Consumers and QR Code Payment Method: A Case of Pakistani Retail Environment

Hassan Ahmad1*, Muhammad Shahid Asghar2, Hamid Khan3, Muhammad Saqib Khan4
1Dongbei University of Finance and Economics, Dalian, China
2School of Management, Shandong University, China
3,4Lecturer IBA Gomal University Dera Ismaial Khan, Pakistan
*Email: hasaan1214@hotmail.com1, shahidasghar90@gmail.com2, hamid.nido@gmail.com3, saqibkhan@gu.edu.pk4

Abstract: Consumers tend to find ways that are beneficial and useful for them during a shopping experience. They use different methods, either online or offline, for a more considerable retail experience. Thus, the use of a particular technology when it accessible, useful, beneficial and innovative may help them progress a certain attitude. The practice of theory of acceptance model (TAM) proved to be right in this context of embracing of QR code transaction method. This kind of payment system is still relatively new in the Pakistani environment, but this, with the current research framework, it shows that consumers are willing to adopt it. Thus, CINN, PBN, PEU, PUF, and attitude proved to be suitable variables for the adoption of this technology.

Keywords: QR code payment, attitude towards QR code payment, consumer innovativeness, usefulness, benefits, easy to use

1 Introduction

Society as a whole is adopting new technologies, and with the advent of mobile phones, life is becoming easy. The mobile phone technology is helping in personal development and growth in different daily life activities (R.-J. Hwang, Shiau, & Jan, 2007; Masamila, Mtenzi, Said, & Tinabo, 2010). Smartphone usage has increased over the years, and billions of users (Calzada & Estruch, 2011) around the world are now attached to smartphones (Union, 2012). In light of the latest technological services, companies are trying to fetch an innovative smartphone payment services that could affluence the life of a consumer (Liébana-Cabanillas, Sánchez-Fernández, & Muñoz-Leiva, 2014). Such smartphone mobile transaction services can take place with wireless devices and networks (Hu, Li, & Hu, 2008). Such kind of services are making the consumer and retailer life more comfortable and to maintain transaction at a low cost and also safe and secure.

Currently, there are different payment services available, like in the form of credit card payments connected to mobile phones or unique card readers for fast payments or payments made through mobile devices. Mobile phone technology is trying to provide an 'all-in-one' payment service for the consumer and the retailer. The emphasis of this research study is to comprehend the notion of smartphone payments through the QR code system in developing nations. The consumers will be able to understand this payment system and accept or adopt this type of QR code payment system through mobile payments. It’s an innovative concept and it's very young, especially in developing countries like Pakistan. Thus, the use of TAM aspects with benefits and innovativeness related to this system will be understood via attitude and, finally, its adoption of QR code payments.
Denso Wave company developed the QR code two-dimensional bar code system for mobile payments (Kan, Teng, & Chou, 2009). The practice of the QR code services isn’t limited to transactions but it has expanded in different usages such as navigation system (Y.-C. Lai, Han, Yeh, Lai, & Szu, 2010), web 2.0 (J.-J. Hwang, Yeh, & Li, 2003), mobile learning (H. C. Lai, Chang, Wen-Shiane, Fan, & Wu, 2013), and augmented reality (AR) in smartphones (Yoon, Park, Lee, Jang, & Woo, 2011). Practice to use the QR code usage has increased a lot in recent years, and many companies are adopting it for information and payment methods (de Luna, Liébana-Cabanillas, Sánchez-Fernández, & Muñoz-Leiva, 2019). The QR codes system is both available on android and IOS phones, and its usage is being increased day by day.

Initially, the QR code system was developed for the automotive industry. Still, now it is being used in many different industries for all kinds of purposes, from advertising to information providing. Many famous brands are using the QR code system like KFC, McDonald's, Calvin Klein, and Volkswagen, etc. Mobile payments the concept is taking off in many countries, and brands have adopted it for fast transactions to save time. Banks and other services are using these systems to make sales fast and secure. In China, there are QR code payments systems like WeChat and Alipay for transactions between the consumer and the retailer, and it has government backing also. In Pakistan, few banks have offered such a service of QR code transaction, nonetheless still, it's in the developing stage as consumers are still trying to espouse such QR code payment technology.

This study proposes the use of theory of acceptance model (TAM) in the implementation of the QR code payment system. The perceived ease of use (PEU) and perceived usefulness (PUF), perceived benefits, and consumer innovativeness is the independent variables in the research framework that affect the attitude and, finally, the adoption of this technology. In this study, a total of 250 respondents from the principal city of Pakistan were investigated to examine the acceptance of smartphone QR code transaction services in Pakistan. The results will be examined through a structural equation model (SEM) via smart pls software.

2 Literature & Conceptual Framework

2.1 TAM & Perceived Ease of Use (PEU)

The concept of PEU is described as the use of a particular technology in an effortless way for an individual (Davis, Bagozzi, & Warshaw, 1989). The adoption of technology ought to be unpretentious and relaxed to practice so that individuals can efficiently utilize their skills in adopting such technology (Kourouthanassis, Giaglis, & Karaiskos, 2010). So, the ease of use (PEU) of a particular technology is measured as one of the crucial factors in its adoption (Moore & Benbasat, 1991). Perceived ease of use (PEU) has positive effects on the attitude of an individual while adopting novel technology (Venkatesh & Davis, 2000). Other studies also revealed that (PEU) also affected (PU) and an individuals’ attitude for the adoption of a particular technology (Bruner II & Kumar, 2005; Franco, Cataluña, & Ramos, 2007). Preceding research studies have already documented the effects of (PEU) on (PU) (Featherman, Miyazaki, & Sprott, 2010; Hernández-Garcia, Iglesias-Pradas, Pelaez, & Pascual-Miguel, 2011). The rapport amid (PU), attitude, and acceptance also have been investigated and proven (Muñoz-Leiva, Hernández-Méndez, & Sánchez-Fernández, 2012).

Intentions of individuals are dependent on their attitudes towards a precise technology (Ajzen, 1991; Ajzen & Madden, 1986) and the degree to which an individual trusts that innovative technology will be perceived useful (Davis, 1989). In aforementioned studies, we have realised that attitude is effected by PEU and PUF (Venkatesh & Davis, 2000; Venkatesh, Morris, Davis, & Davis, 2003). TAM well presents the idea of PEOU and PU for the acceptance of new-fangled
Thus, TAM to date is considered as one of a vital theory when it comes to the acceptance of innovative technology (Chuah et al., 2016; T. Kim & Chiu, 2019). Hence, we can say that the service QR code transaction payment system acceptance will be well understood with PEOU, PU, and attitude. Thus, the following hypotheses are proposed:

H1: PEU positively impact attitude

H2: PEU positively impact perceived usefulness (PUF).

H9: PEU effect on the acceptance of new QR code payment method via PUF and attitude.

2.2 TAM and Perceived Usefulness (PUF)

Perceived usefulness (PUF) has been established in aforementioned studies as an essential feature when it emanates to the acceptance of new-fangled technology (Abdullah, Ward, & Ahmed, 2016; Amin, Rezaei, & Abolghasemi, 2014; Fagan, Kilmon, & Pandey, 2012). The term perceived usefulness means that the usage of a certain technology would augment an individual's recital (Davis, 1989, 1993). In many studies, the idea of perceived usefulness has been investigated and proven. The studies include games (Broom, Lee, Lam, & Flint, 2019), smartphones (Agrebi & Jallais, 2015), VR (Fagan et al., 2012), and internet banking (Lee, Kim, Ryoo, & Shin, 2016).

Technology helps consumers in utilizing their skills and capabilities to have a better life. The use of smartphones for the service of QR code transaction payment system is an innovative way and is helping consumers around the world for making quick payments. Thus, the usefulness of such technology can improve our lives and earn advancements for a better future. Therefore, following hypotheses are proposed:

H3: Perceived usefulness (PUF) has a positive impact on attitude

H7: Perceived usefulness (PUF) mediates between perceived ease of use (PEU) and attitude

2.3 Perceived Benefits

Consumers perceive that the use of technological services has some relative benefit associated with them (Walker & Johnson, 2006). Further, it was revealed that perceived benefits connected with technical assistance are of great advantage if it's easy to use (Walker & Johnson, 2006). Consumers tend to believe that technology is beneficial to them, and the use of mobile payments via the QR code system will help them in fast and safe transactions. This form of smartphone transaction payment method is considered to be faster than the credit card and cash payments.

Another factor that can be considered is trust but in this study we are just focusing on the benefits and usefulness and easy to use the service of the QR code service for payments.

As more retailers and companies will use this particular technology, more trust and service quality will prevail in consumer minds. Further, the consumer may prefer to go to those shops which have faster transaction facilities such as QR code payment systems. Previous studies state that quick transactions are considered as a crucial point for transactions and payments for perceived benefits in the investment sector (G. Kim, Shin, & Lee, 2009), hence this may be the right variable for the adoption of QR code payments in a country like Pakistan.

The studies state that perceived benefits related to mobile payments will also have a trust factor associated with it. As more, this technology becomes conveniently available to the general public, more adoption of this technology will take place. Mobile payments may relate to consumer
lifestyle and needs (Mallat, 2007). Some might think of it as a beneficial and useful, and others might wait till masses adopt this technology. Thus, following is the hypothesis:

**H4: Perceived benefits (PBN) have a positive influence on attitude**

### 2.4 Consumer Innovativeness

There are different kinds of consumers, and some quickly adapt according to new technologies, and some wait for the masses to accept them. Innovativeness consumers tend to escalate the unique technology benefits as they perceive it to be comfortable and useful and took it more open-heartedly (T. Kim & Chiu, 2019; Yi, Fiedler, & Park, 2006). The willingness to try new technological products or services with the belief that it provides benefits is termed as consumer innovativeness (Agarwal & Prasad, 1997; T. Kim & Chiu, 2019). Consumers with high innovativeness tend to understand the benefits of new technology more quickly (Talukder, Chiong, Bao, & Malik, 2019).

The previous study say that there is a connection amid the acceptance of novel technology and consumer innovativeness and creates a significant impact on it (Slade, Dwivedi, Piercy, & Williams, 2015; Yi et al., 2006). Further, studies state that high innovativeness among consumers leads to handle ambiguity matters of the innovative technology acceptance (Li, Wu, Gao, & Shi, 2016; Talukder et al., 2019; Zhang, Luo, Nie, & Zhang, 2017). Consumer innovativeness may positively impact attitude. Thus, we see the following hypothesis:

**H5: Consumer innovativeness positively influences attitude.**

### 2.5 Attitude

A positive attitude does reflect upon the adoption of new technology or different forms of activities that may be helpful to individuals in their life (Wang et al., 2020). The emotional state of wellbeing can be favorable or unfavorable expressed through the behavior is termed as attitude (Fishbein, 1963; Premkumar, Ramamurthy, & Liu, 2008). Attitude takes time to progress, as the experience comes attitude is also developed. Consumers to develop attitudes related to new technology towards its easiness or usefulness. The levels of attitude will vary with the level of technical product adoption and its versatility. Theories suggest attitude is a noteworthy aspect when understanding the acceptance of new-fangled technology (Fishbein & Ajzen, 1980; Pee, Woon, & Kankanhalli, 2008).

Figure 1. shows the research framework with the variables. The studies have shown a momentous affiliation amid attitude and the acceptance of new technology (Hansen, Risborg, & Steen, 2012; Liébana-Cabanillas et al., 2014; Meharia, 2012). For the espousal of novel technology, attitude plays an imperative part. With experience and time, attitude developments help individuals to adopt new technology. Thus, attitude may reflect in a positive way towards the acceptance of the service of QR code transaction payments. Therefore, we investigate the following hypotheses:

**H6: Attitude plays a significant influence on the acceptance of QR code payments.**

**H8: Attitude will mediate amid perceived ease of use (PEU) and acceptance of QR code payments**

**H10: Attitude will mediate amid consumer innovativeness (CINN) and acceptance of QR code payments**

**H11: Attitude will mediate amid perceived benefits (PBN) and acceptance of QR code payments**
H12: Attitude will mediate amid perceived usefulness (PUF) and acceptance of QR code payments.

**Figure 1: Conceptual Framework**

3 Methodology Stage

3.1 Analytical Approach

From the reference of Hair et al. (2017), we have employed the software smart PLS-SEM approach to analyze data of this study. The smart PLS-SEM's software foremost hold is that the technique permits investigators to guesstimate multifaceted models with multiple variables, and structural equation paths without the prosecution of data distribution expectations. The smart PLS-SEM software has a approach to causal forecasting so that it accentuate predictions when estimating statistical research models, the edifice of which is intended to explain contributory relations (Joseph F Hair Jr, Sarstedt, Ringle, & Gudergan, 2017). PLS Structural Equation Model measures the partial model structures demarcated in a path of the relationship of different variables by using both PCA (Principal Component Analysis) and OLS regression (Mateos-Aparicio, 2011).

PLS-SEM is advantageous in many ways. First, PLS-SEM can efficiently analyze data with a small sample size; second, PLS-SEM can simultaneously analyze multiple paths by calculating sperate OLS for each path with complex constructs and items (Fornell & Bookstein, 1982; Joe F Hair Jr, Matthews, Matthews, & Sarstedt, 2017). Third, PLS-SEM also relaxes the normality assumption of data and analyze abnormal data (Hair et al., 2012b; Nitzl, 2016). PLS-SEM ranked top among all methods of analysis in statistical power (Hair et al., 2017c). Higher statistical power means PLS-SEM obtained all the significant relationships present in the dataset of the research model (Sarstedt & Mooi, 2019).
3.2 Results and Analysis

To measure the hypothesized relationship between proposed constructs and dimensions, we have used PLS-SEM. The smart PLS-SEM approach entails two research models. The first one is called measurement model, and the another one is called is the inner model or structural model.

3.3 Common Method Bias

The initial apprehension in survey-based methodology is a common method bias CMB. CMB arises due to the variance in the measurement method instead of the variabless of the study (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). There are different measures suggested by scholars and statisticians (Fornell & Bookstein, 1982; Podsakoff et al., 2003; Schwarz, Rizzuto, Carraher-Wolverton, Roldán, & Barrera-Barrera, 2017) to control CMB, like, respondent confidentiality, avoiding complex and confusing questions, comprehensive guidelines provided in survey to avoid biasness and error. Anyhow, we have employed a modern approach suggested by Kock (2015) and used by Zafar, Qiu, Li, Wang, and Shahzad (2019) to test common method bias by assessing the full collinearity of constructs and related items. Kock (2015) use inner VIF to examine the collinearity and suggested a threshold of 3.3. we have employed the same measure and calculated inner VIF by treating each variable as a dependent variable one by one. Table 1 illustrates the values of inner VIF, and all the values are lesser than the threshold of 3.3, hence proving the non-existence of the common method bias in our study. Another measure to test the CMB is the inner construct correlation, as suggested by (Bagozzi, Yi, & Phillips, 1991). Interconstruct correlation must not be higher than 0.90. Table 3 exemplifies the fallouts of the inner variables correlation, and all the values are less than the verge of 0.90.

Table 1: Inner VIFs

<table>
<thead>
<tr>
<th></th>
<th>ATT</th>
<th>CINN</th>
<th>PBN</th>
<th>PEU</th>
<th>PUF</th>
<th>QRA</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATT</td>
<td></td>
<td>2.192</td>
<td>2.279</td>
<td>2.126</td>
<td>2.345</td>
<td>2.266</td>
</tr>
<tr>
<td>CINN</td>
<td>0.244</td>
<td></td>
<td>2.008</td>
<td>2.07</td>
<td>2.093</td>
<td>2.093</td>
</tr>
<tr>
<td>PBN</td>
<td>0.132</td>
<td>1.711</td>
<td></td>
<td>1.702</td>
<td>1.763</td>
<td>1.824</td>
</tr>
<tr>
<td>PEU</td>
<td>0.264</td>
<td>2.128</td>
<td>2.033</td>
<td></td>
<td>2.076</td>
<td>2.185</td>
</tr>
<tr>
<td>PUF</td>
<td>0.059</td>
<td>2.935</td>
<td>2.942</td>
<td>2.891</td>
<td></td>
<td>2.016</td>
</tr>
<tr>
<td>QRA</td>
<td>0.22</td>
<td>2.869</td>
<td>2.919</td>
<td>2.865</td>
<td>1.988</td>
<td></td>
</tr>
</tbody>
</table>

3.4 Outer Measurement Model

From the reference of Joseph F Hair Jr et al. (2017) we have appraised the measurements of outer model by assessing the internal consistency, discriminant validity (DV), and convergent validity (CV). Consistency evaluation based on reliability assessments, whereas convergent validity (CV) and discriminant validity (DV) assessments used to evaluate the validity (Joe F. Hair, Sarstedt, Ringle, & Mena, 2012). Construct reliability (CR) indicates the variance caused by an observed variable and evaluated through outer loadings. Variable with factor loading 0.60 considered reliable. Factor loadings make sure that items of constructs serve the purpose, that is, to measure what is envisioned to examine (Chin, 1998; Joe F Hair, Ringle, & Sarstedt, 2011). Table 4 exemplifies the outcomes of the reliability and validity of constructs; factor loadings (FL) are exceptional the verge of 0.60, as suggested by Hulland (1999). Moreover, Cronbach's alpha and composite reliability measures also used to confirm the reliability of constructs and values shown in Table 4 are meeting the minimum criteria, as recommended by (Nunnally & Bernstein, 1994). The AVE used to evaluate the convergent validity (CV) of variables, AVE values illustrated in
Discriminant validity, on the other hand, confirmed through other measures suggested by researchers and statisticians, among those measures, Fornell-Larcker criterion (FLC) and Heterotrait Monotrait (HTMT) criteria as are well known and considered authentic. Discriminant validity (DV) as advised by Fornell and Larcker (1981) as to how the variables are dissimilar by each other in the situation of the equivalent model. Discriminant validity confirmed by relating the inner variable correlation with the square root (Sq.R) of the average variance extracted(AVE). Inter construct association essentially be lower than the square root (Sq.R) of AVE to confirm the discriminant validity of each construct. Table 2 illustrates the Fornell-Larcker Criterion (FLC) of all variables, the square root (Sq.R) of AVE is greater than all inner variable correlation, hence confirming the discriminant validity(DV) of this study.

Table 2: Fornell-Larker Criterion

<table>
<thead>
<tr>
<th></th>
<th>ATT</th>
<th>CINN</th>
<th>PBN</th>
<th>PEU</th>
<th>PUF</th>
<th>QRA</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATT</td>
<td>0.823</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CINN</td>
<td>0.638</td>
<td>0.864</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PBN</td>
<td>0.564</td>
<td>0.569</td>
<td>0.827</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PEU</td>
<td>0.646</td>
<td>0.581</td>
<td>0.579</td>
<td>0.804</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PUF</td>
<td>0.609</td>
<td>0.599</td>
<td>0.532</td>
<td>0.612</td>
<td>0.934</td>
<td></td>
</tr>
<tr>
<td>QRA</td>
<td>0.630</td>
<td>0.591</td>
<td>0.492</td>
<td>0.584</td>
<td>0.78</td>
<td>0.856</td>
</tr>
</tbody>
</table>

Henseler and Sarstedt (2013) devised another robust measure of discriminant validity that is method of using HTMT relation. This HTMT method is grounded on Monte Carlo replication, and acceptable standards of correlation are 0.90. Table 3 exemplifies the standards of the HTMT method correlation, and the highest value is 0.871, which approves the acceptable discriminant validity (DV) of variables and echoes the suitable quality of the outer measurement model.

Table 3: HTMT Ratio

<table>
<thead>
<tr>
<th></th>
<th>ATT</th>
<th>CINN</th>
<th>PBN</th>
<th>PEU</th>
<th>PUF</th>
<th>QRA</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATT</td>
<td></td>
<td>0.774</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CINN</td>
<td>0.682</td>
<td>0.642</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PBN</td>
<td>0.792</td>
<td>0.666</td>
<td>0.666</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PEU</td>
<td>0.712</td>
<td>0.652</td>
<td>0.584</td>
<td>0.679</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PUF</td>
<td></td>
<td>0.689</td>
<td>0.569</td>
<td>0.690</td>
<td>0.871</td>
<td></td>
</tr>
<tr>
<td>QRA</td>
<td>0.793</td>
<td></td>
<td></td>
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<td></td>
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</table>

Table 4: Reliability and Validity

<table>
<thead>
<tr>
<th></th>
<th>Loadings</th>
<th>α</th>
<th>CR</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATT1</td>
<td>0.877</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATT2</td>
<td>0.860</td>
<td>0.759</td>
<td>0.863</td>
<td>0.678</td>
</tr>
<tr>
<td>ATT3</td>
<td>0.725</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CINN</td>
<td>0.882</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CINN2</td>
<td>0.88</td>
<td>0.887</td>
<td>0.922</td>
<td>0.747</td>
</tr>
<tr>
<td>CINN3</td>
<td>0.842</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CINN4</td>
<td>0.853</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The Model of Inner Structural Measurement

After settling the values of reliability model and validity measurement model, we now move towards evaluating the inner structural model intended to explain the conjectured associations or paths. The inner structural model evaluates the path coefficients, the implication of the relationships, coefficient of determination (R2), and goodness of fit (GOF) of the study framework.

Direct Effects

Path coefficient indicates the change an independent variable (IV) brings into the dependent variable (DV), and path value ranges between -1 to +1. Figure 2. represents the structural model (SEM) with path coefficients. In H5, we proposed a encouraging and momentous effect of consumer innovativeness on attitude towards QR code payment. Results illustrated in Table 5 supported this hypothesis ($\beta=0.279$, $t$-stat=3.667, and $p<0.001$). H4 of this study demonstrates a direct positive effect of perceived benefits on consumer attitude towards QR code payment as the coefficients encouraging and noteworthy ($\beta=0.138$, $t$-stat=2.229, and $p<0.05$). Perceived ease of use (PEU) expressively and certainly affects perceived usefulness (PUF) as depicted by the results ($\beta=0.612$, $t$-stat=10.31and $p<0.001$), hence proving H2. The unswerving and encouraging effect of perceived ease of use (PEU) has been proposed in H1. This hypothesis also supported by the results ($\beta=0.283$, $t$-stat=3.653, and $p<0.001$). We have projected an encouraging effect of perceived usefulness on attitude in H3, and based on results provided in Table 5 H6 robustly accepted.

Table 5: Path Coefficients

<table>
<thead>
<tr>
<th></th>
<th>$\beta$</th>
<th>SD</th>
<th>T Stats</th>
<th>P Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>H5: CINN $\rightarrow$ ATT</td>
<td>0.279</td>
<td>0.076</td>
<td>3.667</td>
<td>0.000</td>
</tr>
<tr>
<td>H4: PBN $\rightarrow$ ATT</td>
<td>0.138</td>
<td>0.062</td>
<td>2.229</td>
<td>0.026</td>
</tr>
<tr>
<td>H1: PEU $\rightarrow$ ATT</td>
<td>0.283</td>
<td>0.077</td>
<td>3.653</td>
<td>0.000</td>
</tr>
<tr>
<td>H2: PEU $\rightarrow$ PUF</td>
<td>0.612</td>
<td>0.059</td>
<td>10.31</td>
<td>0.000</td>
</tr>
<tr>
<td>H3: PUF $\rightarrow$ ATT</td>
<td>0.196</td>
<td>0.069</td>
<td>2.843</td>
<td>0.005</td>
</tr>
<tr>
<td>H6: ATT $\rightarrow$ QRA</td>
<td>0.631</td>
<td>0.062</td>
<td>10.21</td>
<td>0.000</td>
</tr>
</tbody>
</table>
3.7 Indirect Effects

Table 6 illustrates the results of specific indirect effects or mediation effects. All the indirect effects are positive and significant. Hence providing support to the mediation of attitude between the relationships.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>β</th>
<th>SD</th>
<th>T Stats</th>
<th>P Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>H7: PEU -&gt; PUF -&gt; ATT</td>
<td>0.120</td>
<td>0.048</td>
<td>2.492</td>
<td>0.013</td>
</tr>
<tr>
<td>H10: CINN -&gt; ATT -&gt; QRA</td>
<td>0.176</td>
<td>0.050</td>
<td>3.523</td>
<td>0.000</td>
</tr>
<tr>
<td>H11: PBN -&gt; ATT -&gt; QRA</td>
<td>0.087</td>
<td>0.039</td>
<td>2.202</td>
<td>0.028</td>
</tr>
<tr>
<td>H8: PEU -&gt; ATT -&gt; QRA</td>
<td>0.179</td>
<td>0.052</td>
<td>3.459</td>
<td>0.001</td>
</tr>
<tr>
<td>H12: PUF -&gt; ATT -&gt; QRA</td>
<td>0.124</td>
<td>0.050</td>
<td>2.457</td>
<td>0.014</td>
</tr>
<tr>
<td>H9: PEU -&gt; PUF -&gt; ATT -&gt; QRA</td>
<td>0.076</td>
<td>0.035</td>
<td>2.144</td>
<td>0.033</td>
</tr>
</tbody>
</table>

3.8 Co-efficient of Determination (R²)

Overall size effect and variance instigated by independent variables and also the extrapolative accurateness of the model measured by the coefficient of determination(R²). The R² values shown in Table 7, R² for attitude is 0.558 depicting that 55.8% variance in attitude towards QR code payment caused by the perceived ease of use (PEU), perceived usefulness (PUF), consumer innovativeness (CINN), and perceived benefits (PBN). The variance caused by the attitude in QR
code payment adoption is 39.7%. The R2 value for perceived usefulness is 0.374, indicating a 37.4% change in perceived usefulness (PUF) triggered by perceived ease of use (PEU).

Table 7: Coefficient of Determination

<table>
<thead>
<tr>
<th></th>
<th>R-Square</th>
<th>R-Square Attuned</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATT</td>
<td>0.558</td>
<td>0.551</td>
</tr>
<tr>
<td>PUF</td>
<td>0.374</td>
<td>0.372</td>
</tr>
<tr>
<td>QRA</td>
<td>0.397</td>
<td>0.395</td>
</tr>
</tbody>
</table>

4 Deliberations and Insinuations

4.1 Findings and Theoretical Implications

The research framework hence shows that it is workable in the Pakistani environment. Consumers are ready to accept QR code payments if made available (H. C. Lai et al., 2013; Yoon et al., 2011). Consumer innovativeness does reflect on an individual's attitude and shows a positive result (Im, Bayus, & Mason, 2003; Yi et al., 2006). Customers having more innovativeness are willing to adopt QR code payments. PEU and PUF also show that consumers have a positive attitude towards the new technology and show a willingness to embrace the QR code payment system (Abdullah et al., 2016; Hess, McNab, & Basoglu, 2014).

Perceived benefits also hence proved to be positive towards attitude and eventually towards the adoption of QR code payments. Consumers, when seeing benefits attached to a particular technology, they tend to adopt it and use it for their interests (Al-Debei, Akroush, & Ashouri, 2015; Staiano & Calvert, 2011; Tingchi Liu et al., 2012). And attitude helps consumers in the adoption of QR code payments. Attitude worked well as a mediator between PEOU, PU, PBN, consumer innovativeness, and adoption of QR code payments. Thus, the research idea well allied with the theory of acceptance model (TAM) and previous studies. Moreover, digital payment system like QR code and other technologies increase financial inclusion as people adopt digital payment methods.

4.2 Implications for the Companies

Brands or companies already around the world, focusing on finding new ways to make the life of their consumer easier. Thus, employing new technology is one way to do it. The use of QR code payments during the shopping experience can help the companies and the consumers for fast and safe transactions (Kan et al., 2009; H. C. Lai et al., 2013). Thus, the managers of the companies can use QR code payments in the Pakistani context and make the payment method more effective.

4.3 Research Limitations

The results were in favor of the variables and theory implied in the research framework. Even though being proved, it still had limitations. The total number of respondents was only 250. For future research, the number of respondents may be increased above 300. The data was collected only from one major city of Pakistan. In future research, more cities can be added. The study can also be taken internationally, and a comparison between Pakistan and another country can be made. For future reference, perhaps more new variables or some of the variables may be taken as a moderator to see different results. More new theories can be added to comprehend the behavior of Pakistani consumers towards the adoption of new technology. This study, for forthcoming research, can be taken in the form of longitudinal or experimental study.
5 Conclusion

The variables used in the research framework were proved with excellent results. This study shows that in Pakistani environments, consumers are willing to adopt new technology and find it useful, accessible, and beneficial during the shopping experience. Thus, attitude working as a mediator for these variables showed positive results and hence proven as an essential influence when it emanates to the acceptance of new-fangled technology. The consumers' willingness to adopt the QR code payment system in Pakistan shows that consumers are ready for innovative ways related to the shopping experience.

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