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Faculty of Graduate Studies

Assessing the Effect of Organizational Culture on Six Sigma Implementation in the Palestinian Banking Sector

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

July/2025

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Thesis Approval

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This thesis was defended successfully on 21st July 2025, and approved by:

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Declaration

I confirm that none of the work mentioned in the dissertation has been used to support an application for another degree or certification from this or any other academy.

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Dedication

To the dreamers, the doers, and the believers,

This thesis is dedicated to everyone who dares to dream big, work hard, and persist through challenges. To those who believe that growth is possible, even in the face of obstacles, and that knowledge has the power to transform organizations and lives.

To my family, whose love has been my anchor and whose faith in me never wavered — you reminded me why I started and inspired me to keep going.

To the future change makers who will carry ideas forward, innovate, and lead with purpose — may this work ignite a spark and encourage you to keep pushing boundaries.

This is for those who rise every time they fall, who learn from every failure, and who continue to build, step by step, a better version of themselves and the world around them. Never stop believing. Never stop learning.

With heartfelt gratitude,

Sandra Ezz

Acknowledgement

With a heart full of gratitude, I would like to express my deepest appreciation to all those who have supported me on this remarkable journey.

First and foremost, I thank God for granting me strength, wisdom, and resilience throughout this academic pursuit. Without divine guidance, this achievement would not have been possible.

To my supervisor, Dr. Sami Sader, thank you for your unwavering support, insightful guidance, and constructive feedback. Your encouragement helped shape this thesis and kept me focused even during the most challenging times.

To my family, your endless love, prayers, and belief in me were the fuel that kept me going. Thank you for your patience, sacrifice, and constant encouragement. You are my greatest blessing.

To my friends and colleagues, thank you for the uplifting conversations, late-night study sessions, and for being a source of motivation when I needed it the most.

To the faculty members, librarians, and staff of Arab American University, thank you for creating a nurturing academic environment that fostered growth and discovery.

Finally, to every individual who believed in me, even when I doubted myself — this thesis is a reflection of your faith and my perseverance. May it inspire others to chase their goals with courage, discipline, and passion.

This accomplishment is not the end — it is the beginning of a new chapter filled with purpose, possibilities, and the pursuit of excellence.

Abstract

Although interest in quality improvement methods has grown worldwide, little is known about how organizational culture shapes the success of Six Sigma in service organizations—especially within developing countries. In Palestine, where banks play a vital role in economic stability, this gap is particularly evident. This study explores how different types of organizational culture, defined by the Competing Values Framework (CVF), influence the adoption, integration, and long-term sustainability of Six Sigma practices in Palestinian banks.

The research aims to determine which cultural orientations—teamwork and cooperation (group culture), innovation (developmental culture), control and structure (hierarchical culture), or goal achievement (rational culture)—help or hinder effective Six Sigma implementation. Using a quantitative design, a structured questionnaire was adapted from well-established CVF and Six Sigma studies and distributed to 256 employees across several Palestinian banks. A stratified random sampling method ensured representation from various managerial levels, and a pilot test confirmed the reliability and validity of the instrument. Data were analyzed using SPSS to identify patterns and relationships between cultural factors and key Six Sigma outcomes such as process improvement, quality performance, and employee engagement.

Findings show that rational and teamwork-oriented cultures most strongly support successful Six Sigma adoption, while hierarchical and innovative cultures also have positive, though smaller, effects. These results suggest that aligning internal culture with Six Sigma principles can foster collaboration, innovation, and continuous improvement.

Theoretically, this study extends the application of the Competing Values Framework by demonstrating how specific cultural orientations influence quality management practices in service organizations within emerging economies. It highlights the moderating role of organizational culture in shaping the effectiveness of Six Sigma

initiatives, suggesting that cultural fit is a critical theoretical lens for understanding process improvement adoption. Moreover, the findings contribute to the literature on quality management by linking cultural values to both short-term performance outcomes and the long-term sustainability of continuous improvement practices, offering a framework for integrating organizational behavior and operational excellence theories.

This study offers valuable insights for bank leaders and policymakers who aim to build stronger, performance-driven cultures in Palestinian financial institutions and contributes to the broader understanding of how cultural alignment can shape the success of quality management initiatives in emerging economies.

Keywords: Six Sigma, Organizational Culture, Competing Values Framework, Palestinian Banks, Quality Management, Process Improvement, Emerging Economies

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List of Abbreviations

Abbreviation	Definition
CVF	Competing Values framework
DMAIC	Define, Measure, Analyze, Improve, and Control
SS	Six Sigma
SMEs	Small – to- medium enterprises
DPMO	Defects per million Opportunities
SQL	Sigma Quality Level
COPQ	Cost of poor Quality

Chapter One: Introduction

1.1 Overview of the study

This chapter lays the groundwork for the thesis, it starts by describing the increasing significance of quality control and operational excellence in the global banking industry, paying special attention to the function of Six Sigma as a performance improvement approach. The chapter then aligns this in the context of the banking industry in Palestine, emphasizing its development, structure, and difficulties.

Six Sigma is widely recognized as a powerful methodology that helps organizations reduce defects and improve quality through data-driven processes. However, its true potential is often unlocked not just by applying statistical tools, but by the organizational culture that supports it (Pérez-Huertas et al., 2024). In fact, research suggests that a company's culture can be the deciding factor in whether Six Sigma initiatives succeed or fall short (Gomaa, 2025; Ndrecaj et al., 2023).

When an organization embraces a culture of continuous improvement, where leadership empowers employees and decisions are made based on data, Six Sigma can thrive. This environment fosters collaboration and problem-solving, enabling employees at all levels to take ownership of process improvements (Alosani et al., 2023). As a result, Six Sigma doesn't just help reduce variation or defects—it can become a cornerstone for ongoing excellence.

What makes Six Sigma even more effective in recent years is its combination with Lean principles to form Lean Six Sigma (LSS). By eliminating waste and streamlining processes, LSS not only increases efficiency but also creates a culture of teamwork and shared responsibility (Mohammad et al., 2025). This approach has proven successful in a variety of industries, including banking, where operational efficiency and customer satisfaction are paramount. In these settings, leadership plays a pivotal role in setting the tone for collaboration and engagement at every level (Hassan & Ahmed, 2025).

Organizational culture is a key factor in determining whether Six Sigma initiatives succeed or fail. In their 2023 study, Alosani, Yusoff, and Alansi explore how the culture of a company can make or break Six Sigma efforts. They explain that a clan culture, which values collaboration, trust, and employee involvement, creates the perfect environment for Six Sigma to thrive. In this type of culture, teamwork and open communication are encouraged, making it easier for employees to work together on problem-solving and continuous improvement—core principles of Six Sigma. On the flip side, a hierarchical culture, which focuses more on control, authority, and strict processes, can make implementing Six Sigma more difficult. In such cultures, there may be a reluctance to embrace the flexibility and innovation that Six Sigma requires. Ultimately, Alosani and colleagues (2023) argue that for Six Sigma to succeed, organizations need a culture that is not only willing to engage employees but is also adaptable and committed to ongoing improvement.

In Palestinian banks, organizational culture is shaped by both internal practices and broader socio-political norms. Many institutions exhibit characteristics of hierarchical or bureaucratic cultures, where authority, risk aversion, and centralized decision-making are deeply embedded (Hussein, 2020). These traits may create friction with the core principles of Six Sigma, which requires cross-functional collaboration, openness to innovation, and continuous feedback. Nevertheless, aligning Six Sigma initiatives with core cultural values—such as respect, loyalty, and community—could facilitate better integration and sustainability.

A 2019 literature review emphasized that organizational culture is a critical success factor for Six Sigma and other continuous improvement initiatives. Cultures that promote innovation, learning, and employee involvement tend to achieve stronger outcomes, while bureaucratic or change-resistant cultures are more likely to see failure or stagnation (Springer, 2025).

A 2021 study on the Dubai Police Force found that innovation culture played a significant mediating role between Six Sigma implementation and organizational performance. The

study showed that fostering a culture of innovation is essential for maximizing the benefits of Six Sigma initiatives in complex environments (Emerald, 2021)

Research published in 2025 highlights how Six Sigma, when supported by the right organizational culture, can enhance not only operational performance but also social and economic sustainability. This is particularly relevant for developing economies, where culture and leadership play a decisive role in the success of change programs (Semarak Ilmu, 2025).

1.2 Six Sigma

Six Sigma is a powerful methodology that helps organizations improve their performance by reducing defects and minimizing variations in their processes. It was first developed by Motorola in the 1980s, thanks to the work of engineer Bill Smith, who wanted to help the company improve its product quality. The core idea of Six Sigma is to reduce defects to a level of no more than 3.4 per million opportunities, which means achieving near-perfect performance (Snee, 2020). Over the years, this methodology has evolved and is now used by organizations worldwide to boost quality, improve efficiency, and create value for customers (Kumar & Soni, 2023).

At the heart of Six Sigma is data analysis. It uses statistical tools to identify the root causes of defects and inefficiencies in processes. Tools like control charts, regression analysis, and hypothesis testing help organizations measure and control the variation in their processes, leading to more reliable results (Wang et al., 2021). The methodology follows a structured approach known as DMAIC (Define, Measure, Analyze, Improve, Control), which guides teams through a step-by-step process to identify issues, find solutions, and ensure improvements stick over time (Antony et al., 2019).

One of the major milestones for Six Sigma came when General Electric (GE), under the leadership of Jack Welch in the 1990s, adopted it on a global scale. Welch's decision to implement Six Sigma across GE's operations showcased its potential to improve operational performance and reduce costs. This spread the methodology's popularity

beyond manufacturing, proving that it could also work well in areas like healthcare, finance, and services (Zhang & Yang, 2021). For example, in healthcare, Six Sigma has helped reduce medical errors, streamline patient care, and improve overall hospital efficiency (Pazouki et al., 2023). In the banking sector, it's been used to improve processes like loan approval and customer service (Hassan & Ahmed, 2022).

The main goal of Six Sigma is to achieve operational excellence by identifying and eliminating inefficiencies and defects. But it's not just about fixing problems—it's also about delivering greater value to customers. By using Six Sigma, companies align their processes with the Voice of the Customer (VOC), ensuring that every step adds value and meets or exceeds customer expectations (Antony & Kumar, 2020). It's also a great way to empower employees by giving them the tools and knowledge to actively contribute to problem-solving and continuous improvement, creating a culture that thrives on innovation and quality (Gomaa, 2023).

Another great thing about Six Sigma is how flexible it is. Although it started in manufacturing, its principles have proven successful in sectors as diverse as financial services, logistics, and education. For example, in education, Six Sigma has been used to improve administrative processes and enhance the quality of teaching, ensuring that both staff and students benefit (Tariq & Aslam, 2020). In finance, it's helped streamline transaction processing, improve accuracy in reporting, and boost overall customer satisfaction (Jayaram & Desai, 2022). Its adaptability has made Six Sigma an invaluable tool for organizations seeking to stay competitive in a fast-paced, globalized world (Salah et al., 2023).

As organizations continue to face pressure to improve performance, reduce costs, and keep customers happy, Six Sigma remains as relevant as ever. Its focus on data-driven decisions, employee involvement, and continuous improvement helps businesses stay agile and maintain a competitive edge, whether they're in a developed or emerging economy (Gomaa, 2023). Six Sigma offers organizations a way to deliver better results,

reduce inefficiencies, and, most importantly, make sure their customers are always satisfied.

1.3 Organizational Culture

Organizational culture is often the invisible force that shapes how employees behave, interact, and make decisions within an organization. It refers to the shared values, beliefs, and norms that influence how things get done in a company (Schein, 2010). When it comes to Six Sigma implementation, culture plays a crucial role in determining whether or not the methodology will succeed. Six Sigma, which is all about data-driven decision-making and continuous process improvement, requires a supportive and engaged organizational culture to thrive.

In a culture that encourages open communication, collaboration, and employee involvement, Six Sigma can flourish. For example, a clan culture, which prioritizes teamwork and trust, can provide the kind of environment where employees feel empowered to contribute to problem-solving and process improvements. This kind of supportive culture aligns well with Six Sigma's emphasis on collective efforts to eliminate waste and defects (Alosani et al., 2023). Employees in such environments are more likely to engage with Six Sigma tools and methodologies, leading to successful implementation and sustained improvements.

Conversely, a more hierarchical culture, which focuses on authority, control, and strict adherence to established processes, might not be as conducive to Six Sigma's flexible and iterative approach. In such cultures, employees may be less inclined to challenge the status quo or propose innovative solutions, which can lead to resistance during Six Sigma initiatives (Jayaram & Desai, 2022). Furthermore, rigid cultures may struggle to adapt to the changes that Six Sigma often requires, making it harder for the organization to embrace continuous improvement efforts.

Recent studies have highlighted that organizational culture is not just a background factor but a core enabler of Six Sigma's success. Salah et al. (2023) discuss how leadership

support and a clear vision for quality improvement can shape an organization's culture in ways that encourage Six Sigma adoption. For instance, when senior leaders actively promote and model the principles of Six Sigma, it signals to employees that quality improvement is a top priority, thus driving the cultural shift needed to support these efforts.

Moreover, employee empowerment is a key element in aligning culture with Six Sigma principles. When employees feel valued and empowered to make decisions and suggest improvements, they are more likely to participate actively in Six Sigma projects. This sense of ownership fosters a culture of continuous improvement, which is essential for Six Sigma to be effective over the long term (Gomaa, 2023). For example, when banks or manufacturing companies instill a culture of continuous learning and improvement, Six Sigma can be used not only to solve immediate problems but also to proactively address future challenges.

Organizational culture, therefore, isn't just a backdrop but an active component that can either accelerate or hinder Six Sigma implementation. Companies that recognize the importance of a culture aligned with Six Sigma principles—such as trust, transparency, and teamwork—are more likely to experience long-term success with process improvement initiatives (Antony et al., 2020). In contrast, those that underestimate the cultural shift needed for Six Sigma to take root may struggle to see lasting results.

1.4 Organizational Culture and Six Sigma Adoption

The adoption of Six Sigma is deeply influenced by an organization’s culture. At its core, Six Sigma is about improving processes by reducing defects and minimizing variation. However, for Six Sigma to truly succeed, the organizational culture must be aligned with its values of continuous improvement, data-driven decision-making, and employee empowerment (Salah et al., 2023). An organization's cultural foundation can either facilitate or hinder the successful implementation of Six Sigma methodologies, depending on whether the culture supports the principles of collaboration, flexibility, and problem-solving.

A strong, supportive organizational culture is essential for Six Sigma adoption because it promotes employee engagement and ownership over improvement efforts. For example, a culture that values collaboration and open communication—characteristics typically found in a clan culture—fosters teamwork and trust, both of which are essential for effective Six Sigma implementation (Antony et al., 2020). In such cultures, employees are more likely to embrace Six Sigma's emphasis on problem-solving, process optimization, and achieving high standards of quality. In turn, this increases the likelihood of successful project outcomes and long-term sustainability of Six Sigma initiatives.

On the other hand, a hierarchical culture, which is typically focused on control, authority, and strict procedures, may face challenges in Six Sigma adoption. In organizations with a rigid culture, there may be resistance to the flexibility and innovation required for Six Sigma projects to succeed. Employees may be less inclined to embrace change, and leadership might not fully support the levels of empowerment that Six Sigma demands (Gomaa, 2023). In these cases, the top-down approach that defines hierarchical cultures may create barriers to open communication and collaboration, both of which are vital for continuous improvement efforts.

Research has consistently shown that leadership commitment and support play a significant role in fostering an organizational culture that is conducive to Six Sigma adoption (Jayaram & Desai, 2022). When leaders actively promote the principles of Six Sigma and lead by example, they send a clear message that process improvement and quality control are organizational priorities. This kind of leadership helps to build a culture that is open to change and continuous learning, making Six Sigma adoption smoother and more effective.

Moreover, the level of employee involvement is another critical factor in the relationship between organizational culture and Six Sigma adoption. In organizations where employees feel empowered and encouraged to participate in decision-making, Six Sigma is more likely to be successfully implemented. By fostering a culture of ownership and collaborative problem-solving, employees become key contributors to the success of Six

Sigma projects, driving long-term improvements in both process efficiency and quality (Alosani et al., 2023).

Ultimately, the cultural alignment between an organization's values and the principles of Six Sigma is essential for ensuring that the methodology takes root and delivers sustainable improvements. A culture that supports innovation, transparency, and continuous improvement is more likely to experience successful Six Sigma adoption. By contrast, organizations with a culture of resistance to change may face greater difficulties in integrating Six Sigma into their operations (Antony & Kumar, 2020).

1.5 Banking industry in Palestine

The banking industry in Palestine has proven to be a durable foundation of economic structure and national progress in the face of political unrest, economic limitations, and a changing global financial landscape. The financial sector in Palestine has shown impressive expansion, creativity, and flexibility despite the lack of a fully autonomous state and the constraints placed on it by a complicated political environment. The sector has developed a contemporary financial infrastructure that supports activity in the public and private sectors, eases trade and promotes financial inclusion under the direction of the Palestine Monetary Authority (PMA), which serves as a quasi-central bank.

The Palestinian banking system, which operates through about 378 branches throughout the West Bank and Gaza Strip, consists of 13 licensed banks as of 2024, including 8 Palestinian banks and 5 international institutions, mostly from Jordan and Egypt. These banks, which include significant players The National Bank (TNB), Arab Bank, Bank of Palestine, Palestine Islamic Bank, and Cairo Amman Bank, are crucial for digital banking, microfinance, and international remittances in addition to accepting deposits and making loans. With more than 14,000 Point-of-Sale (POS) terminals and 724 ATMs, the industry's infrastructure is still growing, demonstrating a growing focus on technical modernization and financial accessibility (Cash Essentials, n.d.).

Similarly, the financial volume of Palestinian banks has been steadily increasing. The sector's total assets increased by 35% between 2017 and 2021, to an estimated USD 20.7 billion, demonstrating institutional soundness and public trust (This Week in Palestine, 2023).

Such expansion highlights the sector's strategic significance in promoting investment, stabilizing the economy, and facilitating national economic planning in an environment characterized by geopolitical fragility. Furthermore, Palestinian banks are establishing themselves as respectable and competitive participants in the larger regional banking market by putting an increasing emphasis on risk management, adherence to international financial norms, and digital transformation.

Ultimately, the Palestinian banking sector is more than a financial system—it is a reflection of national resilience, institutional ambition, and economic potential. It continues to adapt and thrive in an environment of uncertainty, making it a crucial context for examining the adoption of performance-enhancing frameworks such as Six Sigma, especially in efforts to enhance efficiency, service quality, and organizational agility.

The Palestine Monetary Authority (PMA), which serves as the de facto central bank, is responsible for the regulatory supervision of the Palestinian banking industry. In order to guarantee the stability and soundness of the financial system in compliance with international standards, the PMA has overseen licensing, monitoring, and regulating financial institutions in the West Bank and Gaza Strip since its founding in 1994 (PMA, 2023).

1.6 Six Sigma in the Banking Sector

In recent years, Six Sigma has become a key tool in the banking sector, helping financial institutions improve process efficiency, reduce errors, and enhance customer satisfaction. While Six Sigma is often associated with manufacturing, its principles of data-driven decision-making and process optimization have proven to be just as valuable in the service industry, especially in banking (Gomaa, 2023). By focusing on reducing defects

and eliminating variations in processes, Six Sigma helps banks streamline operations and deliver better experiences to their customers.

The core of Six Sigma lies in its systematic approach, known as DMAIC (Define, Measure, Analyze, Improve, Control), which helps organizations address issues and implement solutions that drive consistent results. In banking, this methodology can be applied to optimize key processes such as loan approvals, transaction processing, compliance checks, and customer service. For example, Six Sigma can reduce the time it takes for customers to receive loan approvals by eliminating unnecessary steps and minimizing errors in the process (Hassan & Ahmed, 2022). This leads to faster service and higher customer satisfaction, making the bank more competitive in an industry where customer experience is paramount.

Another area where Six Sigma has made a significant impact in banking is in regulatory compliance. Banks face strict regulatory requirements, and ensuring compliance can be a complex and resource-intensive process. By applying Six Sigma's focus on process improvement, banks can reduce the risk of errors and improve the accuracy of reporting, ensuring they meet compliance standards while reducing costs associated with audits and penalties (Jayaram & Desai, 2022). Six Sigma's use of statistical tools and root cause analysis helps identify inefficiencies and root causes of compliance failures, enabling banks to implement corrective actions quickly and effectively.

Six Sigma's emphasis on employee involvement is also crucial in the banking sector. By empowering employees to actively participate in process improvement initiatives, banks can create a culture of continuous improvement. Employees who are trained in Six Sigma methodologies are better equipped to identify inefficiencies and suggest improvements, driving long-term change within the organization. This kind of involvement not only leads to better operational performance but also fosters a more engaged and motivated workforce (Antony et al., 2020).

Moreover, Six Sigma has been used in risk management to enhance decision-making. In the banking world, where high stakes and significant financial risks are part of daily

operations, being able to predict and mitigate risks is crucial. Six Sigma tools can help banks identify potential risk areas—whether it's in credit assessments or fraud detection—and optimize the decision-making process to reduce financial exposure (Salah et al., 2023).

The ability to adapt Six Sigma to the fast-paced and customer-focused banking environment has made it an essential tool for banks seeking to improve operational efficiency, reduce costs, and enhance their competitive edge. By integrating Six Sigma principles, banks not only improve their internal processes but also build stronger relationships with their customers, ensuring long-term success in an increasingly competitive industry (Gomaa, 2023).

1.7 Problem Statement

Despite the growing need for performance improvement and process optimization in Palestinian banks, there is a significant lack of empirical research examining how organizational culture affects the successful implementation and sustainability of Six Sigma methodologies in this context. Most existing studies on LSS have been conducted in industrial sectors or developed countries, with limited focus on service industries like banking in politically and economically complex environments such as Palestine. The misalignment between social systems—such as organizational culture—and technical systems designed for continuous improvement can hinder organizational effectiveness. While anecdotal evidence suggests that cultural transformation is crucial to the success of LSS initiatives, little is known about how different cultural types influence its adoption and performance in Palestinian banks. This gap in knowledge may discourage financial institutions from investing in quality improvement frameworks and prevent them from learning from past implementations. Therefore, this study seeks to investigate the impact of organizational culture on the implementation of Six Sigma in Palestinian banks to address this research gap and support more effective application of quality management practices in the region.

1.8 Thesis Objectives

The main objective of this study is to examine the impact of organizational culture on the implementation of Six Sigma in Palestinian banks. In order to achieve this overarching aim, the study sets out the following specific objectives:

1. To assess the key dimensions of organizational culture within Palestinian banks.
2. To examine the current status and practices of Six Sigma implementation in Palestinian banks.
3. To investigate the relationship between organizational culture and Six Sigma implementation.
4. To explore the role of top management support in facilitating or hindering Six Sigma implementation.
5. To examine whether demographic characteristics (such as gender, age, education, job title, and years of experience) influence perceptions or implementation of Six Sigma.
6. To develop a theoretical framework that explains how organizational culture, top management support, and demographic factors interact in shaping Six Sigma implementation in the Palestinian banking sector.

1.9 Thesis Questions

Based on previous research on the influence of organizational culture on Six Sigma deployment and aligned with the objectives outlined above, the study seeks to answer the following research questions:

1. What are the predominant elements of organizational culture in Palestinian banks?
2. To what extent is Six Sigma currently implemented in Palestinian banks?
3. How does organizational culture affect the successful implementation of Six Sigma in Palestinian banks?
4. What is the role of top management support in shaping the relationship between organizational culture and Six Sigma implementation?

5. Are there significant differences in perceptions of Six Sigma implementation based on respondents' demographic characteristics (gender, age, education, job title, years of experience)?
6. How can a theoretical framework be developed to explain the interaction between organizational culture, top management support, demographic characteristics, and Six Sigma implementation?

1.10 Significance of the thesis

This study is important for several reasons—academic, practical, and contextual—especially as Palestinian banks strive to improve performance and service quality in a competitive and often challenging environment.

Theoretical Significance

On a theoretical level, this research adds to the limited body of knowledge about how organizational culture affects the implementation of Six Sigma , particularly in developing or under-researched regions like Palestine. While Six Sigma has been widely studied in manufacturing and some service industries, its success often depends on the internal culture of the organization (Cameron & Quinn, 2011). By exploring how specific cultural traits—such as teamwork, innovation, control, or goal orientation—support or hinder LSS, this study helps fill an existing gap in the literature.

It also brings top management support into the discussion, which is a known success factor in quality improvement efforts (Sreedharan & Raju, 2016), but not always thoroughly examined in culture-LSS studies. In addition, by considering demographic factors like age, gender, and experience, the study offers a more well-rounded view of how different groups of employees perceive and engage with LSS initiatives. The outcome is a theoretical framework that future researchers can use or build on, especially in similar institutional or cultural contexts (Albliwi et al., 2014).

Practical Significance

From a practical standpoint, understanding how organizational culture impacts the success of Six Sigma in banking is crucial for leaders and quality managers. Recent studies emphasize that aligning Six Sigma initiatives with the right cultural environment can significantly boost their effectiveness. For example, research has shown that organizations with a culture focused on collaboration, openness to change, and continuous improvement tend to see better outcomes from Six Sigma implementations (Khan et al., 2021). Bank leaders can use this insight to create a supportive environment through targeted training, team development, and strong leadership engagement.

Moreover, studies have highlighted the importance of recognizing demographic differences in employees' perceptions of Six Sigma. For instance, younger employees who are more digitally savvy often appreciate the analytical and process-driven nature of Six Sigma, while older employees might value its impact on service quality and operational efficiency (Smith & Lee, 2023). By understanding these differences, bank leaders can tailor their communication strategies, ensuring that Six Sigma resonates with all staff members, regardless of age or role. This personalized approach to engagement has been shown to increase both participation and long-term success of Six Sigma programs (Gomez et al., 2022).

Contextual Significance

In the broader Palestinian context, where organizations often face political, economic, and regulatory challenges, the need for efficient, quality-driven management approaches is especially pressing. This study supports efforts to strengthen the Palestinian banking sector by offering insights into how global best practices like Six Sigma can be adapted and applied locally (Al-Najjar & Jawad, 2011). It may also serve as a reference point for other institutions—within or beyond banking—that are looking to improve performance in similarly complex environments.

Contribution to Academic Literature on Six Sigma and Organizational Culture in Financial Institutions

This study contributes to the growing body of knowledge by addressing the integration of Six Sigma with organizational culture in the financial services sector, an area that has received limited attention compared to the manufacturing industry. While earlier research has predominantly focused on manufacturing contexts (e.g., Antony, 2006; Snee, 2010), the application of Six Sigma in service industries like banking remains underexplored. By investigating the relationship between Six Sigma and organizational culture in Palestinian banks, this research not only extends the application of Six Sigma into new sectors but also provides contextual insights that are specific to financial institutions in the Middle East.

This work aligns with recent calls for more sector-specific research that explores the role of cultural factors in quality improvement frameworks. Previous studies have shown that cultural characteristics significantly influence the success of Six Sigma initiatives, but most of this research has been focused on large, Western corporations. This study addresses this gap by emphasizing the importance of understanding local cultural dynamics in the implementation of Six Sigma in banking (e.g., Khan et al., 2023; Lee & Lee, 2022). Furthermore, it reinforces the need for financial institutions to align their quality management practices with their organizational culture to drive successful outcomes (Chowdhury & Rana, 2021; Salim et al., 2024).

Practical implications for bank managers, policymakers, and quality consultants.

The findings have practical ramifications for operational excellence practitioners. Bank managers can increase staff engagement and project success rates by coordinating LSS activities with prevailing cultural values (e.g., hierarchy, flexibility, or team orientation) (Knapp, 2015; Bhat et al., 2014). The report offers evidence-based methods for quality consultants and policymakers to customize interventions that take cultural dynamics in the financial sector into consideration. This is particularly relevant in transitional economies where cultural rigidity can either hinder or support continuous improvement efforts (Pamfilie et al., 2012; Ibidunni, 2013).

Support future process improvement efforts in Palestine.

The study contributes to national development efforts by providing a framework for banks in Palestine to implement LSS successfully. The empirical findings underscore the importance of cultural alignment and leadership support, offering a local blueprint for process improvement. This supports the Palestinian banking sector's strategic goals toward increased efficiency, service quality, and customer satisfaction (Lewis, 2004; Sun, 2008). By highlighting culturally congruent enablers and barriers, the study informs future improvement projects within public and private financial institutions.

1.11 Thesis Structure

There are five chapters in this thesis. Chapter One covers the introductory principles of the research on "Organizational Culture, Six Sigma, Competing Values Framework (CVF), Process Improvement, and Quality Management in Banking". Moreover, Chapter 1 presented the research backdrop, developed research questions and hypotheses, and established effective study aims and objectives. It offers the necessary features to make the research more efficient and beneficial for the next chapters of this study, as well as guidance on how to do the research.

Chapter Two reviews previous research on Six Sigma, organizational culture, and how these topics interact in service industries, especially the banking sector, based on the goals and objectives that have been defined. After reviewing the development, goals, and worldwide applicability of LSS, an examination of other organizational culture models is conducted, with a particular emphasis on the Competing Values Framework. Empirical research examines the impact of organizational culture on the uptake and effectiveness of quality improvement programs. research also pinpoints theoretical frameworks, contextual insights, and knowledge gaps pertinent to the banking sector in Palestine.

Chapter Three outlines the research methodology that is used to investigate the connection between organizational culture and Six Sigma, deployment in Palestinian banks. The chapter provides specifics on the overall research design, highlighting the application of quantitative methodology backed by primary and secondary data collection techniques. The chapter describes the sample plan, the data analysis methods to be used,

and the justification for choosing a structured survey instrument. To guarantee the validity and dependability of the study process, ethical issues and validity measures are also covered.

Results from the analysis of the gathered data are presented in Chapter Four. In order to answer the research questions and goals mentioned in previous chapters, the findings are organised accordingly. The association between organisational cultural characteristics and the results of Six Sigma adoption is investigated using descriptive and inferential statistical methods. Tables, charts, and graphs are used to highlight the main trends and patterns found. The impact of cultural factors on the success of LSS efforts in the chosen Palestinian banks is clearly and empirically understood in this chapter.

In the last chapter, chapter five, the main conclusions are discussed in light of the theoretical frameworks and body of existing literature that were examined previously in the study. The results are interpreted from the perspective of quality management and organizational change in the banking industry. A thorough conclusion summarizing the study's contributions, limitations, and implications follows the chapter. Based on the results, managers, policymakers, and banking institutions can improve the cultural fit and efficacy of Six Sigma implementation in Palestine by following the useful suggestions made. To help direct future scholarly investigations, research ideas are also provided.

Chapter Two: Literature Review

2.1 Overview

This chapter offers a thorough analysis of the body of research on the study's main topics, which are organizational culture, Six Sigma, and how these topics interact in the banking industry. It starts by outlining the history, goals, and worldwide relevance of Six Sigma, especially its shift from manufacturing to service-oriented sectors like banking. After that, the chapter examines a number of organizational culture models and aspects, concentrating on the Competing Values Framework (CVF), which forms the theoretical basis of this study.

2.2 Organizational Culture

The collective ideals, beliefs, presumptions, and behaviors that influence how people interact and react to their surroundings inside an organization are referred to as its organizational culture. Culture is the fundamental values, ideas, and practices that characterize a group, according to Ibidunni (2013). It is subjective by nature and represents the meanings and interpretations people give to the circumstances they come across.

According to Knapp (2015), organizational culture is a collection of common presumptions and beliefs that affect how workers view the world, make choices, and act. The understanding that culture reflects shared values and beliefs that direct employees' activities and decision-making is shared by the majority of definitions. These ideals are the core ideas that characterize an organization's success. Additionally, culture gives workers a feeling of purpose and community, coordinating personal incentives with the organization's overall goal.

Although culture is important, it is sometimes disregarded when organizational efforts are being implemented. Despite being strongly ingrained and resistant to quick change, leadership can nevertheless have an impact on culture. By deciding what to track, highlight, and manage, leaders communicate organizational priorities and help to form culture (Knapp, 2015). Additionally, leaders' deliberate actions like coaching, mentoring, and role modelling aid staff members in internalizing desired cultural ideals (Knapp, 2015). Other useful strategies for influencing behavior and progressively changing organizational culture include modifying

performance targets, team configurations, operational procedures, and incentive schemes (Knapp, 2015).

2.2.1 Types of Organizational Culture and their Influence on Six Sigma Implementation

Group, developmental, hierarchical, and rational cultures are the four main organizational culture types identified by Knapp (2015) as having a substantial impact on the application of Six Sigma. Different values and behavioral norms define each category, influencing the adoption and sustainability of change attempts.

Group Culture

Internally focused, group culture prioritizes adaptability and unity. It encourages involvement, teamwork, and a strong sense of belonging among members of the organization. Relationships and teamwork are valued in organizations with a dominating group culture. Such a culture can support continuous improvement initiatives, foster cross-functional collaboration, and increase employee engagement in the context of Six Sigma Knapp (2015).

Developmental Culture

Developmental culture also values flexibility but is oriented toward the external environment. It emphasizes innovation, risk-taking, and individual initiative. Organizations with this cultural type are often adaptive and entrepreneurial, quickly responding to emerging market opportunities. For Six Sigma implementation, a developmental culture supports experimentation, creative problem-solving, and openness to new ideas and technologies Knapp (2015).

Hierarchical Culture

Despite its emphasis on the external environment, developmental culture also encourages flexibility. It emphasizes self-motivation, inventiveness, and taking risks. Companies with this culture typically respond quickly to new market opportunities and are adaptable and innovative. In the context of implementing Six Sigma, a developmental culture promotes experimentation, creative problem-solving, and openness to new ideas and technologies. Knapp (2015)

Rational Culture

Control and outward emphasis are valued in rational culture. It is performance-driven and focusses on achieving strategic objectives, productivity, and competitiveness. Rationally orientated organizations are frequently results-oriented and customer-driven. Goal alignment, performance measurement, and a results-oriented mindset are all supported by this culture type when it comes to Six Sigma implementation, and these are all essential for maintaining quality improvements Knapp (2015).

Each one of these cultural kinds has unique advantages and disadvantages when it comes to Six Sigma. For example, rational culture may provide strong alignment with performance goals, whereas group culture may encourage involvement and collaboration. In order to adapt Six Sigma techniques to the organizational context and guarantee long-term implementation success, it is crucial to comprehend the dominant cultural orientation of an organization Knapp (2015).

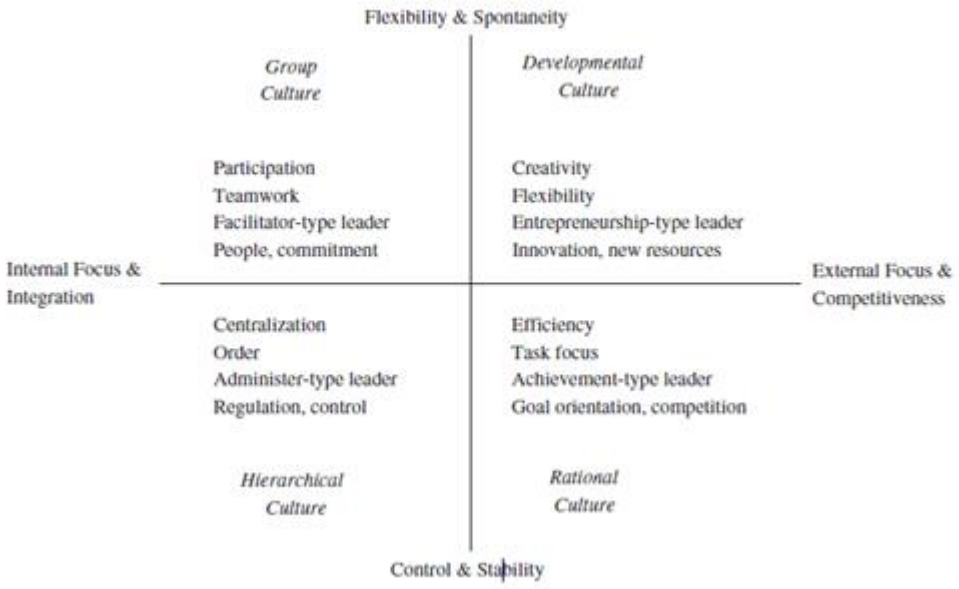

Figure (2.1) The competing Value framework of Organizational Culture (Zu et al., 2008)

2.2.2Factors Influencing Organizational Culture

Assessing how values, beliefs, and behaviors are established and maintained in a workplace requires an understanding of the elements that influence organizational culture. An organization's culture is shaped and changes over time by a number of important variables.

1. The Business Environment

Organizational culture is significantly shaped by the external business environment. It includes social ideals, employment trends, industry conventions, and economic situations that affect how businesses operate and how workers view their jobs. According to literature, broader sociological and anthropological viewpoints imply that cultural values vary by geography and social class. (Hofstede, 2001; Schein, 2010)

These differences have an impact on core attitudes at work, including loyalty to coworkers, regard for superiors, and a focus on providing excellent customer service. Organizations in collectivist civilizations, for instance, might place more value on loyalty and harmony within the group, whereas those in individualistic cultures might place more value on independence and individual success. (Hofstede, 2001; Trompenaars & Hampden-Turner, 2012).

2. Leadership

Leadership plays a fundamental role in shaping, reinforcing, and sometimes transforming an organization's culture. As recognized by scholars like Schein (1983) and Kotter & Heskett (1992), leaders—particularly founders and top executives—are the primary architects of organizational culture. Their values, behaviors, and strategic decisions are pivotal in shaping both the operational dynamics and employee interactions within an organization. Leaders not only set the tone for the organization's direction but also influence its core beliefs, attitudes, and underlying assumptions (Salim et al., 2024).

In newly formed organizations, the relationship between leadership and culture is even more critical. Leadership directly establishes the organizational norms and practices, influencing employee behavior and guiding decision-making processes. As Khan et al. (2023) observe, leaders in these formative stages serve as the foundation upon which organizational culture is built, instilling values and shaping the behaviors that resonate across the entire organization. While empirical studies on the direct cause-and-effect relationship between leadership and culture remain limited, there is a strong consensus in recent literature that leadership plays an essential role in shaping the cultural dynamics of an organization, especially in its early years (Chowdhury & Rana, 2021; Khan et al., 2023).

Recent studies have further expanded this understanding, particularly when it comes to how leadership impacts the adoption of methodologies such as Six Sigma and other continuous improvement initiatives. Effective leaders not only advocate for such frameworks but also foster a culture that encourages collaboration, innovation, and data-driven decision-making. For example, leadership that prioritizes employee involvement and engagement can play a significant role in the successful implementation of Six Sigma by encouraging a culture of continuous improvement and problem-solving (Zhao et al., 2021). This is particularly important in industries like banking, where leaders who champion quality improvement initiatives help align the workforce with the organization's broader objectives (Al-Haddad & Kotnour, 2020).

Thus, leadership is instrumental in cultivating the organizational culture needed for the success of strategic initiatives. When leaders promote and model behaviors that support methodologies like Six Sigma, they create a culture that not only fosters operational excellence but also ensures that the organization remains adaptable, innovative, and customer-focused over time (Cameron & Quinn, 2020; Kouzes & Posner, 2021)

The behaviors that leaders accept, the goals they establish, and the practices they reward all have an impact on culture. Depending on congruence with previous ideals and contextual elements like growth, crisis, or change initiatives, leadership changes over time may either progressively shift or reinforce the culture.

3. Management Practices and Socialization Processes

Kotter's work on leadership and change management is widely recognized, and the 3rd edition of this book updates his original model of leading organizational change. Kotter discusses how leadership plays a pivotal role in influencing culture by creating a vision for the future and inspiring collective action. He highlights that while leaders drive cultural transformation, managers ensure that the processes necessary to achieve that transformation are executed efficiently. The book is particularly relevant for organizations implementing methodologies like Six Sigma or Lean, where leadership and management must work in tandem. Kotter, J. P. (2020).

Harrison explores the interplay between management practices and organizational culture, focusing on how management procedures such as hiring, onboarding, and turnover influence the socialization process. The study highlights how management's role in recruitment and employee integration directly impacts cultural alignment, with particular emphasis on cultural fit during hiring and the integration of new employees into the organization's values. Harrison's work underscores the importance of consistent organizational practices in maintaining a strong and cohesive culture, especially in industries undergoing constant change. Harrison, J. R. (2021).

Antony (2021) explores the impact of management practices on the successful implementation of Six Sigma in service organizations. The study shows how management influences the organizational culture required for Six Sigma adoption by embedding quality-driven practices into daily operations. By aligning employees' actions with customer satisfaction and operational excellence, managers can help integrate Six Sigma principles into the company's cultural fabric, ensuring that cultural norms support continuous improvement.

4. Informal Socialization Processes

Organizational culture is shaped not only by formal processes but also by informal socialization processes. According to group dynamics theory, individual behavior in social situations is driven by three basic needs: inclusion, control, and affection (Schutz, 1969; McGrath, 1984). These psychological needs influence how employees interact with one another, understand the unspoken norms, and assimilate the broader cultural values of the organization. Khan et al. (2023) argue that these needs are deeply intertwined with the informal mechanisms through which cultural expectations are transmitted in the workplace.

Research has shown that informal socialization channels—such as peer influence, storytelling, mentorship, and shared rituals—play a critical role in reinforcing organizational culture. These interactions often prove more effective than formal policies or procedures in conveying the underlying values and beliefs that guide employee behavior (Salim et al., 2024). For

example, Lee and Lee (2022) note that employees often learn the nuances of a company's culture through informal networks, where cultural expectations are communicated more organically through social interactions and shared experiences rather than through top-down communication.

Thus, while formal methods such as training and official policies establish the framework for cultural norms, it is these informal socialization processes that truly embed and reinforce culture within the day-to-day operations of an organization.

5. The Nature and Definition of Organizational Culture

There has been much discussion and a variety of definitions for the term "organizational culture." "The way we do things around here" is one of the most widely used and useful descriptors (Sun, 2008). This phrase captures the way that deeply ingrained habits, mindsets, and actions control organizational life. Culture is a system of shared beliefs and underlying presumptions that direct how members handle both internal and external difficulties. It is not only a collection of outwardly observable actions.

According to Sun (2008), culture is the result of the "collective programming of the mind" that distinguishes one group from another. It emerges as individuals are socialized into a shared environment, adopting common beliefs, values, and behavioral norms. These shared elements form the foundation of the organization's psychological and social environment and significantly influence how decisions are made, how change is managed, and how performance is evaluated.

Every organization has a unique culture or set of principles, and each one may have a different interpretation of what culture is. The values of the organization's founders or senior management typically serve as the cornerstone of its culture. Because organizational culture may be exploited as a competitive advantage throughout organizational development and because a strong culture can generate cooperation, control, communication, and dedication, managers should not overlook organizational culture and its underlying themes in order to create a successful culture. The importance of organizational culture has grown as a result of

several recent developments, and cultural themes can be used consistently to evaluate an organization's culture. Sun (2008).

2.2.3 The Communication and Strategic Role of Organizational Culture

Every organization has a distinct set of rules and values known as its organizational culture, which frequently reflects the goals and ideologies of its senior leadership or founders. According to Sun (2008), these core principles shape how the company operates both internally and externally by influencing employee behavior and attitudes.

This cultural base can be a strong competitive advantage, so managers need to acknowledge and foster it. Cooperation, internal control, communication, and dedication can all be fostered within an organization by a strong, well-managed culture. The strategic importance of organizational culture has only grown in an age of constant innovation and change, with cultural themes acting as timeless instruments for assessing and improving organizational behavior.

Organizational culture is communicated not only through explicit values but also through a wide range of implicit mechanisms. Ibidunni et al. (2013) outlined various channels through which culture is transmitted within organizations. These include:

- Performance and reward criteria
- Decision-making processes
- Role modeling and behavioral example-setting
- Recruitment, selection, and promotion standards
- Teaching, coaching, and mentoring practices
- Resource allocation patterns
- Organizational structure and design
- Business processes, procedures, and policies
- Design and decoration of the physical environment
- Visual branding such as logos, templates, and graphics

Employee behavior is shaped by the signals that each of these components conveys about what is valued and acceptable within the company.

Limeade (2020) asserts that organizational culture is made up of the collective underlying presumptions that establish what matters, how people ought to act, and what is deemed "normal" in the workplace. Both formal systems, like written policies, and informal norms, like unspoken expectations and customs, are based on these presumptions. In this way, organizational culture is similar to a company's personality; it establishes the standard for behavior at all levels of the organization and reflects the thoughts, feelings, and behaviors of its employees in certain circumstances.

Limeade (2020) further identified five strategic roles played by organizational culture:

- Shared Meaning: By encouraging uniformity in attitudes, interpretations, and reactions to organizational problems, a shared culture helps to eliminate ambiguity.
- Coordination and Control: Through common understandings, cultural alignment strengthens control mechanisms, expedites decision-making, and makes departmental coordination easier.
- Uncertainty Reduction: A cohesive cultural framework helps reduce anxiety by simplifying the organizational environment and providing clarity about acceptable actions.
- Motivation: Strong culture fosters identification, loyalty, and intrinsic motivation by reinforcing values and beliefs that support high performance.

Competitive Advantage: Organizations with a strong and adaptive culture are better positioned to compete in dynamic market environments.

2.3 Six Sigma

By locating and removing the underlying causes of mistakes, flaws, or failures, Six Sigma is a data-driven business strategy and technique that seeks to enhance organizational processes and raise overall performance and quality. It is a systematic method that employs statistical methods to aim for near-perfect results in commercial operations, as well as a quality measurement (Antony, 2004). Reducing process variation and continuously improving processes that are essential to customer satisfaction are two of Six Sigma's guiding principles.

According to Antony (2004), the DMAIC (Define, Measure, Analyze, Improve, Control) framework is frequently used as an example of the rigorous, measurement-based approach that forms the basis of Six Sigma methodology. This methodical strategy helps businesses identify performance gaps and use statistical methods to manage and improve operations.

When correctly used, Six Sigma is a purposeful, disciplined endeavor that may improve efficiency and effectiveness in a wide range of businesses, according to Aboelmaged (2010). The advantages of Six Sigma in manufacturing have been well-documented. Reduced process variability, fewer in-process defects, shorter cycle times, shorter maintenance inspection periods, better on-time delivery, maximized capital expenditure savings, greater profitability, and increased productivity are a few of these. Additionally, Six Sigma techniques lower the overall cost of poor quality (COPQ), customer complaints, and operating expenses.

Six Sigma has also shown significant benefits in the banking industry and other service sectors. Aboelmaged (2010) asserts that Six Sigma applications that are service-oriented lead to reduced documentation mistakes, shorter service cycle times, more accurate reporting, and more efficient service delivery.

Enhanced customer satisfaction, decreased equipment inventory, and decreased service process fault rates are further advantages. Crucially, Six Sigma helps companies change their culture from one of reactive problem-solving to one of proactive, preventive process management. Increased cross-functional cooperation, better decision-making grounded in empirical evidence, higher employee morale, and continuous improvement are all facilitated by this cultural shift (Aboelmaged, 2010; Schroeder et al., 2008).

2.3.1 Challenges and Critical Success Factors in Six Sigma Implementation

Even with Six Sigma's proven advantages, there are still difficulties in putting it into practice. A number of obstacles prevent Six Sigma results from being fully realized, particularly in service-oriented and small-to-medium businesses (SMEs), according to Antony (2004). The absence of theoretical support for the frequently mentioned 1.5 sigma shift that yields the computation of 3.4 Defects Per Million Opportunities (DPMO), a crucial Six Sigma statistic, is one noteworthy criticism. Given the inherent flexibility and intangible character of service

processes, this number—which is frequently employed as a standard for process excellence—remains contentious when applied to them.

Additionally, according to Antony (2004), there is not enough empirical support for the claim that the Sigma Quality Level (SQL) and the Cost of Poor Quality (COPQ) are related because the majority of the claims made thus far are based on practitioner experience rather than thorough academic study. Furthermore, there is no agreement on what competencies should be covered in the training materials offered by Six Sigma belt certifications (such as Green Belt and Black Belt) and the training is not standardized. This discrepancy could result in different capacities across sectors and organizations.

Another factor that needs more research is leadership style. Despite the fact that leadership commitment is generally seen as a crucial component, little is known about the precise effects of various leadership philosophies on Six Sigma success (Antony, 2004). Another recurring challenge is data quality; although it is frequently absent, high-quality, pertinent data is necessary for precise analysis and well-informed decision-making.

Some Six Sigma-driven solutions are expensive, and only a tiny percentage of them are really put into practice. This is one of the other implementation problems. Rather of using data-driven prioritization, many organizations choose which Six Sigma projects to implement based on subjective factors. Furthermore, because process data may not follow a normal distribution in real-world circumstances, the methodology's reliance on the assumption of properly distributed data presents difficulties. Continuous evaluation is also necessary for the identification and improvement of Critical-to-Quality (CTQ) attributes in order to stay in line with shifting consumer demands and market dynamics.

Ahmad et al. (2006) expands on these restrictions by offering a framework for evaluating the crucial elements and performance indicators that facilitate effective Six Sigma application. Management leadership, involvement, and dedication are among the most crucial enablers and include:

- Financial Support: Setting aside sufficient funds for infrastructure, project management, and Six Sigma training.

- Project Review Mechanisms: Ensuring that leadership participates actively in recurring project assessments in order to track developments and address roadblocks.

- Effective Communication: Keeping lines of communication open and constant across the company to match procedures with the needs and expectations of customers.

These results highlight the necessity of a systematic and well-supported Six Sigma methodology, especially in developing nations and service industries where implementation may be made more difficult by contextual issues. Leveraging Six Sigma as a tool for long-term process improvement and strategic competitiveness requires an understanding of and attention to these limits.

A number of interconnected organizational elements are necessary for the successful application of Six Sigma. These include strategic alignment of Six Sigma initiatives with overarching corporate objectives, extensive training programs to develop internal expertise, and strong leadership commitment. Enhancing customer happiness is closely linked to quality improvements when a customer-focused approach is utilized. To guarantee on-time delivery and value creation, effective project selection, management, and monitoring are also crucial. Lastly, the value chain as a whole is optimized when suppliers are included in improvement projects. These components promote organizational excellence and long-term performance enhancement when combined holistically (Ahmad et al., 2006).

2.3.2 Strengths and Advantages of Six Sigma Methodology

Six Sigma is widely recognized in the literature for its systematic, data-driven approach to quality and performance improvement. One of its most significant strengths lies in its reliance on empirical, statistical analysis, which enables organizations to make objective decisions and manage process variation more effectively. This analytical rigor enhances operational control and supports evidence-based management practices (Linderman et al., 2003). In addition, Six Sigma's customer-centric focus ensures that improvement initiatives are closely aligned with

customer expectations and Critical-to-Quality (CTQ) attributes, thereby directly contributing to customer satisfaction and service excellence (Zu et al., 2008).

The methodology also demonstrates a strong link to financial performance, as successful implementations have been shown to reduce waste, improve productivity, and enhance profitability—outcomes well-documented in benchmark cases such as General Electric (Henderson & Evans, 2000). Moreover, Six Sigma's structured implementation model, which includes defined roles such as Champions, Master Black Belts, and Green Belts, promotes cross-functional collaboration and capability building across the organization. This role clarity fosters engagement and accountability, enabling a culture of continuous improvement (Snee, 2010).

Six Sigma is frequently presented in literature as a systematic and structured technique that aims to improve organizational performance through the identification and elimination of unpredictability and flaws in business processes. According to Antony (2004), the proper use of Six Sigma tools and techniques, each of which has a specific function within a project framework—is essential to the success of these initiatives. Champions, Master Black Belts, Black Belts, and Green Belts make up the hierarchical infrastructure that supports the system and is in charge of organizing, carrying out, and maintaining improvement projects. The use of data-driven decision-making, where statistical measurement and analysis take the role of intuition in problem-solving and process management, is a defining characteristic of Six Sigma.

This is consistent with a more general organizational trend towards management based on evidence. Despite being created initially for manufacturing, Six Sigma's fundamental ideas—continuous improvement, process control, and defect prevention—have been effectively applied to service and transactional settings. Six Sigma approaches, for instance, have been applied in customer service to enhance complaint processing, speed up response times, and raise overall service quality. Reduced variability and improved process consistency and reliability across sectors are the ultimate goals of the methodology, which is based on the idea of "sigma" as a statistical measure of deviation from the process mean. Antony (2004),

Hoerl and Snee (2002) further highlight three core concepts of statistical thinking that underpin the Six Sigma philosophy: (1) all work occurs within a system of interconnected processes, (2) all processes exhibit inherent variation, and (3) all processes produce data that can be analyzed to understand and control that variation. By embracing these principles, organizations can more effectively diagnose sources of inefficiency and devise targeted interventions to improve performance.

Even with its extensive use and achievements, Six Sigma is still not well-theorized in scholarly works. Even though its applications are widely known, further research is necessary to establish a strong theoretical basis. The academic community must provide frameworks that explain the Six Sigma phenomena in a more methodical and research-driven way in order to bridge this gap between theory and practice, as Antony (2004) points out.

2.3.3 Evolution of Six Sigma

Six Sigma, a methodology developed in the 1980s by Motorola, has evolved into one of the most recognized process improvement approaches globally. At its heart, Six Sigma focuses on reducing variation and improving quality through data-driven decision-making. In its early days, Six Sigma was about using statistical tools to decrease defects in manufacturing processes, aiming for near-perfect outcomes with fewer than 3.4 defects per million opportunities (Pyzdek & Keller, 2021). Over time, organizations saw the potential of Six Sigma beyond just manufacturing, recognizing its value in sectors like healthcare, finance, and service industries.

As it matured, Six Sigma became a systematic approach that emphasizes quality control, problem-solving, and process optimization through the use of structured frameworks like DMAIC (Define, Measure, Analyze, Improve, Control). In recent years, the methodology has expanded to include a focus on organizational culture, leadership involvement, and employee empowerment, all of which are critical for ensuring that Six Sigma initiatives are successfully adopted and sustained (Antony et al., 2020). In industries like banking, Six Sigma is increasingly being integrated to drive operational excellence and enhance customer satisfaction through continuous improvement (Jayaram, 2021).

2.3.4 Objectives of Six Sigma

The primary goal of Six Sigma is to drive operational excellence by enhancing process efficiency and improving product or service quality. Through a disciplined approach to eliminating defects and reducing variability, Six Sigma helps organizations to achieve measurable improvements in both performance and customer satisfaction (George, 2021). The DMAIC framework remains central to this approach, as it provides a structured methodology for identifying problems, analyzing root causes, implementing improvements, and controlling the process to sustain these changes.

In recent applications, Six Sigma has extended its influence beyond traditional manufacturing environments. For instance, in the banking sector, Six Sigma is used to streamline loan approval processes, reduce errors, and enhance customer service quality by addressing bottlenecks and improving overall efficiency (Antony et al., 2021). The methodology not only drives technical improvements but also fosters a culture of data-driven decision-making and accountability across the organization.

2.3.5 Global Relevance of Six Sigma

Six Sigma's global relevance continues to grow, particularly as industries around the world strive fr performance excellence and quality improvement. The methodology has proven effective in a variety of sectors, from manufacturing to healthcare, education, and finance (Pyzdek & Keller, 2021). In each of these fields, organizations leverage Six Sigma's robust statistical tools and problem-solving techniques to streamline operations, reduce costs, and enhance the customer experience.

In the banking sector, Six Sigma has gained particular attention due to its ability to reduce errors in financial transactions, improve compliance processes, and enhance overall customer service (Gomaa, 2023). It also plays a critical role in helping organizations meet regulatory standards while continuously improving their operational processes.

2.3.6 Importance of Six Sigma in the Banking Sector

Banks operate in a highly competitive environment where the quality of service and the efficiency of operations directly impact their bottom line. Six Sigma is a valuable methodology for banks looking to achieve operational excellence by minimizing errors, improving service delivery times, and enhancing customer satisfaction. One of the key advantages of Six Sigma in banking is its ability to improve accuracy and timeliness, which are crucial for maintaining trust and ensuring compliance with regulations (Gomaa, 2023).

For example, Six Sigma has been used to streamline back-office operations, reduce loan processing times, and improve the accuracy of transaction handling. By applying Six Sigma principles, banks can identify bottlenecks, eliminate waste, and reduce process variation, all of which contribute to a smoother, faster, and more accurate service delivery (Alosani et al., 2023).

In a highly competitive market, Six Sigma's ability to reduce operational costs while improving service quality enables banks to gain a competitive edge. By integrating Six Sigma with a focus on customer-centricity, banks can ensure that they not only meet but exceed customer expectations, leading to higher customer satisfaction and loyalty (Jayaram, 2021).

2.3.7 Key Principles for Successful Six Sigma Implementation

Successful Six Sigma implementation requires a commitment to data-driven decision-making, continuous improvement, and employee involvement. As Knapp (2020) emphasizes, effective deployment of Six Sigma depends on a few key elements: the recognition of customer needs, the elimination of waste, and the control of processes to ensure long-term success. These elements help organizations maintain high standards of quality while optimizing performance.

In the banking industry, for example, Six Sigma can be an effective strategy for meeting customer expectations and ensuring regulatory compliance. By focusing on improving both efficiency and quality, Six Sigma enables banks to achieve greater customer satisfaction and employee engagement, as well as improved financial performance (Salah et al., 2023).

Additionally, Six Sigma empowers banks to respond to emerging challenges with flexibility and innovation, ensuring that they remain competitive in a rapidly changing market.

2.4 Six Sigma & Organizational Culture

A crucial factor in the successful implementation of Six Sigma (SS) is organizational culture. According to Knapp (2015), cultural attributes tied to group-oriented and developmental cultures—such as cooperation, adaptability, and a commitment to learning—are strongly associated with the adoption of Six Sigma, particularly when supported by leadership. Knapp's research emphasized that aligning Six Sigma strategies with these cultural dimensions can significantly enhance effectiveness, especially in complex settings like healthcare. Similarly, Leonard (2015) argued that the sustainability and success of Six Sigma initiatives depend largely on organizational culture, which includes employee engagement, process standardization, creativity, and a commitment to continuous improvement.

However, applying Six Sigma—initially rooted in Japanese corporate culture—can be challenging in organizations with competing cultural norms, sometimes leading to resistance or performance setbacks. Aung (2019) highlighted how Six Sigma implementation in healthcare led to increased productivity, flexibility, and service quality, underscoring the crucial role of cultural alignment in maximizing Six Sigma outcomes.

2.5 The Relationship Between Organizational Culture and Six Sigma Implementation

The cultural orientation of an organization plays a critical role in the successful adoption and implementation of Six Sigma. Recent studies have continued to employ frameworks like the Competing Values Framework (CVF) to explore how different organizational cultures influence Six Sigma outcomes. For instance, Khan et al. (2023) found that cultures with strong group-oriented and rational characteristics foster better Six Sigma infrastructure and project success. These cultures, which emphasize collaboration, structured processes, and performance metrics, create an environment conducive to Six Sigma principles.

Additionally, more recent research by Lee and Lee (2022) highlights that organizations with developmental cultures—those that prioritize innovation, learning, and adaptability—tend to

have greater success in Six Sigma initiatives, particularly in service-based sectors such as banking. This finding reinforces the earlier assertion that developmental cultures promote teamwork, knowledge sharing, and a commitment to continuous improvement, all of which are vital for Six Sigma's success.

Furthermore, Chowdhury and Rana (2021) demonstrated that Six Sigma thrives in organizations that foster open communication and trust—hallmarks of a developmental culture—while also emphasizing the importance of aligning leadership values with cultural priorities. These insights reinforce the idea that cultural alignment is not just a peripheral factor but central to the long-term sustainability and effectiveness of Six Sigma initiatives in any sector.

Thus, it is clear that matching Six Sigma's core principles with the right cultural orientation is crucial for achieving effective and lasting outcomes. Whether in manufacturing or service sectors, aligning the cultural dynamics with Six Sigma goals—such as collaboration, innovation, and performance management—can significantly enhance the potential for success.

Organizational culture shapes Six Sigma outcomes across sectors, with cultures that prioritize open communication and continuous improvement being strong predictors of successful implementation. In a cross-sector analysis, McDermott and Prajogo (2005) found that while rational cultures tend to align well with efficiency and control, developmental cultures support creativity and innovation—key components for balancing the rigor and adaptability that Six Sigma requires. In the context of Small and Medium Enterprises (SMEs) in the Gulf region, Aspinwall and Al-Khalifa (2000) observed that hierarchical cultures with rigid decision-making structures hinder Six Sigma implementation, suggesting that leadership-driven cultural change is necessary for success.

Yadav and Sahoo (2018), in their study of Indian manufacturing companies, concluded that successful Six Sigma adoption hinges on cultural preparedness, which includes openness, empowerment, and a willingness to take risks. This insight highlights the significance of

cultural factors such as leadership engagement, employee empowerment, and a commitment to learning, which are essential for Six Sigma to take root and thrive.

2.6 Implications for Palestinian Banks

Implementing Six Sigma in Palestinian banks requires more than technical expertise—it also demands a shift towards a culture that is collaborative, leadership-driven, and focused on continuous learning. Both global and Palestinian case studies indicate that organizational culture plays a pivotal role in the success and sustainability of Six Sigma projects.

2.6.1 International Proof of Culture and Six Sigma Achievement

1. Leadership, Involvement, and Culture: Antony and Gupta (2019) highlight that leadership commitment, employee involvement, and continuous education are essential cultural enablers for Six Sigma success across both manufacturing and service sectors.
2. Competing Values Framework (CVF): According to Quinn and Cameron (2011), balanced cultural archetypes, particularly group and developmental cultures, foster organizational adaptation, which is crucial for successful implementation of Six Sigma.
3. Decentralization and Employee Involvement: Shah and Ward (2007) found that Six Sigma techniques are more sustainable in organizations with decentralized decision-making and high employee involvement—critical elements for Six Sigma success in both manufacturing and service sectors.
4. Cultural Resistance and Alignment: Gupta, Antony, and Peck (2005) emphasized that cultural resistance or misalignment is a frequent cause of Six Sigma failure, underscoring the need for intentional cultural change during the deployment process.

2.6.2 Palestinian Contextual Evidence

1. Case Study of Palestine Islamic Bank: Implementing Six Sigma at Palestine Islamic Bank's Al-Bireh branch reduced account-opening time by 61%, from 38 minutes to 14.7 minutes, according to a case study by Al-Refai (2021). The study highlighted the importance of continuous feedback, effective training, and communication in maintaining progress. This

shows how Six Sigma can improve operational efficiency, but cultural factors like communication and training are key to success.

2. Results for the Banking Industry as a Whole: Azzam (2024) found that Six Sigma principles—such as managerial support, feedback, communication, and continuous improvement—account for 56% of the variance in service quality across Palestinian banks. This finding underscores the central role that organizational culture plays in Six Sigma adoption and its impact on performance outcomes in the Palestinian banking sector.

2.7 Previous Studies

2.7.1 Related Studies in the Palestinian Context

Several recent studies in Palestine have examined the relationship between Six Sigma and organizational culture, with notable findings regarding the adoption and challenges of Six Sigma in Palestinian banks and financial institutions.

Al Refai (2021) conducted a case study on the Palestine Islamic Bank's Al Bireh branch, which implemented Six Sigma to reduce customer wait times during the account-opening process. The study emphasized that the success of Six Sigma adoption relied heavily on cultural factors, such as leadership participation, employee cooperation, and adaptability. This study illustrated that despite Six Sigma's structured approach, the importance of organizational culture in ensuring sustained gains cannot be overstated.

Azzam (2024) explored how Six Sigma standards influenced service quality in Palestinian banks, finding that communication, process control, and managerial commitment played critical roles in improving service quality. His research showed that organizational culture significantly mediates the relationship between Six Sigma adoption and perceived performance, explaining that cultural factors accounted for 56% of the variance in service quality outcomes. Azzam concluded that a positive and supportive culture was crucial for effective Six Sigma implementation.

Abu-Tayeh & Al-Qudah (2020) assessed the role of quality management practices, including Six Sigma, in Palestinian financial institutions. Their study found a strong correlation between

operational efficiency and customer satisfaction, as well as a link to institutional culture, leadership style, and employee engagement. Although their focus was not specifically on Six Sigma, the findings underscored the importance of cultural readiness and engagement for successful quality management adoption.

Shkokani (2019) examined the barriers to Total Quality Management (TQM) in Palestinian banks and drew parallels with Six Sigma adoption. He found that inflexible communication channels and hierarchical decision-making processes significantly hindered the continuous development of quality initiatives, including Six Sigma. These challenges highlight the importance of cultural alignment for successful process improvement.

Abu-Zaid & Al-Ghazawi (2022) studied employee preparedness for change in Palestinian service organizations, particularly banks. They found that cultural openness, participatory decision-making, and trust in leadership were essential for facilitating successful Six Sigma and other quality-driven changes. Their findings emphasized that cultural factors play a vital role in employees' readiness to adopt new methodologies like Six Sigma.

Together, these studies underscore that Palestinian organizations face several cultural and institutional barriers when adopting Six Sigma. However, they also highlight that employee involvement, leadership commitment, and cultural alignment are key factors that increase the likelihood of successful implementation.

2.7.2 Related Studies in the International Context

Numerous studies globally have explored the impact of Six Sigma and organizational culture. These studies suggest that cultural alignment plays a crucial role in determining the success of Six Sigma initiatives across various industries and regions.

Knapp (2015) conducted a study across US hospitals, focusing on how elements of Six Sigma deployment relate to four organizational culture types. Using the Organizational Culture Assessment Instrument (OCAI), the study found that developmental cultures, which prioritize collaboration and adaptability, were most conducive to Six Sigma success. The study

emphasized that group culture, characterized by engagement, cooperation, and a shared focus on learning, is crucial for the successful application of Six Sigma methodologies.

Zu et al. (2010) investigated how various organizational culture types in US manufacturing companies impacted the success of Six Sigma. Their survey-based study found that group culture, defined by employee dedication, involvement, and cooperation, had the strongest positive correlation with Six Sigma success. The study indicated that cultural alignment with the Six Sigma approach significantly influences the effectiveness of its implementation.

Pakdil (2015) used the Competing Values Framework (CVF) to examine how organizational culture affects Six Sigma implementation in manufacturing. His study found that companies with cultures promoting adaptability, collaboration, and continuous improvement saw the most successful outcomes with Six Sigma deployment. The study stressed the need to align organizational culture with Six Sigma principles for achieving optimal process efficiency and sustainability.

Gityforoze (2018) focused on the public sector and how Six Sigma impacts service quality and consistency. Surveying professionals in a California county agency, the study found that organizations with a supportive and communicative culture were better equipped to implement Six Sigma, resulting in improved service delivery and cost reductions. The study highlighted that cultural alignment with Six Sigma principles is critical for success in the public sector.

Burdett (2007) investigated the alignment between Six Sigma and organizational culture, finding that cultural fit significantly affects business performance. The research, based on semi-structured interviews, demonstrated that companies with supportive cultures were more likely to achieve Six Sigma success, while those with hierarchical or rigid cultures faced greater challenges.

Lee et al. (2021) examined hospitals in the United States and used the CVF to explore how different organizational culture profiles impacted performance outcomes related to quality. The study showed that hospitals with a strong multifaceted CVF culture performed better in

patient safety, patient satisfaction, and Lean/Six Sigma application. The study concluded that a more comprehensive cultural approach, rather than a single dominant culture type, improved Six Sigma results.

Hempel (2017) conducted a study on Six Sigma implementation in China, finding that supportive cultures were more likely to succeed with Six Sigma adoption. Interestingly, companies with innovative cultures struggled with implementation. The study also emphasized the importance of setting clear goals from the outset to ensure the success of the Six Sigma process.

Douglas et al. (2017) focused on the role of organizational climate in readiness for change, specifically concerning Six Sigma. The study found that a positive organizational climate was a major enabler of Six Sigma adoption, suggesting that improving the climate before implementation could facilitate smoother transitions to Six Sigma practices.

Tortorella et al. (2020) examined the interplay between leadership philosophies and organizational culture profiles in companies implementing lean manufacturing and Six Sigma principles. They found that the leadership style and the dominant culture of a company played a crucial role in determining the success of Six Sigma initiatives. Companies with collaborative and continuous improvement cultures were more likely to succeed in their Six Sigma efforts.

Cronemyr et al. (2014) explored the cultural drift that occurs when Six Sigma is implemented in multinational corporations. The study found that the structured nature of Six Sigma helped bridge cultural differences between employees from different countries, facilitating better cooperation and understanding across national boundaries. The study suggested that Six Sigma's framework provides a common ground for organizations to work through cultural barriers during international collaborations.

Alosani et al. (2018) proposed a framework combining innovation culture with Six Sigma to improve organizational performance. Their research demonstrated that blending innovation-

driven cultures with Six Sigma practices could lead to enhanced performance, especially in highly competitive sectors.

Ng et al. (2017) studied the impact of organizational culture on the success of Six Sigma in Chinese organizations, finding that supportive cultures were more likely to achieve success, while innovative cultures faced challenges. This study emphasized the importance of goal clarity and cultural alignment for successful Six Sigma implementation in the Chinese industrial context.

These international studies reinforce the idea that Six Sigma's success is not just determined by its technical methodologies, but also by the organizational culture in which it is applied. Cultural alignment, leadership commitment, and employee engagement are essential factors for achieving meaningful results from Six Sigma initiatives, whether in the private or public sector.

2.8 Research Gap

Most research has been carried out in industrial or developed country environments, even though many studies have examined the use of Six Sigma (LSS) in many industries. The impact of organizational culture on the application of LSS in service industries like banking, particularly in the Palestinian context, has not received much empirical attention. Palestine's distinct sociopolitical and economic landscape poses difficulties that could impact quality management programs as well as cultural dynamics. The relationship between cultural factors and LSS adoption is still little understood, even though Palestinian banks are increasingly in need of process optimization and customer-focused tactics. By examining how various organizational culture types impact the deployment and performance of LSS in Palestinian banks, this study seeks to close that gap.

2.9 Contribution of the Study

This study contributes to both academic knowledge and practical applications in several significant ways:

- There are several comparable studies in literature, most of which were carried out in both industrialized and developing nations. However, limited studies that have explored the impact of organizational culture on implementing six sigma in Palestinian banks in specific

- Cultural Perspective: The study combines cultural factors into Six Sigma research, bringing insights into how specific types of culture (e.g., hierarchy, innovation, cooperation) effect quality initiatives.

- Empirical Insights for Developing Countries: By focusing on a developing country, this research adds to the limited body of empirical studies addressing quality management systems in non-Western contexts, thus broadening the global understanding of Six Sigma implementation.

- Practical Implications: By adjusting Six Sigma methodologies to fit existing organizational cultures, policymakers, bank managers, and quality practitioners in Palestine and comparable environments can improve the likelihood that their deployment will be effective.

- Theoretical Progress: By evaluating and improving an existing conceptual model that connects organizational culture and Six Sigma, the study may provide a platform for future research in other fields or geographical areas.

Chapter Three: Methodology

3.1 Overview

This chapter presents the research methodology used to examine the relationship between organizational culture and the implementation of Six Sigma in Palestinian banks. It outlines research design, approach, data collection methods, sampling procedures, instrumentation, and data analysis techniques. The aim is to ensure methodological rigor and provide a transparent framework for replicability.

3.2 Research Approach

The researcher in this thesis examined the specific hypotheses outlined in the first chapter using a quantitative research approach (Creswell, 51 2017). Accordingly, the quantitative research approach is "based on setting a set of hypotheses concerning the elements of a thesis, obtaining data and information, and then statistically analyzing the results to reject or accept the formulated hypotheses" (ElGohary et al., 2008, P. 27). Additionally, for addressing what, where, and when concerns, the quantitative research technique is intriguing (Rajaskar et al., 2013).

The purpose of this study is to examine how organizational culture impacts the implementation of Six Sigma in Palestinian banks. Additionally, the researcher investigated established theories to generate appropriate hypotheses based on them, then evaluated those hypotheses to determine whether to accept or reject them using the deductive research approach (Conard et al., 2014). To analyze and gather the study's data, this research approach focusses on numbers and statistics.

In order to investigate how organizational culture affects the use of six sigma in Palestinian banks, this study uses an explanatory research approach. Finding the reasons for a certain phenomenon is an interesting use of this kind of research.

3.3 Research Hypotheses

Main Hypothesis (H1):

There is a significant relationship between organizational culture and the implementation of Six Sigma in Palestinian banks.

Sub-Hypotheses:

H1a: The Culture of Cooperation and Teamwork has a significant positive effect on the implementation of Six Sigma practices in Palestinian banks.

H1b: Developmental (adhocracy) culture positively influences the implementation of Six Sigma in Palestinian banks.

H1c: The Culture of Hierarchy negatively affects the implementation of Six Sigma in Palestinian banks.

H1d: Rational culture positively influences the implementation of Six Sigma in Palestinian banks

Main Hypothesis (H2):

There are no significant statistical differences in the sample studied towards implementation of Six Sigma attributed to demographic characteristics of the respondent.

Sub-Hypotheses:

H2a: There are no significant statistical differences at ($\alpha<0.05$) in the sample studied towards implementation of Six Sigma attributed to gender of the respondent.

H2b: There are no significant statistical differences at ($\alpha<0.05$) in the sample studied towards implementation of Six Sigma attributed to age of the respondent.

H2c: There are no significant statistical differences at ($\alpha<0.05$) in the sample studied towards implementation of Six Sigma attributed to educational level of the respondent.

H2d: There are no significant statistical differences at ($\alpha<0.05$) in the sample studied towards implementation of Six Sigma attributed to Job Title of the respondent.

H2e: There are no significant statistical differences at ($\alpha<0.05$) in the studied sample towards implementation of Six Sigma attributed to years of experience of the respondent.1.11 Research Model

This study evaluated the impact of organizational culture on Six Sigma in Palestinian Banks. The study's variables are shown in this diagram Organizational Culture Dimensions Six Sigma

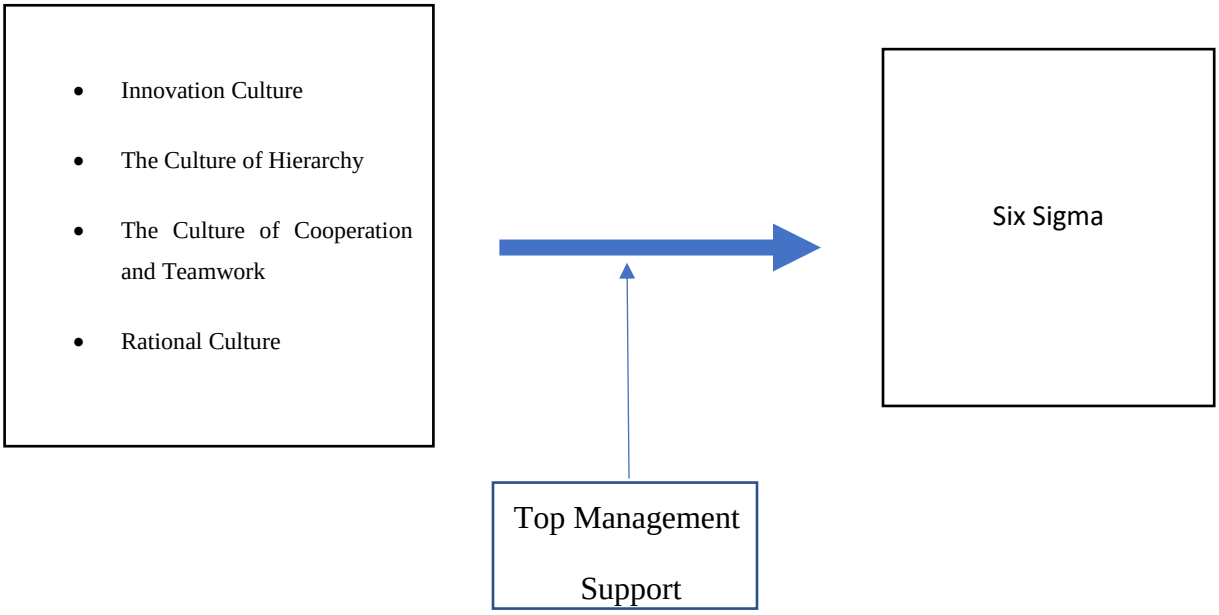

Figure 1.1: Conceptual Model — The Impact of Organizational Culture Dimensions on Six Sigma Implementation in Palestinian Banks

Based on Figure (2.1) With a particular focus on Palestinian banks, the conceptual model shows how different aspects of organizational culture relate to the application of Six Sigma methodology in Palestinian banks.

Four essential aspects of organizational culture are identified by the model:

1. Innovation Culture: Promotes originality, taking chances, and ongoing development.
2. The Culture of Hierarchy: This culture places a strong emphasis on power, control, and structure
3. The Culture of Cooperation and Teamwork: This emphasizes cooperation, support for one another, and common objectives.
4. Rational Culture: Places emphasis on efficiency, performance, and goal attainment.

The successful use of Six Sigma techniques, which call for strong team participation, data-driven decision-making, and strategy alignment, is thought to be directly impacted by these cultural factors.

The conceptual framework provides a starting point for investigating the ways in which particular cultural factors influence the application of Six Sigma in Palestinian banks. The empirical part of the study is guided by this framework, which aids in identifying key cultural alignments and the adjustments required for a successful quality transformation.

3.4 Thesis Variables

Independent Variable (IV): Organizational Culture: which include the following dimensions:

1. Developmental Culture (creativity, flexibility, and external orientation)
2. Hierarchical Culture (rules, stability, and formal processes)
3. Group Culture (participation, cohesiveness, and teamwork)
4. Rational culture (performance, competitiveness, and goal orientation)

Dependent Variable (DV): which includes the implementation of Six Sigma (SS), measured by:

1. The bank's leadership/management, participation, and commitment
2. Training and understanding the Six-Sigma methodology, its tools, and techniques.
3. Linking Six Sigma to the certified ones
4. Selecting projects, setting priorities, and managing projects

3.5 Data Collection Methods

Both primary and secondary data sources were used:

Primary Data: Managers and staff at Palestinian banks were given structured questionnaires. The poll asked about the effectiveness and state of LSS implementation as well as organizational

culture (based on the CVF characteristics of Innovation Culture, The Culture of Hierarchy, The Culture of Cooperation and Teamwork, Rational Culture).

Secondary Data: To put findings in context and bolster analysis, pertinent documents, Palestine Monetary Authority reports, scholarly journals, and bank performance reports were utilized.

3.6 Research Population and Sample Selection

According to Roxy et al. (2008), a population is the total pool from which a sample is picked, data is collected, and conclusions and findings are derived.

There are thirteen banks in Palestine, seven of which are local Palestinian banks, three of which are Islamic banks: AL-Safa Bank, Palestine Islamic Bank, and Arab Islamic Bank. In contrast, there are four commercial banks: The National Bank, Palestine Investment Bank, Bank of Palestine, and Al-Quds Bank. As a result, the study population for this thesis consists of managers and employees of Palestinian banks. Additionally, there are six foreign banks: Egyptian Arab Land Bank, Cairo Amman Bank, Jordan Bank, The Housing Bank, Arab Bank, and Al-Ahli Bank (Association of Banks in Palestine, 2024).

As of the end of 2024, the Palestinian banking sector employed 7,525 individuals, comprising 96 top-level managers (1%), 1,135 middle-level managers (15%), 5,646 employees (75%), and 648 administrative staff (9%) (Association of Banks in Palestine, 2024).

According to Sekaran and Bougie (2016), a sample is a subset of people or things chosen from a larger population with the goal of representing the traits of the entire group. Creswell (2014) asserts that sampling is an essential component of research design since it enables researchers to make inferences about a community without polling every individual. Research employs a variety of sampling approaches, which can be broadly divided into two categories: probability sampling and non-probability sampling.

Convenience sampling was chosen as the most suitable technique for this investigation. By giving every employee in the target population an equal chance of being included in the sample, this method lowers the possibility of bias and improves the findings' generalizability. Random selection facilitates a more precise and impartial analysis of the connection between organizational

culture and Six Sigma deployment, especially in light of the varied organizational cultures seen in the Palestinian banking industry.

According to the size of banking institutions in Palestine, the total population of employees is estimated to be 7,525. Based on this population size, a confidence level of approximately 90% and a confidence interval (margin of error) of ±5% were selected for the study. Accordingly, a sample size of 256 banking employees was determined to be statistically sufficient to represent the population and provide reliable insights into the impact of organizational culture on implementing Six Sigma within Palestinian banks. However, after collecting the data, it was found that 80% from the sample was from Arab Bank & 20% from the sample is from other banks. Given that all banks were contacted the same way two times. As a result, due to the low response from the other banks, and in order to ensure accurate investigation of the study goals, the researcher decided to exclude the other banks and to complete the analysis on Arab Bank respondents only. It is confirmed that Arab Bank has already implemented Six Sigma (Azzam R, 2024). Focusing on Arab Bank will ensure concise results and reliable data. Accordingly, 205 responses were included, other responses were excluded. this shift in sampling approach introduces a limitation the researcher will acknowledge in the study's limitations section

Table (3.1): Distribution of The Studied Sample Based on Demographic Characteristics

Variable	Choices	Frequencies	Percentage
Gender	Male	134	65.4
	Female	71	34.6
	Total	205	100.0
Age	less than 30	75	36.6
	30-39	63	30.7
	40-49	41	20.0
	50 & more	26	12.7
	Total	205	100.0
Education	Tawjihi	2	1.0
	Diploma	7	3.4
	Bachelor	161	78.5
	High Studies	35	17.1
	Total	205	100.0
Job	employee	108	52.7

	Supervisor	18	8.8
	Department Manager	34	16.6
	Branch manager	26	12.7
	Middle Management MGR	11	5.4
	Top Management MGR	8	3.9
	Total	205	100.0
Experience	less than 3 years	49	23.9
	3-5 years	17	8.3
	6-10 years	40	19.5
	more than 10 years	99	48.3
	Total	205	100.0

Table (3.1) shows the distribution of the studied sample based on demographic questions in terms of age, gender, Bank name, Education, Job& Experience. According to age it has four categories; the first category is less than 30 years with a percentage of (36.6%) the second category is the range between 30-39 with a percentage of (30.7%), the third category is 40-49 years is (20%%), whereas the least category is the range of 50 years & more is (12.7%) that is the minority.

According to gender, the first category is the males that has a percentage of 65.4% compared to 34.6% that are females.

The other interesting variable is Education that has five categories that are secondary school, diploma, bachelor, High Studies. The highest category is bachelor with a percentage of (78.5%), the second category is high studies that has a percentage of (17.1%), the other category is Diploma with a percentage of (3.4%), the least category is Tawjihi that has a percentage (1%) of that is the minority.

According to Job, it has six categories that are employee, Supervisor Department Manager, Branch manager, Middle Management MGR, Top Management MGR. Employees category represents most of the sample with a percentage of (52.7%), the other category is department manager is (16.6 %). Then, branch managers with a percentage of (12.7%), then Supervisors with a percentage of (8.8%), Middle management managers with (5.4%), & the least category is the Top Management MGR (3.9%).

Most of the studied sample have more than 10 years of experience, that is (48.3%), whereas 19.5% have 6 – 10 years of experience, 8.3% have 3-5 years of experience & 23.9% have less than 3 years of experience.

3.7 Research Instrument and Instrument Validity

The primary data gathering method used in the study was a questionnaire design, which consisted of a set of pre-written statements given to the chosen sample. Using a predefined response scale, participants were asked to rate their degree of agreement or preference. This strategy is in line with Sekaran and Bougie (2010), who stress that questionnaires are useful tools for gathering standardized data in a measured and consistent manner from a wide population.

Because of its ease of use, speed, and effectiveness in gathering data, the questionnaire is one of the most often used tools for getting data from large sample sizes (Saunders et al., 2009). It is especially appropriate for large-scale investigations because it requires comparatively less time and effort from the respondents as well as the researcher. Furthermore, well-structured questions and precisely stated study variables yield the best results from surveys. According to Ragab and Arisha (2018), a well-crafted questionnaire with items that are logically ordered and with clear language can make it easier to gather a significant amount of accurate and pertinent data. Accordingly, the thesis used a cross-sectional methodology using correlational statistical techniques.

The questionnaire consists of four main sections as follows:

The first section is related to demographic characteristics, and it consists of (6) questions to collect information about the respondents that are Bank Name, Gender, Age, Education level, Job title & Years of experience.

The four organizational culture dimensions are examined in the second part of the questionnaire which are modified and verified to evaluate organizational culture aspects pertinent to Six Sigma application. These dimensions are: 1) The culture of development and innovation, 2) The culture of hierarchy ,3) The culture of cooperation and teamwork, 4) Rational culture

Consequently, the four Six Sigma dimensions are included in the third part of the questionnaire to assess the level of Six Sigma implementation, including: 1) The bank's leadership/management, participation, and commitment, 2) Training and understanding the Six-Sigma methodology, its tools, and techniques, 3) Linking Six Sigma to the certified ones, 4) Selecting projects, setting priorities, and managing projects.

The last section is to measure the impact of organizational culture on implementing six sigma.

The questionnaire used a five-point (1-5) Likert scale of which strongly Agree equals 5, Agree (4), Neutral (3), Disagree (2) & Strongly Disagree (1).

The questionnaire was validated by two experts (see appendix 2) in addition to the supervisor of the thesis. Accordingly, the researcher piloted the questionnaire, where 10 persons were asked to test the tool, further modification was made to ensure ease and clarity of the questions. The modifications was related to the length of the survey, some sentences were replaced in order to make it easy for employees

Further, Using the Google Forms tool, the researcher developed the questionnaire and disseminated the online link to managers and staff at banking institutions to make sure they completed the questionnaire within the time frame decided. Two later reminders were sent to the sample in order to increase participation.

3.8 Survey Questionnaire Reliability

The degree to which a questionnaire produces consistent results when given by other researchers in comparable circumstances or in various settings is known as reliability. Researchers can use a variety of techniques, such as internal consistency, test-retest reliability, and comparable forms, to evaluate a questionnaire's dependability. Cronbach's alpha, which assesses how closely linked a group of items are to one another, is one of the most widely used metrics for internal consistency.

A reliability coefficient that shows how well the items of each scale are positively related to one another" is what Sekaran (2006) defines as Cronbach's alpha . According to Hair et al. (2010), a questionnaire is considered highly reliable if its Cronbach's alpha value is more than 0.70. An

alpha value of 0.60 to 0.70 is typically regarded as adequate; however, a value of 0.80 or above denotes extremely good internal consistency.

The value of Cronbach alpha is (0.977). Thus, the questionnaire has an excellent level of reliability according to Wilson (2014) as he considered that when the value of Cronbach alpha is greater than (0.90); high consistency is indicated when Cronbach's alpha is between 0.70 and 0.90.

Table (3.2): Cronbach Alpha

Item	Cronbach's Alpha	N Items
The culture of development and innovation	0.903	6
The culture of hierarchy	0.922	8
The culture of cooperation and teamwork	0.911	6
Rational culture	0.9	5
Six Sigma	0.702	4
The bank’s leadership/management, participation, and commitment	0.957	8
Training and understanding the Six-Sigma methodology, its tools, and techniques.	0.95	6
Linking Six Sigma to the certified ones	0.825	2
Selecting projects, setting priorities, and managing projects	0.904	3
Organizational Culture & Six Sigma	0.908	6
All The Statements	0.977	60

3.9 Data Analysis Techniques

SPSS version 25 was used to statistically analyze the research data gathered via the online questionnaire. Both descriptive and inferential statistical techniques were used by the researcher to get significant results that matched the goals of the investigation. The responses were first exported to an Excel file from Google Drive and subsequently converted to SPSS format for analysis. An error check was performed before analysis to find and fix any inconsistent or missing data. The data was then analyzed using a variety of statistical approaches in order to test the study's hypotheses, provide answers to the research questions presented in Chapter One, and answer the questions.

- Frequencies: Develop a profile of the demographic features of the studied sample using frequencies and percentages. Additionally, it displays the proportion of people that agree with each statement.
- To analyze statistical differences between respondents based on demographic factors with more than two values, one-way ANOVA is utilized.
- The T test, which has two values, is used to analyze the statistical differences between respondents based on their demographic data.
- The validity of each statement in the questionnaire as well as the correlation between each pair of dependent and independent variables in the study were examined using Pearson correlation. Additionally, to determine whether the thesis's independent variables have a multicollinearity problem, 71
- The impact of the independent variables, which are the Six Sigma constructs, on the dependent variable, which is the calibre of banking services, is estimated using multivariate regression analysis.
- The internal consistency of the sample answers under study was estimated using the Cronbach's alpha approach.

3.10 Ethical Considerations

The study followed the rules of ethical research. Before filling out the questionnaire, participants gave their agreement, were told about the goal of the study, and were guaranteed anonymity and confidentiality. No identifiable or personal data was gathered. Additionally, the researcher presented the findings as they were received and respected the views and opinions of the sample under investigation. Additionally, the researcher handled the data in an anonymized manner.

3.11 Summary

The methodology framework used to investigate how organizational culture affects the use of Six Sigma in Palestinian banks is described in this chapter. To offer a methodical and impartial approach to data collecting and analysis, a quantitative research methodology was used. Managers and staff at Palestinian Banks were given questionnaires to complete to collect data. Convenience and broad reach were ensured by using an online survey format, and meticulous measures were taken to verify the instrument's validity and reliability before it was distributed.

In order to properly analyze the gathered data, the researcher used SPSS version 25 for data analysis, combining descriptive and inferential statistical methods. The analysis and debate provided in later chapters are firmly grounded in this strong methodological approach.

Chapter Four: Data analysis and results

4.1 Overview

This chapter presents the analysis of the quantitative data collected from the selected sample. It begins with a detailed description of the respondents' demographic characteristics, followed by the testing of the study's hypotheses through the application of Pearson correlation and multivariate regression analysis. Additionally, the chapter investigates whether there are significant differences in the participants' perceptions regarding the effect of organizational culture on implementing six sigma in Palestinian banks, based on their personal and demographic attributes.

4.2 Descriptive Analysis

4.2.1 Organizational Culture

Answering research question: What are the types of Organizational cultures that affect Six sigma implementation in Palestinian Banks?

To explore the types of organizational culture that influence the implementation of Six Sigma in Palestinian banks, the researcher employed descriptive analysis techniques, including the use of means, standard deviations, and percentages. The mean values indicate the central tendency of respondents' answers to the questionnaire items, while the standard deviation reflects the extent of variability in those responses. A higher standard deviation suggests a greater variation in participants' views from the average. Overall, these statistical measures were used to evaluate the level of agreement with each dimension of the Six Sigma construct among the study sample.

Table (4.1): Means, STD for Organizational culture dimensions

#	Dimension	N	Mean	Std. Deviation
1	The culture of development and innovation	205	3.8398	0.86789
2	The culture of hierarchy	205	4.0329	0.76765
3	The culture of cooperation and teamwork	205	3.9883	0.84218
4	Rational Culture	205	3.2354	0.53416
	Mean of the construct	205	3.77	0.75297

The organizational culture's meaning, as indicated in Table (4.1), is 3.77, with a range of 3.23 to 4.03. This indicates that a significant degree of consensus exists regarding the existence of organizational culture in Palestinian banking organizations. This indicates that people have a favorable opinion of organizational culture constructs because their meaning is higher than 3.00.

The highest two constructs associated with organizational culture are: The culture of hierarchy with a mean of (4.03) and STD (0.76). The culture of cooperation and teamwork with a mean of (3.98) and STD (0.84).

First: The culture of development and innovation

Means & STD are used for each statement of the culture of development and innovation. Table (4.2) shows the mean of the first Dimension of the Organizational Culture that is the culture of development and innovation is (3.83). This presents that there is a high level of agreement towards the existence culture of development and innovation towards implementing six sigma. This indicates a positive perception of a culture that supports development and innovation, as the mean score for this construct exceeds the neutral benchmark of 3.00.

The highest two statements associated to the culture of development and innovation are: The bank encourages innovation, continuous development and experimentation with new ideas with a mean of (4.15) and STD (1.03). There are great opportunities for employees to learn new skills and develop themselves with a means of (3.87) and STD (1.021).

Table (4.2): Means & STD for the culture of development and innovation

#	Dimension	N	Mean	Std. Deviation
1	The bank encourages innovation, continuous development, and experimentation with new ideas.	205	4.15	1.034
2	The bank's leaders are considered an example of leadership behavior, creativity, and initiative.	205	3.78	1.066
3	Employees are encouraged to think creatively and work in a flexible environment.	205	3.77	1.058
4	There are great opportunities for employees to learn new skills and develop themselves	205	3.87	1.021

5	The bank focuses on the personal and professional growth of employees.	205	3.82	1.066
6	Employees feel confident when making decisions.	205	3.64	1.031
	Mean of the construct	205	3.8383	1.046

Second: The culture of hierarchy

Means & STD are used for each statement of the culture of hierarchy construct. Table (4.3) shows the mean of the second dimension of the organizational culture, that is, the culture of hierarchy is (4.03) and the range of the mean is (4.30 – 3.76). This presents that there is a high level of agreement towards the existence of hierarchical culture The mean score exceeding 3.00 indicates a generally positive orientation toward a hierarchical organizational culture. The two highest statements associated to are: Employees are expected to adhere to work regulations and procedures with a mean of (4.30) and STD is (.85). We have a clear organizational structure that is fully followed with a mean of (4.23) and STD is (0.941).

Table (4.3): Means & STD for the culture of Hierarchy

#	Dimension	N	Mean	Std. Deviation
1	We have a clear organizational structure that is fully followed.	205	4.23	0.941
2	The leaders in our organization are an example of coordination, organization, and flexible working efficiency.	205	3.76	0.963
3	The management style in our organization is characterized by job security, harmony, predictability, and stability in relationships.	205	3.8	1.008
4	Employees are expected to adhere to work regulations and procedures	205	4.3	0.85
5	We focus on continuity and stability, efficiency, control, and operational flexibility.	205	4.18	0.874
6	Success is defined based on efficiency, carrying out tasks within a clear methodology, and achieving results at a low cost.	205	4.01	0.975
7	Leadership helps employees achieve their goals.	205	3.94	1.018
8	Leadership supports continuous improvement initiatives.	205	4.04	0.936
	Mean of the construct	205	4.0325	0.945625

Third: The culture of cooperation and teamwork

Means & STD are used for each statement of the culture of cooperation and teamwork. Table (4.4) shows the mean of the third construct of organizational culture, that is the culture of cooperation and teamwork is (3.75) and the range of the mean is (3.89– 3.49). This presents that there is a high level of agreement towards the existence of the culture of cooperation and teamwork. Moreover, there is a positive attitude toward as the mean of the culture of cooperation and teamwork.is greater than (3.00).

The highest two statements associated to are the bank encourages open communication to promote excellence, and managers are keen to support a teamwork environment to spread a culture of cooperation and team spirit with a means of (3.89) and STD (0.98). We define success based on the development of human resources, work teams, commitment and care for individuals with a mean of (3.87) and STD (0.948).

Table (4.4): Means & STD for the culture of cooperation and teamwork

#		N	Mean	Std. Deviation
1	The bank encourages open communication to promote excellence, and managers are keen to support a teamwork environment to spread a culture of cooperation and team spirit	205	3.89	0.989
2	An atmosphere of mutual support prevails among employees in the work environment.	205	3.75	1.02
3	The bank's management focuses on human relations and friendliness among employees.	205	3.65	1.095
4	Decisions are made collectively through discussions and consultation among members	205	3.49	1.17
5	We define success based on the development of human resources, work teams, commitment, and care for individuals.	205	3.87	0.948
6	You Feel comfortable sharing your thoughts and feedback.	205	3.87	1.077
	Mean of the construct	205	3.75	1.049

Fourth: Rational culture

Means & STD are used for each statement of Rational culture. Table (4.5) shows the mean of the fourth construct of the Organizational Culture, that is the Rational culture is (3.99) and the range of the mean is (3.89 – 4.12).

The results indicate a high level of agreement regarding the presence of a Rational Culture, with the construct's mean exceeding 3.00, reflecting a positive attitude toward this cultural dimension. The highest two statements associated with this are: The bank seeks to achieve specific goals and measure its performance periodically with a mean of (4.12) and STD (0.921). The bank focuses on efficiency and measurable results with a mean of (4.02) and STD (0.955).

Table (4.5): Means & STD for the culture of Rational culture

#	Dimension	N	Mean	Std. Deviation
1	The bank focuses on efficiency and measurable results	205	4.02	0.955
2	Decisions are made based on logical analysis and accurate information.	205	3.89	0.946
3	The bank seeks to achieve specific goals and measure its performance periodically.	205	4.12	0.921
4	Focus is placed on improving productivity and achieving goals through precise planning.	205	4.01	0.96
5	Performance is evaluated based on clear and specific criteria.	205	3.91	1.127
	Mean of the construct	205	3.99	0.9818

4.2.2 Six Sigma Implementation

Answering research question: What are the dimensions of Six Sigma that are implemented in Palestinian Banks?

Table (4.6) shows the Mean of the perceived Six Sigma constructs is (3.55) and the range of the mean is (3.34-3.78). This presents that there is a high level of agreement towards the implementation of six sigma in banking institutions in Palestine (Arab Bank).

The highest two dimensions associated to the implementation of six sigma are: Linking Six Sigma to the certified ones with a mean of (3.78) and STD (0.90). The bank's leadership/management, participation, and commitment with a mean of (3.54) and STD (0.93).

Table (4.6): Means & STD for Six Sigma Dimensions

#	Dimension	N	Mean	Std. Deviation
1	The bank's leadership/management, participation, and commitment	205	3.5462	0.83894
2	Training and understanding the Six-Sigma methodology, its tools, and techniques.	205	3.3496	0.9467
3	Linking Six Sigma to the certified ones	205	3.7805	0.90916
4	Selecting projects, setting priorities, and managing projects	205	3.5431	0.87815
	Mean of the construct	205	3.5549	0.8932375

First: The bank's leadership/management, participation, and commitment

Means & STD are used for each statement of the bank's leadership/management, participation, and commitment. Table (4.7) shows the mean of the first construct of the six sigma in banking institutions that is the bank's leadership/management, participation, and commitment is (3.54) and the range of the mean is (3.33-3.62).

This means that there is a high level of agreement towards the existence of commitment and leadership. The highest two statements associated with these are: The leadership of the bank I work for has clear and effective directions for implementing Six Sigma principles with a mean of (3.62) and STD (0.96). Senior management effectively employs Six Sigma tools to understand customer needs, requirements and expectations and communicate them to all levels in the bank. with a mean of (3.62) and STD (0.98).

Table (4.7): Mean & STD for the bank's leadership/management, participation, and commitment

#	Dimension	N	Mean	Std. Deviation
1	The leadership of the bank I work for has clear and effective directions for implementing Six Sigma principles	205	3.62	0.961
2	Leadership is supportive in promoting Six Sigma initiatives.	205	3.59	0.928
3	Leadership provides adequate support and resources for Six Sigma projects.	205	3.55	0.946
4	Management recognizes and rewards Six Sigma achievements.	205	3.54	0.997
5	Employees from all levels and departments participate in Six Sigma initiatives.	205	3.33	0.993
6	The bank's senior management is committed to the success of Six Sigma initiative.	205	3.56	0.946
7	Senior management participates in reviewing the progress of Six Sigma projects.	205	3.57	0.986
8	Senior management effectively employs Six Sigma tools to understand customer needs, requirements and expectations and communicate them to all levels in the bank.	203	3.62	0.985
	Mean of the construct	203	3.5475	0.96775

Second: Training and understanding the Six-Sigma methodology, its tools, and techniques.

Means & STD are used for each statement of the Training and understanding the Six-Sigma methodology, its tools, and techniques. Table (4.8) shows the mean of the second construct of the Six sigma implementation of banking institutions that is training and understanding the Six-Sigma methodology, its tools, and technique is (3.34) and the range of the mean is (3.22-3.53).

This presents that there is a high level of agreement towards the training and understanding of the Six-Sigma methodology, its tools, and techniques. A mean value greater than 3.00 suggests a generally positive perception of the construct.

The highest two statements associated to training and understanding the Six-Sigma methodology, its tools, and techniques are: Six Sigma has an impact on the efficiency of your department's operations (productivity) with a mean of (3.53) and STD (1.027). There

are resources (training, tools, time) for Six Sigma projects with a mean of (3.36) and STD (0.99).

Table (4.8): Means & STD for the training and understanding of the Six-Sigma methodology, its tools, and techniques.

#	Dimension	N	Mean	Std. Deviation
1	There are resources (training, tools, time) for Six Sigma projects.	205	3.36	0.998
2	Employees are honored for their contributions to Six Sigma projects.	205	3.22	1.066
3	Six Sigma has an impact on the efficiency of your department's operations (productivity).	205	3.53	1.027
4	The bank communicates the goals and benefits of Six Sigma to employees.	205	3.34	1.067
5	Six Sigma training programs are conducted and funded in your organization.	205	3.31	1.08
6	Understanding of Six Sigma tools and techniques is effectively assessed after training programs.	205	3.33	1.096
	Mean of the construct	205	3.3483	1.055666667

Third: Linking Six Sigma to the certified ones

Means & STD are used for each statement of Linking Six Sigma to the certified ones. Table (4.9) shows the mean of the third construct of the Six Sigma implementation of banking institutions that is Linking Six Sigma to the certified ones is (3.78) and the range of the mean is (3.77- 3.8). The results indicate a high level of agreement regarding the association between Six Sigma and certified individuals, as the mean score for this construct exceeds 3.00, reflecting a positive attitude toward this linkage.

The highest statement associated to Linking Six Sigma to the certified ones is Six Sigma contributes to improving customer satisfaction with a mean of (3.8) and STD (0.99).

Table (4.9): Means & STD for Linking Six Sigma to the certified ones

#	Dimension	N	Mean	Std. Deviation
1	Are customer needs, requirements and expectations effectively identified within your organization?	205	3.77	1.036
2	Six Sigma contributes to improving customer satisfaction.	205	3.8	0.958
	Mean of the construct	205	3.785	0.997

Fourth: Selecting projects, setting priorities, and managing projects

Means & STD are used for each statement of Selecting projects, setting priorities, and managing projects. Table (4.10) shows the mean of the fourth construct of the Six sigma implementation of banking institutions that is Selecting projects, setting priorities, and managing projects is (3.54) and the range of the mean is (3.50-3.57).

This presents that there is a high level of agreement towards Selecting projects, setting priorities, and managing projects

The highest two statements associated to are: Six Sigma projects are well selected and prioritized based on their potential impact on business objectives with a mean of (3.57) and STD (1.011). The authority and responsibility for each phase of Six Sigma project management are clear with a mean of (3.50) and STD (0.95)

Table (4.10): Means & STD for Selecting projects, setting priorities, and managing projects

#	Dimension	N	Mean	Std. Deviation
1	Six Sigma projects are well selected and prioritized based on their potential impact on business objectives.	205	3.57	1.011
2	The authority and responsibility for each phase of Six Sigma project management are clear.	205	3.5	0.958
3	The progress of Six Sigma projects is monitored periodically.	205	3.56	0.898
	Mean of the construct	205	3.5433	0.955666667

4.2.3 Impact of Organizational Culture on Six Sigma Implementation

Answering the research question: What is the impact of organizational culture on Six Sigma Implementation?

Table (4.11) shows the mean of the last part, which is Impact of Organizational Culture on Six Sigma Implementation, is (3.605) and the range of the mean is (3.34-3.76).

This presents that there is a high level of agreement towards the impact of organizational culture on implementing Six Sigma

This reflects a favorable view of the construct, given that the mean score is greater than 3.00. The highest-rated statement reinforcing this is: 'A positive culture enhances the effectiveness of Six Sigma,' with a mean of 3.76 and a standard deviation of 0.99. Leadership style in the organization affects Six Sigma implementation with a mean of (3.69) and STD (1.024)

Table (4.11): Means & STD for Impact of Organizational Culture on Six Sigma Implementation

#	Dimension	N	Mean	Std. Deviation
1	A positive organizational culture supports the success of Six Sigma implementation by enhancing focus on customer satisfaction, continuous process improvement, and data-driven decision making.	205	3.65	1.016
2	A positive culture enhances the effectiveness of Six Sigma.	205	3.76	0.998
3	Organizational culture can hinder Six Sigma initiatives	205	3.34	1.112
4	Leadership style in the organization affects Six Sigma implementation.	205	3.69	1.024
5	The communication style in an organization affects the implementation of Six Sigma	205	3.67	1.017
6	The bank rewards and recognizes employees for their contributions to Six Sigma initiatives	205	3.52	1.022
	Mean of the construct	205	3.605	1.0315

4.3 Hypotheses Testing

Testing Main Hypothesis (H1):

There are no significant statistical differences in the sample studied towards implementation of Six Sigma attributed to demographic characteristics of the respondent.

H1a: There are no significant statistical differences at ($\alpha<0.05$) in the sample studied towards implementation of Six Sigma attributed to gender of the respondent.

The researcher used ANOVA test to test the above hypothesis. Table (4.12) presents that male and female respondents' opinions of the bank's organizational culture and Six Sigma implementation did not differ significantly, according to the findings of the one-way ANOVA test. The F-value for Six Sigma was 0.279 with a significance level of 0.598, whereas the F-value for organizational culture was 0.936 with a significance level of 0.334. The differences are not statistically significant because both p-values are higher than 0.05. These results imply that employees' perceptions of organizational culture and the implementation of Six Sigma techniques in the workplace are not significantly impacted by gender. Table 4.12 summarizes the results of analysis.

Table (4.12) Analysis of the Differences in the Mean of the Studied Sample Attributed to Gender

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
ORGCULT	Between Groups	0.412	1	0.412	0.936	0.334
	Within Groups	89.291	203	0.44		
	Total	89.703	204			
SIXSIG	Between Groups	0.186	1	0.186	0.279	0.598
	Within Groups	135.091	203	0.665		
	Total	135.276	204			

H1b: There are no significant statistical differences at ($\alpha<0.05$) in the sample studied towards implementation of Six Sigma attributed to age of the respondent.

The researcher used ANOVA test to test the above hypothesis. To investigate if age group membership significantly affects views of organizational culture (ORGCULT) and Six Sigma implementation (SIXSIG), a one-way ANOVA was used. $F(3, 201) = 1.294$ and $p = 0.278$ were obtained for ORGCULT with a between-group mean square of 0.567 (SS = 1.700, df = 3) and a within-group mean square of 0.438 (df = 201). Likewise, for SIXSIG, the within-group mean square was 0.656 (df = 201) and the between-group mean square was 1.114 (SS = 3.343, df = 3), resulting in $F(3, 201) = 1.697$ and $p = 0.169$. The p-values in both analyses are higher than the significance level of 0.05. This suggests that opinions of Six Sigma methods and corporate culture are not significantly impacted by age group.

As a result, the null hypothesis cannot be rejected, indicating that employees' opinions on these constructs are the same across all age groups. Table 4.13 summarizes the results of analysis.

Table (4.13) Analysis of the Differences in the Mean of the Studied Sample Attributed to Age

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
ORGCULT	Between Groups	1.7	3	0.567	1.294	0.278
	Within Groups	88.003	201	0.438		
	Total	89.703	204			
SIXSIG	Between Groups	3.343	3	1.114	1.697	0.169
	Within Groups	131.934	201	0.656		
	Total	135.276	204			

H1c: There are no significant statistical differences at ($\alpha<0.05$) in the sample studied towards implementation of Six Sigma attributed to educational level of the respondent.

The researcher used ANOVA test to test the above hypothesis. According to the ANOVA results, employees' opinions of organizational culture and Six Sigma deployment in Palestinian banks are not statistically impacted by education level. In particular, the research revealed no discernible variations in Six Sigma implementation ($F = 1.852$, $p = 0.139$) or organizational culture across educational levels ($F = 2.072$, $p = 0.105$). According to these findings, employees' perceptions of and contributions to organizational culture and quality improvement programs like Six Sigma are

not influenced by their educational background. This emphasizes the importance of taking other factors into account when developing and putting into practice improvement strategies, such as professional experience or organizational role. Table 4.14 summarizes the results of analysis.

Table (4.14) Analysis of the Differences in the Mean of the Studied Sample Attributed to Educational Level

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
ORGCULT	Between Groups	2.691	3	0.897	2.072	0.105
	Within Groups	87.012	201	0.433		
	Total	89.703	204			
SIXSIG	Between Groups	3.64	3	1.213	1.852	0.139
	Within Groups	131.637	201	0.655		
	Total	135.276	204			

H1d: There are no significant statistical differences at ($\alpha<0.05$) in the sample studied towards implementation of Six Sigma attributed to Job Title of the respondent.

The researcher used ANOVA test to test the above hypothesis. According to the ANOVA results, employees' opinions on organizational culture and Six Sigma implementation in Palestinian banks are not significantly impacted by job title. With a significance level of $p = 0.074$ and an F-value of 2.042 for organizational culture, the study produced results that are statistically significant above the 0.05 cutoff. Likewise, there was no significant effect for Six Sigma adoption, as indicated by the F-value of 1.350 and p-value of 0.245. These results point to the possible influence of additional elements like organizational climate, leadership style, or training, indicating that employees' roles or positions within the bank do not significantly change their opinions on organizational culture or the application of Six Sigma practices. Table 4.15 summarizes the results of analysis.

Table (4.15) Analysis of the Differences in the Mean of the Studied Sample Attributed to Job Title

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
ORGCULT	Between Groups	4.378	5	0.876	2.042	0.074
	Within Groups	85.325	199	0.429		
	Total	89.703	204			
SIXSIG	Between Groups	4.437	5	0.887	1.35	0.245
	Within Groups	130.84	199	0.657		
	Total	135.276	204			

H1e: There are no significant statistical differences at ($\alpha<0.05$) in the studied sample towards implementation of Six Sigma attributed to years of experience of the respondent.

The researcher used ANOVA test to test the above hypothesis. According to results, years of experience do not statistically significantly affect how employees view organizational culture or the application of Six Sigma in Palestinian banks, according to the ANOVA results. Six Sigma implementation had an F-value of 1.528 with a p-value of 0.208, whereas organizational culture had an F-value of 1.390 with a significance level of p = 0.247. Differences in experience do not significantly affect how employees view or interact with Six Sigma processes or corporate culture, as both significance values are above the 0.05 cutoff. According to these findings, leadership, training, and institutional policies may be more important factors in influencing how employees perceive certain organizational elements than experience alone. Table 4.16 summarizes the results of analysis.

Table (4.16) Analysis of the Differences in the Mean of the Studied Sample Attributed to years of experience

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
ORGCULT	Between Groups	1.823	3	0.608	1.39	0.247
	Within Groups	87.88	201	0.437		

	Total	89.703	204			
SIXSIG	Between Groups	3.016	3	1.005	1.528	0.208
	Within Groups	132.26	201	0.658		
	Total	135.276	204			

4.4 Correlation Analysis of the Relationship Between Organizational Culture & Six Sigma implementation

The following analysis will investigate the Main Hypothesis (H2):

There is a significant relationship between organizational culture and the implementation of Six Sigma in Palestinian banks.

To investigate the connections between Six Sigma implementation and the various organizational culture aspects of innovation, hierarchy, cooperation and teamwork, and rationality, a Pearson correlation analysis was performed. A sample of 205 respondents served as the basis for the findings. Table 4.17 summarizes the analysis results of Pearson correlation between organizational culture and Six Sigma implementation.

Table (4.17): The Pearson Correlation Between Organizational Culture & Six Sigma implementation

Correlations						
		SIXSIG	Innovation Culture	The culture of hierarchy	The culture of cooperation and teamwork	Rational culture
SIXSIG	Pearson Correlation	1	.666**	.689**	.694**	.635**
	Sig. (1-tailed)		0	0	0	0
	N	205	205	205	205	205
Innovation Culture	Pearson Correlation	.666**	1	.803**	.775**	.500**
	Sig. (1-tailed)	0		0	0	0

	N	205	205	205	205	205
The culture of hierarchy	Pearson Correlation	.689**	.803**	1	.870**	.520**
	Sig. (1-tailed)	0	0		0	0
	N	205	205	205	205	205
The culture of cooperation and teamwork	Pearson Correlation	.694**	.775**	.870**	1	.535**
	Sig. (1-tailed)	0	0	0		0
	N	205	205	205	205	205
Rational culture	Pearson Correlation	.635**	.500**	.520**	.535**	1
	Sig. (1-tailed)	0	0	0	0	
	N	205	205	205	205	205
**. Correlation is significant at the 0.01 level (1-tailed).						

According to results, all aspects of organizational culture have a strong positive correlation with Six Sigma implementation:

Six Sigma implementation is positively and statistically significantly correlated with all four cultural characteristics. This suggests that stronger application of Six Sigma techniques is linked to higher views of these cultural traits.

The deployment of Six Sigma is most strongly correlated (r = 0.694) with the Culture of Cooperation and Teamwork. This implies that cooperation and teamwork are essential for the effective implementation of Six Sigma projects in Palestinian financial institutions.

These results lend proof to the idea that organizational culture is a key factor in making Six Sigma easier to apply. The significance of creating a supportive cultural environment in Palestinian banking institutions is highlighted by the statistically significant positive relationships that each of the following dimensions has with Six Sigma practices:

innovation, hierarchy, cooperation, and rational culture. Table 4.18 Summarizes the interpretation of correlation tests of Organizational Culture aspects and Six Sigma implementation.

Table (4.18): interpretation of correlation tests of Organizational Culture aspects and Six Sigma implementation

Pair	Correlation (r)	Significance (p)	Interpretation
SIXSIG & Innovation Culture	0.666**	0.001	positive correlation
SIXSIG & The culture of hierarchy	0.689**	0.001	positive correlation
SIXSIG & The culture of cooperation and teamwork	0.694**	0.001	positive correlation
SIXSIG & Rational culture	0.635**	0.001	positive correlation

4.5 The Effect of organizational culture on implementing six sigma in Palestinian banks

Answering the research question: What is the effect of organizational culture on implementing six sigma in Palestinian banks?

Regression analysis was used to estimate the impact of organizational culture on the implementation of Six Sigma. A multiple linear regression was performed to determine the predictive power of various organizational culture dimensions on Six Sigma adoption. The standardized beta coefficients (Table 4.19) show the direction and strength of each predictor's influence on Six Sigma implementation. According to the results, rational culture ($\beta = 0.508$, $p = 0.000$) and culture of cooperation and teamwork ($\beta = 0.205$, $p = 0.025$) emerged as statistically significant predictors of Six Sigma implementation, with rational culture being the strongest. While the culture of innovation ($\beta = 0.182$, $p = 0.013$) was also statistically significant, its predictive power was relatively weaker. In contrast, culture of hierarchy ($\beta = 0.186$, $p = 0.077$), despite showing a positive beta value, was not statistically significant at the 0.05 level. Therefore, although all cultural dimensions had a positive directional influence, only

rational culture, cooperation/teamwork, and innovation culture demonstrated statistically significant relationships. These findings emphasize that while fostering a collaborative and goal-oriented culture is important, prioritizing rational culture—focused on performance, results, and clear objectives—may have the most substantial impact on successful Six Sigma implementation in the banking sector.

Table (4.19): Regression Analysis of the impact of Organizational culture on implementing Six Sigma

Organizational Culture Dimension	Standardized Beta (β)	Interpretation
Rational Culture	β = 0.508	Positive predictor
Culture of Cooperation & Teamwork	β = 0.205	Positive predictor
Culture of Hierarchy	β = 0.186	Positive predictor
Innovation Culture	β = 0.182	Least but still positive predictor

Accordingly, the regression equation is presented as follows:

$$SIXSIG = -0.358 + 0.182(InnovationCulture) + 0.186(CHGroup) + 0.205(RCGroup) + 0.508(SSGroup)$$

Where:

- The intercept (constant) is -0.358.
- Each B coefficient represents the expected change in SIXSIG for a one-unit increase in the respective predictor, holding the others constant.
- Statistical significance (Sig.):
  - Innovation Culture ($p = 0.013$) → significant
  - Culture of Hierarchy Group ($p = 0.077$) → not statistically significant at 0.05
  - Culture of Cooperation & Teamwork Group ($p = 0.025$) → significant
  - Rational Culture Group ($p = 0.000$) → highly significant

All four cultural factors have a favorable impact on Six Sigma deployment, according to the regression model, with rational culture being the most significant predictor. These results highlight how crucial it is to foster a collaborative, goal-oriented work atmosphere in order to successfully apply Six Sigma techniques in the banking industry.

Accordingly, the updated model of the research is represented in Figure 4.1.

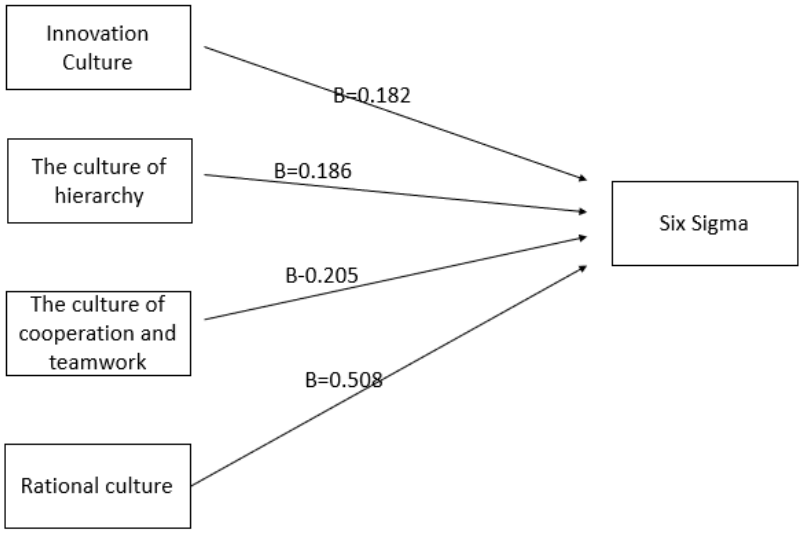

Fig 4.1. Main study model

Chapter Five: Discussion, Conclusion, and Recommendations

5.1 Overview

This chapter synthesizes the study's key findings and critically interprets them in light of existing literature and the specific context of Palestinian banks. It highlights the study's theoretical and practical contributions, reflects on methodological limitations, and provides evidence-based recommendations. The discussion moves beyond description to analyze why certain cultural dimensions facilitated or hindered Lean Six Sigma (LSS) implementation, and how these dynamics are shaped by the institutional and socio-economic realities of the Palestinian banking sector.

5.2 Discussion of Findings

This section provides a critical interpretation of the results, linking them to established theories and the unique features of the Palestinian banking environment.

Rational culture and data-driven orientation:

The strong influence of rational culture aligns with global findings emphasizing structured, goal-oriented environments as conducive to Six Sigma success (Antony, 2014; Tari et al., 2012). In Palestinian banks—where regulatory oversight, performance accountability, and risk management are deeply embedded—this culture provides a natural foundation for process discipline and measurement. However, an overemphasis on control and standardization may restrict flexibility, which could impede creative problem-solving and innovation in a rapidly digitalizing banking landscape.

Teamwork and cooperation as drivers of process improvement:

The positive impact of teamwork and cooperation reinforces prior studies that highlight cross-functional collaboration as a cornerstone of quality improvement (Jain & Singh,

2014). Given the traditionally hierarchical and siloed nature of Palestinian banks, this finding implies that breaking down departmental boundaries is both an organizational challenge and a strategic opportunity. Yet, cooperation may still vary across institutions, suggesting that context-specific cultural interventions are necessary to achieve consistent results across the sector.

Hierarchical culture's limited contribution:

Contrary to some international evidence where formal structures support process standardization (Koskela-Huotari et al., 2016), this study found hierarchical culture less predictive of Six Sigma success. This may reflect how excessive centralization and rigid authority in Palestinian banks constrain employee autonomy—undermining empowerment, creativity, and engagement, which are vital for sustained Six Sigma improvement. Thus, while hierarchy ensures compliance, it may inhibit the proactive problem-solving behavior LSS requires.

Innovation culture and digital transformation:

Innovation culture showed only limited predictive power, reflecting the relatively early stage of innovation integration within Palestinian banking. As the sector faces growing pressure from fintech disruption and digital transformation (Salim et al., 2024; Khan et al., 2023), this finding suggests an urgent need for banks to foster a culture that values experimentation, openness, and adaptability. Developing such a culture would not only complement Six Sigma's structured approach but also support long-term sustainability and customer-centric innovation.

Demographic and experiential differences:

Differences across managerial levels and experience indicate that perceptions of culture and LSS engagement vary by role and tenure. Senior employees, accustomed to traditional structures, may be more comfortable with rational and hierarchical cultures, while younger or mid-level employees might value teamwork and innovation. This

underscores the need for differentiated leadership and training strategies rather than uniform interventions.

In summary, organizational culture in Palestinian banks functions as both an enabler and a constraint. Traditional cultural strengths—discipline, cooperation, and goal orientation—facilitate Six Sigma adoption, yet cultural rigidity and limited innovation may impede its deeper institutionalization. Achieving balance between structure and adaptability emerges as the central challenge.

5.3 Conclusions

This study provides compelling evidence that organizational culture decisively shapes the success of Six Sigma implementation in Palestinian banks. Even well-designed Six Sigma programs cannot yield sustainable outcomes without alignment with the underlying cultural context. The key conclusions are:

Cultural characteristics drive Six Sigma success:

Adaptability, employee engagement, openness to change, and performance orientation significantly influence Six Sigma's adoption and sustainability. Organizations embodying these traits are better equipped to realize the full potential of quality improvement initiatives.

Teamwork is a critical success factor:

Among the cultural dimensions, teamwork and cooperation emerged as the strongest predictors of effective Six Sigma implementation. This finding emphasizes that collaboration, shared goals, and participatory problem-solving are essential for process excellence in banks.

Rational culture supports measurable performance:

The prominence of rational culture highlights the importance of data-driven decision-making, goal clarity, and accountability. Palestinian banks should leverage these strengths while cultivating flexibility to adapt to technological and market changes.

Leadership, communication, and training as catalysts:

Successful cultural alignment requires leadership commitment, transparent communication, and targeted employee training. These factors bridge the gap between strategy and execution, ensuring Six Sigma practices permeate all organizational levels.

Cultural alignment ensures sustainability:

Aligning Six Sigma strategies with cultural characteristics enhances long-term performance, efficiency, and customer satisfaction. Tailoring initiatives to demographic and institutional differences strengthens overall impact.

Strategic and practical implications:

For policymakers and executives, fostering cultures that blend structure, teamwork, and innovation is crucial. Such transformation not only enhances Six Sigma effectiveness but also improves resilience and competitiveness across Palestinian financial institutions.

Contribution to research:

This study extends the literature on quality management in emerging economies by offering empirical insights into how specific cultural orientations shape LSS implementation in the banking sector.

In essence, Six Sigma success in Palestinian banks requires more than technical expertise—it depends on cultivating a culture that balances discipline with adaptability. Integrating cultural awareness into quality management strategies enables meaningful and sustainable improvement.

5.4 Theoretical Contribution

This study addresses a critical research gap concerning the limited understanding of how organizational culture influences Six Sigma implementation within the banking sector of developing economies, particularly in Palestine. While prior research has extensively applied the Competing Values Framework (CVF) to manufacturing and select service industries, there has been little empirical investigation into how different cultural orientations shape quality improvement initiatives in financial institutions operating under socio-economic and regulatory constraints. By situating the CVF within the Palestinian banking context, this study fills this theoretical void and extends the framework's applicability to a new and underexplored institutional setting.

Furthermore, the integration of the SERVQUAL model with the CVF represents another major theoretical advancement. Existing Six Sigma studies often emphasize internal process efficiency, overlooking the service quality dimensions—reliability, responsiveness, assurance, empathy, and tangibles—that define customer perceptions in service-oriented sectors. By combining these two frameworks, this research bridges a significant conceptual gap between internal cultural enablers and external service outcomes, demonstrating that organizational culture not only shapes process performance but also directly influences perceived service quality.

The empirical model, tested on data from 205 bank employees, empirically validates this relationship and introduces a comprehensive theoretical framework linking culture, service quality, and Six Sigma outcomes. This framework contributes to the broader body of knowledge by:

1. Extending the CVF's relevance to financial service organizations in emerging economies.
2. Integrating SERVQUAL into Six Sigma research to capture the service quality dimension often absent from process-focused models.
3. Providing a culturally grounded perspective that explains how and why SS initiatives succeed or struggle in developing contexts like Palestine.

5.5 Practical Contribution

From a managerial perspective, this study offers actionable insights:

- The diagnostic framework enables banks to assess their cultural readiness for LSS and pinpoint traits requiring development.
- Findings emphasize the need for visible leadership engagement and tailored training programs that address differences in experience and managerial roles.
- Integrating SERVQUAL-based service quality measures within LSS helps ensure process improvements translate into tangible customer benefits.
- The focus on Palestinian banks provides context-specific lessons for managing quality under regulatory, economic, and geopolitical constraints.

5.6 Recommendations

1. Strengthen leadership commitment: Leadership must actively champion cultural transformation and model Six Sigma values in daily operations.
2. Enhance employee involvement: Encourage staff participation in problem-solving and continuous improvement initiatives to build ownership and engagement.
3. Invest in cultural change management: Promote openness and experimentation to nurture innovation alongside process discipline.
4. Integrate SERVQUAL with performance metrics: Use service quality dimensions as key performance indicators to link internal efficiency with customer satisfaction.
5. Foster cross-departmental collaboration: Break down silos to improve knowledge sharing and holistic process optimization.

5.7 Limitations

- The cross-sectional design provides a snapshot rather than longitudinal insights into cultural evolution.
- Self-reported data may be influenced by response bias; future studies should incorporate objective performance indicators.
- The exclusion of Gaza due to geopolitical constraints limits the generalizability of findings.
- Overrepresentation from certain banks (e.g., Arab Bank) may skew sectoral balance.

5.8 Suggestions for Future Research

Future research should:

- Employ longitudinal or mixed-method designs to track cultural transformation and validate causal links over time.
- Conduct comparative studies across regions or countries to test the framework's generalizability.
    - Examine customer perspectives to evaluate how Six Sigma-driven process changes influence perceived service quality.
    - Explore the interplay between digital transformation, culture, and quality management in banking.
    - Develop hybrid models combining CVF, SERVQUAL, and digital maturity frameworks to address evolving industry challenges.

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Appendices

Appendix (1): Questionnaire of the study

تأثير الثقافة المؤسساتية على تطبيق الستة سيجما في البنوك الفلسطينية

السادة الاعزاء

تحية طيبة وبعد،

تقوم الباحثة ساندرا سامي عز، طالبة الماجستير في تخصص إدارة الجودة في كلية الدراسات العليا في الجامعة العربية الامريكية بإعداد دراسة بعنوان

" تأثير الثقافة المؤسساتية على تطبيق الستة سيجما في البنوك الفلسطينية"

من أجل تحقيق هذه الغاية، نرجو من حضرتكم المساعدة في توفير اجابات دقيقة وموضوعية على الاسئلة الواردة في هذا الاستبيان لمساعدتنا في الحصول على نتائج دقيقة.علما بأنكم ستحتاجون الى 10 دقائق على الأكثر لاستكمال هذا الاستبيان.

إن المعلومات التي تجمع من خلال هذا الاستبيان سيتم استخدامها لأغراض البحث العلمي، مع الحفاظ على السرية التامة لهذه المعلومات ومصدرها.

وتفضلوا بقبولS.ezz@student.aaup.eduلأي استفسار، يمكنكم مراسلتنا على البريد الإلكتروني التالي

فائق الاحترام

الباحثة: ساندرا عز

القسم الاول: معلومات عامة

يهدف الى بناء معرفة عامة عن عينة الدراسة. الرجاء اختيار الخيار الذي ينطبق عليك أنت شخصيا أو على المؤسسة المصرفية التي تعمل بها.

اسم البنك (لأغراض البحث العلمي).....

1- الجنس: ذكر / أنثى

2- العمر:

1- أقل من 30 عام

2- 30-39

3- 40-49

4- 50 فأكثر

3- المستوى التعليمي:

- توجيهي
- دبلوم
- بكالوريوس
- دراسات عليا

4- المسمى الوظيفي:

- موظف
- مشرف
- مدير قسم
- مدير فرع
- مدير في الإدارة المتوسطة
- مدير في الإدارة العليا

5- عدد سنوات الخبرة:

- أقل من 3 سنوات
- 3-5 سنوات

- 6-10 سنوات
- أكثر من 10 سنوات

القسم الثاني: ثقافة المؤسسة Organizational Culture

الثقافة المؤسسية في البنوك تعرّف على أنها مجموعة القيم والمعتقدات والسلوكيات التي توجه أداء الموظفين وتؤثر على بيئة العمل داخل البنك. وفي سياق هذا البحث فإن الثقافة المؤسسية المقصودة هي تلك الثقافة الداعمة لمبادئ التحسين والتطوير المستمر.

يشمل هذا القسم 40 جملة تهدف الى اكتشاف النوع السائد من ثقافة المؤسسة في البنك. يرجى اختيار الاجابة التي تعكس بشكل أفضل مدى موافقتك على كل عبارة. علما بأن:

1: غير موافق بشدة

2: غير موافق

3: محايد

4: موافق

5: موافق بشدة

1) كيف تصف الثقافة المؤسسية في البنك الذي تعمل به؟

• داعمة للغاية • داعمة *حيادي • غير داعمة • غير داعمة على الإطلاق

(e.g., open, hierarchical, collaborative, competitive)

2) إلى أي مدى توافق على أن مؤسستك تشجع التحسين المستمر؟

Strongly Agree) - 5 ,Strongly Disagree - 1)

أولا: ثقافة التطوير والابتكار

#	الفقرة	موافق بشدة	موافق	محايد	غير موافق	غير موافق بشدة
11	يشجع البنك على الابتكار والتطوير المستمر وتجربة أفكار جديدة					
2	القادة في البنك يُعتبرون مثالاً في الريادة " السلوك القيادي " والابداع والمبادرة					
3	يتم تشجيع الموظفين على التفكير بشكل إبداعي والعمل في بيئة مرنة					
4	توجد فرص كبيرة للموظفين لتعلم مهارات جديدة وتطوير أنفسهم					
5	يركز البنك على النمو الشخصي والمهني للموظفين					
6	يشعر الموظفون بالثقة عند اتخاذ القرارات					

ثقافة التسلسل الهرمي

#	الفقرة	موافق بشدة	موافق	محايد	غير موافق	غير موافق بشدة
1	لدينا هيكل تنظيمي واضح ويتم اتباعه بشكل كامل					
2	القادة في منظمتنا يُعتبرون مثالاً في التنسيق والتنظيم وكفاءة العمل بشكل مرن					
3	النمط الاداري في منظمتنا يتمثل في الامن الوظيفي والانسجام والقدرة على التنبؤ والاستقرار في العلاقات					
4	يتوقع من الموظفين الالتزام باللوائح والإجراءات المتبعة في العمل					
5	تُركز على الاستمرارية والثبات، الكفاءة والرقابة ومرونة العمليات					

6	يعرف النجاح على أساس الكفاءة، والقيام بالمهام ضمن منهجية واضحة وتحقيق النتائج بكلفه قليله					
7	القيادة تساعد الموظفين على تحقيق أهدافهم					
8	القيادة تدعم مبادرات التحسين المستمر					

ثالثا: ثقافة التعاون والعمل بروح الفريق

#	الفقرة	موافق بشدة	موافق	محايد	غير موافق	غير موافق بشدة
1	يشجع البنك على التواصل المفتوح لتعزيز التميز و يحرص المدراء على دعم بيئة العمل الجماعي لنشر ثقافة التعاون و روح الفريق					
2	يسود جو من الدعم المتبادل بين الموظفين في بيئة العمل					
3	تركز ادارة البنك على العلاقات الإنسانية والود بين الموظفين					
4	يتم اتخاذ القرارات بشكل جماعي من خلال النقاشات والتشاور بين الأعضاء					
5	نُعرف النجاح على أساس تطوير الموارد البشرية وفرق العمل والالتزام والاهتمام بالأفراد					
6	تشعر بالراحة عند مشاركة أفكارك وملاحظاتك					

رابعا: الثقافة العقلانية

#	الفقرة	موافق بشدة	موافق	محايد	غير موافق	غير موافق بشدة
1	يركز البنك على الكفاءة والنتائج القابلة للقياس					
2	يتم اتخاذ القرارات بناءً على التحليل المنطقي والمعلومات الدقيقة					
3	يسعى البنك إلى تحقيق أهداف محددة وقياس أدائها بشكل دوري					
4	يتم التركيز على تحسين الإنتاجية وتحقيق الأهداف من خلال الخطط الدقيقة					
5	يتم تقييم الأداء بناءً على معايير واضحة ومحددة					

القسم الثالث: الستة سيجما

تعريف الستة سيجما six-sigma: الستة سيجما (Six Sigma) هي منهجية إدارية تهدف إلى تحسين جودة العمليات وتقليل العيوب والأخطاء إلى أدنى حد ممكن، وذلك من خلال استخدام أدوات إحصائية ومنهجيات منهجية لتحليل وتحسين العمليات..

1. كيف تقيم فهمك لمبادئ ستة سيجما؟
(ضعيف جدا- ضعيف- محايد - جيد - جيد جدًا)

2. ما مدى فعالية تطبيق Six Sigma في مؤسستك؟
(ضعيف جدا- ضعيف- محايد - جيد - جيد جدًا) / (1 - Very Ineffectively, 5 - Very Effectively)

3. هل تعتقد أن معايير Six Sigma يمكنها تحسين الكفاءة التشغيلية في القطاع المصرفي؟

(غير موافق بشدة – موافق بشدة)

4. هل تلقيت أي نوع من التدريب عن ستة سيجما؟
- نعم
- لا

أولاً: قيادة/ إدارة البنك، مشاركتها، والتزامها:

#	الفقرة	موافق بشدة	موافق	محايد	غير موافق	غير موافق بشدة
1	قيادة البنك الذي أعمل به لديها توجهات واضحة وفعالة لتطبيق مباديء ستة سيجما					
2	القيادة داعمة في الترويج لمبادرات Six Sigma					
3	توفر القيادة الدعم والموارد الكافية لمشاريع ستة سيجما					
4	تعترف الإدارة وتكافئ إنجازات Six Sigma					
5	يشارك الموظفون من مختلف المستويات والأقسام في مبادرات Six Sigma					
6	الإدارة العليا في البنك ملتزمة بنجاح مبادرات Six Sigma					
7	تشارك الإدارة العليا في مراجعة تقدم مشاريع Six Sigma					
8	توظف الإدارة العليا بشكل فعال أدوات Six Sigma لفهم احتياجات العملاء ومتطلباتهم وتوقعاتهم وتوصلها لجميع المستويات في البنك					

ثانياً: التدريب وفهم منهجية Six-Sigma، أدواتها، وتقنياتها

#	الفقرة	موافق بشدة	موافق	محايد	غير موافق	غير موافق بشدة
1	هناك موارد (تدريب، أدوات، وقت) لمشاريع Six Sigma					
2	يتم تكريم الموظفين لمساهماتهم في مشاريع Six Sigma					
3	ستة سيجما لها تأثير على كفاءة العمليات في قسمك" الإنتاجية "					
4	يقوم البنك بتوصيل أهداف وفوائد Six Sigma للموظفين					
5	يتم اجراء و تمويل برامج تدريب Six Sigma في مؤسستك					
6	يتم تقييم فهم أدوات Six Sigma والتقنيات بشكل فعال بعد برامج التدريب					

ثالثاً: ربط الستة سيغما بالمعتمدين

#	الفقرة	موافق بشدة	موافق	محايد	غير موافق	غير موافق بشدة
1	يتم تحديد احتياجات ومتطلبات وتوقعات العملاء بشكل فعال داخل مؤسستك؟					
2	تساهم Six Sigma في تحسين رضا العملاء					

رابعاً: اختيار المشاريع، تحديد أولوياتها، وإدارة المشاريع

#	الفقرة	موافق بشدة	موافق	محايد	غير موافق	غير موافق بشدة
1	يتم اختيار وتحديد أولويات مشاريع Six Sigma بشكل جيد بناءً على تأثيرها المحتمل على الأهداف التجارية					
2	سلطة ومسؤولية كل مرحلة من مراحل إدارة مشروع Six Sigma تكون واضحة					
3	يتم متابعة تقدم مشاريع Six Sigma بشكل دوري					

ما هي الجوانب الثقافية لمؤسستك التي تعتقد أنها تحتاج إلى تحسين لتعزيز نجاح تطبيق Six Sigma؟(اختر كل ما ينطبق)

- دعم القيادة والمشاركة
- تمكين الموظفين وإشراكهم
- التواصل والشفافية
- الانفتاح على التغيير
- التركيز على التحسين المستمر
- أخرى (يرجى التحديد:.....)

ما هي العوامل الرئيسية التي تعتقد أنها ستؤدي إلى تحسين تطبيق Six Sigma داخل مؤسستك؟

- دعم أقوى من القيادة
- تدريب وتعليم أفضل للموظفين
- تخصيص المزيد من الموارد لمشروعاتSix Sigma
- التغيير في الثقافة المؤسسية
- مزيد من التعاون بين الإدارات
- أخرى (يرجى التحديد: .....)

Appendix (2): Questionnaire Revision

List of Academic and Professional Referees:

Serial	Referee	Place of Work
1	Dr. Ashraf Al Mimi	Arab American University
2	Dr. Yahya Saleh	An-Najah National University
3	Dr. Sami Sader	Arab American University

الملخص باللغة العربية

على الرغم من تزايد الاهتمام بمنهجيات تحسين الجودة مثلSix Sigma ، إلا أن هناك نقصًا ملحوظًا في الدراسات التي تتناول تأثير الثقافة التنظيمية على تطبيق هذه المنهجية في القطاعات الخدمية، وخاصة في القطاع المصرفي الفلسطيني. تهدف هذه الدراسة إلى سد هذه الفجوة من خلال تحليل العلاقة بين أبعاد الثقافة التنظيمية وتطبيق منهجية Six Sigma في البنوك الفلسطينية.

تركز الدراسة على أربعة أنماط ثقافية وفقًا لإطار القيم المتنافسة(CVF) ، وهي :ثقافة الجماعة (التعاون والعمل الجماعي)، الثقافة التطويرية (الابتكار)، الثقافة الهرمية، والثقافة العقلانية، بهدف معرفة أي منها يدعم أو يعيق تطبيق.Six Sigma

اعتمدت الدراسة على المنهج الكمي، حيث تم تصميم استبيان مبني على أدوات معتمدة في دراسات سابقة، وتوزيعه على 256موظفًا من عدد من البنوك الفلسطينية باستخدام أسلوب العينة العشوائية الطبقية لضمان تمثيل مختلف المستويات الوظيفية. كما تم اختبار الاستبيان مبدئيًا للتأكد من صلاحيته وثباته. تم تحليل البيانات باستخدام برنامج SPSSمن خلال اختبارات الارتباط (Pearson)والانحدار الخطي المتعدد لتحديد مدى قوة العلاقة بين أبعاد الثقافة التنظيمية وتطبيق عناصرSix Sigma ، مثل

أظهرت النتائج أن الثقافة العقلانية وثقافة التعاون والعمل الجماعي كانتا من أبرز العوامل المؤثرة إيجابيًا في تطبيقSix Sigma ، في حين أظهرت الثقافة الهرمية وثقافة الابتكار علاقة إيجابية لكنها أضعف. وتشير هذه النتائج إلى أن مواءمة الثقافة التنظيمية مع مبادئ Six Sigma تساهم بشكل فعّال في تحسين الأداء، وتعزيز التعاون الداخلي، ودعم استمرارية التحسين داخل المؤسسات المصرفية.

تقدم هذه الدراسة رؤى عملية مهمة لمديري البنوك وصناع القرار في فلسطين، وتؤكد على أهمية الثقافة التنظيمية كعامل استراتيجي في نجاح تطبيق منهجيات تحسين الجودة. كما تسهم في إثراء الأدبيات العلمية المتعلقة بإدارة الجودة في الدول النامية، وتسلط الضوء على أهمية السياق الثقافي في تطبيق أدوات التحسين الحديثة.

الكلمات المفتاحية: سيغما ستة، الثقافة التنظيمية، البنوك الفلسطينية، إطار القيم المتنافسة، إدارة الجودة، تحسين العمليات