

Final Project 2

Project title

The Socio-Economic Shift in Saudi Consumer Behavior:
A Comparative Analysis of Daily Purchasing via Digital
Wallets vs. Physical Cash

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Chapter 1: Introduction

1.1. Research Background

As the Kingdom of Saudi Arabia (KSA) moves from a heavily cash-based economy to a global leader in the use of digital payments, its financial environment is experiencing a historic metamorphosis. This change is a systematic pillar of Saudi Vision 2030 rather than just a technology trend. The Kingdom has increased its efforts to improve financial inclusion and transparency under the Financial Sector Development Program (FSDP), with the goal of empowering a generation that was born in the digital age and reducing the shadow economy.

Digital payments have successfully surpassed the 80% threshold of all retail transactions as of 2026, according to the Saudi Central Bank (SAMA). A strong national infrastructure (Mada) and the development of an advanced Fintech ecosystem with both domestic and foreign businesses like STC Pay, Urpay, Mada Pay, and Apple Pay have made this quick adoption possible. These platforms, which provide a smooth "one-tap" experience for anything from luxury shopping to small-scale transactions at neighborhood grocery stores, have blended in well with Saudi citizens' daily life.

However, a major socioeconomic dilemma is introduced by this shift. The "pain of paying"—a emotional barrier that historically restrained consumer spending while using real banknotes—is fundamentally altered by digital wallets, despite its unmatched convenience and security. The physical act of transferring money is a continual reminder of finite resources; on the other hand, digital interfaces frequently obscure the instantaneous sense of loss, which may result in "spendception" or disconnected spending.

The goal of this study is to close the gap between the adoption of technology and its effects on behavior. It compares how Saudi consumers' spending patterns are affected by their shift away from actual currency and assesses if adding budgeting features to these apps is a useful method to combat the growing trend of impulsive purchases. Through an analysis of the transition from "Cash Before" to "Digital Now," this study provides a critical viewpoint on Saudi consumers' long-term financial well-being in a post-cash world.

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1.2. Research Problem

In Saudi Arabia, the shift from paper money to digital interfaces has happened faster than the psychological frames of consumers have adjusted. Even while the technological framework for a cashless society is almost finished, there is still a big "psychological gap" in how people handle their own finances.

The visual experience of physically handing over banknotes during traditional cash transactions causes what behavioral economists refer to as the "Pain of Paying." Spending is naturally controlled by this psychological tension. On the other hand, the "one-tap" feature of Mada Pay or Apple Pay creates a phenomenon that has been dubbed "Spendception" recently (Faraz & Anjum, 2025). This idea explains how the transaction's decreased visibility results in less psychological resistance to spending.

In the Saudi context, several specific problems have been identified:

- **Decoupled Spending:** When customers don't physically touch with money, they become emotionally detached and find it difficult to relate a digital "tap" to a tangible decline in their wealth (Ly & Ly, 2024).

- **Growing Impulse Control Problems:** Studies show that Saudi youth engage in more impulsive buying for every 1% growth in digital wallet usage (Alojail & Khan, 2023).
- **Cyber-Fraud Anxiety:** Although these platforms are convenient, 29% of Saudi customers are still concerned about the rise in financial fraud, which could discourage long-term trust in them (Roy, P. C., 2025).

There is currently a dearth of empirical, localized data evaluating how these digital tools, which are meant to be convenient, can be unintentionally weakening Saudi people's financial discipline in comparison to traditional cash-based budgeting.

1.3. Research Significance

Because it offers a timely review of the behavioral side effects of the Financial Sector Development Program (FSDP), this study is important. Three major stakeholders share its value:

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1.3.1 For Consumers and Society

In order to educate Saudi citizens, understand the "invisible" nature of digital spending, it acts as an instructional tool. Customers can develop better "digital financial literacy" practices by realizing the connection between frictionless payments and impulsive purchases. For example, they can use the tracking and alerting capabilities of applications like STC Pay to recover control over their finances.

1.3.2 For Fintech Developers and Financial Institutions

For providers like Urpay, Mada, and local banks, this study offers critical data on user satisfaction and perceived security. It identifies whether consumers value "convenience" over "budgetary control," allowing

developers to design interfaces that promote responsible spending (e.g., real-time budget warnings) rather than just transaction speed.

1.3.3 For Policymakers (SAMA & Vision 2030)

This study offers the essential "behavioral audit" of the Saudi Central Bank's (SAMA) 70–80% cashless ambition. It alerts authorities to the need for new frameworks for consumer protection that address both technical security and the socioeconomic effects of a culture where technological ease may lead to excessive expenditure.

1.4. Research Questions

This study aims to address the following key issues in order to examine the transition from physical currency to digital wallets:

- RQ1: How much does the shift from cash to digital wallets affect Saudi consumers' overall purchasing volume? The quantitative shift in consumption patterns is examined in this question.
- RQ2: What is the relationship between the frequency of impulsive purchases in the KSA retail industry and the "frictionless" aspect of digital wallet payments (such as Mada Pay and Apple Pay)? The psychological absence of "pain of paying" is the main focus here.
- RQ3: Do Saudi fintech apps (such as STC Pay and Urpay) that incorporate tracking and budgeting capabilities help or hurt users' perceptions of their financial control? The usefulness of "Digital Financial Literacy" tools is examined here.
- RQ4: When comparing digital wallets to conventional currency systems, which are the main factors that influence overall consumer satisfaction—perceived ease of use, security, or social influence?

1.5. Research Objectives

This study's main goal is to assess the socioeconomic effects of Saudi Arabia's move to cashless transactions. In particular, the research aims to:

- To examine how the use of digital wallets affects regular spending habits: In order to ascertain whether digital users spend substantially more than those who use physical currency, this objective will compare transaction data with customer self-reports.
- To assess how frictionless payments and impulsive purchases are related: When biometric "taps" or scans take the place of actual banknotes, this goal will quantify the psychological distance from money that results.
- In order to evaluate how well digital budgeting tools promote financial discipline, the study will look at whether real-time alerts and categorization features in applications genuinely assist Saudi customers in adhering to their monthly budgets or if they are disregarded in favor of convenience.
- To gauge customer happiness and confidence in the Saudi Fintech sector: This entails determining the precise characteristics (such as split-billing, security, or cashback) that, as of 2026, have made digital wallets the go-to payment option for more than 80% of transactions.

1.6. Research Hypotheses

This study proposes a set of hypotheses grounded in behavioral theories such as the “Pain of Paying” and “Spendception,” alongside existing literature. It suggests that digital wallet usage significantly increases monthly spending among Saudi consumers (H1) by reducing the psychological

barriers associated with cash transactions. Furthermore, a higher frequency of digital wallet use is positively associated with impulsive purchasing behavior (H2), as frictionless payment methods and instant gratification encourage unplanned spending. The study also highlights that perceived usefulness and ease of use—core elements of the Technology Acceptance Model (TAM)—play a critical role in shaping customer satisfaction and continued usage intentions (H3).

In addition, the study proposes that digital wallets can enhance perceived financial control when users actively engage with real-time budgeting and transaction tracking tools (H4), although this benefit depends on user discipline. Finally, it emphasizes that trust and perceived security significantly influence the relationship between digital wallet usage and customer satisfaction (H5), particularly within the Saudi context where concerns about privacy and cyber risks may either support or hinder adoption.

1.7. Scope of The Study

The study is geographically limited to Saudi Arabia, focusing on active users of digital wallets (Mada, STC Pay, etc.) between 2020 and 2026. It covers daily retail sectors such as food, groceries, and services.

1.8. The Suggested Project Structure

- Chapter 1: Introduction and foundational framework.
- Chapter 2: Comprehensive Literature Review.
- Chapter 3: Research Methodology.
- Chapter 4: Discussion and Thematic Analysis of Literature.
- Chapter 5: Conclusion and Recommendations (to be developed).

Chapter 2: Literature Review

3.

2.1 Theoretical Framework: The Evolution of TAM

The foundation of digital payment research remains the Technology Acceptance Model (TAM) (Davis, 1989). While the original model focused on Perceived Usefulness (PU) and Perceived Ease of Use (PEOU), modern research in the GCC suggests that these are no longer the only drivers. In 2026, the Saudi context requires an Extended TAM that includes:

- **Perceived Security:** With the rise of sophisticated cyber-fraud, trust in the "Mada" and "SAMA" regulatory umbrellas is a primary determinant of adoption (Garrouch, 2025).
- **Social Influence:** In a collectivist society like KSA, the rapid adoption of "Apple Pay" and "STC Pay" is heavily driven by peer behavior and social normalization.

2.2 The Psychology of Spending: "The Cashless Effect"

The transition from cash to digital is not just a change in tools; it is a change in cognitive processing.

- **The Pain of Paying:** Behavioral economists Prelec and Simester (2001) first identified that credit cards decouple the pleasure of consumption from the pain of paying. Physical cash provides a "transparent" loss; you see the wallet empty.
- **Spendception (The 2026 Perspective):** Recent studies Faraz & Anjum, (2025). have introduced the term "Spendception" to describe how digital wallets create an "illusion of liquidity." Because the transaction is biometric (a face scan or thumbprint), the brain does not register the

financial outflow as a "loss," leading to a 0.73% increase in spending volume for every 1% increase in wallet usage (Kraiwanit, T., Limna, P., & Wattanasin, P., 2024).

2.3 The Saudi Fintech Landscape: Vision 2030 and Beyond

Saudi Arabia's shift is unique due to the speed of its Financial Sector Development Program (FSDP).

- **Market Growth:** As of early 2026, the Saudi Fintech market is valued at approximately \$3.1 billion, with over 280 active fintech companies (Stucky, M., 2024).
- **The 80% Milestone:** While Vision 2030 originally targeted 70% non-cash transactions by 2025, SAMA data indicates that the Kingdom surpassed this, reaching 79%–80% by late 2024 (Thanh, N. B., 2025).
- **Hyper-Adoption:** Near-field communication (NFC) adoption in KSA has reached a staggering 94%, ranking the Kingdom among the top globally for contactless payments.

2.4 Digital Wallets and Impulse Buying

A critical tension exists between "Convenience" and "Control."

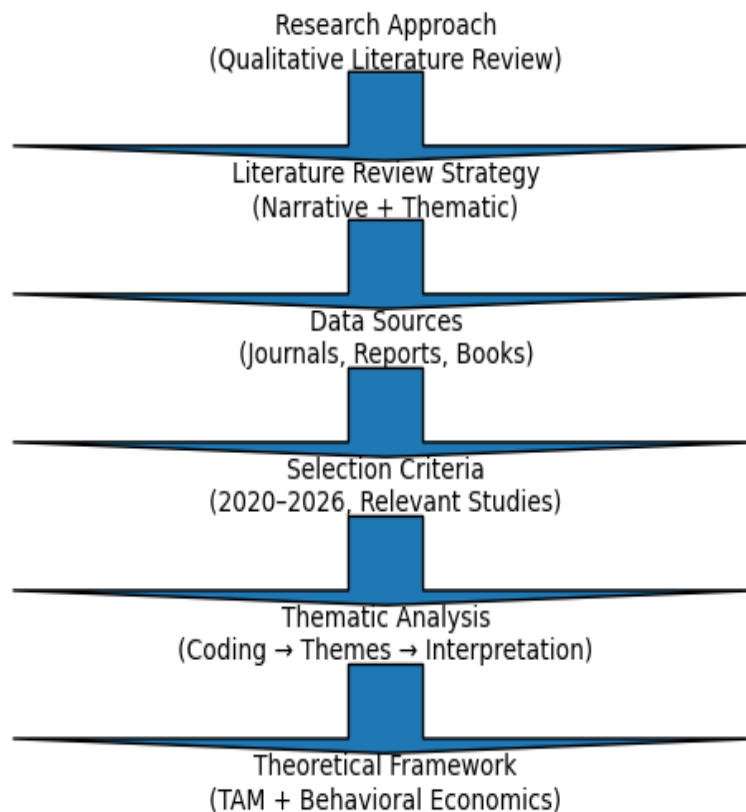
- **Nudging and Notifications:** Digital wallets use "behavioral nudges", such as instant cashback or limited-time offers, to trigger immediate action. Research shows that 32% of users make unplanned payments immediately after receiving a notification (Radhika, H., & Rashmi, C. P., 2026).
- **The Counter-Argument (Digital Literacy):** Conversely, some researchers argue that digital wallets improve financial management. Features like real-time expense categorization and automated

budgeting in apps like Uripay provide a level of data transparency that was impossible with physical cash (Helal, M. Y., et al, 2025).

Chapter 3: Research Methodology

3.1 Research Approach

In order to investigate the socio-economic effects of digital wallets on consumer behavior in Saudi Arabia, this study uses a qualitative research methodology based on a thorough literature analysis. In contrast to empirical studies, this research focuses on the analysis and interpretation of existing academic and industrial literature rather than collecting primary data.



Because the study examines behavioral and psychological concepts like impulse buying, financial control, and the "Pain of Paying," a qualitative approach is appropriate. Rather than numerical measurement, these notions

require interpretive examination. Additionally, the study employs deductive reasoning, which uses accepted ideas to explain patterns seen in the literature.

3.2 Research Strategy: Literature Review Method

The study uses a methodical approach to literature evaluation, integrating thematic analysis and narrative review. While thematic analysis enables the discovery of recurrent patterns and connections throughout the literature, the narrative component offers a thorough summary of earlier research.

This methodology allows the research to critically evaluate existing studies and compare different perspectives across the literature, enabling a balanced assessment of findings within the field of fintech and digital payments. It also helps identify gaps in current knowledge while contributing to a coherent and comprehensive understanding of digital payment behavior, particularly in light of evolving consumer trends and technological advancements.

3.3 Data Sources and Literature Selection

The study relies entirely on secondary data sources, including peer-reviewed journal articles and journal papers that undergo rigorous review processes, as well as scholarly publications and conceptual models. It also incorporates insights from conference papers, reports issued by organizations such as the Saudi Central Bank, and fintech trade journals to ensure a comprehensive and well-rounded foundation of information.

To guarantee quality and relevance, the study follows specific standards, focusing on research published between 2020 and 2026. It includes studies related to consumer behavior, fintech, and digital wallets, with

particular emphasis on the Saudi Arabian and GCC context whenever possible. Additionally, outdated or non-academic sources are systematically excluded to maintain the credibility and reliability of the findings.

3.4 Data Analysis Method: Thematic Analysis

A thematic analysis approach is employed to examine the selected literature, involving the identification, classification, and interpretation of meaningful patterns across studies. The process begins with carefully reviewing and understanding individual sources, followed by recognizing recurring ideas such as trust, convenience, and impulse purchasing. These ideas are then grouped into broader categories, and the resulting themes are interpreted in relation to the research questions.

The analysis reveals several key themes, including the “cashless effect” and its influence on spending behavior, the balance between financial discipline and convenience, and the role of technology acceptance factors (TAM variables). Additional themes highlight the importance of digital literacy in maintaining financial control, as well as the critical role of trust and security in shaping user behavior toward digital payment systems.

Chapter 4: Discussion and Thematic Analysis of Literature

4.1 Introduction

The literature studied in Chapter 2 is subjected to a critical discussion and thematic analysis in this chapter. Interpreting current research findings and connecting them to the study's research objectives and hypotheses is the goal.

This chapter summarizes earlier research to find trends, inconsistencies, and important insights on how digital wallets affect Saudi Arabian consumers' behavior rather than providing original data.

4.2 Theme 1: Convenience, Cashless Behavior, and Increased Spending

Digital wallets significantly enhance transaction convenience through features like one-tap payments and reduced effort, which lowers transactional friction and encourages higher spending. This convenience, combined with the “cashless effect,” reduces the psychological “pain of paying,” making money feel less tangible and increasing the likelihood of impulse purchases. As a result, digital payments not only facilitate faster transactions but also amplify spontaneous and higher consumption, although this may reflect both reduced financial control and increased economic activity.

4.3 Theme 2: Technology Adoption and User Behavior (TAM & Moderators)

User adoption of digital wallets is strongly influenced by perceived usefulness and ease of use, as explained by the Technology Acceptance Model (TAM), especially within technologically advanced environments like Saudi Arabia. However, adoption and behavioral outcomes are also shaped by moderating factors such as financial literacy, self-control, social norms, and cultural influences. These factors determine how users interact with digital wallets, particularly in terms of impulse buying and long-term usage, indicating that technology alone does not drive behavior.

4.4 Theme 3: Financial Control, Trust, and Risk Perception

The impact of digital wallets on financial control is mixed, as they can both enhance money management through tracking and budgeting tools or lead to overspending when users prioritize convenience. At the same time, trust and security play a critical role in shaping user confidence and adoption. Concerns about fraud, privacy, and unauthorized transactions persist, but strong regulatory frameworks help build trust. Ultimately, user behavior, engagement with financial tools, and perceived security determine whether digital wallets act as a financial aid or a risk factor.

Chapter 5: Conclusion and Recommendations

5.1 Overall Conclusion

The transition to digital wallets in Saudi Arabia represents a major technological and behavioral shift, significantly increasing convenience and adoption. However, it also reduces spending awareness due to the “cashless effect,” leading to higher and more impulsive spending. While digital wallets can enhance financial management through built-in tools, their effectiveness depends largely on user behavior and financial literacy. Overall, the shift to a cashless economy is successful but introduces new behavioral and financial challenges.

5.2 Key Insights

Digital wallets increase spending due to reduced transaction friction and amplify impulse buying by weakening the “pain of paying.” Financial control is not guaranteed by technology but depends on user discipline and awareness. Additionally, trust and security are essential for adoption, highlighting a key paradox: digital wallets both empower users and weaken financial control.

5.3 Recommendations

Consumers should improve financial discipline by using budgeting tools, tracking expenses, and setting limits. Fintech developers are encouraged to design responsible systems with smart budgeting features, behavioral nudges, and spending alerts. Policymakers should promote

financial literacy, strengthen consumer protection, and enhance cybersecurity to support a sustainable cashless economy.

5.4 Contributions

The study extends the Technology Acceptance Model (TAM) by incorporating trust, security, and social factors, while also integrating behavioral economics concepts such as the “pain of paying.” It provides a context-specific analysis of digital wallet usage in Saudi Arabia and emphasizes the need for an interdisciplinary approach in fintech research.

5.5 Limitations & Suggestions

The study relies on secondary data, limiting empirical validation and real-time accuracy, and its findings may not be generalizable beyond Saudi Arabia. Future research should include empirical studies, longitudinal analysis, cross-country comparisons, and exploration of AI in financial behavior monitoring to strengthen and expand the findings.

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