

Research Proposal

Automation of Procurement and Payment Processes Using FinTech Solutions to Enhance Operational Efficiency in the Corporate Sector in Saudi Arabia

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1. Introduction

Financial technology, commonly referred to as FinTech, has appeared as a transformative force revolutionizing financial management processes across corporate organizations around the globe. This development is supported by various scholars, including Arner et al. (2016) and Gomber et al. (2017). The integration of financial payment systems, enterprise resource planning (ERP) systems, artificial intelligence (AI), cloud computing, and workflow automation has significantly enhanced financial management practices, making them more efficient, accurate, and transparent, as asserted by Davenport and Ronanki (2018) and the PricewaterhouseCoopers (PwC) report (2019).

In all corporate organizations, the Procure-to-Pay cycle is a key financial management process that integrates procurement and financial settlement. In most organizations, despite ongoing digital transformation initiatives, the Procure-to-Pay cycle remains partially automated, with a mix of manual and financial processes. This has led to inefficiencies, increased operational costs, and a substantial risk of errors, as argued by the OECD (2020).

In the kingdom of Saudi Arabia, the financial management and transformation have been the initiatives concerned, as illustrate in vision 2030 that is supported by prominent financial institutions such as the Saudi Central Bank (SAMA) and the Capital Market Authority (CMA). The adoption of financial technology has been increased in all scoters. However, there is a lack of empirical studies shows the automation effects KPIs like cost effectiveness, accuracy, speed, and transparency across the Procure-to-Pay cycle. The aim of this study is to assess and show the effect of f FinTech-driven automation of the Procure-to-Pay process on the operational performance of corporate entities within Saudi Arabia.

2. Problem Statement

Despite the rapid pace of digitalization worldwide, many corporations in Saudi Arabia still use traditional procurement and payment systems that are often labor-intensive and involve extensive paperwork, as well as non-integrated financial management systems. The traditional financial management system contributes to extending the transaction cycle, increasing operational costs, heightening error rates, and ultimately weakening the overall effectiveness of internal control systems. While several researchers have studied the implementation of ERP systems, electronic payment systems, and workflow automation, most empirical research is conducted outside Saudi Arabia. Arner et al. conducted a study on the implementation of electronic payment systems, which is limited to the banking and manufacturing industries. While Gomber et al. conducted a study on the implementation of workflow automation systems. Similarly, there is a lack of comprehensive systematic reviews that use key performance indicators to synthesize global, regional, and national-level empirical evidence to assess the measurable impact of FinTech-based P2P automation systems on the operational efficiency of corporations in Saudi Arabia. Nevertheless, the importance of systematic review, as highlighted by FinTech Saudi and the OECD. That highlighted the need of using KPI to synthesize global, regional, and national-level empirical evidence to examine measurable impact of FinTech-based P2P automation systems.

3. Significance of the Study

3.1 Academic Significance

The research contributes to the academic domain by linking FinTech adoption to quantifiable operational efficiency metrics in the corporate P2P domain (Arner et al., 2016; Gomber et al., 2017). FinTech research has largely focused on the banking sector; this research extends it to the corporate sector. Furthermore, this research bridges the gap between digital transformation theory and KPI-based performance measurement frameworks through a systematic review (Bharadwaj et al., 2013; OECD, 2020).

3.2 Practical Significance

The research provides corporate management KPI-based insights into the advantages of automating P2P processes using FinTech tools (PwC, 2019). This research enables corporate management to make data-driven strategic decisions to improve P2P process performance and operational risk management, while aligning with Saudi Vision 2030 digital transformation initiatives in the private and quasi-public sectors (FinTech Saudi, 2023; OECD, 2020).

3.3 Professional Significance

The research provides finance professionals, procurement managers, internal auditors, and risk and compliance professionals with a better understanding of the operational and governance implications of FinTech adoption in P2P processes (Davenport & Ronanki, 2018; OECD, 2020). This research promotes the development of scalable FinTech frameworks that can be applied to different industries and corporate models in Saudi Arabia and the broader GCC countries (FinTech Saudi, 2023).

4. Aims of the Study

- Analyze the current state of the procurement and payment processes in Saudi Arabian corporate organizations, and determine major inefficiencies, control issues, and operational risks in the Procure-to-Pay cycle (OECD, 2020).
- Examine the various FinTech-enabled automation tools that can potentially support the procurement and payment processes, such as e-procurement systems, e-invoicing systems, digital payment systems, and ERP-FinTech systems (Arner et al., 2016; Gomber et al., 2017).
- Examine and measure the operational performance improvements that can result from the automation of the Procure-to-Pay cycle, using quantifiable metrics such as cycle time reduction, transaction cost efficiency, error minimization, compliance, and transparency (Bharadwaj et al., 2013; PwC, 2019).
- Prepare strategic recommendations based on empirical research to support the digital transformation of the procurement and payment processes in Saudi Arabian corporate organizations, in alignment with the aims of developing the FinTech ecosystem in the Kingdom of Saudi Arabia (FinTech Saudi, 2023; OECD, 2020).

5. Research Questions

1. What operational inefficiencies, control issues, and risks are associated with traditional procurement and payment systems in Saudi Arabian corporate entities? (OECD, 2020)
2. What is the scope for FinTech solutions to enable the end-to-end automation of procurement and payment processes through the Procure to Pay (P2P) process lifecycle? (Arner et al., 2016; Gomber et al., 2017)
3. What empirical evidence is available on the impact of Procure to Pay automation on the reduction of processing time, transaction costs, and overall administrative costs? (PwC, 2019)
4. What is the impact of FinTech-driven automation on the accuracy, error rates, compliance levels, and transparency levels associated with procurement and payment processes? (Davenport & Ronanki, 2018; OECD, 2020)
5. What is the scope for operational efficiency improvement through FinTech solutions in the context of global, Gulf Cooperation Council (GCC), and Saudi Arabian empirical studies on Procure to Pay automation? (FinTechSaudi,2023)

6. Research Hypotheses

H1:

A significant reduction in the average transaction processing time is observed through the automation of procurement and payment processes using FinTech solutions in the Procure-to-Pay (P2P) cycle of corporate organizations (PwC, 2019).

H2:

Significant improvement in the cost efficiency of overall operations is achieved through FinTech-driven automation of the Procure-to-Pay (P2P) cycle across procurement and payment processes in corporate organizations (Bharadwaj et al., 2013; PwC, 2019).

H3:

Significant reductions in overall error rates are observed through the automation of Procure-to-Pay (P2P) processes using FinTech solutions across the operations of the corporate organization (Davenport & Ronanki, 2018).

H4:

Significant improvement is achieved through FinTech-driven automation of the Procure-to-Pay (P2P) cycle across procurement and payment processes in corporate organizations.

7. Previous Studies

Earlier research shows that ERP systems, electronic payment infrastructures, and workflow automation solutions play a vital role in increasing Procure-to-Pay process efficiency and reducing workload. Gomber et al. (2017) and PwC (2019) support this argument. Similarly, Davenport & Ronanki (2018) and PwC (2019) note that empirical research often reveals quantifiable improvements, such as reduced invoice processing times, lower costs, and greater accuracy, after implementing automation solutions.

Despite the above, the existing empirical research is limited to the finance, manufacturing, and procurement sectors, and is conducted in non-Saudi environments. In addition, previous research findings often examine the effectiveness of automation solutions individually, without a standardized evaluation framework to measure the performance of P2P processes using key performance indicators. Arner et al. (2016) and Gomber et al. (2017) support this argument.

In terms of P2P automation, the GCC and Saudi Arabian environments, as noted above, have seen a surge in the development and use of FinTech infrastructures, including digital payment and procurement solutions. Nevertheless, empirical research on evaluating P2P automation effectiveness using key performance indicators is limited in the Saudi Arabian corporate sector. FinTech Saudi (2023) and OECD (2020) support this argument.

8. Theoretical Foundations

- Digital Transformation Theory: This theory explains the way an organization incorporates advanced technologies such as FinTech solutions into its operational processes with the aim of redesigning its operations with the ultimate goal of creating value and aligning itself with the broader national digital strategies such as the Saudi Vision 2030 (Bharadwaj et al., 2013; OECD, 2020).
- Business Process Optimization Theory: This theory focuses on the redesigning of business processes with the aim of optimizing performance results through the elimination of inefficiencies with the ultimate goal of realizing improved performance results through the measurement of time, cost, and quality (Gomber et al., 2017).
- Procure-to-Pay (P2P) Cycle Model: This is a theoretical approach that offers a systematic understanding of the procure-to-pay processes with the ultimate goal of evaluating the processes with the help of stage-specific KPIs (PwC, 2019).
- Accounting and Information Systems Theory: This theory offers a perspective on the significance of integrated information systems with the ultimate goal of realizing improved financial management with the help of automated procure-to-pay processes (Davenport & Ronanki, 2018).
- Corporate Governance and Internal Control Theory: This theory offers a perspective on the significance of transparency and accountability with the ultimate goal of evaluating the procure-to-pay processes with the help of internal controls (OECD, 2020).

9. Methodology and Research Methods

The present study uses quantitative systematic literature review (SLR) research method (Bharadwaj et al., 2013; OECD, 2020). The research is based on only peer-reviewed research articles, academic studies, research articles, and industry and policy reports on FinTech-based automation in procurement and payment processes (Arner et al., 2016; Gomber et al., 2017; PwC, 2019). Financial reports, primary data collection, case studies based on company reports, and any confidential sources are not used in this research.

The research articles used in this study are collected from prominent databases such as Google Scholar, Web of Science, and Scopus. Regional databases are also used to collect research articles on the topic (FinTech Saudi, 2023; OECD, 2020). The research articles used in this study are based on research articles published from 2020 to 2026. Quantitative research articles based on P2P automation in procurement and payment processes are used in this research. Exclusion criteria are also applied to filter research articles based on the absence of any outcome (PwC, 2019). KPI-based research methodology is used to filter quantitative research articles based on the results obtained on the topic.

10. Study Tools

The paper uses a structured KPI analytical matrix in which each of the included studies is coded in terms of context (by country, sector), type of automation (ERP, e-invoicing, payments, etc.), and results for KPIs (PwC, 2019). Techniques of comparative literature synthesis and systematic evaluation criteria are used to evaluate the strength and consistency of the results in relation to the Saudi corporate environment (Bharadwaj et al., 2013; OECD, 2020).

11. Study Limits

- The research is restricted to the domain of procurement and payments, and it does not include other areas of finance, such as taxation, treasury, and investments (OECD, 2020).
- The geographical area of the research is restricted to Saudi Arabia, but studies related to the global arena and GCC countries have been reviewed to gain more knowledge (FinTech Saudi, 2023).
- The research is based on secondary data, which is obtained through literature review, and it does not include internal corporate reports, which may not be publicly available (PwC, 2019).
- The data used in the research is based on literature available up to the 2026 academic year, and it does not include any new developments in the field of technology and finance (FinTech Saudi, 2023; OECD, 2020).

12. References

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