A Value-based Approach for Explaining the Adoption Intention of Mobile Data Services

Mutaz M. Al-Debei

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ABSTRACT

This study aims at explaining the factors affecting the adoption intention of mobile data services from the perspective of consumers as users. In this study we focus on the value users can potentially gain from using these services. We hypothesize that if we can examine users' utilitarian, hedonic, uniqueness, epistemic and economic value, then we can explain and predict their intentions to use mobile data services. Our results show that utilitarian value is according to previous studies an important adoption factor. Additionally, economic value is also important and significant. Nevertheless, it seems that in our context, hedonic, uniqueness, and epistemic value dimensions are not as important for the use of mobile data services as utilitarian and economic value dimensions. The results of this study can be utilized by mobile service providers to get insights of consumers' needs and preferences in order to offer better and thus more popular services.

Keywords: Adoption Intention, Mobile Data Services, Value Elements, Value-based, Perceived Value, Mobile Business.

1. INTRODUCTION

The revolutionary developments in mobile technologies have brought Mobile Data Services (MDS) to the world of mobile business as a new, effective, and strategically important revenue stream for Mobile Network Operators (MNOs), especially with the saturation of voice market. MDS are varied in terms of purpose and range from communication (e.g. SMS, chat room), transactions (e.g. e-banking, product purchasing), information content (e.g. location based services, news, stocks update) to entertainment (e.g. games, ringing tones). Despite the emergence of such wide-ranged services, related literature shows that the diffusion of mobile data services is not yet as expected (Kim et al., 2005; Yang, 2004; Carlsson et al., 2006). This is indeed related to the misalignment between the nature of services provided by MNOs and the requirements of consumers.

Aiming to contribute in this domain, this study aims at examining the adoption intention of MDS in Jordan using a value-based approach and from the perspective of consumers as users. We believe that the decision concerning the adoption of MDS is normally taken rationally and sensibly by consumers through evaluating the value that would be captured from such an adoption. Hence, we postulate that the value associated with the use of MDS as perceived from the perspective of consumers as users affects their adoption decisions. In this research, perceived value is used as a multidimensional construct that encapsulates utilitarian, hedonic, uniqueness, epistemic, and economic value elements. Hence, we approach the adoption intention of technology in general, and MDS in particular from a novel standpoint that gives attention to perceived value dimensions from consumers' perspective. This is deemed useful due to the lack of understanding of MDS value as it is perceived not only by consumers but also by people in organizations (Nah et al., 2005; Al-Debei and Avison, 2011).

The results of this study would be of great value to MNOs in guiding them into building effective strategies and business models (see Al-Debei and Avison, 2010; Al-Debei and Fitzgerald, 2010) and developing innovative services meeting the desires and wants of customers. This in turn would lead to a better allocation of resources and a significant increment in the revenues. Indeed, recognizing the value elements appreciated by
consumers would help MNOs in developing and delivering services that are most likely accepted and welcomed by consumers. This would lead to a win-win situation where both parties (i.e. MNOs and consumers) are satisfied.

The remaining sections of this paper will be as follows. The next section discusses reviews from relevant literature, followed by our research model and hypotheses. Section 3 describes the research method. Data analysis and results are presented in section 4 while section 5 presents the conclusions of this research.

2. LITERATURE REVIEW AND RESEARCH MODEL

Research in the area of mobile data services has been flourished with the increasing number of people relying on mobile devices and services they offer. Scholars aim to build models that explain why and how people intend to adopt those services and define factors affecting their decisions. According to the theory of reasoned action (TRA), individuals often consider the consequences of their actions before intending to perform them (Van der Heijden et al., 2005). Applying this concept into our research topic, we assume that consumers will evaluate the consequences of using mobile services and build their intentions to adopt accordingly. Indeed, consumers always seek the value that can be derived from a certain product or service before making the final decision.

This research examines the adoption intention of MDS from consumers' perspective by highlighting the important role perceived value construct along with its dimensions or elements can play in explaining and predicting the adoption intention of technologies. In the IS and Marketing literature, perceived value is recognized as the salient determinant for consumers when making a decision (Anckar et al., 2003; Kim and Han, 2009; Shin, 2009). Recognizing its importance in the context of MDS adoption and acceptance, perceived value construct or some of its dimensions were utilized in previous research (Kim et al., 2007; Turel, 2007). This was based on the argument that perceived value has a strong influence on users’ decision process for pay-per-use services (Hong et al., 2006; Kim et al., 2007; Kim and Han, 2009; Kim and Han, 2011; Lin and Lu, 2011). The result of such studies revealed that utilitarian value (that relates to task accomplishment), hedonic value (which involves the enjoyment and pleasure felt when using MDS), and social or uniqueness value (which can be defined as enhancement of the social image of the user through the use of MDS) dimensions have strong positive influences on the adoption intention of MDS. However, we postulate that other dimensions of perceived value such as epistemic and economic value elements should be also considered. Epistemic value is relevant given that MDS are often new and the curiosity to learn new things amongst some consumers is seen positively and reported to have a positive influence on adoption intention (Bhatti, 2007; Pihlstrom and Brush, 2008; Rouibah and Hamdy, 2009). Economic value is also important since if MDS are priced inappropriately, consumers are most likely to reject it. Despite the importance of perceived value elements and their impact on users’ decisions, little has been done to comprehensively identify the perceived value elements of mobile services and their effect on adoption intention (Hong et al., 2008) and more specifically in the Arab world. Thus, this paper comes to contribute in this domain. As this study approaches the adoption intention of mobile data services from consumers' perspective, the study examines the effect of the dimensions of perceived value (i.e. utilitarian, hedonic, uniqueness, epistemic and economic) on the adoption intention of MDS (See Figure 1).

Utilitarian value

Utilitarian value relates to the level of effectiveness and efficiency that is perceived by consumers when using Information Systems (IS) (Kim and Han, 2009). Utilitarian value can also be described as the effective achievement of a utilitarian goal which is often suitable for customers classified as problem-solvers (Pura, 2005). For example, overcoming the time and place constraints, video phone services is seen as the greatest benefits of MDS (Kim, 2004; Carlsson et al., 2005). Location-based services represent another example of mobile services providing utilitarian values such as finding the nearest petrol station, although such services can also provide location-based games which deliver hedonic values. Most studies on the IS domain have strongly supported utilitarian value as a crucial determinant of prompting behavioral intention to adopt and use IS because customers make rational and calculated assessments of the functional benefits and sacrifices of using IS. The results of many studies indicated that utilitarian value has a positive and significant influence on intention to adopt MDS (Anckar et al., 2003; Van der Heijden et al, 2005;
Carlsson et al., 2006). Hence, we hypothesize that utilitarian value that can be derived from the use of services such as mobile banking, buying tickets, and location based services will have a positive effect on the adoption intention of MDS.

\[ H1. \text{Utilitarian value has a positive and significant influence on adoption intention of MDS.} \]

**Figure1. The Research Model**

**Hedonic value**

Hedonic value is defined as the level of pleasure and joy users experience when using a certain technology. In the context of MDS, hedonic values are delivered when mobile services successfully provide users with fun and enjoyment. Intrinsic motivations (level of enjoyment) which refer to the satisfaction sensed when performing an activity have a direct and favorable influence on user behavior (Kwon and Chidambaran, 2000; Hong et al. 2008). Entertaining services that include fun elements such as games, ringing tone, MP3 player are preferred by customers (Kim et al., 2005) and they use them based on emotional wants rather than performance enhancement. These services powered by technological advances and communicated through media and social members enable their users to better communicate with relatives and kill time when there is nothing to do while amusing themselves and feeling relaxed at the same time. Previous studies conducted by Kim et al. (2007), Kim and Han (2009) had shown the positive effect hedonic value has in explaining the adoption intention of MDS. Therefore, we postulate that there is a direct and positive relationship between hedonic value and adoption intention of MDS.

\[ H2. \text{Hedonic value has a positive and significant influence on adoption intention of MDS.} \]

**Uniqueness value**

Uniqueness value relates to the sense of differentiation from others (Tepper and Mckenzie, 2001). Individuals who quest uniqueness normally value their sense of self-importance and seek whatever ways that will lead them to their quest. Possession and usage of a unique product can help users obtain the perception of dominance and leadership in their hierarchy. Mobile phones are used as a symbol to create a better social image, but with the increasing number of advanced mobile phones' holders, services offered by such enhanced technology are also used nowadays to shape the social image (Nicolas et al., 2008). Young people in many Asian countries use their smartphones as new fashion items to show off in public (Lu et al., 2005). This indicates that services that are observable and can draw attention would be widely adopted by individuals looking for distinguishing themselves from others (Heinonen and Anderson, 2002; Hong et al., 2006). Moreover, MDS offer highly personalized services to its carrier. Telecoms
as service providers can detect the identity and the location of the user, thus offering customized information based on resources nearby (Lee and Benbasat, 2004). However, it must be noted that once a service becomes popular among many users, it loses its uniqueness. Thus, innovative mobile services must be provided in a constant and timely manner. According to the findings of Hong et al. (2006), there is a strong positive relationship between uniqueness and MDS adoption intention. So we hypothesize that uniqueness will have a direct effect on intention to adopt MDS.

**H3. Uniqueness value has a positive and significant influence on adoption intention of MDS.**

**Epistemic value**

Epistemic value relates to the knowledge gained upon trying out new services (Pihlstrom and Brush, 2008). In the context of information technology, individuals who are willing to try out a new technology are called personal innovators. It has been believed that individuals who have high personal innovativeness tend to be more risk-taking and are considered to be among the first to try out new technologies and recognize their usefulness and ease of use (Yand, 2004; Lu et al., 2005; Nicolas et al., 2008). Those innovators are more influenced by information gathered from external sources (e.g. media, internet) rather than information received from friends and colleges (Lu et al., 2005). Pagani (2004) mentioned that the more innovative the service is, the more are the interested people to adopt it. An important point we have to take into consideration here is that the process of experimenting new services will not always lead to final adoption, but in general epistemic value and the curiosity to learn new things and gain new knowledge amongst innovators is seen positively and reported to have a positive effect on adoption intention of various technologies (Bhatti, 2007; Pihlstrom and Brush, 2008; Rouibah and Hamdy, 2009). Therefore, we hypothesize that epistemic value positively and significantly affect the adoption intention of MDS.

**H4. Epistemic value has a positive and significant influence on adoption intention of MDS.**

**Economic value**

People usually think twice before spending their money on a product or service that they have never tried before. This is especially true when it comes to MDS, since unlike many services on stationary Internet which are provided for free, MDS are pay-per-use services (Kim et al., 2007). Moreover, MDS are usually used for personal needs and the cost is borne mainly by individuals; hence, if the satisfaction received is not worth it, consumers would feel guilty for spending money irrationally. Indeed, it has been found that financial cost, initial cost, and operating cost are amongst the main barriers for using mobile data services (Anckar et al., 2003; Carlsson et al., 2005). Hence, we assume that the mobility value derived from mobile devices will cease its effect if there is a significant monetary sacrifice associated with the use of MDS (Heinonen, and Anderson 2002). According to that, we can expect that people will be more willing to use MDS if the cost associated with them is reasonable (Phan and Daim, 2011). Thus, we hypothesize that economic value has a strong effect on intention to adopt MDS.

**H5. Economic value has a positive and significant influence on adoption intention of MDS.**

3. RESEARCH METHOD

3.1 Data Collection and Measurement Scale

This study utilized the survey questionnaire as the instrument for data collection, where participation was completely voluntary. Hence, a self-completion, well-structured questionnaire was developed based on previous literature and was then distributed to a random sample. A total of 285 questionnaires were distributed from October 16, 2011 to February 9, 2012. Amongst the 275 returned questionnaires eight were excluded due to multiple skipped questions and missing values. In total, 267 responses \((n = 267)\) were usable for data analysis. Given that MDS is new in the context of Jordan, respondents to this questionnaire can be characterized as potential early adopters of this innovation.

The constructs of interest in this study are Utilitarian Value (UV), Hedonic Value (HV), Uniqueness Value (UNQV), Epistemic Value (EV), Economic Value (ECV), and Adoption Intention of MDS (ADI). The developed questionnaire in this study adapted questionnaire items from previous literature. Table 1 lists the questionnaire items. Measurements for utilitarian value (UV) were adopted from Davis (1989) and Sirdeshmukh et al. (2002). Hedonic value (HV) measures were based on the work of Davis et al. (1992) and Sweeney and Soutar (2001). Measurements for uniqueness value (UNQV) were borrowed from Tepper
and McKenzie (2001), and Hong and Tam (2006). Measurements for epistemic value (EV) were adopted from Lu et al. (2008). As for economic value (ECV), its measurements were borrowed from Dodds et al. (1991). Finally, measurements for adoption intention of MDS were adopted from Davis (1989). All the items were measured using a five-point Likert-type scale with anchors from "Strongly disagree" to "Strongly agree".

Table 1: Summary of Measurement Scales

<table>
<thead>
<tr>
<th>Construct</th>
<th>Item</th>
<th>Measure</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adoption Intention</td>
<td>AI1</td>
<td>I intend to use MDS in the future</td>
<td>Davis (1989)</td>
</tr>
<tr>
<td>of MDS (ADI)</td>
<td>AI2</td>
<td>I expect that I would use MDS in the future</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AI3</td>
<td>I plan to use MDS in the future</td>
<td></td>
</tr>
<tr>
<td>Utilitarian Value</td>
<td>UV1</td>
<td>Using MDS would increase my chances of achieving things that are important to me</td>
<td>Davis (1989); Sirdeshmukh et al. (2002)</td>
</tr>
<tr>
<td>(UV)</td>
<td>UV2</td>
<td>Compared to the effort and time I need to put in and spend, the use of MDS would be beneficial and worthwhile to me</td>
<td></td>
</tr>
<tr>
<td></td>
<td>UV3</td>
<td>Using MDS would help me accomplish things more quickly</td>
<td></td>
</tr>
<tr>
<td></td>
<td>UV4</td>
<td>MDS would be useful in my daily life</td>
<td></td>
</tr>
<tr>
<td>Hedonic Value (HV)</td>
<td>HV1</td>
<td>I expect that using MDS would be enjoyable</td>
<td>Davis et al. (1992); Sweeney and Soutar (2001)</td>
</tr>
<tr>
<td></td>
<td>HV2</td>
<td>I expect to have fun using MDS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>HV3</td>
<td>Using MDS would make me feel good</td>
<td></td>
</tr>
<tr>
<td></td>
<td>HV4</td>
<td>MDS would be the services that I feel relaxed about using</td>
<td></td>
</tr>
<tr>
<td>Uniqueness Value</td>
<td>UNQV1</td>
<td>I often think that using MDS would shape a more unusual personal image about myself</td>
<td>Tepper and McKenzie (2001); Hong and Tam (2006)</td>
</tr>
<tr>
<td>(UNQV)</td>
<td>UNQV2</td>
<td>I am often on the lookout for new MDS that will add to my personal uniqueness</td>
<td></td>
</tr>
<tr>
<td></td>
<td>UNQV3</td>
<td>I actively seek to develop my personal uniqueness by using special MDS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>UNQV4</td>
<td>Using MDS is interesting and assisting me in establishing a distinctive image</td>
<td></td>
</tr>
<tr>
<td>Epistemic Value (EV)</td>
<td>EV1</td>
<td>If I heard about a new MDS, I would look for ways to experiment with it.</td>
<td>Lu et al. (2008)</td>
</tr>
<tr>
<td></td>
<td>EV2</td>
<td>I always look forward to a new MDS so as I can get new knowledge about new technologies and services</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EV3</td>
<td>Among my peers, I am usually the first to explore new MDS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EV4</td>
<td>In general, I am hesitant to try out new MDS</td>
<td></td>
</tr>
</tbody>
</table>
Construct | Item | Measure | Source
--- | --- | --- | ---
Economic Value (ECV) | ECV1 | I expect that MDS would be reasonably priced | Dodds et al. (1991)
 | ECV2 | MDS would offer a good value for money | 
 | ECV3 | I believe that at the current price, MDS would provide a good value | 

3.2 Sample Profile
The sample's descriptive statistics showed that 36.3% of the respondents were male and 63.7% were female. Respondents aged between 18-24 years formed the largest age group and represented 79.8% of the sample, whilst respondents aged between 25-30 years represented 12.4% of the sample. Also, 4.5% of the respondents aged between 31-35 years. Respondents aged between 36-40 years represented only 1.5% of the sample. Finally, 1.9% of the respondents aged above 40 years. In terms of their education, the majority respondents (i.e. 92.9%) are pursuing their undergraduate degrees, whilst those pursuing their postgraduate degrees represented only 6% of the sample. Respondents pursuing their high school degrees formed 1.1% of the sample. In terms of mobile service providers, Zain was found to be the main provider with 64.8% of the sample. Many respondents are subscribed with more than one provider. The details are shown in table 2.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Item</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>97</td>
<td>36.3</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>170</td>
<td>63.7</td>
</tr>
<tr>
<td>Age</td>
<td>18-24</td>
<td>213</td>
<td>79.8</td>
</tr>
<tr>
<td></td>
<td>25-30</td>
<td>33</td>
<td>12.4</td>
</tr>
<tr>
<td></td>
<td>31-35</td>
<td>12</td>
<td>4.5</td>
</tr>
<tr>
<td></td>
<td>36-40</td>
<td>4</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td>Above 40</td>
<td>5</td>
<td>1.9</td>
</tr>
<tr>
<td>Educ. Background</td>
<td>High School</td>
<td>3</td>
<td>1.1</td>
</tr>
<tr>
<td></td>
<td>College/University</td>
<td>248</td>
<td>92.9</td>
</tr>
<tr>
<td></td>
<td>Postgraduate</td>
<td>16</td>
<td>6</td>
</tr>
<tr>
<td>MNOs</td>
<td>Zain</td>
<td>173</td>
<td>64.8</td>
</tr>
<tr>
<td></td>
<td>Orange</td>
<td>24</td>
<td>9.0</td>
</tr>
<tr>
<td></td>
<td>Umniah</td>
<td>26</td>
<td>9.7</td>
</tr>
<tr>
<td></td>
<td>Zain+Orange</td>
<td>15</td>
<td>5.6</td>
</tr>
<tr>
<td></td>
<td>Zain+Umniah</td>
<td>23</td>
<td>8.6</td>
</tr>
<tr>
<td></td>
<td>Zain+Orange+Umniah</td>
<td>1</td>
<td>0.4</td>
</tr>
<tr>
<td></td>
<td>Orange+Umniah</td>
<td>3</td>
<td>1.1</td>
</tr>
</tbody>
</table>

4. RESULTS AND DISCUSSION
4.1 Reliability and Validity
The scales' reliabilities were measured and the Cronbach's alphas of all scales as in Table 3 were ranged between 0.751 and 0.839; indicating good reliabilities of the scales.
### Table 3. Descriptive Statistics and Reliability

<table>
<thead>
<tr>
<th>Variable</th>
<th>Cronbach Alpha (Ω)</th>
<th>Mean (M)</th>
<th>Standard Deviation (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adoption Intention (ADI)</td>
<td>0.827</td>
<td>4.041</td>
<td>0.804</td>
</tr>
<tr>
<td>Utilitarian Value (UV)</td>
<td>0.839</td>
<td>4.107</td>
<td>0.714</td>
</tr>
<tr>
<td>Hedonic Value (HV)</td>
<td>0.763</td>
<td>3.935</td>
<td>0.647</td>
</tr>
<tr>
<td>Uniqueness Value (UNQV)</td>
<td>0.779</td>
<td>3.264</td>
<td>0.824</td>
</tr>
<tr>
<td>Epistemic Value (EV)</td>
<td>0.751</td>
<td>3.520</td>
<td>0.670</td>
</tr>
<tr>
<td>Economic Value (ECV)</td>
<td>0.782</td>
<td>3.367</td>
<td>0.875</td>
</tr>
</tbody>
</table>

#### 4.2 Hypotheses Testing and Discussion

The simple correlation amongst all the study variables was conducted using Pearson correlation analysis as shown in Table 4. As variables showed significant correlations ($p \leq 0.01$), we then utilized the regression model to test multicollinearity by examining collinearity statistics; i.e. Variance Inflation Factor (VIF) and tolerance. This is significant given that variables with high collinearity pose a problem to regression analysis. The VIF value of any variable should not exceed 10; otherwise the variable is considered highly collinear (Hair et al., 1998). Collinearity statistics showed that tolerance values of all variables ranged between 0.618 and 0.846 and VIF values ranged between 1.181 and 1.672; indicating that multicollinearity is not a likely threat to the parameter estimates in this study.

<table>
<thead>
<tr>
<th>UV</th>
<th>HV</th>
<th>UNQV</th>
<th>EV</th>
<th>ECV</th>
<th>ADI</th>
</tr>
</thead>
<tbody>
<tr>
<td>UV</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HV</td>
<td>0.420**</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UNQV</td>
<td>0.314**</td>
<td>0.391**</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EV</td>
<td>0.305**</td>
<td>0.372**</td>
<td>0.0508**</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>ECV</td>
<td>0.273**</td>
<td>0.127*</td>
<td>0.200**</td>
<td>0.215**</td>
<td>1.00</td>
</tr>
<tr>
<td>ADI</td>
<td>0.547**</td>
<td>0.329**</td>
<td>0.310**</td>
<td>0.307**</td>
<td>0.287**</td>
</tr>
</tbody>
</table>

UV: Utilitarian Value, HV: Hedonic Value, UNQV: Uniqueness Value, EV: Epistemic Value, ECV: Economic Value, ADI: Adoption Intention. ** $p \leq 0.01$, * $p \leq 0.05$

Moreover, regression analysis requires data to be normally distributed as a prerequisite so as to ensure the validity and reliability of the results. This research employs Jarque-Bera (skewness-kurtosis) test to make sure that all variables are within the acceptable limit of the skewness-kurtosis ranges. This test provides a comparison of the distributions of the study data and the normal distribution. Skewness values indicate the symmetry of the distribution. If skewness values are positive, then data are clustered to the left of the distribution; otherwise data are clustered to the right of the distribution. Kurtosis values indicate the height of the distribution. Positive kurtosis values indicate a peaked distribution, while negative kurtosis values suggest a flatter distribution (Hair et al., 2006). Skewness-kurtosis acceptable values have been suggested by scholars such as Tabachnick and Fidell (2007) to be within the range of ± 2.58 at the 0.01 significance level. As in Table 5, almost all the Skewness-kurtosis values of the study data are within the recommended range and thus normality as a condition for successful regression analysis is assured in this study.
Table 5. Normality Test

<table>
<thead>
<tr>
<th>Variable</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adoption Intention (ADI)</td>
<td>-1.039</td>
<td>1.849</td>
</tr>
<tr>
<td>Utilitarian Value (UV)</td>
<td>-1.615</td>
<td>4.266</td>
</tr>
<tr>
<td>Hedonic Value (HV)</td>
<td>-0.459</td>
<td>0.126</td>
</tr>
<tr>
<td>Uniqueness Value (UNQV)</td>
<td>-0.478</td>
<td>-0.065</td>
</tr>
<tr>
<td>Epistemic Value (EV)</td>
<td>-0.186</td>
<td>-0.669</td>
</tr>
<tr>
<td>Economic Value (ECV)</td>
<td>-0.536</td>
<td>-0.230</td>
</tr>
</tbody>
</table>

After making sure that necessary conditions are all satisfactorily met, the study hypotheses were tested using multiple regression analyses. First, value elements or dimensions (i.e. "utilitarian value", "hedonic value", "uniqueness value", "epistemic value", and "economic value") were regressed on "adoption intention". As in Figure 2, it was found that "utilitarian value" ($\beta = 0.434$, $p < 0.001$) and "economic value" ($\beta = 0.126$, $p < 0.05$) are significantly and positively related to "adoption intention" of MDS ($R^2 = 0.334$). Thus, H1 and H5 are supported. However, results show that "hedonic value" ($\beta = 0.070$), "uniqueness value" ($\beta = 0.081$), and "epistemic value" ($\beta = 0.080$) are not significant at $p \leq 0.001$, $p \leq 0.01$, or $p \leq 0.05$ levels. Hence, H2, H3, and H4 are not supported.

![Figure 2. Results of Regression Analysis](image)

The findings of this study illustrate that utilitarian value strongly influences adoption intention of MDS. This indicates that people in Jordan search for goal fulfillment or task accomplishment services and this is consistent with the findings of Kim and Han (2009), and Lu et al. (2008). Economic value has also been found to positively predict adoption intention, which is also expected since people are usually concerned about the costs of such services (Kim et al., 2007). Research conducted by Van der Heijden et al. (2005), Kim at al. (2007), and Kim and Han (2011) revealed that hedonic value is a weak predictor for adoption intention; a finding that is supported by our results. Strahilevitz and Myers (1998) argued that hedonic value is often associated with some guilt feeling and people often seek to justify their choices. In the case of mobile data services that contribute to personal pleasure, finding a proper justification might be difficult; which can be a reason for this weak relationship.

Moreover, uniqueness value was not found to have a significant effect on adoption intention of MDS. This is consistent with the findings of Carlsson et al. (2005) which
argued that the use of mobile services to emphasize social status is considered a small benefit. Furthermore, epistemic value has similar results. Novelty seeking and curiosity about new services are characteristics of innovators; those individuals can cope with uncertainty in order to gain new knowledge. As the culture in the Middle East is described as “strong uncertainty avoidance” (Kandari and Gaither, 2011), we are not surprised to find out there is no significant relationship between epistemic value and adoption intention.

5. CONCLUSIONS

This study contributes to the existing body of knowledge about MDS drivers, especially in Jordan. A research model was developed to investigate the effect of technological, social and informational influences on mobile value elements, and the effect those value elements have on the intention to adopt mobile data services. In light of our results, utilitarian and economic value elements are the best predictors of MDS adoption intention in Jordan, and mobile technology forms the strongest influence on people’s perception about those value elements. Social and informational influences were also significant but not at a lesser degree than technological influences.

The present study also provides implications for MDS practitioners. Based on the results, people in Jordan are more interested in goal-oriented services that would enable them to accomplish their tasks more effectively and efficiently than self-oriented hedonic personal services. Consequently, service providers must focus their efforts on providing this type of services. Moreover, monetary value must not be overlooked as it ranked second after utilitarian value amongst other value elements individuals look for. Offering appropriate services may not yield the expected results if they were not associated with reasonable prices. This is especially important with the intensified competition in mobile industry. When promoting their added value services, providers must stress on the utilitarian aspects of their services along with the cost savings gained by using such services.

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منهجية القيم في تفسير استخدام الخدمات الرقمية في شبكات الإتصالات الخلوية

معتر محمد السعيِّ

ملخص

هدفت هذه الدراسة إلى توضيح العوامل المرتبطة في نية استخدام خدمات البيانات الخلوية من منظور المستهلكين كمستخدمين لتلك الخدمات، ونركز في هذه الدراسة على القيم التي من الممكن أن يحصل عليها المستخدمون جراء هذه الخدمات ونحن نفترض أنه إذا تمكنا من معرفة القيمة المتنفعية والترفيهية والاجتماعية والمعرفية والاقتصادية التي توفرها كل الخدمات، فإننا ستتمكن من توضيح وتوظيف القيم في استخدام خدمات البيانات الخلوية. أظهرت النتائج، أن القيمة المتنفعية من أبرز الإسباب التي أدت إلى اعتماد هذه الخدمات، بالإضافة إلى أهمية القيمة الاقتصادية، وبدأت القيمة الترفيهية والقيمة الاجتماعية والقيمة المعرفية ليست بدأت الأهمية التي تعد من دواعي استخدام خدمات البيانات الخلوية في الأردن، ومن المؤمل استخدام نتائج البحث من قبل الأشخاص المسؤولين عن التزود بالخدمات الخلوية حتى يكونوا على دراية بحاجات واهتمامات المستهلكين من أجل تقديم خدمات ذات رؤيت الأفضل.

الكلمات الدالة: نية الاستخدام، خدمات البيانات الخلوية، عنصر القيم، القيم المدركة، الأعمال المتعلقة بالخدمات الخلوية.

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