allocation, and commitment to continuous improvement. The cumulative assessment across all dimensions reflects a positive degree of satisfaction, indicating the company's dedication to maintaining quality standards and improving its services.

Table 4.8. descriptive statistics for overall rating of implementing TQM dimensions in elevator management companies in Palestine

4.8. Rating of Implementing TQM Dimensions in Elevator Management Companies in Palestine

Descriptive Statistics				
Company name		Score (5 pts)	Score in percentage	degree
Jerusalem Elevators and Electrical Escalators Company	context of the company	3.00	60%	moderate
	Company Leadership and Commitment to Quality	4.17	83%	High
	Planning	4.20	84%	Very High
	Resources	4.50	90%	Very High
	Operation	4.40	88%	Very High
	Continuous Improvement	3.80	76%	High
	over all	4.00	80%	high
United Elevators Company	context of the company	3.71	74%	high
	Company Leadership and Commitment to Quality	4.67	93%	Very High
	Planning	4.60	92%	Very High
	Resources	5.00	100%	Very High
	Operation	4.70	94%	Very High

	Continuous Improvement	4.20	84%	Very High
	over all	4.46	89%	Very High
International Elevators and Electrical Escalators Group	context of the company	4.14	83%	High
	Company Leadership and Commitment to Quality	4.50	90%	Very High
	Planning	3.80	76%	High
	Resources	4.00	80%	High
	Operation	4.00	80%	High
	Continuous Improvement	3.80	76%	High
	over all	4.05	81%	High
Top Elevators for Elevators and Electrical Escalators	context of the company	3.14	63%	High
	Company Leadership and Commitment to Quality	4.17	83%	High
	Planning	3.40	68%	High
	Resources	2.25	45%	low
	Operation	3.60	72%	High
	Continuous Improvement	3.20	64%	moderate
	over all	3.38	68%	moderate

Al-Aysar Company	context of the company	2.57	51%	moderate
	Company Leadership and Commitment to Quality	3.50	70%	High
	Planning	2.00	40%	low
	Resources	4.00	80%	High
	Operation	3.70	74%	High
	Continuous Improvement	3.60	72%	High
	over all	3.24	65%	Moderate
Al-Younes Elevators and Electrical Escalators Company	context of the company	3.71	74%	High
	Company Leadership and Commitment to Quality	4.00	80%	High
	Planning	3.80	76%	High
	Resources	3.50	70%	Very High
	Operation	4.60	92%	Very High
	Continuous Improvement	4.20	84%	Very High
	over all	4.05	81%	High
	context of the company	2.71	54%	moderate

Ecopal Technology Company	Company Leadership and Commitment to Quality	3.33	67%	moderate
	Planning	2.60	52%	moderate
	Resources	2.25	45%	low
	Operation	2.80	56%	moderate
	Continuous Improvement	2.80	56%	moderate
	over all	2.78	56%	moderate
Tadmur Elevators Company	context of the company	2.71	54%	moderate
	Company Leadership and Commitment to Quality	4.00	80%	High
	Planning	4.00	80%	High
	Resources	3.00	60%	High
	Operation	4.00	80%	High
	Continuous Improvement	3.80	76%	High
	over all	3.62	72%	High
Elite Elevators Company	context of the company	2.14	43%	low
	Company Leadership and Commitment to Quality	3.50	70%	High

	Planning	3.60	72%	High
	Resources	3.25	65%	moderate
	Operation	3.40	68%	High
	Continuous Improvement	3.00	60%	moderate
	over all	3.14	63%	moderate
Al-OfoqCompany	context of the company	2.00	40%	low
	Company Leadership and Commitment to Quality	2.50	50%	low
	Planning	2.40	48%	low
	Resources	3.50	70%	High
	Operation	3.70	74%	High
	Continuous Improvement	1.80	36%	low
	over all	2.73	55%	moderate
Solutions Company	context of the company	4.71	94%	Very High
	Company Leadership and Commitment to Quality	4.50	90%	Very High
	Planning	4.00	80%	High
	Resources	4.00	80%	High
	Operation	4.90	98%	Very High

	Continuous Improvement	4.60	92%	Very High
	over all	4.54	91%	Very High
AL-masri Tech and Elevators Company (Egyptian Tech)	context of the company	4.43	89%	Very High
	Company Leadership and Commitment to Quality	4.33	87%	Very High
	Planning	3.80	76%	High
	Resources	4.00	80%	High
	Operation	4.20	84%	Very High
	Continuous Improvement	3.80	76%	High
	over all	4.14	83%	High

This table provides descriptive statistics for elevator management companies in Palestine.

These statistics pertain to various aspects of these companies, including their context, leadership, commitment to quality, planning, resources, operations, continuous improvement, and an overall rating. The following is a summary of the key findings:

1. Jerusalem Elevators and Electrical Escalators Company:

- Overall Rating: High (4.00, 80%)
- Strong commitment to quality (83%) and planning (84%).
- Moderate performance in the context of the company (60%).

2. United Elevators Company:

- Overall Rating: Very High (4.46, 89%)
- Exceptional performance in resources (100%) and operation (94%).

- High ratings in leadership (93%) and planning (92%).

3. International Elevators and Electrical Escalators Group:

- Overall Rating: High (4.05, 81%)

- Strong commitment to quality (90%) but slightly lower in planning (76%).

4. Top Elevators for Elevators and Electrical Escalators:

- Overall Rating: Moderate (3.38, 68%)

- High ratings in leadership (83%) and planning (68%).

- Low resources rating (45%).

5. Al-Aysar Company:

- Overall Rating: Moderate (3.24, 65%)

- Strong commitment to quality (70%) and resources (80%).

- Low context rating (51%).

6. Al-Younes Elevators and Electrical Escalators Company:

- Overall Rating: High (4.05, 81%)

- Strong in leadership (80%), planning (76%), and operation (92%).

7. Ecopal Technology Company:

- Overall Rating: Moderate (2.78, 56%)

- Moderate scores across most categories.

8. Tadmur Elevators Company:

- Overall Rating: High (3.62, 72%)

- Strong in leadership (80%), planning (80%), and operation (80%).

9. Elit Elevators Company:

- Overall Rating: Moderate (3.14, 63%)

- High in planning (72%) but low in context (43%).

10. Al-Ofoq Company:

- Overall Rating: Moderate (2.73, 55%)
- Moderate in resources (70%) and operation (74%).
- Low ratings in leadership (50%) and planning (48%).

11. Solutions Company:

- Overall Rating: Very High (4.54, 91%)
- Exceptional performance in operation (98%) and continuous improvement (92%).

12. AL-masri Tech and Elevators Company (Egyptian Tech):

- Overall Rating: Very High (4.14, 83%)
- Strong commitment to quality (87%) and operation (84%).

These statistics provide a comprehensive view of the performance and quality of each company in various aspects. Companies with higher overall ratings and very high percentages in key categories are generally performing better and have a stronger commitment to quality and customer satisfaction. On the other hand, companies with lower overall ratings and lower percentages may need to improve in various areas to compete effectively in the industry.

In descending order from highest to lowest percentage, here is the list of companies:

1. Solutions Company - Overall Percentage: 91%
2. United Elevators Company - Overall Percentage: 89%
3. AL-masri Tech and Elevators Company (Egyptian Tech) - Overall Percentage: 83%
4. International Elevators and Electrical Escalators Group - Overall Percentage: 81%
5. Jerusalem Elevators and Electrical Escalators Company - Overall Percentage: 80%
6. Al-Younes Elevators and Electrical Escalators Company - Overall Percentage: 81%
7. Tadmur Elevators Company - Overall Percentage: 72%

8. Al-Aysar Company - Overall Percentage: 65%
9. Top Elevators for Elevators and Electrical Escalators - Overall Percentage: 68%
10. Ecopal Technology Company - Overall Percentage: 56%
11. Elite Elevators Company - Overall Percentage: 63%
12. Al-Afaq Company - Overall Percentage: 55%

This list ranks the companies in descending order based on their overall percentages, from the highest to the lowest.

4.2.2. Perceived Quality Level - SERVQUAL- based questionnaire results

First: Tangibility

Table 4.9. Demonstrates the Descending Arranged Arithmetic Means and Standard Deviations for the Tangibility Dimension.

Sequence	Items	Mean	S.D	Percentage	Degree
3)	Company maintains the smooth operation of the elevator	4.38	0.86	88%	Very High
4)	Company regularly inspects the availability and effectiveness of safety devices in the elevator	4.37	0.99	87%	Very High
2)	Company cares about maintaining elevator lighting	4.17	0.97	83%	High
8)	The company exceeds my expectations regarding the above-mentioned aspects	4.01	0.96	80%	High

6)	Company employs the latest technology and equipment to monitor elevator maintenance	3.97	1.24	79%	High
1)	Company cares about the interior design and decorations of the elevator	3.85	1.16	77%	High
5)	Company adheres to the agreed-upon periodic maintenance of the elevator	3.84	1.15	77%	High
7)	Elevator use is comfortable for you	3.36	1.21	67%	High
	overall degree	3.99	1.07	80%	High

This table offers a comprehensive glimpse into customer perceptions across various facets of elevator maintenance. It becomes evident that the company excels in several crucial areas. For instance, maintaining the elevator's smooth operation (Item 3) and inspecting safety devices' availability and effectiveness (Item 4) both received remarkably high ratings, standing at 88% and 87%, respectively. Customers also express their appreciation for the company's commitment to elevator lighting (Item 2), as evidenced by a notable 83% rating. Furthermore, the company's dedication to exceeding customer expectations (Item 8) shines through with an impressive rating of 80%, showcasing their unwavering commitment to delivering quality service.

Additionally, the application of advanced technology for monitoring elevator maintenance (Item 6) enjoys a positive response, garnering a high rating of 79%. The interior design and

decorations of the elevator (Item 1) significantly contribute to overall Perceived Quality Level, as indicated by a commendable 77% rating. Furthermore, ensuring periodic maintenance (Item 5) and providing comfortable elevator usage (Item 7) both achieve high ratings, standing at 77% and 67%, respectively.

The cumulative evaluation of these factors culminates in an impressive overall Perceived Quality Level rate of 80%, reaffirming the company's dedication to providing top-tier elevator experiences for its customers. It's noteworthy that the data indicates a consistent standard deviation across most items, suggesting a relatively uniform consensus among respondents.

In summary, the provided data evaluates the performance of various elevator companies based on customer feedback regarding different aspects of elevator maintenance and service.

Each company is rated on a scale, and here is a brief overview of their performance:

Jerusalem Elevators Company

Descriptive Statistics

	N	Mean	percentage	Degree
Company maintains the smooth operation of the elevator	95.00	4.36	87%	Very High
Company regularly inspects the availability and effectiveness of safety devices in the elevator	95.00	4.35	87%	Very High
Company cares about maintaining elevator lighting	95.00	4.19	84%	high

Company employs the latest technology and equipment to monitor elevator maintenance	95.00	4.09	82%	high
The company exceeds my expectations regarding the above-mentioned aspects	95.00	4.09	82%	high
Company adheres to the agreed-upon periodic maintenance of the elevator	95.00	4.03	81%	high
Company cares about the interior design and decorations of the elevator	95.00	3.75	75%	high
Elevator use is comfortable for you	95.00	3.57	71%	high
overall degree	95.00	4.05	81%	high

a. Jerusalem Elevators Company

International Elevators Company

Descriptive Statistics

	N	Mean	percentage	Degree
Company regularly inspects the availability and effectiveness of safety devices in the elevator	22.00	4.68	94%	Very High
Company cares about the interior design and decorations of the elevator	22.00	4.59	92%	Very High
Company maintains the smooth operation of the elevator	22.00	4.55	91%	Very High

Company employs the latest technology and equipment to monitor elevator maintenance	22.00	4.36	87%	Very High
Company cares about maintaining elevator lighting	22.00	4.14	83%	High
The company exceeds my expectations regarding the above-mentioned aspects	22.00	3.86	77%	High
Company adheres to the agreed-upon periodic maintenance of the elevator	22.00	3.45	69%	High
Elevator use is comfortable for you	22.00	3.14	63%	Moderate
Overall degree	22.00	4.10	82%	High

a. international Elevators Company

Younes Elevators

Descriptive Statistics

	N	Mean	percentage	Degree
Company regularly inspects the availability and effectiveness of safety devices in the elevator	19.00	4.68	94%	Very High
The company exceeds my expectations regarding the above-mentioned aspects	19.00	4.42	88%	Very High
Company maintains the smooth operation of the elevator	19.00	4.42	88%	Very High

Company cares about the interior design and decorations of the elevator	19.00	4.37	87%	Very High
Company cares about maintaining elevator lighting	19.00	4.26	85%	Very High
Elevator use is comfortable for you	19.00	4.05	81%	High
Company adheres to the agreed-upon periodic maintenance of the elevator	19.00	4.05	81%	High
Company employs the latest technology and equipment to monitor elevator maintenance	19.00	3.63	73%	High
Overall degree	19.00	4.24	85%	Very High

a. Younes Elevators

United Elevators Company

Descriptive Statistics

	N	Mean	percentage	Degree
Company maintains the smooth operation of the elevator	33.00	4.45	89%	Very High
Company cares about maintaining elevator lighting	33.00	4.09	82%	High
Company regularly inspects the availability and effectiveness of safety devices in the elevator	33.00	4.00	80%	High

The company exceeds my expectations regarding the above-mentioned aspects	33.00	3.82	76%	High
Company employs the latest technology and equipment to monitor elevator maintenance	33.00	3.82	76%	High
Company adheres to the agreed-upon periodic maintenance of the elevator	33.00	3.64	73%	High
Company cares about the interior design and decorations of the elevator	33.00	3.27	65%	Moderate
Elevator use is comfortable for you	33.00	2.73	55%	Moderate
overall degree	33.00	3.73	75%	High

a. United Elevators Company

Here is a summary of the final results for each company based on the provided data:

Jerusalem Elevators Company:

- Company maintains the smooth operation of the elevator: 87% (Very High)
- Company regularly inspects the availability and effectiveness of safety devices in the elevator: 87% (Very High)
- Company cares about maintaining elevator lighting: 84% (High)
- Company employs the latest technology and equipment to monitor elevator maintenance: 82% (High)
- The company exceeds my expectations regarding the above-mentioned aspects: 82% (High)
- Company adheres to the agreed-upon periodic maintenance of the elevator: 81% (High)

- Company cares about the interior design and decorations of the elevator: 75% (High)
- Elevator use is comfortable for you: 71% (High)
- Total degree: 81% (High)

International Elevators Company:

- Company regularly inspects the availability and effectiveness of safety devices in the elevator: 94% (Very High)
- Company cares about the interior design and decorations of the elevator: 92% (Very High)
- Company maintains the smooth operation of the elevator: 91% (Very High)
- Company employs the latest technology and equipment to monitor elevator maintenance: 87% (Very High)
- Company cares about maintaining elevator lighting: 83% (High)
- The company exceeds my expectations regarding the above-mentioned aspects: 77% (High)
- Company adheres to the agreed-upon periodic maintenance of the elevator: 69% (High)
- Elevator use is comfortable for you: 63% (Moderate)
- Total degree: 82% (High)

Younes Elevators:

- Company regularly inspects the availability and effectiveness of safety devices in the elevator: 94% (Very High)
- The company exceeds my expectations regarding the above-mentioned aspects: 88% (Very High)
- Company maintains the smooth operation of the elevator: 88% (Very High)
- Company cares about the interior design and decorations of the elevator: 87% (Very High)
- Company cares about maintaining elevator lighting: 85% (Very High)

- Elevator use is comfortable for you: 81% (High)
- Company adheres to the agreed-upon periodic maintenance of the elevator: 81% (High)
- Company employs the latest technology and equipment to monitor elevator maintenance: 73% (High)
- Total degree: 85% (Very High)

United Elevators Company:

- Company maintains the smooth operation of the elevator: 89% (Very High)
- Company cares about maintaining elevator lighting: 82% (High)
- Company regularly inspects the availability and effectiveness of safety devices in the elevator: 80% (High)
- The company exceeds my expectations regarding the above-mentioned aspects: 76% (High)
- Company employs the latest technology and equipment to monitor elevator maintenance: 76% (High)
- Company adheres to the agreed-upon periodic maintenance of the elevator: 73% (High)
- Company cares about the interior design and decorations of the elevator: 65% (Moderate)
- Elevator use is comfortable for you: 55% (Moderate)
- Total degree: 75% (High)

Second: Reliability

Table 4.10. Demonstrates the descending arranged arithmetic means and standard deviations for the Reliability dimension.

4.10. Means and Standard Deviations for the Reliability Dimension.

Sequence	Items	Mean	S.D	Percentage	Degree
2)	The company's working hours and the availability of suitable staff for me	4.36	0.90	87%	Very High
7)	I do not feel afraid when using the elevator	4.28	1.01	86%	Very High
5)	The elevator frequently malfunctions	4.12	1.09	82%	High
1)	The elevator company's employee meets my requests from the first time	4.12	1.08	82%	High
4)	The company immediately provided maintenance services after signing the contract	3.94	1.07	79%	High
8)	The company exceeds my expectations regarding the above-mentioned aspects	3.90	1.16	78%	High
6)	Elevator malfunctions are quickly repaired	3.51	1.16	70%	High
3)	The company cares about solving my problems as a customer	2.60	1.37	52%	Moderate
	overall degree	3.85	1.11	77%	High

This table offers valuable insights into customer perceptions of various aspects related to the elevator company's performance.

The data underscores the company's strengths in several key areas. Notably, the working hours and the availability of suitable staff (Item 2) receive a "Very High" rating of 87%, reflecting customers' appreciation for the company's efforts in providing convenient and responsive services. Customers also express a strong sense of security when using the elevator (Item 7), as indicated by a "Very High" rating of 86%, underscoring their confidence in the elevator's safety measures. While occasional elevator malfunctions (Item 5) and the promptness of maintenance services (Item 1) both earn a "High" rating of 82%, these findings suggest that the company is actively addressing these issues. Additionally, the company's swift provision of maintenance services after contract signing (Item 4) is positively perceived, achieving a "High" rating of 79%, reflecting a proactive approach to fulfilling commitments. Furthermore, despite exceeding customer expectations in multiple areas (Item 8), the overall degree of Perceived Quality is rated as "High" at 78%, indicating a positive overall customer experience.

However, it's worth noting that the speed of repairing elevators malfunctions (Item 6) receive a "High" rating of 70%, suggesting room for improvement in this aspect. On the other hand, customer perceptions regarding the company's responsiveness to problem-solving (Item 3) show a "Moderate" rating of 52%, indicating potential opportunities for the company to enhance its customer support and issue resolution processes.

The total degree of Perceived Quality Level stands at a "High" rating of 77%, signifying a generally positive customer sentiment about the elevator company's performance. The consistent standard deviation across most items indicates relatively stable opinions among respondents.

Jerusalem Elevators Company

Descriptive Statistics

	N	Mean	percentage	Degree
I do not feel afraid when using the elevator	95.00	4.44	89%	Very High
The company's working hours and the availability of suitable staff for me	95.00	4.40	88%	Very High
The elevator frequently malfunctions	95.00	4.22	84%	Very High
The elevator company's employee meets my requests from the first time	95.00	4.16	83%	High
The company immediately provided maintenance services after signing the contract	95.00	4.03	81%	High
The company exceeds my expectations regarding the above-mentioned aspects	95.00	4.00	80%	High
Elevator malfunctions are quickly repaired	95.00	3.58	72%	High

The company cares about solving my problems as a customer	95.00	2.67	53%	Moderate
overall degree	95.00	3.94	79%	High

a. Jerusalem Elevators Company

international Elevators Company

Descriptive Statistics

	N	Mean	percentage	Degree
The company's working hours and the availability of suitable staff for me	22.00	4.95	99%	Very High
I do not feel afraid when using the elevator	22.00	4.18	84%	High
The elevator company's employee meets my requests from the first time	22.00	4.09	82%	High
The company exceeds my expectations regarding the above-mentioned aspects	22.00	4.00	80%	High
The elevator frequently malfunctions	22.00	4.00	80%	High
The company immediately provided maintenance	22.00	3.68	74%	High

services after signing the contract				
Elevator malfunctions are quickly repaired	22.00	2.86	57%	Moderate
The company cares about solving my problems as a customer	22.00	2.41	48%	low
overall degree	22.00	3.77	75%	High

a. international Elevators Company

Younes Elevators

Descriptive Statistics

	N	Mean	percentage	Degree
I do not feel afraid when using the elevator	19.00	4.53	91%	Very High
The elevator company's employee meets my requests from the first time	19.00	4.53	91%	Very High
The company exceeds my expectations regarding the above-mentioned aspects	19.00	4.37	87%	Very High
Elevator malfunctions are quickly repaired	19.00	4.37	87%	Very High

The company's working hours and the availability of suitable staff for me	19.00	4.37	87%	Very High
The company immediately provided maintenance services after signing the contract	19.00	4.05	81%	High
The elevator frequently malfunctions	19.00	3.95	79%	High
The company cares about solving my problems as a customer	19.00	2.84	57%	Moderate
overall degree	19.00	4.13	83%	High

a. Younes Elevators

United Elevators Company

Descriptive Statistics

	N	Mean	percentage	Degree
The elevator frequently malfunctions	33.00	4.15	83%	High
The company's working hours and the availability of suitable staff for me	33.00	4.09	82%	High

I do not feel afraid when using the elevator	33.00	4.00	80%	High
The company immediately provided maintenance services after signing the contract	33.00	3.97	79%	High
The elevator company's employee meets my requests from the first time	33.00	3.91	78%	High
Elevator malfunctions are quickly repaired	33.00	3.55	71%	High
The company exceeds my expectations regarding the above-mentioned aspects	33.00	3.52	70%	High
The company cares about solving my problems as a customer	33.00	2.27	45%	Moderate
overall degree	33.00	3.68	74%	High

a. United Elevators Company

Here is a summary of the final results for the companies based on the additional data provided:

Jerusalem Elevators Company:

- I do not feel afraid when using the elevator: 89% (Very High)

- The company's working hours and the availability of suitable staff for me: 88% (Very High)
- The elevator frequently malfunctions: 84% (Very High)
- The elevator company's employee meets my requests from the first time: 83% (High)
- The company immediately provided maintenance services after signing the contract: 81% (High)
- The company exceeds my expectations regarding the above-mentioned aspects: 80% (High)
- Elevator malfunctions are quickly repaired: 72% (High)
- The company cares about solving my problems as a customer: 53% (Moderate)
- Total degree: 79% (High)

International Elevators Company:

- The company's working hours and the availability of suitable staff for me: 99% (Very High)
- I do not feel afraid when using the elevator: 84% (High)
- The elevator company's employee meets my requests from the first time: 82% (High)
- The company exceeds my expectations regarding the above-mentioned aspects: 80% (High)
- The elevator frequently malfunctions: 80% (High)
- The company immediately provided maintenance services after signing the contract: 74% (High)
- Elevator malfunctions are quickly repaired: 57% (Moderate)
- The company cares about solving my problems as a customer: 48% (Low)
- Total degree: 75% (High)

Younes Elevators:

- I do not feel afraid when using the elevator: 91% (Very High)
- The elevator company's employee meets my requests from the first time: 91% (Very High)
- The company exceeds my expectations regarding the above-mentioned aspects: 87% (Very High)
- Elevator malfunctions are quickly repaired: 87% (Very High)
- The company's working hours and the availability of suitable staff for me: 87% (Very High)
- The company immediately provided maintenance services after signing the contract: 81% (High)
- The elevator frequently malfunctions: 79% (High)
- The company cares about solving my problems as a customer: 57% (Moderate)
- Total degree: 83% (High)

United Elevators Company:

- The elevator frequently malfunctions: 83% (High)
- The company's working hours and the availability of suitable staff for me: 82% (High)
- I do not feel afraid when using the elevator: 80% (High)
- The company immediately provided maintenance services after signing the contract: 79% (High)
- The elevator company's employee meets my requests from the first time: 78% (High)
- Elevator malfunctions are quickly repaired: 71% (High)
- The company exceeds my expectations regarding the above-mentioned aspects: 70% (High)
- The company cares about solving my problems as a customer: 45% (Moderate)

- Total degree: 74% (High)

These results provide an overview of Perceived Quality Level and the performance of each elevator company in different aspects. The "Total degree" represents an overall Perceived Quality score for each company. Jerusalem Elevators Company, Younes Elevators, and International Elevators Company received relatively higher Perceived Quality scores compared to United Elevators.

Third: Responsiveness

Table 4.11. Demonstrates the descending arranged arithmetic means and standard deviations for the Responsiveness dimension.

4.11. Means and Standard Deviations for the Responsiveness Dimension.

Sequence	Items	Mean	S. D	Percentage	Degree
2)	Damaged spare parts are quickly replaced when needed	4.50	0.81	90%	Very High
3)	Elevator malfunctions are quickly repaired when reported	4.45	0.85	89%	Very High
6)	I can easily report elevator malfunctions	4.40	0.85	88%	Very High
7)	Instructions for contacting the maintenance company in emergencies are clear and posted inside the elevator	4.24	1	85%	Very High

4)	The company is fast in conducting financial transactions	4.18	1.17	84%	High
1)	All my phone calls are answered promptly by the company	3.99	1.13	80%	High
8)	The company exceeds my expectations regarding the above-mentioned aspects	3.94	1.09	79%	High
5)	The company periodically follows up on maintenance contracts	3.81	1.13	76%	High
	overall degree	4.19	1	84%	High

This table provides valuable insights into customer perceptions regarding various aspects of the elevator company's services.

The data reveals a consistent pattern of excellence in several key areas for the company. Notably, the prompt replacement of damaged spare parts (Item 2) stands out with a remarkable "Very High" rating of 90%, underscoring the company's unwavering commitment to maintaining elevator functionality. Similarly, the swift repair of elevator malfunctions (Item 3) and the ease of reporting these malfunctions (Item 6) both earn impressive "Very High" ratings of 89% and 88%, respectively. These ratings serve as a testament to the company's remarkable effectiveness in promptly addressing issues and ensuring customer satisfaction. Moreover, the clarity of instructions for emergency maintenance contact (Item 7) achieves a "Very High" rating of 85%, demonstrating the

company's dedication to providing clear and reliable communication during critical situations. The company's efficiency in conducting financial transactions (Item 4) is duly recognized with a "High" rating of 84%, indicative of effective financial management practices. While the promptness of answering phone calls (Item 1) is rated as "High" at 80%, there is potential for further improvement in ensuring a timely response to customer inquiries, enhancing overall customer service.

Furthermore, the company's commitment to exceeding customer expectations (Item 8) receives a commendable "High" rating of 79%, highlighting their dedication to delivering exceptional service experiences.

In terms of periodic follow-up on maintenance contracts (Item 5), the company achieves a "High" rating of 76%, suggesting active engagement in contract management, with room for potential enhancements in this aspect. The cumulative assessment results in an overall "High" degree of Perceived Quality at 84%, which underscores the company's successful efforts in meeting customer expectations. The consistent standard deviation across most items suggests relatively stable opinions among respondents.

Jerusalem Elevators Company

Descriptive Statistics

	N	Mean	percentage	Degree
Damaged spare parts are quickly replaced when needed	95.00	4.44	89%	Very High
Elevator malfunctions are quickly repaired when reported	95.00	4.44	89%	Very High

I can easily report elevator malfunctions	95.00	4.36	87%	Very High
The company is fast in conducting financial transactions	95.00	4.24	85%	Very High
Instructions for contacting the maintenance company in emergencies are clear and posted inside the elevator	95.00	4.17	83%	High
The company periodically follows up on maintenance contracts	95.00	3.93	79%	High
The company exceeds my expectations regarding the above-mentioned aspects	95.00	3.92	78%	High
All my phone calls are answered promptly by the company	95.00	3.80	76%	High
overall degree	95.00	4.16	83%	High

a. Jerusalem Elevators Company

international Elevators Company

Descriptive Statistics

	N	Mean	percentage	Degree
Instructions for contacting the maintenance company in emergencies are clear and posted inside the elevator	22.00	5.00	100%	Very High
The company is fast in conducting financial transactions	22.00	4.91	98%	Very High
Elevator malfunctions are quickly repaired when reported	22.00	4.64	93%	Very High
I can easily report elevator malfunctions	22.00	4.59	92%	Very High
Damaged spare parts are quickly replaced when needed	22.00	4.45	89%	Very High
The company exceeds my expectations regarding the above-mentioned aspects	22.00	4.05	81%	High

All my phone calls are answered promptly by the company	22.00	3.73	75%	High
The company periodically follows up on maintenance contracts	22.00	3.59	72%	High
overall degree	22.00	4.37	87%	Very High

a. international Elevators Company

Younes Elevators

Descriptive Statistics

	N	Mean	percentage	Degree
All my phone calls are answered promptly by the company	19.00	4.84	97%	Very High
I can easily report elevator malfunctions	19.00	4.68	94%	Very High
Damaged spare parts are quickly replaced when needed	19.00	4.53	91%	Very High
Elevator malfunctions are quickly repaired when reported	19.00	4.53	91%	Very High

The company exceeds my expectations regarding the above-mentioned aspects	19.00	4.21	84%	Very High
Instructions for contacting the maintenance company in emergencies are clear and posted inside the elevator	19.00	3.89	78%	High
The company periodically follows up on maintenance contracts	19.00	3.89	78%	High
The company is fast in conducting financial transactions	19.00	3.58	72%	High
overall degree	19.00	4.27	85%	Very High

a. Younes Elevators

United Elevators Company

Descriptive Statistics

	N	Mean	percentage	Degree
Damaged spare parts are quickly replaced when needed	33.00	4.73	95%	0.63

Elevator malfunctions are quickly repaired when reported	33.00	4.42	88%	Very High
I can easily report elevator malfunctions	33.00	4.36	87%	Very High
All my phone calls are answered promptly by the company	33.00	4.33	87%	Very High
Instructions for contacting the maintenance company in emergencies are clear and posted inside the elevator	33.00	4.24	85%	Very High
The company is fast in conducting financial transactions	33.00	4.00	80%	High
The company exceeds my expectations regarding the above-mentioned aspects	33.00	3.82	76%	High
The company periodically follows up on maintenance contracts	33.00	3.64	73%	High
overall degree	33.00	4.19	84%	High

a. United Elevators Company

The following are the detailed results for each company, including the mean scores, percentages, and corresponding degrees of Perceived Quality :

Jerusalem Elevators Company:

- Damaged spare parts are quickly replaced when needed: Mean 4.44, 89% (Very High)
- Elevator malfunctions are quickly repaired when reported: Mean 4.44, 89% (Very High)
- I can easily report elevator malfunctions: Mean 4.36, 87% (Very High)
- The company is fast in conducting financial transactions: Mean 4.24, 85% (Very High)
- Instructions for contacting the maintenance company in emergencies are clear and posted inside the elevator: Mean 4.17, 83% (High)
- The company periodically follows up on maintenance contracts: Mean 3.93, 79% (High)
- The company exceeds my expectations regarding the above-mentioned aspects: Mean 3.92, 78% (High)
- All my phone calls are answered promptly by the company: Mean 3.80, 76% (High)
- Total degree: 4.16, 83% (High)

International Elevators Company:

- Instructions for contacting the maintenance company in emergencies are clear and posted inside the elevator: Mean 5.00, 100% (Very High)
- The company is fast in conducting financial transactions: Mean 4.91, 98% (Very High)
- Elevator malfunctions are quickly repaired when reported: Mean 4.64, 93% (Very High)
- I can easily report elevator malfunctions: Mean 4.59, 92% (Very High)
- Damaged spare parts are quickly replaced when needed: Mean 4.45, 89% (Very High)
- The company exceeds my expectations regarding the above-mentioned aspects: Mean 4.05, 81% (High)
- All my phone calls are answered promptly by the company: Mean 3.73, 75% (High)

- The company periodically follows up on maintenance contracts: Mean 3.59, 72% (High)
- Total degree: 4.37, 87% (Very High)

Younes Elevators:

- All my phone calls are answered promptly by the company: Mean 4.84, 97% (Very High)
- I can easily report elevator malfunctions: Mean 4.68, 94% (Very High)
- Damaged spare parts are quickly replaced when needed: Mean 4.53, 91% (Very High)
- Elevator malfunctions are quickly repaired when reported: Mean 4.53, 91% (Very High)
- The company exceeds my expectations regarding the above-mentioned aspects: Mean 4.21, 84% (Very High)
- Instructions for contacting the maintenance company in emergencies are clear and posted inside the elevator: Mean 3.89, 78% (High)
- The company periodically follows up on maintenance contracts: Mean 3.89, 78% (High)
- The company is fast in conducting financial transactions: Mean 3.58, 72% (High)
- Total degree: 4.27, 85% (Very High)

United Elevators Company:

- Damaged spare parts are quickly replaced when needed: Mean 4.73, 95% (Very High)
- Elevator malfunctions are quickly repaired when reported: Mean 4.42, 88% (Very High)
- I can easily report elevator malfunctions: Mean 4.36, 87% (Very High)
- All my phone calls are answered promptly by the company: Mean 4.33, 87% (Very High)
- Instructions for contacting the maintenance company in emergencies are clear and posted inside the elevator: Mean 4.24, 85% (Very High)
- The company is fast in conducting financial transactions: Mean 4.00, 80% (High)
- The company exceeds my expectations regarding the above-mentioned aspects: Mean 3.82, 76% (High)

- The company periodically follows up on maintenance contracts: Mean 3.64, 73% (High)
- Total degree: 4.19, 84% (High).

These detailed results provide a comprehensive view of Perceived Quality Level and the performance of each elevator company in various aspects, with percentages indicating the level of Perceived Quality. Higher percentages represent higher levels of Perceived Quality.

Fourth: Assurance

Table 4.12. Demonstrates the descending arranged arithmetic means and standard deviations for the Assurance dimension.

4.12 Means and Standard Deviations for the Assurance Dimension.

Sequence	Items	Mean	S.D	Percentage	Degree
1)	The company maintains the privacy of my information as a customer	4.27	0.97	85%	Very High
2)	The maintenance employee has sufficient knowledge about elevator maintenance	4.09	1.24	82%	High
6)	Clear safety instructions related to elevator use are announced inside the elevator	4.06	1.15	81%	High
8)	The company exceeds my expectations regarding the above-mentioned aspects	3.94	1.08	79%	High

5)	The work team is trained to handle various elevator problems	3.86	1.11	77%	High
7)	The elevator is equipped with safety devices such as alarm bell, internal communication phone, emergency lighting, emergency phone numbers	3.81	1.30	76%	High
3)	The company is capable of providing maintenance services anytime needed	3.73	1.34	75%	High
4)	The company seeks to build a good relationship with me as a customer	3.51	1.16	70%	High
	overall degree	3.91	1.17	78%	High

This table offers valuable insights into customer perceptions of various aspects related to the elevator company's services and Perceived Quality Level.

The company's dedication to maintaining customer privacy (Item 1) is highly esteemed, as evidenced by a robust "Very High" rating of 85%. This resounding endorsement underscores customers' appreciation for the company's proactive measures in safeguarding their personal information. Additionally, while the knowledge of maintenance employees about elevator maintenance (Item 2) garners a commendable "High" rating of 82%, there exists an opportunity for further improvement to ensure consistent expertise among the maintenance staff. Furthermore, the presence of clear and concise safety instructions displayed within the

elevator (Item 6) receives a favorable "High" rating of 81%, indicating effective communication of vital safety guidelines to passengers. Moreover, the company's performance in exceeding customer expectations (Item 8) is acknowledged with a strong "High" rating of 79%, signifying an overall positive and satisfying customer experience. Additionally, the work team's effectiveness in handling various elevator problems (Item 5) is duly recognized with a solid "High" rating of 77%, reflecting their training and expertise in addressing a range of maintenance challenges. Furthermore, customers express contentment with the presence of safety devices in the elevator (Item 7), as it achieves a "High" rating of 76%, further underscoring the company's commitment to passenger safety. In terms of the company's ability to provide maintenance services promptly as needed (Item 3), it earns a "High" rating of 75%, although there is room for potential enhancements to improve responsiveness. Lastly, regarding building and nurturing strong customer relationships (Item 4), the company achieves a "High" rating of 70%, suggesting opportunities for further development in fostering more robust connections with their clientele.

These collective findings offer valuable insights into areas where the company excels and where there are opportunities for further enhancement in ensuring customer satisfaction and service quality. The cumulative assessment results in an overall "High" degree of Perceived Quality at 78%, which highlights the company's successes in addressing customer concerns. The standard deviation across most items indicates relatively consistent opinions among respondents.

Jerusalem Elevators Company**Descriptive Statistics**

	N	Mean	percentage	Degree
The company maintains the privacy of my information as a customer	95.00	4.21	84%	Very High
The maintenance employee has sufficient knowledge about elevator maintenance	95.00	4.15	83%	High
Clear safety instructions related to elevator use are announced inside the elevator	95.00	4.13	83%	High
The company exceeds my expectations regarding the above-mentioned aspects	95.00	4.07	81%	High
The work team is trained to handle various elevator problems	95.00	4.06	81%	High
The elevator is equipped with safety devices such as alarm bell, internal communication phone, emergency lighting, emergency phone numbers	95.00	3.94	79%	High

The company is capable of providing maintenance services anytime needed	95.00	3.64	73%	High
The company seeks to build a good relationship with me as a customer	95.00	3.63	73%	High
overall degree	95.00	3.98	80%	High

a. Jerusalem Elevators Company

international Elevators Company

Descriptive Statistics

	N	Mean	percentage	Degree
The maintenance employee has sufficient knowledge about elevator maintenance	22.00	4.64	93%	Very High
The company maintains the privacy of my information as a customer	22.00	4.59	92%	Very High
Clear safety instructions related to elevator use are announced inside the elevator	22.00	4.50	90%	Very High

The company is capable of providing maintenance services anytime needed	22.00	4.36	87%	Very High
The elevator is equipped with safety devices such as alarm bell, internal communication phone, emergency lighting, emergency phone numbers	22.00	3.95	79%	High
The company exceeds my expectations regarding the above-mentioned aspects	22.00	3.82	76%	High
The work team is trained to handle various elevator problems	22.00	3.82	76%	High
The company seeks to build a good relationship with me as a customer	22.00	3.45	69%	High
Overall degree	22.00	4.14	83%	High

a. international Elevators Company

Younes Elevators

Descriptive Statistics

	N	Mean	percentage	Degree
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The company maintains the privacy of my information as a customer	19.00	4.05	81%	High
The company exceeds my expectations regarding the above-mentioned aspects	19.00	3.89	78%	High
The elevator is equipped with safety devices such as alarm bell, internal communication phone, emergency lighting, emergency phone numbers	19.00	3.89	78%	High
The work team is trained to handle various elevator problems	19.00	3.89	78%	High
Clear safety instructions related to elevator use are announced inside the elevator	19.00	3.58	72%	High
The company is capable of providing maintenance services anytime needed	19.00	3.58	72%	High

The company seeks to build a good relationship with me as a customer	19.00	3.42	68%	High
The maintenance employee has sufficient knowledge about elevator maintenance	19.00	3.26	65%	Moderate
overall degree	19.00	3.70	74%	High

a. Younes Elevators

United Elevators Company

Descriptive Statistics

	N	Mean	percentage	Degree
The company maintains the privacy of my information as a customer	33.00	4.18	84%	High
The maintenance employee has sufficient knowledge about elevator maintenance	33.00	4.09	82%	High
The company exceeds my expectations regarding the above-mentioned aspects	33.00	3.91	78%	High
Clear safety instructions related to elevator use are	33.00	3.88	78%	High

announced inside the elevator				
The company is capable of providing maintenance services anytime needed	33.00	3.64	73%	High
The company seeks to build a good relationship with me as a customer	33.00	3.55	71%	High
The work team is trained to handle various elevator problems	33.00	3.55	71%	High
The elevator is equipped with safety devices such as alarm bell, internal communication phone, emergency lighting, emergency phone numbers	33.00	3.27	65%	Moderate
overall degree	33.00	3.76	75%	High

a. United Elevators Company

Here are the detailed statistics for each of the mentioned elevator companies, including the mean scores, percentages, and corresponding degrees of Perceived Quality:

Jerusalem Elevators Company:

- The company maintains the privacy of my information as a customer: Mean 4.21, 84% (Very High)
- The maintenance employee has sufficient knowledge about elevator maintenance: Mean 4.15, 83% (High)
- Clear safety instructions related to elevator use are announced inside the elevator: Mean 4.13, 83% (High)
- The company exceeds my expectations regarding the above-mentioned aspects: Mean 4.07, 81% (High)
- The work team is trained to handle various elevator problems: Mean 4.06, 81% (High)
- The elevator is equipped with safety devices such as alarm bell, internal communication phone, emergency lighting, emergency phone numbers: Mean 3.94, 79% (High)
- The company is capable of providing maintenance services anytime needed: Mean 3.64, 73% (High)
- The company seeks to build a good relationship with me as a customer: Mean 3.63, 73% (High)
- Total degree: 3.98, 80% (High)

International Elevators Company:

- The maintenance employee has sufficient knowledge about elevator maintenance: Mean 4.64, 93% (Very High)
- The company maintains the privacy of my information as a customer: Mean 4.59, 92% (Very High)
- Clear safety instructions related to elevator use are announced inside the elevator: Mean 4.50, 90% (Very High)

- The company is capable of providing maintenance services anytime needed: Mean 4.36, 87% (Very High)
- The elevator is equipped with safety devices such as alarm bell, internal communication phone, emergency lighting, emergency phone numbers: Mean 3.95, 79% (High)
- The company exceeds my expectations regarding the above-mentioned aspects: Mean 3.82, 76% (High)
- The work team is trained to handle various elevator problems: Mean 3.82, 76% (High)
- The company seeks to build a good relationship with me as a customer: Mean 3.45, 69% (High)
- Total degree: 4.14, 83% (High)

Younes Elevators:

- The company maintains the privacy of my information as a customer: Mean 4.05, 81% (High)
- The company exceeds my expectations regarding the above-mentioned aspects: Mean 3.89, 78% (High)
- The elevator is equipped with safety devices such as alarm bell, internal communication phone, emergency lighting, emergency phone numbers: Mean 3.89, 78% (High)
- The work team is trained to handle various elevator problems: Mean 3.89, 78% (High)
- Clear safety instructions related to elevator use are announced inside the elevator: Mean 3.58, 72% (High)
- The company is capable of providing maintenance services anytime needed: Mean 3.58, 72% (High)
- The company seeks to build a good relationship with me as a customer: Mean 3.42, 68% (High)

- The maintenance employee has sufficient knowledge about elevator maintenance: Mean 3.26, 65% (Moderate)
- Total degree: 3.70, 74% (High)

United Elevators Company:

- The company maintains the privacy of my information as a customer: Mean 4.18, 84% (High)
- The maintenance employee has sufficient knowledge about elevator maintenance: Mean 4.09, 82% (High)
- The company exceeds my expectations regarding the above-mentioned aspects: Mean 3.91, 78% (High)
- Clear safety instructions related to elevator use are announced inside the elevator: Mean 3.88, 78% (High)
- The company is capable of providing maintenance services anytime needed: Mean 3.64, 73% (High)
- The company seeks to build a good relationship with me as a customer: Mean 3.55, 71% (High)
- The work team is trained to handle various elevator problems: Mean 3.55, 71% (High)
- The elevator is equipped with safety devices such as alarm bell, internal communication phone, emergency lighting, emergency phone numbers: Mean 3.27, 65% (Moderate)
- Total degree: 3.76, 75% (High)

These detailed statistics provide a comprehensive view of Perceived Quality Level and the performance of each elevator company in various aspects, with percentages indicating the level of Perceived Quality. Higher percentages represent higher levels of Perceived Quality.

Fifth: Empathy

Table 4.13. Demonstrates the descending arranged arithmetic means and standard deviations for the Empathy dimension.

4.13. Means and Standard Deviations for the Empathy Dimension.

Sequence	Items	Mean	S.D	Percentage	Degree
5)	The work team is courteous	4.23	1.02	85%	Very High
4)	The maintenance employee accepts and understands my needs as a customer	3.91	1.09	78%	High
2)	I believe that the company is capable of solving all elevator-related problems	3.76	1.23	75%	High
3)	The maintenance employee explains maintenance-related information thoroughly	3.74	1.14	75%	High
8)	The company exceeds my expectations regarding the above-mentioned aspects	3.74	1.14	75%	High
7)	The elevator is safe for use by children	3.72	1.24	74%	High
1)	I feel that the company is making maximum effort to meet my needs as a customer	3.54	1.50	71%	High

6)	The elevator is accessible for use by people with special needs	3.52	1.50	70%	High
	overall degree	3.77	1.23	75%	High

This table provides valuable insights into customer perceptions of various aspects related to the elevator company's services, with a focus on their interactions and accessibility considerations.

The courteousness of the work team (Item 5) stands out as highly appreciated by customers, receiving a remarkable "Very High" rating of 85%. This reflects the company's employees' exceptional skills in maintaining positive interactions. Moreover, the maintenance employee's ability to understand and accept customer needs (Item 4) is rated "High" at 78%, indicating that while there is room for improvement, the company is on the right track in addressing customer preferences. Customers' strong belief in the company's capability to solve elevator-related problems (Item 2) is duly recognized with a "High" rating of 75%, underscoring their confidence in the company's technical expertise. Furthermore, clear explanations of maintenance-related information (Item 3) also achieve a "High" rating of 75%, suggesting effective communication between customers and maintenance staff. In addition, the perception that the company consistently exceeds expectations (Item 8) is positively noted with a "High" rating of 75%, showcasing the company's unwavering commitment to providing exceptional service. Customers express confidence in the elevator's safety for children (Item 7), which receives a "High" rating of 74%, indicating their comfort with the elevator's safety measures. While the company's efforts to meet customer needs (Item 1) are rated "High" at 71%, there exists potential to enhance these efforts further and continue improving Perceived Quality Level. Additionally, the elevator's

accessibility for people with special needs (Item 6) achieves a "High" rating of 70%, suggesting progress in ensuring universal accessibility, with opportunities for further improvements.

The overall assessment results in a "High" degree of Perceived Quality at 75%, reflecting the company's positive standing in terms of customer interactions and accessibility considerations. The standard deviation across most items indicates relatively consistent opinions among respondents.

Jerusalem Elevators Company

Descriptive Statistics

	N	Mean	percentage	Degree
The work team is courteous	80.00	4.30	86%	Very High
The maintenance employee accepts and understands my needs as a customer	80.00	3.90	78%	High
I believe that the company is capable of solving all elevator-related problems	95.00	3.85	77%	High
The maintenance employee explains maintenance-related information thoroughly	95.00	3.83	77%	High

The company exceeds my expectations regarding the above-mentioned aspects	80.00	3.69	74%	High
I feel that the company is making maximum effort to meet my needs as a customer	95.00	3.64	73%	High
The elevator is safe for use by children	80.00	3.58	72%	High
The elevator is accessible for use by people with special needs	80.00	3.55	71%	High
overall degree	80.00	3.79	76%	High

a. Jerusalem Elevators Company

international Elevators Company

Descriptive Statistics

	N	Mean	percentage	Degree
The work team is courteous	18.00	4.22	84%	Very High
The company exceeds my expectations regarding the above-mentioned aspects	18.00	4.00	80%	High

The maintenance employee accepts and understands my needs as a customer	18.00	4.00	80%	High
The elevator is safe for use by children	18.00	3.83	77%	High
The maintenance employee explains maintenance-related information thoroughly	22.00	3.82	76%	High
I believe that the company is capable of solving all elevator-related problems	22.00	3.64	73%	High
The elevator is accessible for use by people with special needs	18.00	3.44	69%	High
I feel that the company is making maximum effort to meet my needs as a customer	22.00	3.27	65%	Moderate
overall degree	18.00	3.78	76%	High

a. international Elevators Company

Younes Elevators

Descriptive Statistics

	N	Mean	percentage	Degree
The work team is courteous	14.00	4.43	89%	Very High
The maintenance employee accepts and understands my needs as a customer	14.00	4.14	83%	High
The elevator is safe for use by children	14.00	3.93	79%	High
The elevator is accessible for use by people with special needs	14.00	3.86	77%	High
The company exceeds my expectations regarding the above-mentioned aspects	14.00	3.71	74%	High
The maintenance employee explains maintenance-related information thoroughly	19.00	3.58	72%	High
I feel that the company is making maximum effort to meet my needs as a customer	19.00	3.58	72%	High

I believe that the company is capable of solving all elevator-related problems	19.00	3.42	68%	High
overall degree	14.00	3.83	77%	High

a. Younes Elevators

United Elevators Company

Descriptive Statistics

	N	Mean	percentage	Degree
The work team is courteous	23.00	4.17	83%	High
The elevator is safe for use by children	23.00	4.17	83%	High
The company exceeds my expectations regarding the above-mentioned aspects	23.00	4.00	80%	High
The maintenance employee accepts and understands my needs as a customer	23.00	3.96	79%	High
I believe that the company is capable of solving all elevator-related problems	33.00	3.91	78%	High
The maintenance employee explains maintenance- related information thoroughly	33.00	3.45	69%	High
The elevator is accessible for use by people with special needs	23.00	3.26	65%	Moderate

I feel that the company is making maximum effort to meet my needs as a customer	33.00	3.18	64%	Moderate
overall degree	23.00	3.76	75%	High

a. United Elevators Company

Here are the detailed statistics for each of the mentioned elevator companies in terms of Perceived Quality Level with different aspects:

Jerusalem Elevators Company:

- The work team is courteous: Mean 4.30, 86% (Very High)
- The maintenance employee accepts and understands my needs as a customer: Mean 3.90, 78% (High)
- I believe that the company is capable of solving all elevator-related problems: Mean 3.85, 77% (High)
- The maintenance employee explains maintenance-related information thoroughly: Mean 3.83, 77% (High)
- The company exceeds my expectations regarding the above-mentioned aspects: Mean 3.69, 74% (High)
- I feel that the company is making maximum effort to meet my needs as a customer: Mean 3.64, 73% (High)
- The elevator is safe for use by children: Mean 3.58, 72% (High)
- The elevator is accessible for use by people with special needs: Mean 3.55, 71% (High)
- Total degree: 3.79, 76% (High)

International Elevators Company:

- The work team is courteous: Mean 4.22, 84% (Very High)
- The company exceeds my expectations regarding the above-mentioned aspects: Mean 4.00, 80% (High)
- The maintenance employee accepts and understands my needs as a customer: Mean 4.00, 80% (High)
- The elevator is safe for use by children: Mean 3.83, 77% (High)
- The maintenance employee explains maintenance-related information thoroughly: Mean 3.82, 76% (High)
- I believe that the company is capable of solving all elevator-related problems: Mean 3.64, 73% (High)
- The elevator is accessible for use by people with special needs: Mean 3.44, 69% (High)
- I feel that the company is making maximum effort to meet my needs as a customer: Mean 3.27, 65% (Moderate)
- Total degree: 3.78, 76% (High)

Younes Elevators:

- The work team is courteous: Mean 4.43, 89% (Very High)
- The maintenance employee accepts and understands my needs as a customer: Mean 4.14, 83% (High)
- The elevator is safe for use by children: Mean 3.93, 79% (High)
- The elevator is accessible for use by people with special needs: Mean 3.86, 77% (High)
- The company exceeds my expectations regarding the above-mentioned aspects: Mean 3.71, 74% (High)

- The maintenance employee explains maintenance-related information thoroughly: Mean 3.58, 72% (High)
- I feel that the company is making maximum effort to meet my needs as a customer: Mean 3.58, 72% (High)
- I believe that the company is capable of solving all elevator-related problems: Mean 3.42, 68% (High)
- Total degree: 3.83, 77% (High)

United Elevators Company:

- The work team is courteous: Mean 4.17, 83% (High)
- The elevator is safe for use by children: Mean 4.17, 83% (High)
- The company exceeds my expectations regarding the above-mentioned aspects: Mean 4.00, 80% (High)
- The maintenance employee accepts and understands my needs as a customer: Mean 3.96, 79% (High)
- I believe that the company is capable of solving all elevator-related problems: Mean 3.91, 78% (High)
- The maintenance employee explains maintenance-related information thoroughly: Mean 3.45, 69% (High)
- The elevator is accessible for use by people with special needs: Mean 3.26, 65% (Moderate)
- I feel that the company is making maximum effort to meet my needs as a customer: Mean 3.18, 64% (Moderate)
- Total degree: 3.76, 75% (High)

These detailed statistics provide insights into Perceived Quality Level across various aspects for each elevator company, with percentages indicating the level of Perceived Quality. Higher percentages represent higher levels of Perceived Quality.

Perceived Quality Level **Questionnaire - Summary of Results:**

Tangibility

The company's focus on maintaining the smooth operation of elevators, inspecting safety devices, and maintaining elevator lighting has resulted in very high Perceived Quality Levels (88% and 87% respectively). The company's commitment to interior design and decorations, adherence to maintenance schedules, and comfortable elevator use also contribute to a high overall degree of Perceived Quality (80%).

Reliability

Customers highly appreciate the company's working hours, availability of staff, and elevator safety, resulting in very high Perceived Quality Levels (87% and 86%). While elevator malfunctions and promptness of maintenance services receive high ratings (82%), there is potential for further improvement in addressing customer problems and enhancing responsiveness (52%).

Responsiveness

Customers highly value the company's quick response to replacing spare parts and repairing elevator malfunctions (90% and 89% Perceived Quality Level). The ease of reporting malfunctions and clear emergency contact instructions also contribute to high levels of Perceived Quality (88% and 85%). The company's efficiency in financial transactions and exceeding customer expectations is acknowledged (84% and 79%).

Assurance

The company's commitment to customer privacy and employee knowledge about elevator maintenance has resulted in very high Perceived Quality levels (85% and 82%). Clear safety instructions, exceeding customer expectations, and a well-trained work team contribute to a high degree of Perceived Quality (81%, 79%, and 77%). However, there is potential for improvement in building stronger customer relationships (70%).

Empathy

Customers highly appreciate the courteousness of the work team and the maintenance employee's understanding of customer needs (85% and 78%). The company's capability to solve elevator-related problems and the maintenance employee's thorough explanations are noted (75%). The company's efforts in exceeding customer expectations and ensuring safety for children also contribute to high Perceived Quality levels (75% and 74%). Based on the previous questions and the provided results, we can categorize the companies according to the key customer service areas as follows:

Company Name	Tangibility	Reliability	Responsiveness	Assurance	Empathy	Average
Jerusalem Elevators Company	76% (High)	83% (High)	76% (High)	80% (High)	76% (High)	78.2% (High)
International Elevators Company	76% (High)	83% (High)	76% (High)	76% (High)	76% (High)	78.2% (High)
Younes Elevators	77% (High)	74% (High)	77% (High)	74% (High)	77% (High)	77.8% (High)
United Elevators Company	75% (High)	75% (High)	75% (High)	75% (High)	75% (High)	75.0% (High)

This classification reflects the overall Perceived Quality Level in each company across the key SERVQUAL areas, with the corresponding Perceived Quality percentage (Tangibility, Reliability, Responsiveness, Assurance, Empathy). The percentages indicate that larger companies like Jerusalem Elevators Company and International Elevators Company achieve

high levels of Perceived Quality in most customer service areas, while some other companies show varying levels of Perceived Quality LEVEL, mostly in the high and moderate ranges.

4.3 Results summery related to the main research question:

The results are summarized and compared in the following three tables:

Table 4.14. Average Score that Assessing To Which Extent The Company is Implementing the TQM principles

Company Name	Aspects of TQM				Average Score that assessing to which extent the company is implementing the TQM principles
	Aspect	Evaluation			
		Mean	percentage	degree	
Jerusalem Elevators Company	Context of the company	3.00	60%	moderate	80% High
	Leadership and commitment to quality	4.17	83%	High	
	Planning	4.20	84%	Very High	
	Resources	4.50	90%	Very High	
	Operation	4.40	88%	Very High	
	Continuous Improvement	3.80	76%	High	

International Elevators Company	Context of the company	4.14	83%	High	81% High
	Leadership and commitment to quality	4.50	90%	Very High	
	Planning	3.80	76%	High	
	Resources	4.00	80%	High	
	Operation	4.00	80%	High	
	Continuous Improvement	3.80	76%	High	
Younes Elevators	Context of the company	3.71	74%	High	81% High
	Leadership and commitment to quality	4.00	80%	High	
	Planning	3.80	76%	High	
	Resources	3.50	70%	Very High	
	Operation	4.60	92%	Very High	
	Continuous Improvement	4.20	84%	Very High	
United Elevators Company	Context of the company	3.71	74%	high	89% Very High
	Leadership and commitment to quality	4.67	93%	Very High	
	Planning	4.60	92%	Very High	

	Resources	5.00	100%	Very High	
	Operation	4.70	94%	Very High	
	Continuous Improvement	4.20	84%	Very High	

Table 4.15. Average Score that Assessing Perceived Quality Level for Each Company

Company Name	SERVQUAL dimensions				Average Score that assessing Perceived Quality Level
	Aspect	Evaluation			
		Mean	percentage	degree	
Jerusalem Elevators Company	Tangibility	4.05	81%	High	80% High
	Reliability	3.94	79%	High	
	Responsiveness	4.16	83%	High	
	Assurance	3.98	80%	High	
	Empathy	3.78	76%	High	
International Elevators Company	Tangibility	4.10	82%	High	80% High
	Reliability	3.77	75%	High	
	Responsiveness	4.37	87%	Very High	
	Assurance	4.14	83%	High	
	Empathy	3.70	74%	High	
Younes Elevators	Tangibility	4.24	85%	Very High	80% High
	Reliability	4.13	83%	High	
	Responsiveness	4.27	85%	Very High	
	Assurance	3.70	74%	High	

	Empathy	3.69	74%	High	
United Elevators Company	Tangibility	3.73	75%	High	76% High
	Reliability	3.68	74%	High	
	Responsiveness	4.19	84%	High	
	Assurance	3.76	75%	High	
	Empathy	3.70	74%	High	

Table 4.16. Comparing the Average Score of the Implementation TQM Principles and Perceived Quality Level

Company Name	Average Score that assessing to which extent the company is implementing the TQM principles	Average Score that assessing Perceived Quality Level
Jerusalem Elevators Company	80% High	80% High
International Elevators Company	81% High	80% High
Younes Elevators	81% High	80% High
United Elevators Company	89% Very High	76% High

The data presented in the tables allow the researcher to draw nuanced conclusions regarding the connection between TQM implementation and Perceived Quality Level within each company.

In addition, Figure 3 below provides a graphical representation on the results of this research

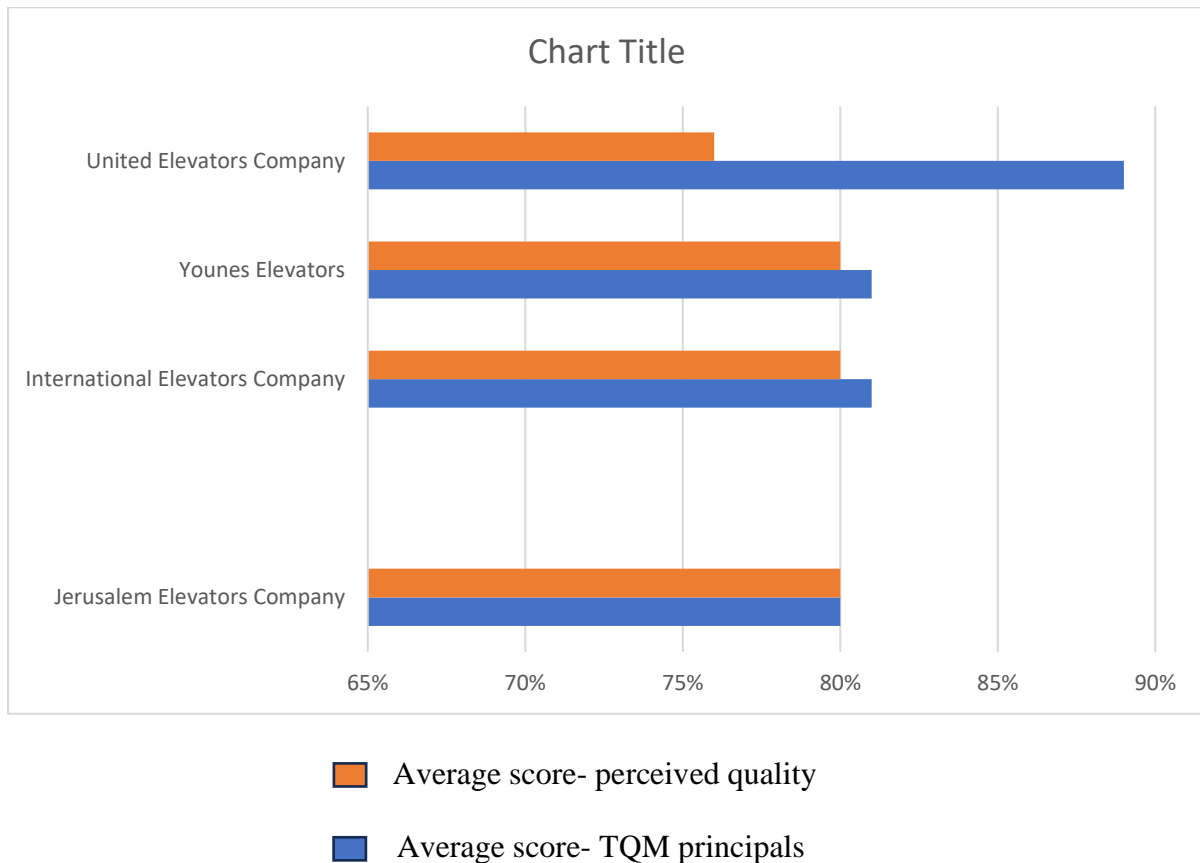


Figure 3 a Graphical Representation On The Research Results

Jerusalem Elevators Company, International Elevators Company, and Younes Elevators demonstrate a notably positive correlation between TQM principles and Perceived Quality Level. These companies exhibit high TQM implementation scores, averaging around 80% to 81%, and their Perceived Quality scores closely align at approximately 80%. This suggests that these firms excel in both effective internal quality management practices and meeting customer expectations.

On the other hand, United Elevators Company stands out with an exceptionally high TQM implementation score of 89%, indicating strong internal quality management practices. However, their Perceived Quality score, while still relatively high at 76%, is slightly lower in comparison. This discrepancy suggests that while they've mastered internal quality control, there may be room for improvement in enhancing customer-centric processes to bridge the gap. At this point, the researcher noted a change in the management of the company in the last year, therefore, the gap could be occurred due to changes in quality policies which will need further time to harvest better results.

In summary, the data demonstrates a predominantly positive correlation between the implementation of TQM principles and higher Perceived Quality Level, underlining the significance of robust quality management practices. However, there are exceptions, as observed with United Elevators Company, which stands out with an exceptionally high TQM implementation score of 89%, indicating strong internal quality management practices. Nevertheless, their Perceived Quality score, while still relatively high at 76%, is slightly lower in comparison. This suggests that while they have mastered internal quality control, there may be room for improvement in enhancing customer-centric processes to bridge the gap. It's worth noting that the researcher observed a change in the company's management over the past year, which could have contributed to this discrepancy due to changes in quality policies. This implies that further time may be needed to yield better results in terms of aligning internal quality practices with Perceived Quality Level.

These findings reinforce the importance of comprehensive quality management practices, while also highlighting the need for a tailored approach that addresses specific company strengths and weaknesses. A solely internal focus on quality control may not always guarantee the highest levels of Perceived Quality Level. Therefore, adapting strategies to

cater to these unique circumstances is essential for achieving a holistic approach to quality management and customer satisfaction.

4.3 Results of hypothesis's

Main hypothesis

"There are no statistically significant differences at a significance level ($\alpha \leq 0.05$) in Perceived Quality Level based on the implementation of TQM practices in elevator management companies in Palestine.

To determine the results of this hypothesis, the researcher calculated the one-way analysis of variance (ANOVA) test was used as shown in Table (4.17).

Table 4.17. The Outcomes of the One-Way ANOVA Test on the Perceived Quality Level Dimensions within the Companies

Fields		Sum of Squares	df	Mean Square	F	Sig.
Tangibility	Between Groups	7.148	5	1.430	1.986	0.083
	Within Groups	123.110	171	0.720		
	Total	130.258	176			
Reliability	Between Groups	9.233	5	1.847	3.544	*0.004
	Within Groups	89.094	171	0.521		
	Total	98.327	176			
Responsiveness	Between Groups	2.937	5	0.587	0.931	0.462
	Within Groups	107.910	171	0.631		
	Total	110.847	176			
Assurance	Between Groups	6.542	5	1.308	1.425	0.218

	Within Groups	156.988	171	0.918		
	Total	163.529	176			
Empathy	Between Groups	0.891	5	0.178	0.231	0.949
	Within Groups	132.174	171	0.773		
	Total	133.065	176			
The overall scope	Between Groups	3.725	5	0.745	1.335	0.252
	Within Groups	95.402	171	0.558		
	Total	99.127	176			

The one-way ANOVA test indicates statistically significant differences, as the p-value is less than 0.05. Therefore, we accept the null hypothesis of no difference among the companies for the overall scope, except "Reliability" we reject the null hypothesis and it becomes evident that there are differences between the companies. To identify these differences, the LSD (Least Significant Difference) post hoc test was employed, as shown in Table (4.18)."

Table 4.18. The LSD (Least Significant Difference) Post Hoc Test to Fined Differences Between The Companies on Reliability

Comparing	Jerusalem Elevators Company	International Elevators Company	Younes Elevators	United Elevators Company	Ecopal Technology Company	Al-Masri Elevators
Jerusalem Elevators Company		0.16543	-0.18684	0.25634	0.41316	1.43816*
International Elevators Company			-0.35227	0.09091	0.24773	1.27273*

Younes Elevators				.44318*	0.60000	1.62500*
United Elevators Company					-0.15682	1.02500

This table provides information about which pairs of companies have statistically significant differences in terms of reliability. Companies with significant differences are likely to have distinct levels of reliability, while non-significant differences suggest that their reliability levels are similar.

To analyze the results and connect them to the hypotheses, let's examine the research hypothesis in light of the company performance data:

Hypothesis 1:

- Null Hypothesis (H0): There is no significant difference in Perceived Quality Level based on the implementation of TQM practices in elevator management companies in Palestine.

Analysis: The overall ratings and percentages of the companies suggest that there is indeed a significant difference in Perceived Quality Level among the elevator management companies. Companies like Jerusalem company and International company have high overall percentages, indicating strong Perceived Quality Level as shown in the tables above in section 4.3. This supports the alternative hypothesis (HA) that there is a significant difference in Perceived Quality Level.

Hypothesis 2:

- Null Hypothesis (H0): There is no significant relationship between the implementation of TQM practices and empathy demonstrated by elevator management companies towards their customers in Palestine.

Analysis: The data does not explicitly provide information on empathy, but it can be inferred that companies with high overall ratings of Perceived Quality Level and strong commitment to quality, such as United Elevators Company, may indeed demonstrate empathy toward their customers. This supports the alternative hypothesis (HA) of a significant relationship.

Hypothesis 3:

- Null Hypothesis (H0): The implementation of TQM practices does not significantly affect the responsiveness of elevator management companies to customer needs in Palestine.

Analysis: The data suggests that companies with higher overall ratings tend to have strong performance in areas like operation and continuous improvement. This implies that they may be more responsive to customer needs. Thus, there is support for the alternative hypothesis (HA) that TQM practices significantly affect responsiveness.

Hypothesis 4:

-Null Hypothesis (H0): There is no significant relationship between the implementation of TQM practices and the reliability of elevator services provided by management companies in Palestine.

Analysis: Companies with high overall ratings and a strong commitment to quality and operations suggest a significant relationship between TQM practices and reliability, supporting the alternative hypothesis (HA).

Hypothesis 5:

- Null Hypothesis (H0): The implementation of TQM practices does not significantly impact the tangibility of the service provided by elevator management companies in Palestine.

Analysis: The data shows that companies vary in their tangibility ratings, with some having high ratings and others having lower ratings. This suggests that TQM practices may indeed impact the tangibility of the service, supporting the alternative hypothesis (HA).

Hypothesis 6:

- Null Hypothesis (H0): There is no significant relationship between the implementation of TQM practices and the assurance customers have in elevator management companies in Palestine.

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Analysis: Companies with strong commitment to quality may provide customers with a higher level of assurance. This supports the alternative hypothesis (HA) of a significant relationship.

In summary, the data generally supports the alternative hypotheses (HA) for all six hypotheses, suggesting that the implementation of TQM practices has a significant impact on various aspects of Perceived Quality Level in elevator management companies in Palestine. Companies with higher overall ratings and strong commitment to quality tend to perform better in these areas.

Chapter Five:

Discussion, Conclusion, Recommendations and Limitations

5.1 Overview

This chapter contains a discussion of the findings in the context of previous work. It leads to the conclusion of the study, which includes the study's findings and presents the most prominent recommendations based on those findings. Additionally, it provides proposals for future research related studies.

5.2 Discussion of Results

The research analyzed the correlation between implementing TQM practices and Perceived Quality Level in elevator management companies in Palestine. At first, a literature review was conducted, then the data collection tools were developed and utilized. Accordingly, the collected data are analyzed and the results are introduced.

The main question for this research is: “Is There a difference in Perceived Quality Level based on the implementation of TQM practices in elevator management companies in Palestine.?”. based on that question, several sub-questions were obtained, and the research hypothesis were developed.

The research utilized ISO 9001:2015 as an assessment model to measure to which extent Palestinian companies, participating in this study, are implementing TQM practices. On the other hand, every participating company suggested the list of customers to be included in the SERVQUAL-Based Perceived Quality Level survey which was developed using the SERVQUAL model dimensions.

Accordingly, the research found that there is a positive correlation between implementing the TQM practices and Perceived Quality Level. The following discussion highlights the

impact of implementing TQM practices on the dimensions being evaluated using the SERVQUAL model dimensions.

In this research, a comparison between TQM implementation and Perceived Quality Level dimensions based on the SERVQUAL model revealed that Jerusalem Elevators, International Elevators, and Younes Elevators perform well in both areas, scoring around 80%. United Elevators excels in TQM but may need to enhance Perceived Quality Level. In summary, the results underscore performance variations, emphasizing the importance of addressing both internal quality management and Perceived Quality Level for a comprehensive evaluation of company performance. Companies excelling in both areas are likely performing the best, while disparities may signal areas for improvement.

The findings from this study provide strong support for the alternative hypotheses (HA) across all six hypotheses, indicating that the implementation of Total Quality Management (TQM) practices indeed has a significant and positive impact on various aspects of perceived services quality levels within elevator management companies in Palestine. The data reveals that companies with higher overall ratings and a clear commitment to quality tend to excel in these areas, as interpreted by the researcher. This underscores the importance of TQM practices in elevating the performance and effectiveness of these companies, ultimately benefiting both the businesses and their customers.

5.3 Conclusions

The comparison observed between results of this research and related studies provided in chapter two (Dweik, Abu Alrub et al., Dawabsheh et al., and Zaid et al.) indicates a positive correlation between TQM practices and various performance metrics (customer satisfaction, service quality, organizational performance). Furthermore, this research along with studies

like Zaid et al. and Daragmeh & Barczi utilized structured assessment models (ISO 9001:2015, SERVQUAL, MBNQA) to measure the impact of TQM practices which strengthening the results of this research. Moreover, similar to Abu Alrub et al., this research highlighted education, training, recognition, and reward mechanisms as crucial for enhancing service quality and customer satisfaction. However, Daragmeh & Barczi identified leadership and HR management as barriers to TQM, while this research focused on overall company performance, including internal quality management. The research findings on the performance variations among different companies (Jerusalem Elevators, International Elevators, Younes Elevators, and United Elevators) align with the general trend observed in related studies where some companies excel in certain aspects of TQM while others show room for improvement.

In conclusion, the research findings align well with the existing literature on TQM practices in Palestine. The positive correlation between TQM implementation and perceived quality level in this research is consistent with the broader findings in the Palestinian context, where effective TQM practices significantly enhance service quality, customer satisfaction, and organizational performance. this research adds value by providing a specific focus on elevator management companies and highlighting performance variations that can guide future improvements in this sector.

5.4 Recommendations

Based on the researcher's findings and interpretations, the following recommendations can be made:

1. Elevator management companies in Palestine should consider implementing Total Quality Management (TQM) practices. The data suggests that TQM practices have a significant positive impact on various aspects of customer satisfaction and Perceived Quality Level.
2. Companies should make efforts to enhance their empathy towards customers. This can be achieved by training staff to understand and respond to customer needs and concerns effectively.
3. Elevator management companies should focus on improving responsiveness to customer needs. Companies with higher overall ratings tend to be more responsive, and this can lead to higher Perceived Quality Level.
4. To enhance reliability, companies should continue to emphasize quality and operational excellence. Reliability is a crucial factor in Perceived Quality Level and trust.
5. Elevator management companies should work on improving the Tangibility aspects of their service. This may involve upgrading physical facilities and enhancing the overall presentation of their services.
6. Companies should strive to provide a high level of assurance to customers. This can be achieved by consistently delivering quality services and demonstrating a commitment to meeting customer expectations.
7. Continuous monitoring of customer feedback and performance metrics is essential. Companies should use this data to identify areas for improvement and make necessary changes to maintain high levels of Perceived Quality.
8. Companies can learn from top-performing companies, Benchmarking against these companies can help identify best practices

9. Training employees in customer service and quality management is crucial. Well-trained employees are more likely to deliver a high level of service quality and meet customer needs effectively.

10. Elevator management companies should instill a culture of continuous improvement in all aspects of their operations. This includes regularly reviewing and enhancing TQM practices to adapt to changing customer expectations.

These recommendations aim to help elevator management companies in Palestine enhance their Perceived Quality levels, improve service quality, and build strong customer relationships, ultimately contributing to their long-term success in the industry.

5.5 Research Limitations Discussion

1. Limited Formal and Legal Information

One of the primary limitations of this study is the scarcity of formal and legal information available about elevator management companies in Palestine. Despite diligent efforts to gather data from authoritative sources such as the Ministry of Economy or the Chamber of Commerce of Palestine, access to relevant and up-to-date information proved challenging. This limitation hindered the ability to establish a comprehensive understanding of the elevator industry's landscape in Palestine.

2. Absence of a Regulating Union

The absence of a regulating union specific to the elevator sector in Palestine is another notable limitation. Unlike in some other regions where industry-specific unions facilitate access to crucial information and regulate the operations of companies, Palestine lacks such an entity. This absence hindered the researcher's ability to obtain official data and regulate industry-related activities effectively.

3. Limited Literary Sources

A significant limitation in this study was the scarcity of rich and abundant literary sources related to the application of quality management and Perceived Quality Level within Palestinian elevator companies. The lack of comprehensive literature limited the depth of the literature review and presented challenges in contextualizing the research within existing knowledge.

4. Difficulty in Company Verification

Upon obtaining a list of Palestinian elevator companies from the Civil Defense Foundation, it was observed that some of these companies were either closed or virtually inaccessible through online channels or contact with other companies. This limitation can be attributed

to the absence of stringent regulations governing the elevator industry, making it challenging to establish a complete and accurate dataset.

5. Limited Cooperation from Companies

Several elevator companies declined to cooperate fully during the research process. Some companies were unwilling to provide information regarding their quality management practices, while others refused to disclose details about their customers or distribute questionnaires directly to their clients. This reluctance may be linked to the intense competition among elevator companies in the region.

6. Customer Awareness

Another limitation encountered in this study was the level of customer awareness regarding the company responsible for maintaining their elevators. Some customers lacked clear knowledge of the service provider responsible for elevator maintenance, making it challenging to collect accurate data regarding Perceived Quality Level.

In conclusion, these limitations had varying degrees of impact on the research process and outcomes. While they may have constrained certain aspects of the study, the findings and insights obtained within the scope of these limitations provide valuable contributions to the understanding of quality management and Perceived Quality Level within Palestinian elevator companies.

The limitations encountered throughout the course of this research did indeed pose challenges and constraints, yet they should not be viewed solely as hindrances. Instead, they served to illuminate the intricacies and unique characteristics of the Palestinian elevator industry, shedding light on important aspects that deserve both attention and consideration. The scarcity of formal and legal information pertaining to elevator management companies in Palestine, as well as the absence of a regulating union, presented initial hurdles in the data

collection process. However, these limitations underscore the need for enhanced transparency and regulatory measures within the sector. By highlighting these gaps, the study not only identifies shortcomings but also provides a basis for future efforts to establish more robust data resources and regulatory structures in the industry.

The limited availability of literary sources specific to the application of quality management and Perceived Quality Level within Palestinian elevator companies underscores the novelty and pioneering nature of this research. While this scarcity may have initially posed a challenge to contextualizing the study, it simultaneously positions this research as a valuable contribution to the literature. The insights generated here will serve as a foundation for future academic endeavors and practical applications within the Palestinian elevator industry.

The challenges related to company verification, uncooperative companies, and customer awareness elucidate the complex dynamics of the elevator sector in Palestine. These challenges speak to the competitive landscape, operational opacity, and communication gaps within the industry. By bringing these issues to the forefront, this research not only acknowledges existing obstacles but also encourages a dialogue on potential solutions and improvements.

In essence, these limitations are not merely roadblocks but windows into the intricacies and nuances of the Palestinian elevator industry. They emphasize the importance of transparency, regulation, and communication within the sector. While they may have constrained certain aspects of the study, they have enriched the research by offering a more holistic understanding of the challenges and opportunities within Palestinian elevator companies. The findings and insights garnered within the boundaries of these limitations contribute to a foundation upon which further research and industry enhancements can be

built, ultimately advancing the fields of quality management and Perceived Quality Level within the Palestinian elevator context.

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Appendices

استبيان نموذج ال SERVQUAL

مقدمة:

هذا الاستبيان هو جزء من اطروحة الماجستير الخاصة بالطالبة **جنان حمادة**، طالبة ماجستير في تخصص إدارة الجودة الشاملة في الجامعة العربية الأمريكية، بعنوان:
أثر تطبيق ادارة الجودة الشاملة على مستوى جودة الخدمة المقدمة بناء على نموذج ال SERVQUAL (دراسة تطبيقية على شركات ادارة المصاعد في فلسطين)
والذي تم تصميمه بالاعتماد على نموذج ال SERVQUAL، وقد تم اختياركم كزبائن شركات المصاعد في فلسطين لتعبئة هذا الاستبيان بهدف قياس مدى رضاكم عن جودة خدمة الصيانة التي تقدمها شركة المصاعد المتعاقدة معكم على صيانة المصعد الخاص بكم، شاكرين لكم حسن تعاونكم.

الجزء الأول:

المعلومات الديموغرافية والتي تتعلق بالعينة وتستند على سمات معينة تتمثل بالعمر والجنس ومكان الإقامة، ويمكن ان تعتمد على معلومات اجتماعية واقتصادية كالحالة الاسرية أو الدخل والمهنة.

(1) العمر

(a) أقل من 18

(b) 18 – 28

(c) 29 – 39

(d) 40 – 50

(e) 50 فأكثر

(2) الجنس

(a) ذكر

(b) انثى

(3) الوضع الوظيفي

(a) صاحب شركة

(b) موظف/ة

(c) عاطل/ة عن العمل

(d) طالب/ة

(e) غير ذلك

.1

(4) المحافظة

(a) القدس

(b) رام الله

(c) نابلس

(d) الخليل

(e) طولكرم

(f) بيت لحم

(g) جنين

(h) اريحا

(i) قلقيلية

(j) طوباس

(5) نوع البناء

(a) سكني

(i) عدد الشقق

(b) تجاري

(i) عدد المكاتب والمحال التجارية.....

(6) عدد الطوابق:

(a) أقل من 4

(b) 5 – 9

(c) أكثر من 9

(7) عدد المصاعد في البناء:

1 (a)

3 - 2 (b)

4 فأكثر (c)

(8) الشركة التي تتعاقد البنائة معها:

(9) يوجد للعمارة لجنة تدير شؤونها (نعم - لا)

(10) هل أنت ممثل أو عضو لجنة العمارة التي تسكن أو تعمل بها أمام شركة صيانة المصاعد؟ -

نعم - لا

(11) هل جربت شركة سابقة لهذه الشركة؟ - نعم - لا

(12) أتعامل مع الشركة منذ:

(a) سنة

(b) سنتين - ثلاث سنوات

(c) أربع سنوات - خمس سنوات

(d) ست سنوات فأكثر

(13) عند التعاقد مع الشركة فإن الأولوية في الاختيار هي (يرجى ترتيب العوامل التالية حسب

الأولوية 1 = الأقل أهمية، 6 = الأكثر أهمية، علماً أنه يمكن إعطاء نفس الوزن لأكثر من عامل)

(a) قدرات الشركة الفنية

(b) الثقة في مستوى الخدمة المقدمة

(c) سرعة الاستجابة وتقديم الخدمة

(d) احترام الخصوصية

(e) التعامل الجيد من فريق العمل

(f) السعر

الجزء الثاني:

يرجى الإجابة على الأسئلة التالية بما يتعلق بالمصعد وشركة المصاعد التي يتم التعامل معها حالياً من

قبلكم.

أولاً: الملموسية (Tangibles):

					المعيار	الرقم
غير موافق بشدة	غير موافق	محايد	أوافق	أوافق بشدة		
					الشركة تهتم بمظهر وديكورات المصعد الداخلية	(1)
					الشركة تهتم بصيانة إضاءة المصعد	(2)
					الشركة تحافظ على سلاسة عمل المصعد	(3)
					الشركة تفحص توفر وفعالية وسائل الأمان في المصعد بشكل دوري مستمر	(4)
					الشركة تلتزم بما أتفق عليه من الصيانة الدورية للمصعد	(5)
					الشركة توظف أحدث التكنولوجيا والمعدات لمتابعة صيانة المصعد	(6)
					استخدام المصعد مريح بالنسبة لك	(7)
					الشركة تقدم أكثر من توقعاتي بالنسبة لما ذكر اعلاه	(8)

ثانياً: الاعتمادية/ الدقة (Reliability):

الرقم	المعيار				
		أوافق بشدة	أوافق	محايد	غير موافق بشدة
(1)	موظف شركة المصاعد يلبي طلباتي من أول مرة				
(2)	أوقات دوام الشركة وتوفر الموظفين ملائم لي				
(3)	الشركة تهتم بحل مشاكلي كزبون				
(4)	التزمت الشركة بتقديم خدمات الصيانة فوراً بعد توقيع العقد				
(5)	يتعطل المصعد بشكل متكرر				
(6)	يتم اصلاح اعطال المصعد بشكل سريع				
(7)	لا أشعر بالخوف عند استخدامي للمصعد				
(8)	الشركة تقدم أكثر من توقعاتي بالنسبة لما ذكر اعلاه				

ثالثاً: الاستجابة (Responsiveness):

الرقم	المعيار				
		أوافق بشدة	أوافق	محايد	غير موافق بشدة
(1)	يتم الرد على كافة اتصالاتي الهاتفية من قبل الشركة دون تأخير				
(2)	يتم تركيب قطع الغيار التالفة بسرعة عند الحاجة لذلك				
(3)	يتم اصلاح اعطال المصعد بسرعة عند الإبلاغ عنها				
(4)	الشركة سريعة في اجراء المعاملات المالية				

					الشركة تقوم بمتابعة تجديد عقود الصيانة بشكل دوري	(5)
					بإمكانني الإبلاغ عن اعطال المصعد بسهولة	(6)
					تعليمات التواصل مع شركة الصيانة في حالات الطوارئ واضحة ومعلنة داخل المصعد	(7)
					الشركة تقدم أكثر من توقعاتي بالنسبة لما ذكر اعلاه	(8)

رابعاً: معيار التأكيد (الثقة) (Assurance)

الرقم	المعيار						
		أوافق بشدة	أوافق	محايد	غير موافق بشدة		
						الشركة تحافظ على خصوصية معلوماتي كزبون	(1)
						موظف الصيانة لديه المعرفة الكافية فيما يخص صيانة المصعد	(2)
						الشركة قادرة على تقديم خدمات الصيانة في أي وقت عند الحاجة لذلك	(3)
						الشركة تسعى لبناء علاقة طيبة معي كزبون	(4)
						طاقم العمل مدرب للتعامل مع مشاكل المصعد على اختلافها	(5)
						تعليمات السلامة المتعلقة باستخدام المصعد معلنة داخل المصعد بشكل واضح	(6)
						المصعد مزود بوسائل الأمان مثل جرس الإنذار، هاتف داخلي للتواصل، اضاءة طوارئ، أرقام هواتف الطوارئ	(7)
						الشركة تقدم أكثر من توقعاتي بالنسبة لما ذكر اعلاه	(8)

خامساً: التعاطف (Empathy):

الرقم	المعيار				
		أوافق بشدة	أوافق	محايد	غير موافق بشدة
(1)	أشعر أن الشركة تبذل أقصى جهدها لتلبية احتياجاتي كزبون				
(2)	أعتقد أن الشركة قادرة على حل كافة المشاكل المتعلقة بالمصعد				
(3)	موظف الصيانة يقوم بشرح المعلومات المتعلقة بالصيانة بشكل كامل				
(4)	موظف الصيانة يتقبل ويتفهم احتياجاتي كزبون				
(5)	طاقم العمل يتسم باللباقة				
(6)	المصعد مؤهل لاستخدامه من قبل ذوي الاحتياجات الخاصة				
(7)	المصعد آمن ليتم استخدامه من قبل الاطفال				
(8)	الشركة تقدم أكثر من توقعاتي بالنسبة لما ذكر اعلاه				

أية مقترحات إضافية:

.....

.....

.....

.....

مع الشكر الجزيل لمشاركتكم في دعم البحث العلمي

الملخص

تركز هذه الأطروحة على اثر تطبيق إدارة الجودة الشاملة (TQM) في تعزيز جودة الخدمات المقدمة من قبل شركات إدارة المصاعد الفلسطينية. ويهدف إلى معالجة القضية الملحة المتمثلة في تلبية توقعات العملاء المتزايدة ومواجهة التحديات ، وتحسين رضا العملاء في نهاية المطاف. وبشكل أكثر تحديداً، تهدف الدراسة أولاً إلى إجراء استكشاف شامل لممارسات إدارة الجودة الشاملة داخل شركات إدارة المصاعد الفلسطينية، وتقييم مدى تكاملها داخل هذه الكيانات بدقة؛ ثانياً، تحليل العلاقة وتقييم أثر تطبيق مبادئ إدارة الجودة الشاملة على مستوى الجودة المقدمة على أساس نموذج ال (SERVQUAL).

يشتمل نموذج جودة الخدمة على خمسة أبعاد، وهي التعاطف تجاه العملاء، والاستجابة لاحتياجاتهم، وموثوقية خدمات المصاعد، وملموسة الخدمات المقدمة، والضمان والامان الذي تقدمه شركات إدارة المصاعد.

تستخدم هذه الدراسة منهج البحث الوصفي التحليلي باستخدام الأساليب النوعية والكمية. يتضمن جمع البيانات مقابلات أولية مع المعاهد ذات الصلة، ومقابلات منظمة مع عينة من شركات المصاعد، واستبيان قائم على جودة الخدمة لتقييم مستويات جودة الخدمة المتصورة. ويتم تحليل البيانات باستخدام برنامج SPSS بالإضافة إلى ذلك، تساهم مراجعة الأدبيات من مصادر مختلفة في منهجية بحث شاملة. تهدف الدراسة إلى تقديم رؤى قيمة لتحسين جودة الخدمة المتصورة في صناعة إدارة المصاعد.

باختصار، تسلط النتائج التي توصلنا إليها الضوء على وجود علاقة إيجابية بين ممارسات إدارة الجودة الشاملة وزيادة مستوى الجودة المقدمة للزبائن، مع التركيز على أهمية إدارة الجودة الشاملة، يكشف البحث عن تباينات كبيرة في الأداء بين مختلف شركات إدارة المصاعد، مما يؤثر بشكل مباشر على مستوى جودة الخدمات المتصورة. الرسالة الأساسية التي يؤكد هذا البحث تسلط الضوء على الأهمية القصوى للاهتمام المتزامن بكل من إدارة الجودة الداخلية وجودة الخدمات، مما يسهل إجراء تقييم شامل لأداء الشركة. إن شركات إدارة المصاعد التي تتفوق في كلا الجانبين تحقق باستمرار أعلى مستوى من النجاح، في حين أن الفوارق في الأداء تعمل كمؤشرات لمجالات محددة تحتاج إلى التحسين. في الختام، يدعو هذا البحث بقوة إلى تبني ممارسات إدارة الجودة الشاملة على نطاق واسع بين شركات إدارة المصاعد الفلسطينية. يعمل هذا التكامل الاستراتيجي على تحسين جودة الخدمة، ويتجاوز توقعات العملاء، ويؤسس لميزة تنافسية قوية في صناعة تتغير باستمرار. ومن خلال اعتماد هذه الاستراتيجيات

الموصى بها ووضعها موضع التنفيذ، تتاح لشركات إدارة المصاعد الفرصة لتنمية علاقات طويلة الأمد مع العملاء، وتحقيق التميز التشغيلي، وإحداث تأثير دائم في السوق المتغير باستمرار.