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# Attributes of Mobile Technology Adoption Acceptance from Users Perspective

**Saeed Al Naqbi[1], Azlina Md Yassin[1*]**

[1]Faculty of Technology Management and Business,
UniversitiTun Hussein Onn Malaysia, Parit Raja, Batu Pahat, Johor, MALAYSIA

*Corresponding Author

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**Abstract:** The most significant challenge associated with the operationalization of user-based technology emerged as technology acceptance among the public. This study aims to investigate the challenges in mobile technology adoption in the Abu Dhabi Emirate by identifying 52 factors that motivate users to adopt mobile technology across a broad spectrum. These factors were clustered into six categories namely Perceived Ease of Use (PEOU) User Experience (UE) Attitude (ATT), Customer Satisfaction Excellence (CSE) Perceived Usefulness (PU) and Intention to Use (INU). The data was collected through 396 questionnaires to gauge the perception of the public. The data was analysed statistically and found that all of the categories have Cronbach Alpha values greater than 0.7 which indicate that the data was reliable and consistent. The data was also assessed for its normality and found that the skewness and kurtosis values were in the range of normal distribution. For ranking analysis, it was found that the three most common categories considered by respondents when using any technology is Perceived Ease of Use. User experience is the second most important driving respondents' use of technology. This is followed by the user's attitude, which is what drives the adoption of any technology. This findings help the new technology providers to understand the acceptance patterns of the users.
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**Keywords:** Ranking, technology adoption, Abu Dhabi, mobile technology, customer satisfaction excellence

## 1. Introduction

Technology acceptance has emerged as the single most significant challenge associated with the operationalization of user-based technology (Scherer et al., 2019; Venkatesh & Davis, 2000; Legris et al., 2003). Old and new studies consider TAM as a key influencer of technology acceptance to contribute supportive evidence to the role of user experience in technology acceptance. Among these studies is Castaeda et al. (2007) empirical observation, built on Ma and Liu's (2004) meta-analysis of TAM studies to establish the moderating effect of user experience on technology intention. Other studies on user experience in technology acceptance have filled gaps relevant to the investigation's unique context or a specific technology; these include (Gefen et al., 2003; Aswani et al., 2018; Scherer et al., 2019). A few researchers have focused on the overarching role of one construct within the TAM model over the others to observe a change in technology acceptance behavior (Venkatesh & Davis, 2000; Venkatesh, 2000).

Despite all of these efforts, a significant research gap is integral to the increasingly heterogeneous nature of observations on user experience in technology acceptance. The abstract nature of user experiences, heterogeneity across studies and contexts in which they are investigated, the multiplicity of technology applications under investigation, and differences in user experiences all contribute to incoherence in understanding user experiences in technology acceptance (King & He, 2006). According to Deng et al. (2005), due to the unique nature of these papers in addressing specific technical problems, it is practically impossible to compare studies and draw conclusions across papers on user

*Corresponding author: azlina@uthm.edu.my
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experiences within TAM. Despite the challenge of heterogeneity and the lack of common grounds for comparing TAM studies, Venkatesh (2000) observes that the user experience is the best-studied moderator variable in TAM. However, attempts to conceptualize this area have primarily been quantitative, adding to the already existing pool of unique studies without critical insight into the underlying factors that define the user experience in a given technology acceptance context. Furthermore, King and He (2006) asserting use experience without a critical observation of key subjects involved in technology usage is difficult. Therefore, the need for a more comprehensive understanding and conceptualization of user aspects of technology acceptance is necessary and critical (Chatterjee & Kar, 2018).

To contribute to the body of evidence on user experience, it should be noted that only a few studies have chosen to investigate underlying elements of user experience specific to mobile technology systems (Hsi, 2003; Arhippainen& Tähti, 2003). Arhippainen & Tähti (2003) explored user experience specific to mobile application technology or mobile applications. Investigations into user experiences necessitate a broader set of approaches to investigate technology use's underlying constituents and determinants. To be helpful in mobile application technology, these applications must be designed so that the needs and preferences of the users and the context of use are considered (Consolvo et al., 2002). Such studies necessitate the observation of real users in real-world settings to gain the necessary insight thoroughly. Despite the increased relevance of mobile technology to today's businesses, the need for comprehensive conceptualization insight on user experience on technology systems is lacking (Arhippainen& Tähti, 2003, Samonte et al., 2018).

Closing this gap will pave the way for a new stream of studies that address the context of user experience in technology acceptance in a comprehensive way, revealing the underlying factors relevant to mobile application technology (Samonte et al., 2018; Charland & Leroux, 2011). This remains the main gap, and the current study will be one of the first to employ a thorough approach to explore, and at the same time quantitatively conceptualize user experience in mobile application technology acceptance to customer service excellence. According to a preliminary informal observation of the number of users on the ADM mobile application subscription, there are less than 1000 users since the application was first introduced about a year ago (DPM, 2019). A closer look at the ADM application on Google Play, Apple Store, and other mobile application sites reveals that everyone in ADM has not installed the system. This claim is based on common evidence that the total number of downloads is less than 1000, even though ADM currently employs over 2800 people. This preliminary observation also reveals that the applications' overall experience is poor and unsatisfactory.

Furthermore, current online reviews indicate unfavorable and negative user experiences. As a result, the unwillingness to accept mobile technology is currently perceived to stem from poor user experiences with mobile applications. However, because of the widespread use of mobile phones, businesses have been encouraged to leverage available technology to improve work performance and customer experiences (The Media Lab, 2018). Nonetheless, despite this optimistic outlook, the UAE continues to lag behind other countries worldwide in terms of readiness to embrace services based on smartphone technology (Augustine, 2017). Therefore, this study will help understand the challenges in adopting mobile technology in the Abu Dhabi Emirate by understanding the parameters driving users to adopt mobile technology at a broad spectrum.

## 2. Literature Review

### 2.1 The Concept of Technology and Innovation

The technology comprises artifacts and knowledge, such as intellectual property and organizational capability. As a result, technology plays a vital role in corporate innovation. Finally, technology has been identified as a mode of inquiry and action; inherently representing the various techniques used to create and disseminate knowledge (Hoadley & Kilner, 2005). As a result, it aids in integrating learning, innovation, and continuous improvement; a set of concepts commonly associated with and expected of business excellence.

The need to improve technological innovation capability development has remained a critical component of business development. Furthermore, the assumption that there is a relationship between business innovation and excellence stems from a proper understanding of the concept of technology and what it entails. In addition, information and communication technology (ICT) in particular, continues to be critical to the growth and development of global organisations (Croteau & Bergeron, 2001). This claim has received overwhelming support from relevant literature, including Bergeron and Raymond (1995) and Henderson and Venkatraman (1999).

### 2.2 The Need for Technology Acceptance and Associated Challenges

Information systems play an essential role in organisations because they can change how business is conducted (Heeks, 1999). However, the power and efficiency of information systems are constantly evolving (Atler, 1999), increasing the need for businesses to incorporate cutting-edge technology into their workplace. The need for organisations to operate at the highest levels of efficiency drives them to implement new, updated information systems. IT Success was proposed as the dependent variable for information technology (IT) research by William DeLone and Ephraim McLean in 1992. The D&M study examined 180 studies from seven major MIS publications and synthesized six key measures of IT success: system quality, information quality, use, user satisfaction, individual impact, and

organizational impact. However, many businesses fail to successfully integrate new technologies into their operations, which often results in either never seeing a return on investment from an IS implementation or, in some cases, losing large sums of money because the new systems are underutilized or underutilized not used at all. Poulymenakou and Serafeimidis (1997) discovered that IT projects can fail at three points: during development when introduced to users, or during operation. They claimed that IT implementations fail because they are treated solely as IT projects with no regard for human involvement. This can be a fatal error in developing an information system; if the users' needs are ignored, the technology will never meet its intended goals. There is a substantial body of evidence that many information system implementations fail, with approximately 70% of major IS implementations failing. According to the United Nations (2007) and the Institute for Policy Studies (2018), how to improve excellence is critical as business environments become more complex, with a wide range of factors playing different roles. The strength of a country's innovation infrastructure has been proposed to be a function of the country's innovation capacity and the internal environment for innovation within both private and public entities (Thong, 1999). Even though Tornatzky and Fleischer (1990) proposed that an organization with higher quality (skills) human resources will be more capable of technological innovation, many factors continue to impede the smooth acceptance of technology. As a result, Berry et al. (2010) argue that the challenge of technology acceptance can be divided into internal and external components. While the internal environment refers to the firm's practices, the external environment refers to forces outside the firm's environment that play a dominant role.

Handoko et al. (2014) agree with Berry et al. (2010) that, if adequately addressed, external environment technology factors have the potential to boost the firm's overall innovative capacity. The external environment, on the other hand, includes a variety of factors such as government regulation, patent applications, and technological uncertainty but is not limited to technology acceptance behaviour (Damanpour, 1991; Tornatzky& Fleischer, 1990; Mazzoleni & Nelson, 1998; Chen &Puttitanun, 2005; Kim et al., 2012). In addition, Fu et al. (2011), have argued that foreign direct investment (FDI), skilled labour turnover, and Kaufmann et al. (2003) on regional innovation within the firm's external innovation environment all play a significant role in the success of technology projects.

The lack of technology acceptance is one aspect of the external environment that is rather dominant and has been most frequently cited as a reason for technology project failure (Janz et al., 1996; Busch, 1999; Raphaelian& Broadbent, 1999; Croteau & Bergeron, 2001; Raphaelian & Broadbent, 1999; Venkatesh & Davis, 2000; Legris et al., 2003). The refusal to accept technology has direct consequences for technology usage, and the overall purpose for introducing the technology becomes adamant. Acceptance must be overcome for technology to be useful and serve the purpose it was submitted. Prospective users must be willing to engage with and use the technology for the purpose it was introduced.

## 2.3 Challenges of Technology Acceptance In The UAE and The Urgent Need For Action

Because of the relatively higher levels of inefficiency associated with performance, the public sector has come under scrutiny. Unlike the private sector, public entities typically lack a strategic vision for future advancement and are often encouraged to implement measures that are only available in the private sector (Kuipers et al., 2014). Other global and regional organisations have emphasized the importance of "high-quality, dependable public services and legal certainty" (European Commission 2010). Donnelly et al., (1995) in an investigation on UK local government, Chiravuri& Abdul (2016) on the excellence of e-government services in the UAE, Zaidi &Qteishat (2012) on India e-Government service delivery excellence, among others, have emphasised the need for technology innovation and strategy to achieve excellence in the public domain.

The United Arab Emirates (UAE) has experienced rapid changes in the technological operationalization of government services over the last few decades (ADCED, 2008). As a result, the Emirate of Abu Dhabi, the largest of the seven emirates that comprise the UAE federation, is playing a significant role in driving the country's socio-economic development (SCAD, 2014). According to Abu Dhabi's 2030 Vision (ADCED, 2008), the Abu Dhabi government is committed to re-engineering and automating its processes to achieve greater operational excellence. On the other hand, these technology projects are on the verge of failure if acceptance issues are not addressed.

A critical factor of organizational resistance to business strategy development in the UAE is the act of management commitment and sponsorship (Al-Khouri & Bal, 2007; Al-Yahya, 2009; Yaseen &Okour, 2012). The UAE culture encourages conformity to a leader's vision. The absence of explicit executive support can lead to ambiguity in a change initiative's goals and objectives or even make individuals feel "lost" and "paralysed" (Barley, 1990). Furthermore, a lack of management support can lead to poor participation and collaboration among the associated functional units and individuals (Crowswell, 1991). In response to these challenges, technology projects are frequently launched to address them. However, a lack of organizational support impairs technology management and business strategy development in the context of the UAE (Barley, 1990; Bensaou& Earl, 1998; Crowswell, 1991). Poor communication, a stifling UAE social culture, an overemphasis on individual privacy, and other regional issues have been cited as reasons why technology change initiatives fail (Al-Mashari & Zairi, 1999; Dixon et al., 1994; Fondas, 1993; Rodney & John, 1999; Biygautane& Al-Yahya, 2010; Biygautane& Al-Yahya, 2011).

Another internal challenge to technology adoption is a lack of information technology (IT) competency. A lack of computer self-efficacy frequently leads to a fear of losing power and, as a result, user resistance to technology

acceptance (Al-Khouri & Bal, 2007; Hesson, 2007). IT competence is defined here as the skills and knowledge required to operate these technologies effectively. As IT projects become operational, it is necessary to use IT competently (Al-Khouri & Bal, 2007; Bensaou& Earl, 1998). To add to the challenges of technology acceptance in the UAE, the majority of the UAE workforce is made up of expatriates (SCAD, 2014). Expatriates frequently believe that changing business strategies will inevitably result in, or at least partially contribute to, the replacement of expatriate workers with UAE nationals (Hesson, 2007; Al-Yahya, 2009). In turn, UAE nationals may believe that these changes will automate their duties, rendering their jobs obsolete or less relevant. These concerns frequently lead to vehement opposition to change in the UAE public sector from both expatriates and UAE nationals.

A lack of perceived personal benefits is a critical technology acceptance resistance factor. Individuals perceive business strategy development and technological innovation as a burden rather than a means of improving and streamlining operations due to this perception (Kudray& Kleiner, 1997; Yaseen &Okour, 2012). Fairness is a critical tenet of UAE social culture. Uneven distribution of burdens and rewards in an organization is perceived as unfair and is fiercely opposed by individuals. However, there is no doubt that any strategic initiative may necessitate sacrifices from some individuals while benefiting others. Therefore, there is an urgent need to assess challenges to reach fair compromises and overcome the overall challenge of technology acceptance (Badawy, 1980; Darwish, 1998; Muna, 1980; Yaseen & Okour, 2012).

Several Researchers have pointed out considerations of the users for adopting technological changes as well the measuring the attributes defining customer satisfaction. Comprehensive literature review resulted in identifying 51 attributes classified into six categories as in Table 1.

**Table 1 - Attributes defining adoption of new technology**

| Category | Attributes | Source |
|---|---|---|
| Perceived Usefulness (PU) | 1. Using mobile app enhances my effectiveness<br>2. Using mobile app makes it easier to do the tasks.<br>3. Using mobile app improves my performance.<br>4. Overall, I find the mobile app system useful.<br>5. The mobile app makes it easy for you to find the content you need.<br>6. The mobile app provides useful content.<br>7. The mobile app makes it easy for you to choose what you want to learn.<br>8. I believe mobile app can assist interaction to whom you want.<br>9. Overall, I find the mobile app system easy to use.<br>10. My interaction with the mobile app system is clear and understandable.<br>11. I find it easy to get the mobile app system to do what I want it to do.<br>12. Mobile app enables me to accomplish tasks more quickly | Shen, Luo, and Sun (2015) |
| Perceived Ease of Use (PEOU) | 1. Learning to use the mobile app was easy for me.<br>2. I found it easy to get the mobile app to do what I want it to do to manage my tasks.<br>3. Using the mobile app was clear and understandable.<br>4. I found the mobile app to be flexible to use.<br>5. It was easy for me to become skilful at using the mobile app.<br>6. I found the mobile app to be easy to use. | Park, Goering, Head, and Ellis (2017) |
| Attitude (ATT) | 1. Using mobile app is good.<br>2. My using mobile app is favourable.<br>3. It is a positive influence for me to use mobile app.<br>4. I think it is valuable to use mobile app.<br>5. I think it is a trend to use mobile app | Weng, Yang, Ho, andSu (2018) |
| Intention To Use (INU) | 1. I intend to use mobile app in the next few months.<br>2. I predict that I would use mobile app in the next few months.<br>3. I plan to use mobile app in the next few Months | Revels, Tojib, and Tsarenko (2010) |
| User Experience (UE) | 1. The mobile app is focused on sensory appeal.<br>2. The mobile app tries to excite my senses.<br>3. The mobile app tries to be emotional.<br>4. The mobile app tries to be affective.<br>5. The mobile app tries to intrigue me.<br>6. The mobile app tries to stimulate my curiosity.<br>7. The mobile app causes me to think creatively.<br>8. The mobile app tries to make me think about my lifestyle.<br>9. The mobile app tries to remind me of the activities I can do.<br>10. The mobile app gets me to think about my behaviour.<br>11. The mobile app tries to make me think about bonds. | Sheng, and Teo (2012) |

| | | |
|---|---|---|
| | 12. I can relate to other people through the mobile app.<br>13. The mobile app tries to get me to think about relationships.<br>14. It is easy and comfortable to use the mobile app.<br>15. The mobile app can transfer files simply and rapidly | |
| Customer Service Excellence (CSE) | 1. This mobile app company provider is committed to provide services to its clients excellently.<br>2. The services provided by this mobile app company provider are suitable and fulfilling the clients' needs.<br>3. This mobile app company provider provides excellent services to its clients.<br>4. This mobile app company provider solves their clients' complaints as soon as possible.<br>5. This mobile app company provider has enough resources to provide excellent services.<br>6. This mobile app company provider regularly improves their work processes in serving their clients.<br>7. The service process provided in this mobile app company provider is not complicated.<br>8. This mobile app company provider's staff plays their roles accordingly.<br>9. The staffs of this mobile app company provider are capable of providing excellent services.<br>10. The staff of this mobile app company provider is motivated and friendly to the clients | Ariffin, Mokhtar, and Yusoff (2020) |

## 3. Research Methodology

For data collection in this study, a self-administered questionnaire was created. A questionnaire survey is more effective for collecting data with reduced time and cost (Almarashda et al. 2021). The questionnaire contained 51 items organised into six categories to assess customer service excellence in technology adoption. The items were evaluated using a 6-point Likert scale. The Likert scale is a psychometric scale with multiple varieties. Respondents can select their opinions, attitudes, or feelings about a specific issue (Nemoto and Beglar, 2014 cited by Almansoori et al. 2021). It is a unidimensional scale of measurement that ensures all items of measurement measure the same thing. It is one of the most popular scales of measurement used in survey research (Giudici, 2005; Oppenheim, 2000). The study selects the 6-Point Likert Scale because the responses obtained using this scale are not excessively skewed. The sensitivity of the responses is greater when compared to other scales such as the five-point Likert scale (Collis & Hussey, 2013; Natarajan, Balasubramanian, & Kasilingam, 2017). The variable was measured using a scale ranging from 1 to 6, with 1 strongly disagree and 6 strongly agree. SPSS version 26 software was used to manage the collected data in this study

## 4. Reults and Discussion

The targeted respondents were given a total of 537 questionnaire forms. As a result of this, 417 questionnaires were returned. Out of these, 396 were filled out by respondents, representing a 73.74 percent response rate, and were used for further analysis to achieve the study's goal. The characteristics of the respondents who filled out the questionnaire form were gathered and summarized in table 2.

**Table 2 - Characteristics of the respondents**

| Demographic Variable | Category | Frequency | % age |
|---|---|---|---|
| Gender | Male | 300 | 75.8% |
| | Female | 96 | 24.2% |
| Marital Status | Married | 332 | 81.4% |
| | Single | 64 | 17.4% |
| Age group | 21-30 | 144 | 36.2% |
| | 31-40 | 127 | 32.1% |
| | 41-50 | 93 | 23.5% |
| | More than 50 Years | 32 | 8.3% |
| Education | Diploma | 6 | 1.5% |
| | Bachelors | 261 | 65.9% |
| | Masters | 125 | 31.6% |
| | PhD | 4 | 1% |

According to Table 2, the majority of respondents, 75.8 percent, were males, while the remaining 24.2 percent were females. In contrast, 81.4 percent of respondents were married, while 18.6 percent were unmarried. The characteristics also shed light on the age group of the respondents. The majority of those who responded were under the age of thirty. On the other hand, 36.2 percent of respondents were between the ages of 21 and 30 years old, while 32.1 percent were between 31 and 40 years old. Furthermore, 23.5 percent of those polled are between 41 and 50. Finally, the remaining respondents were over the age of 50. In terms of education, most respondents (64.9%) held a Bachelor's degree; 31.6 percent held a Masters Degree in a different discipline, 4 (1%) held a PhD, and only 1.5 percent held a diploma in a different discipline.

## 4.1 Reliability Test

The internal consistency of research instruments is defined as reliability. It is a method for determining the quality of a research instrument, and it refers to the degree to which test scores are free of measurement error (Muijs 2004). Cronbach's alpha coefficient is a widely used method for assessing reliability. Its value ranges from 0 (lowest internal consistency) to 1 (highest internal consistency) (Sekaran & Bougie 2016). If the Cronbach's alpha value equals or exceeds 70%, the measure is considered reliable (Thanasegaran 2009, Alhammadi and Memon 2020, Memon at al. 2014). The Cronbach Alpha value for the indicators in this study was calculated using the SPSS software package, as shown in table 3.

**Table 3 - Reliability of the test**

| Category | Cronbach Alpha |
|---|---|
| Perceived Usefulness | 0.889 |
| Perceived Ease of Use | 0.86 |
| Attitude | 0.86 |
| Intention To Use | 0.90 |
| User Experience | 0.924 |
| Customer Service Excellence | 0.924 |

Table 3 shows that the Cronbach's alpha value for all the categories of indicators is above 0.700, indicating that the internal consistency of the categories is acceptable.

## 4.2 Normality Assumption

Hair et al. (2014) referred to normality as the level of distribution of the data available deals with normal distribution. It is key to evaluate the data to assess if it is too much abnormal (Hair et al., 2017). If the data is abnormal, it will be a severe problem for the analysis. Researchers have defined skewness as the “Skewness known as “the measure of the symmetry of distribution; in most instances the comparison is made to a normal distribution. A positively skewed distribution has relatively few large values and tails off to the right, and a negatively skewed distribution has relatively few small values and tails off to the left”, and Kurtosis known as “the measure of the peakedness or flatness of distribution when compared with a normal distribution. The positive values show the distribution of the data to be peaked whereas the negative values reflect the distribution of data to be flat (Hair et al., 2014, p33-34). Kline (1998) mentioned that the range of skewness and Kurtosis must be between -3 and +3. The results of normality for the collected data are presented in Table 4.

**Table 4 - Result for skewness and kurtosis for normality test**

| Factors | Skewness | | Kurtosis | |
|---|---|---|---|---|
| | Statistics | Std Error | Statistics | Std Error |
| PEOU | -1.865 | 0.124 | 2.505 | 0.247 |
| PU | -1.257 | 0.124 | 0.812 | 0.247 |
| INU | -1.471 | 0.124 | 1.421 | 0.247 |
| CSE | -1.253 | 0.124 | 0.731 | 0.247 |
| UE | -1.730 | 0.124 | 2.268 | 0.247 |
| ATT | -1.344 | 0.124 | 0.871 | 0.247 |

From table 3, it can be seen that the Skewness and Kurtosis of all the categories of attributes are within the recommended values, which shows that the collected is normal.

## 4.3 Ranking of the Attributes

The factors defining the parameters of customer satisfaction excellence for adopting technology in Abu Dhabi were analyzed for calculating Average, Standard Deviation, Skewness, and Kurtosis to rank the parameters for understanding the priority level. The results are presented in table 5.

**Table 5: Ranking of the attributes driving technology adoption**

| ID | Average | SD | Skewness | Kurtosis | Rank |
|---|---|---|---|---|---|
| **Category: Perceived Ease of Use** | | | | | |
| PEOU1 | 5.26 | 1.12 | -1.57 | 1.58 | 3 |
| PEOU2 | 5.28 | 1.12 | -1.81 | 2.98 | 2 |
| PEOU3 | 5.24 | 1.12 | -1.67 | 2.37 | 4 |
| PEOU4 | 5.30 | 1.13 | -1.84 | 2.81 | 1 |
| PEOU5 | 5.07 | 1.29 | -1.48 | 1.42 | 6 |
| PEOU6 | 5.24 | 1.23 | -1.77 | 2.51 | 5 |
| **Category: Perceived Usefulness** | | | | | |
| PU1 | 4.63 | 1.50 | -0.86 | -0.31 | 9 |
| PU2 | 4.68 | 1.40 | -0.86 | -0.16 | 6 |
| PU3 | 4.67 | 1.39 | -0.82 | -0.24 | 7 |
| PU4 | 4.56 | 1.36 | -0.58 | -0.73 | 10 |
| PU5 | 4.36 | 1.42 | -0.49 | -0.65 | 11 |
| PU6 | 4.66 | 1.41 | -0.81 | -0.35 | 8 |
| PU7 | 4.88 | 1.30 | -1.13 | 0.43 | 4 |
| PU8 | 4.95 | 1.31 | -1.31 | 1.01 | 2 |
| PU9 | 4.92 | 1.23 | -1.34 | 1.41 | 3 |
| PU10 | 4.95 | 1.24 | -1.25 | 0.93 | 1 |
| PU11 | 4.85 | 1.36 | -1.09 | 0.20 | 5 |
| PU12 | 4.23 | 1.36 | -0.30 | -0.78 | 12 |
| **Category: Intention to Use** | | | | | |
| INU1 | 4.96 | 1.38 | -1.43 | 1.25 | 3 |
| INU2 | 5.02 | 1.22 | -1.64 | 2.56 | 1 |
| INU3 | 4.97 | 1.24 | -1.33 | 1.27 | 2 |
| **Category: Customer Satisfaction Excellence** | | | | | |
| CSE1 | 5.05 | 1.37 | -1.45 | 1.10 | 4 |
| CSE2 | 5.04 | 1.18 | -1.22 | 0.81 | 5 |
| CSE3 | 5.06 | 1.20 | -1.35 | 1.16 | 2 |
| CSE4 | 4.91 | 1.35 | -1.14 | 0.21 | 9 |
| CSE5 | 5.05 | 1.33 | -1.41 | 1.02 | 3 |
| CSE6 | 5.04 | 1.19 | -1.25 | 0.94 | 6 |
| CSE7 | 5.06 | 1.15 | -1.25 | 0.87 | 1 |
| CSE8 | 4.90 | 1.36 | -1.11 | 0.13 | 10 |
| CSE9 | 4.99 | 1.23 | -1.18 | 0.64 | 8 |
| CSE10 | 5.02 | 1.20 | -1.17 | 0.61 | 7 |
| **Category: User Experience** | | | | | |
| UE1 | 5.07 | 1.08 | -1.13 | 0.85 | 11 |
| UE2 | 5.08 | 1.06 | -1.11 | 0.84 | 7 |
| UE3 | 5.10 | 1.05 | -1.04 | 0.35 | 5 |
| UE4 | 5.10 | 1.08 | -1.08 | 0.51 | 6 |

| | | | | | |
|---|---|---|---|---|---|
| UE5 | 5.07 | 1.04 | -1.14 | 1.21 | 9 |
| UE6 | 5.05 | 1.09 | -1.13 | 0.90 | 12 |
| UE7 | 5.08 | 1.06 | -1.10 | 0.69 | 7 |
| UE8 | 5.11 | 1.08 | -1.15 | 0.58 | 3 |
| UE9 | 5.11 | 1.09 | -1.22 | 1.02 | 4 |
| UE10 | 5.07 | 1.07 | -1.33 | 1.94 | 10 |
| UE11 | 5.02 | 1.11 | -1.01 | 0.29 | 13 |
| UE12 | 5.08 | 1.08 | -1.16 | 0.91 | 8 |
| UE13 | 5.11 | 1.05 | -1.05 | 0.23 | 2 |
| UE14 | 5.12 | 1.08 | -1.20 | 1.03 | 1 |
| UE15 | 5.10 | 1.05 | -1.30 | 1.78 | 5 |
| **Category: Attitude** | | | | | |
| ATT1 | 5.02 | 1.15 | -1.12 | 0.58 | 4 |
| ATT2 | 5.05 | 1.13 | -1.17 | 0.85 | 3 |
| ATT3 | 5.08 | 1.08 | -1.04 | 0.19 | 1 |
| ATT4 | 5.06 | 1.12 | -1.11 | 0.57 | 2 |
| ATT5 | 5.05 | 1.13 | -1.38 | 1.81 | 3 |

From table 5, it can be seen that in the category Perceived Ease of Use, the attribute PEOU4 i.e. I found the mobile app to be flexible to use is the first ranked attribute, followed by PEOU2 (Learning to use the mobile app was easy for me) and PEOU1 (I found it easy to get the mobile app to do what I want it to do to manage my tasks). In the category of perceived usefulness, top three attributes are PU10 (My interaction with the mobile app system is clear and understandable), PU8 (I believe the mobile app can assist interaction to whom you want) and PU9 (Overall, I find the mobile app system easy to use). INU2, INU3 and INU1 are reported as rank 1, rank 2 and rank 3 attributes, respectively in the category of intention to use. These attributes are I predict that I would use mobile app in the next few months, I plan to use mobile app in the next few months and I intend to use the mobile app in the next few months. Examining customer satisfaction excellence, it is seen that CSE7, CSE3 and CSE5 are rank 1,2,3 attributes respectively which are the service process provided in this mobile app company provider is not complicated, this mobile app company provider offers excellent services to its clients and this mobile app company provider regularly improves their work processes in serving their clients. The respondents have ranked UE14, UE12 and UE8 as top three attributes in the category of user experience. These attributes are defined as it is easy and comfortable to use the mobile app, the mobile app tries to get me to think about relationships and the mobile app tries to make me think about my lifestyle. While measuring attitude it was found that ATT3 is the top-ranked attribute which it defined as t is a positive influence for me to use the mobile app. ATT4 i.e. I think it is valuable to use mobile app is reported as 2nd ranked attribute. The respondents have ranked ATT2 and ATT5 at 3rd place by assigning same weight. These attributes are that my using the mobile app is favourable, and I think it is a trend to use it. All the categories of the attributes were also ranked as presented in Table 6.

**Table 6 - Ranking of the categories driving technology adoption**

| Category | Mean | Std. Dev | Rank |
|---|---|---|---|
| Perceived Ease of Use (**PEOU**) | 5.2318 | 1.00958 | **1** |
| User Experience (**UE**) | 5.0837 | 0.81899 | **2** |
| Attitude (**ATT**) | 5.0505 | 0.96901 | **3** |
| Customer Satisfaction Excellence (**CSE)** | 5.0111 | 0.94580 | **4** |
| Perceived Usefulness (**PU**) | 4.6954 | 0.98210 | **5** |
| Intention to Use (**INU)** | 4.9846 | 1.18205 | **6** |

From table 6, it can be observed that Perceived Ease of Use is the most common category considered by the respondent for using any technology. Second ranked category to drive the use of technology as perceived by the respondents is user experience. This is followed by the attitude of the user which drives the adoption of any technology.

## 5. Conclusion

This study investigated various categories and attributes which drive the promotion of new technology among the public. This was carried out by considering an example of mobile application in the Abu Dhabi. The perception of the public was gathered through a questionnaire survey. The investigation was done based on six categories Perceived Ease

of Use (PEOU) User Experience (UE) Attitude (ATT), Customer Satisfaction Excellence (CSE) Perceived Usefulness (PU), Intention to Use (INU) consisting of total 51 attributes or factors. Analysis of 396 samples showed that all of the categories of the investigated attributes have Cronbach Alpha values greater than 0.7, indicating that the data is reliable and consistent. Furthermore, the data's skewness and kurtosis values stated that the data is normal and suitable for further analysis. Ranking among the categories of attributes, found that Perceived Ease of Use is ranked first. User experience is the second most important category driving respondents' use of technology. This is followed by the user's attitude, which drives the adoption of any technology. This findings help the new technology providers to understand the acceptance patterns of the users.

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