ABSTRACT

Introduction

Competing for consumers’ attention in cluttered advertising environment leaves marketers searching for new, innovative and effective platforms to convey commercial messages to target audiences. In this backdrop, mobile phones are being considered a powerful new medium to reach out to consumers. But there are issues that need to be explored to delineate factors affecting adoption of mobile marketing by the target consumers. Marketers are therefore interested in continually updating themselves through research so as to address the inhibiting factors.

According to Ticehurst and Veal (2000), culture can influence the outcomes of the research. The findings of any research are not necessarily applicable to other countries. Thus, conducting a comparative study between India and Syria to understand the extent to which cultural differences have a bearing on adoption of mobile phone based advertising and services in these two countries was considered necessary. The study attempts to provide much needed insights into behavioural intentions leading up to adoption of mobile advertising and services in India and Syria.

Telecommunication Scenario in India & Syria

According to the Telecom Regulatory Authority of India (TRAI), there were 488.40 million wireless subscribers in October 2009 in India (Table 1). It is now the second-largest subscriber market in the world after China (720 million). Wireless tele-density is at 42.4 per cent now (The Economic Times, 23 Dec, 2009). In November 2009, aided by low tariff plans like per-second billing, GSM operators added 11.64 million new mobile subscribers. Bharti Airtel is the largest player while Reliance Communications is the second largest with 113.43 and 86.82 million subscribers, respectively.

Syria’s telecommunications sector, despite developed infrastructure, remains highly regulated with some of the region’s highest tariffs. Still, 7 million Syrians – 38% of the country’s population – own a mobile phone. Syriatel accounts for 55 percent of the market and MTN makes up the rest (Birke, 2009).
The current policy of reforms in Syria’s telecommunications sector is expected to spark increased interest in the country’s telecommunication market. With the number of mobile subscribers in Syria having reached 7.3 million in July 2009, the penetration rate stands at 36.2% (Table 1). Despite good growth, a number of factors continue to inhibit mobile adoption. Some non-urban areas of Syria are not covered by mobile networks and the high cost of local services compared to regional markets is one of the biggest hurdles.

<table>
<thead>
<tr>
<th></th>
<th>Population (in millions)</th>
<th>Subscribers (in millions)</th>
<th>Penetration Rate %</th>
<th>Subscribers Growth % (2002-2009)</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>1152</td>
<td>488.40</td>
<td>42.4</td>
<td>1,726</td>
</tr>
<tr>
<td>Syria</td>
<td>20.17</td>
<td>7.30</td>
<td>36.2</td>
<td>3,749</td>
</tr>
</tbody>
</table>

*Source: Euromonitor International, 2009*

**Research Problem**

Understanding how marketers should interact with their customers and deliver services in electronic environments is of decisive importance (Parasuraman and Zinkhan 2002). The development of mobile services has been intense for years but adoption has not progressed as expected (Carlsson *et al.*, 2006). On the other hand, the development of mobile advertising is still in its early stages and poses challenges both in terms of technology and business implications. Some researchers argue that it can even impede the prevalence of mobile advertising (Facchetti, Rangone, Renga, & Savoldelli, 2005). According to Merisavo *et al.* (2007) the factors that induce consumers to accept mobile devices as an advertising medium are not yet fully understood.

Most of the theories/models of technology adoption have been developed, modified, and extended in the context of USA. Thus, an issue in focus is whether these can be used in other countries, especially in India and Syria. According to Straub & Brenner (1997), culture has often been argued to be a significant construct impacting IT adoption (Straub & Brenner, 1997).

In the light of the above, to understand the factors affecting the adoption of mobile advertising and services, it was thought necessary to carry out the present study.
Objectives of the Study

The study had two broad objectives. *Firstly*, to review literature on mobile advertising and services adoption in the context of theories and models of individual adoption of information technology. *Secondly*, to propose and validate adoption models of mobile advertising and mobile services in the context of India and Syria. Keeping the above two broad objectives in mind, the following specific research objectives were considered for the study:


2. To investigate the factors that influence intention of consumers to adopt mobile advertising and services in India and Syria.

3. To propose and test adoption models for mobile advertising for each of the two countries.

4. To propose and test adoption models for mobile services for each of the two countries.

5. To examine the effect of gender on mobile advertising and service adoption in India and Syria.

6. To investigate the differences between Indian and Syrian respondents for mobile advertising and service adoption.

Current Approaches to Consumer Adoption of Mobile Advertising and Services

A large number of researchers have approached the adoption of mobile advertising and services from the perspective of technology acceptance theories
and models (Amberg, Hirschmeier, & Wehrmann, 2004; Brwon, Caje5, Davies, & Stroebel, 2003; Carlsson, et al., 2005; Carlsson, et al., 2006; He & Lu, 2007; Hsu, Lu, & Hsu, 2007; Hung, Ku & Chang, 2002; Knutsen, 2005; Lee et al., 2002; Park, Yang, & Lehto, 2007; Pagani, 2004; Kwon & Chidambaram, 2000; Pedersen, Methlie & Thorbjornsen, 2002; Samtani, Tze, Hoon & Gin, 2003; Teo & Pok, 2003; Turel et al., 2007). While others have attempted to provide conceptual models of customers’ willingness to accept mobile advertising and services (Bauer, Reichardt, Barnes, & Neumann, 2005; Dickinger et al., 2004; Haghirian et al., 2005; Hsu et al., 2007; Leppäniemi & Karjaluoto, 2005; Turel et al., 2007); conceptualized success factors (Bouwman, Carlsson, Molina-Castillo, & Walden, 2007; Dickinger et al., 2004; Drosos & Giaglis, 2004; Merisavo, et al., 2007; Scharl, Dickinger, Murphy, 2005); examined the effectiveness empirically (Barwise & Strong, 2002; Drossos et al., 2007; Haghirian et al., 2005; Bauer et al., 2005); compared different approaches for mobile advertising (Bulander, Decker, Schiefer, & Kolmel, 2005); examined privacy issues in mobile advertising (Cleff, 2007), categorized mobile marketing campaigns (Pousttchi & Wiedeman, 2006); analyzed the emerging industry (Kavassalis, Spyropoulou, Drossos, Mitrokostas, Gikas, & Hatzistamatiou, 2002); and some have discussed business models (Komulainen, Mainela, Sinisalo, Tähtinen, & Ulkuniemi, 2005). Concepts like relative advantage/usefulness/utility, subjective norm/social value/normative pressure/peer influence/social influence, compatibility, complexity/ease of use, privacy, risk, trust, sacrifice, attitude, control, permission, facilitating condition, self-efficacy, and triability play a key role in approaches adopted by these researchers.

Theories and Models of Adoption

Various models originating from different disciplines have attempted to explain factors that affect innovation adoption and usage. These theories have alternately been used to explain possible adoption and acceptance patterns of emerging new mobile technologies and services among consumers:
1) The Theory of Reasoned Action (TRA) proposed by Fishbein and Ajzen (1975) posits that individual's attitude toward the behaviour and subjective norms surrounding the performance as a direct determinant of behavioural intention.

2) The Theory of Planned Behaviour (TPB) proposed by Ajzen (1985) posits that behavioural intention is a function of an individual's attitude toward the behaviour, the subjective norms surrounding the performance of the behavior, and the behavioral control.

3) Technology Acceptance Model (TAM) proposed by Davis (1989) posits that usefulness and ease of use will have a significant impact on a user's attitude toward using the system and both the attitude and the usefulness will have a significant impact on the behavioural intention.

4) Diffusion of Innovation Theory (DIT) proposed by Rogers (1995) posits that relative advantage, compatibility, complexity, trialability and observability as the most important characteristics of an innovation explaining why it is being adopted.

5) The Unified Theory of Use and Acceptance of Technology (UTUAT) proposed by Venkatesh et al. (2003) posits that performance expectancy, effort expectancy and social influence as direct determinants of intention to use.

Theoretical Framework of the Study

Measurement of behaviour intention as a predictor of future usage behaviour is important as a key dependent variable in order to predict usage behaviour in the future (Ajzen, 1985; Ajzen & Fishbein, 1980; Davis et al., 1989). Thus, in this study, intention to adopt was considered as a key dependent variable.

Factors pertaining to user adoption have been identified from technology acceptance/adoption theories/models (Ajzen & Fishbein, 1980; Ajzen, 1985; Davis, 1989; Rogers, 1983; Venkatesh, et al., 2003) as well as from previous research (Bauer et al., 2005; Carlsson et al., 2006; Hsu et al., 2007; Okazaki, 2007a; Merisavo et al., 2007; Moore & Benbasat, 1991; Sweeney & Soutar, 2001).
Key factors associated with both mobile advertising and services that have been considered include attitude towards mobile advertising and services (Ajzen, 1985; Davis, 1989; Davis et al., 1989; Fishbein & Ajzen, 1975; Taylor & Todd, 1995b); subjective norm (Ajzen, 1991; Ajzen & Fishbein, 1980); perceived usefulness (Davis, 1989; Rogers, 1983, 1995); compatibility (Rogers, 1983, 1995); personal innovativeness (Leung & Wei, 1998; Lin, 1998; Lin & Jeffres, 1998; Li, 2003; Rogers, 1995). The study also considered certain factors associated with mobile advertising only viz. control of mobile advertising (Leppäniemi & Karjaluoto 2005; Nysveen et al., 2005b); attitude towards mass media advertisements (Fishbein & Ajzen, 1975; Taylor & Todd, 1995b); and awareness of mass media advertisements (Okazaki, 2007a).

Therefore, the proposed research model for adoption of mobile advertising model (Figure 1) consists of eight core constructs viz. attitude towards mobile advertising (AA), subjective norm for mobile advertising (SA), perceived usefulness of mobile ads (UA), compatibility with mobile ads (CA), personal innovativeness (IN), control of mobile ads (C), attitude towards mass media advertising (AM), and awareness of mass media ads (AW). Moreover, we considered one dependent variable which is the intention to adopt mobile advertising (IA).

Based on the proposed adoption research of mobile advertising model (Figure 1), the following hypotheses were tested: Whether mobile advertising factors (AA, SA, UA, CA, IN, C, G and AW) have an influence on intention to adopt mobile advertising (IA).

On the other hand, the proposed research model for adoption of mobile services (Figure 2) consists of five core constructs. They include attitude towards mobile Services (AS), subjective norm for mobile service (SS), perceived usefulness of mobile services (US), Compatibility with mobile services (CS) and Personal innovativeness (IN). Moreover, we considered one dependent variable which is the behavioural intention to adopt mobile services (IS). On the other hand, based on the proposed research model for adoption of mobile services the following hypotheses were tested: Whether mobile service factors (AS, SS, US, CS and IN) have an influence on intention to adopt mobile advertising (IS).
Figure 1: The Proposed Research Model for Adoption of Mobile Advertising

- ATTITUDE TOWARDS MOBILE ADS (AA)
- SUBJECTIVE NORM FOR MOBILE ADS (SA)
- PERCEIVED USEFULNESS OF MOBILE ADS (UA)
- COMPATIBILITY WITH MOBILE ADS (CA)
- PERSONAL INNOVATIVENESS (IN)
- CONTROL OF MOBILE ADS (C)
- ATTITUDE TOWARDS MASS MEDIA ADS (AM)
- AWARENESS OF MASS MEDIA ADS (AW)

INTENTION TO ADOPT MOBILE ADVERTISING (IA)

Figure 2: The Proposed Research Model for Adoption of Mobile Services

- ATTITUDE TOWARDS MOBILE SERVICES (AS)
- SUBJECTIVE NORM FOR MOBILE SERVICES (SS)
- PERCEIVED USEFULNESS OF MOBILE SERVICES (US)
- COMPATIBILITY WITH MOBILE SERVICES (CA)
- PERSONAL INNOVATIVENESS (IN)

INTENTION TO ADOPT MOBILE SERVICES (IS)
Research Hypotheses
The hypotheses have been divided into two sections: the first section lists hypotheses related to mobile advertising while the second section lists hypotheses related to mobile services. The hypotheses in each section have further been categorized into three groups. Groups A_A, B_A, and C_A come under mobile advertising section, whereas, groups A_S, B_S, and C_S come under mobile services section. The hypotheses in Groups A_A and A_S contain hypotheses related to testing significant differences between the Indian and the Syrian respondents vis-a-vis each construct. In Groups B_A and B_S, the hypotheses are related to investigating the differences with respect to gender for each construct. Lastly, the hypotheses in Groups C_A and C_S are related to testing of the direct paths between key factors and behavioural intention.

Hypotheses Related to Mobile Advertising
1) Group A_A
These hypotheses test the significant differences between Indian and Syrian respondents with respect to nine constructs (AA, SA, UA, CA, IN, C, AM, AW, & IA) considered in the study.

H_{1AA} Significant differences do not exist between Indian and Syrian respondents regarding attitude towards mobile ads (AA).

H_{2AA} Significant differences do not exist between Indian and Syrian respondents regarding subjective norm for mobile ads (SA).

H_{3AA} Significant differences do not exist between Indian and Syrian respondents regarding perceived usefulness of mobile ads (UA).

H_{4AA} Significant differences do not exist between Indian and Syrian respondents regarding compatibility with mobile ads (CA).

H_{5AA} Significant differences do not exist between Indian and Syrian respondents regarding personal innovativeness (IN).

H_{6AA} Significant differences do not exist between Indian and Syrian respondents regarding control of mobile ads (C).

H_{7AA} Significant differences do not exist between Indian and Syrian respondents regarding attitude towards mass media ads (AM).

H_{8AA} Significant differences do not exist between Indian and Syrian respondents regarding awareness of mass media ads (AW).

H_{9AA} Significant differences do not exist between Indian and Syrian respondents regarding intention to adopt mobile ads (IA).
2) **Group BA**

These hypotheses test the influence of gender on the nine constructs (AA, SA, UA, CA, IN, C, AM, AW, & IA) considered in this study.

- **H1_{BA}** Significant differences do not exist between respondents based on gender regarding attitude towards mobile ads (AA).
- **H2_{BA}** Significant differences do not exist between respondents based on gender regarding subjective norm for mobile ads (SA).
- **H3_{BA}** Significant differences do not exist between respondents based on gender regarding perceived usefulness of mobile ads (UA).
- **H4_{BA}** Significant differences do not exist between respondents based on gender regarding compatibility with mobile ads (CA).
- **H5_{BA}** Significant differences do not exist between respondents based on gender regarding personal innovativeness (IN).
- **H6_{BA}** Significant differences do not exist between respondents based on gender regarding control of mobile ads (C).
- **H7_{BA}** Significant differences do not exist between respondents based on gender regarding attitude towards mass media ads (AM).
- **H8_{BA}** Significant differences do not exist between respondents based on gender regarding awareness of mass media ads (AW).
- **H9_{BA}** Significant differences do not exist between respondents based on gender regarding intention to adopt mobile ads (IA).

3) **Group CA**

The following hypotheses were considered for testing the significance of direct paths between eight key factors (AA, SA, UA, CA, IN, C, AM, & AW) and intention to adopt mobile advertising (IA).

- **H1_{CA}** Attitude towards mobile ads (AA) has direct and significant influence on intention to adopt mobile ads (IA).
- **H2_{CA}** Subjective norm for mobile ads (SA) has direct and significant influence on intention to adopt mobile ads (IA).
- **H3_{CA}** Perceived usefulness of mobile ads (UA) has direct and significant influence on intention to adopt mobile ads (IA).
- **H4_{CA}** Compatibility with mobile ads (CA) has direct and significant influence on intention to adopt mobile ads (IA).
- **H5_{CA}** Personal innovativeness (IN) is positively related to intention to adopt mobile ads (IA).
$H_{6_{CA}}$ Control of mobile ads (C) has direct and significant influence on intention to adopt mobile ads (IA).

$H_{7_{CA}}$ Attitude towards mass media ads (AM) has direct and significant influence on intention to adopt mobile ads (IA).

$H_{8_{CA}}$ Awareness of mass media ads (AW) has direct and significant influence on intention to adopt mobile ads (IA).

**Hypotheses Related to Mobile Services**

1) **Group $A_S$**

The following hypotheses were considered for testing the significant differences between Indian and Syrian respondents regarding six constructs ($A_S$, $S_S$, $U_S$, $C_S$, $I_N$, & $I_S$) of this study.

$H_{1_{AS}}$ Significant differences do not exist between Indian and Syrian respondents regarding attitude towards mobile services ($A_S$).

$H_{2_{AS}}$ Significant differences do not exist between Indian and Syrian respondents regarding subjective norm for mobile services ($S_S$).

$H_{3_{AS}}$ Significant differences do not exist between Indian and Syrian respondents regarding perceived usefulness of mobile services ($U_S$).

$H_{4_{AS}}$ Significant differences do not exist between Indian and Syrian respondents regarding compatibility with mobile services ($C_S$).

$H_{5_{AS}}$ Significant differences do not exist between Indian and Syrian respondents regarding personal innovativeness ($I_N$).

2) **Group $B_S$**

The following hypotheses were considered for testing the significant influence of gender on five constructs ($A_S$, $S_S$, $U_S$, $C_S$, $I_N$, & $I_S$) of this study.

$H_{1_{BS}}$ Significant differences do not exist between respondents based on gender regarding attitude towards mobile services ($A_S$).

$H_{2_{BS}}$ Significant differences do not exist between respondents based on gender regarding subjective norm for mobile services ($S_S$).

$H_{3_{BS}}$ Significant differences do not exist between respondents based on gender regarding perceived usefulness of mobile services ($U_S$).

$H_{4_{BS}}$ Significant differences do not exist between respondents based on gender regarding compatibility with mobile services ($C_S$).

$H_{5_{BS}}$ Significant differences do not exist between respondents based on gender regarding personal innovativeness ($I_N$).
3) Group Cs

The following hypotheses were considered for testing the significance of direct paths between five key factors (AS, SS, US, CS, and IN) and the intention to adopt mobile services (IS).

\[ H1_{CS} \] Attitude towards mobile services (AS) has direct and significant influence on intention to adopt mobile services (IS).

\[ H2_{CS} \] Subjective norm for mobile services (SS) has direct and significant influence on intention to adopt mobile services (IS).

\[ H3_{CS} \] Perceived usefulness of mobile services (US) has direct and significant influence on intention to adopt mobile services (IS).

\[ H4_{CS} \] Compatibility with mobile services (CS) has direct and significant influence on intention to adopt mobile services (IS).

\[ H5_{CS} \] Personal innovativeness (IN) has direct and significant influence on intention to adopt mobile services (IS).

**Research Methodology**

**Sample**

The sample comprised students from public and private institutions located in India and Syria. The institutions covered included four from India viz. Aligarh Muslim University (AMU), Jamia Hamdard University (JH), Asia Pacific Institute of Management (APIM), and Jamia Millia Islamia (JMI) and five from Syria viz. Damascus University (DU), Damascus Open-learning University (DOU), Al-Kalamoon University (KU), Technological Institute of Business Administration and Marketing (TIBAM) and Higher Institute of Business Administration (HIBA). Keeping in mind the difficulties and costs of sampling, absence of sample frame and peculiar nature of research spanning two cultures, it was thought proper to adopt convenience sampling for generating data. Although such samples are not strictly representative, they are less likely to create any systematic bias (Douglas & Craig, 1983). Using university students as matched samples from the two countries also helped control the exogenous variables that might confound results of cross-cultural research (Straub, 1994). Final sample comprised 399 Indian and 500 Syrian respondents. It is to be noted that according to Wimmer & Dominick (2000), for multivariate studies, a sample size of 300 is considered to be good.
Questionnaire Design

Measurement items used in this research have been adapted from adoption theories and related research including that of Agarwal and Prasad (1998), Bauer, Barnes, Reichardt and Neumann (2005), Carlsson, Carlsson, Hyvönen, Puhakainen, and Walden (2006), Hsu, Lu, and Hsu (2007), Leavitt and Walton (1975), Merisavo et al. (2007), Moore and Benbasat (1991), Okazaki (2007a), Sweeney and Soutar, (2001), Sheehan and Hoy (1999, 2000), Davis (1989), Taylor and Todd (1995b), and Venkatesh, Morris, Davis, and Davis (2003). Keeping in mind the objectives of the study, some additional items were developed and included in the research instrument. Structured closed-ended questionnaire designed specifically for the study was personally administered by the researcher on the student respondents in the two countries i.e. India and Syria. English version questionnaire was administered in India whereas Arabic version questionnaire was administered in Syria. The questionnaire originally constructed in English was translated into Arabic language by using a double translation method (Marin & Marin, 1991). Pre-testing of the instrument was done to evaluate the items used in the questionnaire (Hair, Black, Babin, Anderson, & Tatham 2006) and to establish a scale’s content validity (Hair et al., 2003). Pilot survey was then used to test out all aspects of the survey and not just question wording (Ticehurst & Veal, 2000).

Statistical Techniques

The statistical techniques used in this research can be categorised into three groups. The first set of techniques was used to refine and test the reliability and validity of the research instrument by using Cronbach Alpha, inter-item correlation, item-total correlation, and principal component analysis (Hair et al., 2006; Robinson, Shaver & Wrightsman, 1991; Sekaran, 2003). The second set of techniques was used to explore differences between groups by using T-tests and ANOVA (Malhotra, 2005; Pallant, 2005; Sekaran, 2003) and third, Structural Equation Modelling (SEM) was used to estimate interrelated dependence relationships (Hair et al., 2006). This technique is helpful in generating a model of relationships among variables (Hayduk, 1987).
Scale Refinement

During scale refinement 15 items were dropped out from the Indian sample (AA3, AA5, AS3, AS5, UA2, UA3, US1, US4, CA1, CA2, CA5, IN3, AM3, AM4, and AW4); whereas, 17 items were dropped out from Syrian sample (AA4, AA5, AS4, AS5, IA2, IS2, UA1, UA4, US1, US4, CA1, CA2, CA5, IN3, AM3, AM4, and AW3). The retained items are presented in Table 2.

Table 2: Constructs of Mobile Advertising and Services

<table>
<thead>
<tr>
<th>Construct</th>
<th>No. of Items</th>
<th>Items of Mobile Advertising</th>
<th>Construct</th>
<th>No. of Items</th>
<th>Items of Mobile Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>IA</td>
<td>3, 2</td>
<td>IA1, IA2, IA3</td>
<td>IS</td>
<td>3, 2</td>
<td>IS1, IS2, IS3</td>
</tr>
<tr>
<td>AA</td>
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<td>AA1, AA2, AA3</td>
<td>AS</td>
<td>3, 3</td>
<td>AS1, AS2, AS3</td>
</tr>
<tr>
<td>SA</td>
<td>3, 3</td>
<td>SA1, SA2, SA3</td>
<td>SS</td>
<td>3, 3</td>
<td>SS1, SS2, SS3</td>
</tr>
<tr>
<td>UA</td>
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<td>UA1, UA2, UA5</td>
<td>US</td>
<td>3, 3</td>
<td>US2, US3, US5</td>
</tr>
<tr>
<td>CA</td>
<td>3, 3</td>
<td>CA1, CA2, CA3</td>
<td>CS</td>
<td>3, 3</td>
<td>CS1, CS2, CS3</td>
</tr>
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<td>C</td>
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<td>C3, C4, C6</td>
<td>IN</td>
<td>3, 3</td>
<td>IN1, IN2, IN4</td>
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<td></td>
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</tr>
<tr>
<td>AM</td>
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<tr>
<td>AW</td>
<td>3, 3</td>
<td>AW1, AW2, AW3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Results of Hypotheses Testing

The results of hypotheses related to mobile advertising (Table 2) are presented below:
1) In Group A_A, three null hypotheses ($H_{4AA}, H_{5A} \& H_{9AA}$) were rejected out of nine ($H_{1AA} - H_{9AA}$).

2) In Group B_A, five null hypotheses ($H_{4BA}, H_{5BA}, H_{6BA}, H_{8BA} \& H_{9BA}$) were rejected out of nine ($H_{1BA} - H_{9BA}$).

3) In Group C_A (India), two null hypotheses ($H_{5CA} \& H_{7CA}$) were rejected out of eight ($H_{1CA} - H_{8CA}$).

4) In Group C_A (Syria), five null hypotheses ($H_{2CA}, H_{3CA}, H_{5CA}, H_{6CA} \& H_{8CA}$) were rejected out of eight ($H_{1CA} - H_{8CA}$).

**Table 2: Results of Mobile Advertising Hypotheses Testing**

<table>
<thead>
<tr>
<th>Group A_A</th>
<th>Group B_A</th>
<th>Group C_A</th>
</tr>
</thead>
<tbody>
<tr>
<td>$H_{1AA}$</td>
<td>$H_{1BA}$</td>
<td>$H_{1CA}$</td>
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</tr>
<tr>
<td>$H_{2AA}$</td>
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<tr>
<td>NR</td>
<td>R</td>
<td>R</td>
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<tr>
<td>$H_{4AA}$</td>
<td>$H_{4BA}$</td>
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<tr>
<td>$H_{5AA}$</td>
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<td>$H_{8BA}$</td>
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<td>$H_{9BA}$</td>
<td>$H_{9CA}$</td>
</tr>
<tr>
<td>R</td>
<td>R</td>
<td>R</td>
</tr>
</tbody>
</table>

*Note: R = Rejected, NR = Not Rejected*

Results of hypotheses related to mobile services (Table 3) are presented below:

1) In Group A_S, two null hypotheses ($H_{4AS} \& H_{6AS}$) were rejected out of six ($H_{1AS} - H_{6AS}$).

2) In Group B_S, three null hypotheses ($H_{4BS}, H_{5BS} \& H_{6BS}$) were rejected out of six ($H_{1BS} - H_{6BS}$).

3) In Group C_S (India), no null hypothesis was rejected out of five ($H_{1CS} - H_{5CS}$).

4) In Group C_S (Syria), one null hypothesis ($H_{4CS}$) was rejected out of five ($H_{1CS} - H_{5CS}$).

**Table 3: Results of Mobile Services Hypotheses Testing**

<table>
<thead>
<tr>
<th>Group A_S</th>
<th>Group B_S</th>
<th>Group C_S</th>
</tr>
</thead>
<tbody>
<tr>
<td>$H_{1AS}$</td>
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<tr>
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<tr>
<td>$H_{4AS}$</td>
<td>$H_{4BS}$</td>
<td>$H_{4CS}$</td>
</tr>
<tr>
<td>R</td>
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<td>$H_{5AS}$</td>
<td>$H_{5BS}$</td>
<td>$H_{5CS}$</td>
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<tr>
<td>NR</td>
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<td>NR</td>
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<tr>
<td>$H_{6AS}$</td>
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<td>$H_{6CS}$</td>
</tr>
<tr>
<td>R</td>
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</tbody>
</table>

*Note: R = Rejected, NR = Not Rejected*
Key Findings

1) Differences between Indian and Syria Respondents

The results indicate that significant differences existed for (1) compatibility towards advertising, (2) compatibility towards services, (3) awareness of mass media advertising, (4) the intention to adopt mobile service, and (5) the intention to adopt the mobile advertising.

2) Differences between Genders for Indian and Syria Respondents

The results showed that significant differences existed for (1) compatibility with mobile advertising, (2) compatibility with mobile services, 3) personal innovativeness, 4) control (5) awareness of mass media advertising, (6) intention to use mobile advertising, and (7) intention to use mobile services.

3) Mobile Advertising Adoption Model for India (MAAMI)

MAAMI (Figure 3) posits six significant factors influence intention to adopt mobile advertising (IA) viz. (1) attitude towards mobile ads (AA), (2) subjective norm for mobile advertising (SA), (3) perceived usefulness of mobile ads (UA), (4) compatibility with mobile ads (CA), (5) controlling mobile advertising (C) and (6) awareness of mass media ads (AW) significantly influenced intention to adopt mobile ads for India.

Figure 3: Mobile Advertising Adoption Model for India (MAAMI)

Key: —— —— —— = Insignificant paths
          ——— ——— ——— = Significant paths
4) Mobile Advertising Adoption Model for Syria (MAAMS)

MAAMS (Figure 4) posits three significant factors influence intention to adopt mobile advertising (IA) viz. (1) attitude towards mobile ads (AA), (2) compatibility with mobile ads (CA) and (3) attitude towards mass media advertising (AM).

![Figure 4: Mobile Advertising Adoption Model for Syria (MAAMS)]

5) Mobile Services Adoption Model for India (MSAMI)

MSAMI (Figure 5) posits all factors proposed in the conceptual model influence intention to adopt mobile services viz. (1) attitude towards mobile services (AS), (2) subjective norm for mobile services (SS), (3) perceived usefulness of mobile services (US), (4) compatibility with mobile services (CA), and (5) personal innovativeness (IN).

![Figure 5: Mobile Services Adoption Model for India (MSAMI)]
6) Mobile Services Adoption Model for Syria (MSAMS)

MSAMS (Figure 6) posits four significant factors influence intention to adopt mobile services viz. (1) Attitude towards mobile services (AS), (2) Subjective norm for mobile services (SS), (3) Perceived usefulness of mobile services (US), and (4) Personal innovativeness (IN).

**Figure 6: Mobile Services Adoption Model for Syria (MSAMS)**

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**Limitations of the Study**

This study suffers from certain limitations which are discussed below. *Firstly*, a convenience sample of students was used in this research, which limits the generalizability of the findings. *Secondly*, the student respondents, who are more familiar with information technology than the general consumer population, might see mobile advertising and services as more acceptable than other samples. *Thirdly*, this study did not include many socio-demographic variables in our analysis; though the variable gender was considered. Other variables such as level of education, income profile, age, rural-urban, etc. could have been included in our analysis and which could have been of help in predicting the intention and adoption of mobile advertising and services. *Fourthly*, this study did not examine the causality and interrelationship between the factors influencing the intention. *Fifthly*, it did not consider the effect of gender as a moderating variable in the two models considered in the study. *Sixthly*, some amount of bias may have crept in as the samples from the two countries were not identical in terms of educational level. Majority of respondents from India were
enrolled in masters level programmes whereas most of the Syrian respondents were at graduation level. Lastly, although the mobile telecommunication infrastructures in India and the Syria are similar, yet pricing structures are markedly different. The present study does not cover the effect of differential tariff on the adoption intention.

Suggestions for Future Research

Future researchers may consider using a more general and representative population of mobile users and investigate and examine other factors that could further explain consumer's behavioural intention towards the adoption of mobile advertising as well as mobile services.

The present study is cross-sectional; that is, it measures perceptions and intentions at a single point in time. However, perceptions change over time as individuals gain experience (Mathieson et al., 2001; Venkatesh & Davis, 1996). This change has implications for researchers and practitioners interested in predicting mobile advertising and services usage over time. A dynamic model or longitudinal evidence would not only help predict beliefs and behavior over time, but also enhance our understanding of the causality and interrelationships between variables, that are important to individuals' adoption of mobile advertising and services.

Perceived usefulness was found in this study to influence adoption intention. Researchers (Pura, 2005; Standing, Benson & Karjaluoto, 2005; Tsang, Ho & Liang, 2004; Tähtinen & Salo, 2004) have highlighted that the usefulness is related to entertainment and informativeness of the mobile advertising content as well as saving money, saving time and providing useful information. Thus, future research should focus on the content of mobile advertising messages as well as on the benefits associated with using mobile services.

Since compatibility is another key determinant of intention, it is important to ensure that mobile advertising and services fit well with the existing values and lifestyles of consumers. To achieve that, it is important to understand how mobile advertising and services can be made to be more compatible with the adopters' lifestyles and needs. So, additional research is a need in the context of compatibility.