Mobile Payments from Merchants’ Perspective: An Empirical Study Using the TAM Model in Saudi Arabia

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Summary
This study aims to examine the factors that affect the intention of merchants to adopt mobile payments in Saudi Arabia. The underlying model used in the study is the technology acceptance model, which includes two factors: perceived ease of use and perceived usefulness. The effects of trust, cost, and compatibility are also examined because these are among the common factors used based on the literature. An online questionnaire was completed by 242 merchants in Saudi Arabia who had already adopted mobile payment services. A significant relationship was identified between perceived usefulness and compatibility in terms of merchants’ intention to adopt mobile payment systems, while an insignificant relationship was identified with perceived ease of use, trust, and cost.

Key words:
Compatibility, cost, intention to use, m-payments, TAM.

1. Introduction

Historically, payments have been restricted to cash or debit or credit cards. With the growth of mobile technology and smartphone ownership, innovative electronic payment methods have emerged, which are viewed as the next generation in developing electronic payments. Today, payments can be handled simply by waving a smartphone over a terminal payment reader. This contactless payment process is achieved using Near Field Communication (NFC) technology [1]. Several researchers and experts have demonstrated that mobile payments (m-payments) play a vital role in the development of mobile commerce and payment services [2], [3]. Although some authors use the terms m-payments, digital payments, mobile wallets (m-wallets), and electronic payments interchangeably [4], [5], this study refers to mobile payments as m-payments.

In recent years, m-payments have been one of the fastest-growing fields in the financial services industry [6]. According to McKinsey & Company [7], the COVID-19 pandemic has accelerated this growth, leading to a significant increase in the use of mobile technology and the adoption of m-payments among both consumers and merchants. Business owners and retailers can benefit from m-payment services in different ways. For example, they can use m-payments to build rich databases around their customers and their buying behaviors, and the data can be analyzed to assist in optimizing marketing campaigns and loyalty programs [8]. In addition to these benefits, m-payment services can increase transaction volumes, reduce transaction costs, and increase customer satisfaction [9].

Su et al. [10] defined m-payments as an onsite process of a contactless or proximity payment that requires buyers and sellers to be present in the same physical location. They involve several contactless technologies such as personal digital assistants, radiofrequency devices, and NFC-based devices. Shin [11] described m-payments as a digital wallet that will replace physical wallets such that people no longer need to carry cash, credit cards, or debit cards to conduct point-of-sale transactions. Several types of m-payment technologies are available, including short message service (SMS) [12], NFC [13], quick response codes [14], and cloud-based m-payments [8].

Saudi Arabia launched m-payment services at the beginning of 2019 under an initiative led by the Saudi Central Bank, formerly known as the Saudi Arabian Monetary Authority (SAMA) [15]. The Financial Sector Development Program is one of the key pillars of Saudi Arabia’s Vision 2030, which aims to increase the share of non-cash transactions to 70% of the total transactions by 2030, with a goal of reaching 28% non-cash transactions by the end of 2020 [16]. Accordingly, based on a report published at the end
of the second quarter of 2020, the share of non-cash transactions in Saudi Arabia has already reached 36%, which indicates that the 2020 target was exceeded [16]. Additionally, the COVID-19 pandemic has played a critical role in increasing the government’s enforcement of the transition toward contactless and cashless payments [17].

Several studies have investigated the factors that influence consumers to accept and adopt m-payments [4], [5], [18]–[20]. However, relatively few studies have been undertaken to examine the factors that affect the adoption of m-payments from the merchants’ perspective [21]. These studies have been conducted in various countries, including the United States [22], Sweden [23], Thailand [24], and India [21]. To the best of our knowledge, no study has published that examines the factors that influence merchants’ adoption of m-payments in Saudi Arabia. Hence, this emphasizes the need to examine the merchants’ perspective in adopting m-payments, taking into account the technological support and financial services provided by the Saudi government.

In prior studies, the most commonly used theoretical models for studying the adoption of m-payments include the technology acceptance model (TAM), the unified theory of acceptance and use of technology (UTAUT) model, and the diffusion of innovation (DOI) theory [2], [4], [25]. In over 20 studies, the TAM model was found to be the most commonly used model for examining the acceptance of m-payments [2], [26]. The ability and effectiveness of TAM to predict consumers’ acceptance of technology is supported by the wide range of literature on information technology acceptance [27], [28].

To fill the identified research gap, this study examines the factors that affect merchants’ decisions to adopt m-payments in Saudi Arabia. The target sample of this study consists of coffee shops and restaurants in Saudi Arabia. Taylor [8] stated that the fast-food and beverages industry is a quick-service-oriented industry that pioneered the adoption of m-payment services. This study uses the TAM model since it has been widely applied in the same context [2]. The following five factors are examined in this study: perceived ease of use, perceived usefulness, trust, cost, and compatibility. The selected factors are among the most influential factors that affect merchants’ intentions to adopt m-payments, as confirmed in the literature [2]. The findings of this study will help m-payment providers to better understand the factors that influence merchants’ adoption of the technology, thereby offering insights to facilitate service improvement. The findings may also serve as an effective input for policymakers to help in making appropriate decisions and designing applicable strategies in the field.

This paper is organized as follows: Section 2 presents a literature review focusing on m-payment acceptance and adoption by consumers and merchants. Section 3 presents the proposed conceptual framework and the research hypotheses. Section 4 describes the research methodology. Section 5 presents and discusses the results. And Section 6 offers concluding remarks and recommendations for future work.

2. Literature Review

The m-payment penetration rate has been growing globally, and the number of merchants providing and accepting m-payments has also been increasing [29]. Noteworthily, merchants’ adoption of m-payment technology can play a vital role in encouraging consumers to adopt and accept these services [22]. Therefore, studying the factors that affect the acceptance of the technology is important to develop and enhance the technology’s ability to stimulate adoption among consumers [30]. The topic of m-payments has been studied extensively by many researchers in different contexts, including Saudi Arabia [31], the United States [22], the United Kingdom [32], Germany [20], China [33], Sweden [23], India [4], Singapore [34], Thailand [35], the United Arab Emirates [36], and Oman [37]. These studies have aimed to identify the factors that influence the acceptance and adoption of m-payments.

Most previous studies that have investigated the adoption of m-payments have applied the TAM model [5], [20], [35], [38], [39], the UTAUT model [31], [37], DOI theory [25], [40], [41], or the Technology-Organization-Environment (TOE) model [24], [42]. Several studies have combined several of these models to facilitate their investigation of consumers’ intention to accept new technology [4], [19], [21]. Most of these studies have confirmed that ease of use, relative advantage, trust, and perceived security significantly impact consumers’ use of m-payments [4], [20], [25], [33], [40].

Almost all prior studies in this area have focused on the perspective of consumers [2]. Relatively few have addressed the perspective of merchants [21], [22], [24], [38], [41], [42]. Among the studies that have focused on the factors that influence merchants’ adoption of m-payments, the factors of interest include perceived usefulness [21], [38], perceived ease of use [38], trust [21], [43], complexity [24], [41], cost [22], [36], [41], and compatibility [24], [38], [42].

Several studies have focused on the merchants’ perspective regarding the acceptance and adoption of m-payments [21], [22], [36], [38], [41], [42]. For example, [42] used the TOE model and reported that technological competency, senior management support, external pressure, and critical mass positively and significantly influence the adoption of m-payments for retailers. At the same time, the authors demonstrated that facilitating conditioning, competitive pressure, and owner’s innovativeness were not significant predictors of m-payment adoption.

One group of studies that has investigated merchants’ m-payment adoption is characterized by the use of the qualitative approach, involving interviews with merchants. For example, Vashistha et al. [44] conducted a qualitative empirical study to examine the awareness and acceptance of both merchants and consumers toward m-payments in India. Surprisingly, the
study found that merchants believed that m-payments were unnecessary and ineffective for their businesses.

This literature review indicates that Alqahtani et al. [31] was one of the earliest studies to examine the consumer’s use of m-payments in Saudi Arabia. The study used the UTAUT model and considered trust, usefulness, security, awareness, and support for the Arabic language. Data were collected using the qualitative method of semi-structured interviews. The findings indicated that almost 45% of the interviewees were concerned about security issues. Additionally, 35% believed that usefulness played an important role in their decisions about whether to use m-payments. As previously noted, another factor that the researchers examined was m-payment support for the Arabic language. While the study examined several important factors, support for the Arabic language is an especially critical factor to consider when adopting a new technology, given that it is the native language in Saudi Arabia.

Almuhammadi’s [45] systematic review investigated the m-payment ecosystem in Saudi Arabia. The study aimed to provide an overview of m-payments in Saudi Arabia and to identify the key components of the Saudi payment ecosystem. The study also presented an extensive analysis of Saudi m-payment stakeholders and their intentions and interests. Likewise, it reviewed SAMA and Saudi fintech initiatives, both of which are currently aiming to increase the use of e-transactions and enhance the Saudi Arabian fintech ecosystem.

According to a recent study by Alkhowaiter [46], relatively few studies have investigated the adoption of m-payments in Saudi Arabia. Furthermore, to the best of our knowledge, no prior study has examined merchants’ intention to adopt m-payments in Saudi Arabia. Due to the topic’s importance, this gap justifies the need to study the factors that affect merchants’ intention to adopt m-payments in Saudi Arabia. Therefore, to fill this gap, this study investigates m-payments from the merchants’ perspective, focusing especially on Saudi Arabia.

3. Conceptual Framework

This study aims to examine the factors that affect merchants’ adoption of m-payments in Saudi Arabia. Therefore, the study was developed based on the research of [21], which used the TAM and DOI models with four additional factors: namely, awareness, perceived cost, perceived trust, and perceived customer value addition.

[2] undertook a critical review of m-payment research, confirming that the TAM model is one of the most common models used as a theoretical foundation for understanding the adoption of m-payments. [47] claimed that the TAM model, originally proposed by [48], is one of the most utilized models for studying consumers’ acceptance of new technology. Furthermore, the TAM model was introduced to examine consumers’ behavioral intention to use new technology by focusing on two key factors – perceived ease of use and perceived usefulness – and their roles as determinants of consumer technology acceptance.

In the years since the TAM model was originally proposed, several studies have extended the TAM model with additional factors, including compatibility [4], [24], [38], [40], [42], trust [4], [37], [49], and cost [22], [35], [41]. Therefore, to investigate the factors affecting merchants’ intention to adopt m-payments in Saudi Arabia, this study uses the TAM mode with three additional factors: trust, cost, and compatibility.

![Figure 1. Proposed model with research hypotheses.](image-url)
Figure 1 illustrates the proposed model for m-payment adoption, which includes the key factors of the TAM model along with additional factors related to the research hypotheses. These research hypotheses are specified in the following sections.

3.1. PERCEIVED USEFULNESS

Perceived usefulness (PU) can be defined as “the degree to which a person believes that using a particular system would enhance his or her performance” (Davis, 1989, p. 320). [18] demonstrated that the PU of m-payments significantly influences their adoption. Additionally, several studies have confirmed the significant and positive effect of PU on merchants’ intention to use m-payments [21], [38]. Consequently, the intention to use m-payments is influenced by PU. Therefore, the following hypothesis was established:

H1: Perceived usefulness positively influences merchants’ intention to adopt m-payments.

3.2. PERCEIVED EASE OF USE

Perceived ease of use (PEOU) is defined as “the degree to which a person believes that using a particular system would be free of effort” (Davis, 1989, p. 320). According to [18], early adopters of a technology value ease of use, which depends on their personal knowledge of m-payments, while the PEOU of late adopters is affected by personal innovativeness, which may be explained by the fact that innovative late adopters are tech-savvy and feel secure when using m-payment solutions. [2] systematic review found that PEOU was cited in 12 articles before 2007 compared to 23 articles after 2007, which indicates its importance as a key factor that affects the intention to adopt m-payments. Contrastingly, the recent study undertaken by [38] in Malaysia concluded that PEOU has no significant effect on merchants’ intention to adopt m-payments. This result may be attributable to the fact that consumers may have a clear expectation that mobile apps are mostly user-friendly. Thus, the following hypothesis was established:

H2: Perceived ease of use positively influences merchants’ intention to adopt m-payments.

3.3. PERCEIVED TRUST

The factor of trust is frequently considered in the context of m-payment adoption [2]. In the context of m-payments, trust refers to an individual's belief that their sensitive data is protected, their privacy is guaranteed, and that payments from the accepted account will be duly credited to the merchant [5]. Various studies that focus on consumers have found that trust is significantly and positively correlated with consumers’ intention to use m-payments [4], [35]. Motivated by these results, the researcher believes that studying the effect of trust from the merchants’ perspective will yield similar results. Therefore, the following hypothesis was established:

H3: Perceived trust positively influences merchants’ intention to adopt m-payments.

3.4. PERCEIVED COST

Merchants are motivated by the idea that adopting m-payments will reduce the overall cost of the payment process [21]. Many types of costs are associated with the use of m-payments, including the cost of new handheld devices, transaction fees, and subscription fees [35]. [22] reported that cost is the second-highest concern for merchants regarding the adoption of m-payments. The authors also found that many merchants view m-payments as an opportunity to control their payment processing costs because m-payments are less costly compared to accepting credit cards. As such, the use of m-payment services is often perceived as a way to reduce merchants’ processing cost per transaction. Additionally, [41] confirmed that merchants believe that the payment processing cost per transaction when using m-payments is lower compared to traditional credit cards. Thus, the following hypothesis was established:

H4: Perceived cost negatively influences merchants’ intention to adopt m-payments.

3.5. PERCEIVED COMPATIBILITY

According to [42], compatibility is defined as the degree to which an innovation conforms to existing norms, previous experiences, and the needs of potential adopters. [38] recent study found that compatibility has a significant and positive effect on merchants’ acceptance of m-payments. From the consumer perspective, several studies have confirmed that compatibility significantly influences consumers’ intention to adopt m-payments [4], [19], [40]. Although several studies have examined compatibility from the consumer perspective [20], [35], [40], we also believe that compatibility is a key factor that affects the adoption of m-payments from the perspective of merchants. Therefore, the following hypothesis was established:

H5: Perceived compatibility positively influences merchants’ intention to adopt m-payments.

4. Research methodology

4.1. INSTRUMENT DEVELOPMENT

A quantitative approach was followed involving the development of a self-administered online questionnaire, the purpose of which was to examine the effect of the following...
factors on merchants’ intention to use m-payments in Saudi Arabia: perceived ease of use, perceived usefulness, perceived trust, perceived cost, and perceived compatibility. The items were measured using a five-point Likert scale ranging from 1 (‘strongly disagree’) to 5 (‘strongly agree’). The scales for perceived usefulness, perceived trust, perceived cost, and compatibility were adapted from [21], while the scale for perceived ease of use was adapted from [48].

Table 1. DESCRIPTIVE STATISTICS OF RESPONDENTS (N = 242)

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Quantity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Business type</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coffee shop</td>
<td>124</td>
<td>51.2%</td>
</tr>
<tr>
<td>Restaurant</td>
<td>118</td>
<td>48.8%</td>
</tr>
<tr>
<td><strong>Number of branches</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 branch</td>
<td>154</td>
<td>63.6%</td>
</tr>
<tr>
<td>2 branches</td>
<td>43</td>
<td>17.8%</td>
</tr>
<tr>
<td>3 or more branches</td>
<td>45</td>
<td>18.6%</td>
</tr>
<tr>
<td><strong>When did you launch the business?</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 year or less</td>
<td>93</td>
<td>38.4%</td>
</tr>
<tr>
<td>2-3 years</td>
<td>69</td>
<td>28.5%</td>
</tr>
<tr>
<td>More than 3 years</td>
<td>80</td>
<td>33.1%</td>
</tr>
<tr>
<td><strong>Do you offer mobile payment options?</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>242</td>
<td>100%</td>
</tr>
<tr>
<td>No</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td><strong>When did you start to offer mobile payments?</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before COVID-19 pandemic</td>
<td>208</td>
<td>86%</td>
</tr>
<tr>
<td>After COVID-19 pandemic</td>
<td>34</td>
<td>14%</td>
</tr>
<tr>
<td><strong>Number of employees</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-5 employees</td>
<td>55</td>
<td>22.7%</td>
</tr>
<tr>
<td>5-10 employees</td>
<td>68</td>
<td>28.1%</td>
</tr>
<tr>
<td>More than 10 employees</td>
<td>119</td>
<td>49.2%</td>
</tr>
<tr>
<td><strong>Estimated monthly income (in SR)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15,000 SR or less</td>
<td>34</td>
<td>14%</td>
</tr>
<tr>
<td>16,000-30,000 SR</td>
<td>29</td>
<td>12%</td>
</tr>
<tr>
<td>31,000-50,000 SR</td>
<td>36</td>
<td>14.9%</td>
</tr>
<tr>
<td>51,000-80,000 SR</td>
<td>29</td>
<td>12%</td>
</tr>
<tr>
<td>More than 80,000 SR</td>
<td>114</td>
<td>47.1%</td>
</tr>
</tbody>
</table>

4.2. DATA COLLECTION

The 31-question survey was distributed online to members of the target population. The questionnaire consisted of two sections, each containing a set of closed-ended questions. The first section focused on demographic variables, including business type, number of branches, number of employees, business founding date, duration of service offering, and estimated monthly income. Given that the study focused on merchants who had already adopted m-payments, a filtering question was also asked to exclude merchants who had not adopted m-payments. The second section focused on the principal factors of interest and their corresponding scales. To avoid misunderstanding among the participants, local examples were used when referring to m-payment services (e.g., Apple Pay and Mada Pay).

Between 14 March 2021 and 7 April 2021, the survey was randomly distributed to coffee shops and restaurants in Riyadh, Saudi Arabia, all of which had already implemented m-payment services in their stores. To ensure that the sample group was representative of the target population, sample size was determined based on the number of questions contained in the data collection instrument, assuming ten responses per question [21]. Thus, the selected sample size for this study was 240. The questionnaire was translated into Arabic to minimize language barriers. At the end of the data collection phase, 242 completed questionnaires were obtained.

The demographic characteristics of the 242 respondents are shown in Table 1. The types of business were distributed equally between coffee shop and restaurant owners, and almost 63.6% of the businesses had only one branch. Most merchants (86%) had adopted m-payments before the onset of the COVID-19 pandemic. This can be attributed to the Saudi government’s effort, driven by Saudi Arabia’s Vision 2030, to promote cashless transactions, which started before the pandemic.

4.3. DATA ANALYSIS

The collected data were imported into SPSS (version 25) to analyze the effect of each factor on the dependent variable (in this case, intention to use m-payments). Previous studies in the same context have frequently used SPSS to analyze survey data [24], [25], [42], [50]. Multiple linear regression analysis was applied to test the relationship between the five independent variables and the dependent variable.

4.4. MEASUREMENT MODEL: RELIABILITY AND VALIDITY

To improve the study’s reliability and validity, Cronbach’s alpha (\( \alpha \)) test was applied for the purpose of determining the survey instrument’s internal consistency. Cronbach’s alpha
test scores should be greater than or equal to 0.6 or 0.7 to be considered acceptable [51]. For each variable, Cronbach’s alpha exceeded 0.6 and the overall reliability was 0.896, thereby indicating the reliability of all questionnaire items. Table 2 shows the results of Cronbach’s alpha for all variables. Furthermore, Table 3 shows that all of the variables were significantly correlated with each other. The Pearson correlation coefficient for all variables ranged between 0.288 and 0.622, indicating that the strength of the relationship among the variables was weak to moderate. Given that most of the correlations among the different constructs were lower than 0.5, the constructs show divergent validity. This can be interpreted as the constructs being unique with respect to one another and, as such, containing no overlapping items [52].

Table 2. Reliability

<table>
<thead>
<tr>
<th>Factor</th>
<th>Cronbach’s alpha</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>PU</td>
<td>0.812</td>
<td>4</td>
</tr>
<tr>
<td>PEOU</td>
<td>0.618</td>
<td>4</td>
</tr>
<tr>
<td>Trust</td>
<td>0.847</td>
<td>4</td>
</tr>
</tbody>
</table>

Table 3. Correlation Matrix

<table>
<thead>
<tr>
<th>Factor</th>
<th>PU</th>
<th>PEOU</th>
<th>Trust</th>
<th>Cost</th>
<th>Compatibility</th>
<th>Intention to use</th>
</tr>
</thead>
<tbody>
<tr>
<td>PU</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PEOU</td>
<td>0.381</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trust</td>
<td>0.380</td>
<td>0.374</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost</td>
<td>0.470</td>
<td>0.360</td>
<td>0.417</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compatibility</td>
<td>0.622</td>
<td>0.383</td>
<td>0.411</td>
<td>0.500</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Behavioral intention</td>
<td>0.513</td>
<td>0.306</td>
<td>0.288</td>
<td>0.403</td>
<td>0.503</td>
<td>1.00</td>
</tr>
</tbody>
</table>

5. Results and Discussion

This study sought to identify the factors that affect merchants’ intention to adopt m-payment services in Saudi Arabia. The following five factors were explored: perceived ease of use, perceived usefulness, perceived trust, perceived cost, and perceived compatibility. For hypothesis testing, the study applied the R-squared statistical measure, t-tests, and simple regression. The results of the hypothesis tests are reported in Table 4.

The study found that perceived usefulness was positively and significantly correlated with merchants’ intention to adopt m-payments. Hence, H1 is confirmed and supported (PU → INT: \( \beta = 0.361, p = 0.000 \)). Previous studies, including [21], [38], reported consistent results. In particular, they found that perceived usefulness positively and significantly affects merchants’ intention to adopt m-payments. Merchants use m-payment services to satisfy consumer needs, save time for both merchants and consumers, and increase overall efficiency.

The results indicate that perceived ease of use was not significantly correlated with merchants’ intention to adopt m-payments (PEOU → INT: \( \beta = 0.083, p = 0.335 \)). Hence, H2 is rejected and not supported. Altounijy et al. [38] reported consistent results and suggested that the insignificant effects of perceived ease of use may be attributable to the fact that most contemporary people are familiar with technology.
Additionally, previous studies confirm the familiarity and acceptance of Saudi citizens with mobile technology [53], [54]. This study’s results also indicate that perceived trust has an insignificant effect on merchants’ intention to adopt m-payments (Trust → INT: β = 0.008, p = 0.877). Therefore, H3 is rejected and not supported. In contrast, Hayashi & Bradford [22] found that most merchants believe that perceived trust affects their intention to adopt m-payments. In the Saudi context, we believe that there is a strong information technology infrastructure and well-established systems in the financial industry that can guarantee the protection of merchant and consumer data. This explains why trust, according to our results, does not significantly affect merchants’ decisions, as merchants already expect the local infrastructure to be trustworthy.

The relationship between perceived cost and intention to adopt m-payments was found to be insignificant (Cost → INT: β = 0.081, p = 0.053). Hence, H4 is rejected and not supported. Similarly, the study of [21] reported consistent results in finding that cost does not affect intention to adopt m-payments. In contrast to our findings, several previous studies have identified cost as a critical factor in merchants’ adoption of m-payments [22], [55]. These studies confirm that costs, including installation, processing, and training, play a significant role in merchants’ adoption of m-payments.

Finally, perceived compatibility was found to have a positive and significant effect on merchants’ intention to adopt m-payments (Compatibility → INT: β = 0.361, p = 0.000). Therefore, H5 is supported and confirmed. This result is consistent with previous studies in which it has been reported that compatibility is a critical factor to consider when adopting m-payments [21], [38], [42].

To summarize, the results indicate that perceived usefulness (H1) and perceived compatibility (H5) have positive and significant relationships with the intention to adopt m-payments among merchants in Riyadh, Saudi Arabia. Perceived ease of use (H2), perceived trust (H3), and perceived cost (H4), on the other hand, have non-significant relationships with the intention to adopt m-payments. It is worth noting that the research participants may have been members of the younger generations with a relatively high level of education. As such, these demographic characteristics may have made them more open to embracing novel technology. This, in turn, may be reflected in the willingness of those merchants to adopt such a service.

**Conclusion**

In recent years, the importance of studying the factors that influence merchants’ intention to adopt m-payments has increased substantially. This is due to the pressure of governments around the world to substitute cash with cashless options, especially in the time of the COVID-19 pandemic and the growing availability of multiple m-payment options.

This study sought to examine merchants’ acceptance and adoption of m-payment services in Saudi Arabia. The study’s theoretical framework was based on the TAM model with three additional factors, leading to the consideration of the following five factors: perceived usefulness, perceived ease of use, perceived trust, perceived cost, and perceived compatibility. To the best of our knowledge, no previous studies have examined the factors influencing merchants’ adoption of m-payments in the Saudi context.

The results indicated that perceived usefulness and compatibility have a positive and significant influence on merchants’ intentions to adopt m-payments, which is consistent with previous studies on m-payment adoption [21], [38], [42]. The key predictor of merchants’ intention to adopt m-payments services was found to be perceived usefulness. This may be attributable to the fact that merchants value m-payments due to their value in saving time and increasing the effectiveness and efficiency of the payment process.

Given that this study was conducted on merchants in Saudi Arabia, its findings are expected to add value to any stakeholders interested in the field, including policymakers, banks, and service providers, particularly in terms of enabling them to base their decisions on these results. The study’s results will guide these stakeholders toward a clearer vision of their targeted consumers’

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Relationship</th>
<th>R²</th>
<th>β</th>
<th>t</th>
<th>p</th>
<th>Result</th>
<th>Hypothesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>PU → INT</td>
<td>0.361</td>
<td>3.918</td>
<td>0.000</td>
<td></td>
<td>Supported</td>
<td>Supported</td>
</tr>
<tr>
<td>H2</td>
<td>PEOU → INT</td>
<td>0.083</td>
<td>0.966</td>
<td>0.335</td>
<td></td>
<td>Not supported</td>
<td>Not supported</td>
</tr>
<tr>
<td>H3</td>
<td>Trust → INT</td>
<td>0.335</td>
<td>0.008</td>
<td>0.142</td>
<td>0.877</td>
<td>Not supported</td>
<td>Not supported</td>
</tr>
<tr>
<td>H4</td>
<td>Cost → INT</td>
<td>0.081</td>
<td>1.947</td>
<td>0.053</td>
<td></td>
<td>Not supported</td>
<td>Not supported</td>
</tr>
<tr>
<td>H5</td>
<td>Compatibility → INT</td>
<td>0.242</td>
<td>3.316</td>
<td>0.001</td>
<td></td>
<td>Supported</td>
<td>Supported</td>
</tr>
</tbody>
</table>

Table 4. OUTCOME OF HYPOTHESES EVALUATION, WHERE P < 0.001
preferences, allowing them to enhance their offerings by incorporating consumers’ perspectives and influencing factors. In terms of recommendations for future study, it would be worthwhile to examine the reasons why non-adopters of m-payments in Saudi Arabia are uninterested in doing so. Moreover, since merchants can adopt more than one m-payment approach, a future study could analyze merchants’ preferences in choosing from the available apps and providers.

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References


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