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An Investigation of the Challenges Facing the Mobile Telecommunications Industry in United Arab Emirates from the Young Consumers' Perspective

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An Investigation of the Challenges Facing the Mobile Telecommunications Industry in United Arab Emirates from the Young Consumers' Perspective

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Abstract

The United Arab Emirates (UAE) has one of the highest mobile penetration rates in the world. Nevertheless, recent reports on the performance of mobile companies revealed a decline in revenues obtained by the two main mobile operators in UAE (Etisalat and du). Building on the findings of previous studies which investigated the mobile regulatory frameworks in the Arab region in general and the UAE and their effects on consumers' use of mobile phones, the main aim of this research was to investigate the issues and challenges facing the use of mobile phones from the young consumers' perspective. Data were collected from 533 young Arabs aged (18-29) years old in Dubai via multi-stage cluster sampling using questionnaires which were distributed face-to-face and analysed using descriptive statistics. The findings of this research revealed that the participants think that high prices of mobile handsets, high prices of mobile tariffs and high prices of mobile Internet, market monopoly, restrictions on some mobile services, ethical issues and cultural issues are major challenges affecting their use of mobile phones. The research has several implications for policymakers and mobile companies in UAE.

Keywords: Telecommunications in United Arab Emirates; Mobile phone use; Young Arab customers; ICT policies

1. Introduction

The use of mobile phones has a great potential in the United Arab Emirates (UAE). The benefits gained from the telecommunication sector have exceeded providing advantages to customers only. Mobile technologies help to increase economic growth. The GSMA (2013) report stated that the mobile industry is the second source of wealth after the oil industry in the Gulf countries (GSMA, 2013). Saudi Arabia, Qatar, Kuwait and the UAE form the strongest mobile

markets in the Arab region. The Connect Arab Summit report (2012) stated “*In 2011, the mobile industry was responsible for driving a further USD78 billion of revenue for the economies of the Arab states*” (Connect Arab Summit follow-up, 2012, p.17). Furthermore, the effect of 3G penetrations on GDP per capita has been significant (Williams et al., 2013). In fact, the relationship between GDP level in a developing country and Information and Communication Technologies adoption has been described as a two-way relationship (Abbasi, 2011). On the one hand, the higher the level of GDP in a country, the more people can afford to adopt new technologies, therefore, the higher the level of ICT adoption and use. On the other hand, the increase in the level of ICT adoption usage leads to an increase in GDP and economic growth (Virta et al., 2011; GSMA, 2013). The population of UAE is generally young (Library of Congress, 2007; The Economist Intelligence Unit, 2009; Www.census.gov, 2013; World Bank, 2016b) so young people form the highest segment of customers for mobile companies. There is a lack of recent studies that address the current situation of the mobile telecommunication market in Arab countries (Ameen and Willis, 2016).

Despite the high penetration rate of mobile phones in UAE, recent reports on the performance of mobile companies reported a decrease in revenues since 2015 (Emirates247.com, 2015; Emirates247.com, 2016; Itp.net, 2016; Www.thenational.ae, 2016). This indicates that there are issues hindering an increase in revenues. Previous studies explained that the state of the regulatory environment and the openness of the market can affect prices offered to the customer (Ameen and Willis, 2016). The investigation of ICT adoption and use in the GCC countries which have a high potential due to their high GDP was recommended in previous studies (Rouibah and Hamdy, 2009). Although the UAE’s ICT infrastructure had a significant development in the past few years, it is still behind compared to other developed countries (Alfaki and Ahmed, 2013). The direct effect of the regulatory settings in a certain country on consumers’ use of mobile phones was acknowledged in many previous studies (Sutherland, 2007; Mackay and Weidlich, 2007; Cheng, 2009; Alshurideh et al., 2015). The mobile telecom regulations affect consumers’ use in many aspects including providing a variety of different products, services and offers to customers, pricing regulations, privacy and safety regulations, quality of the mobile services provided (Sutherland, 2007; Cheng, 2009; Alshurideh et al., 2015). Therefore, investigating the consumers’ opinions on the regulatory issues that affect their use of mobile phones is important. Despite the importance of identifying the issues around mobile phone adoption and use, there is a lack of research on the topic of telecommunication operations and ICT policies and their effectiveness in UAE from the customers’ perspective.

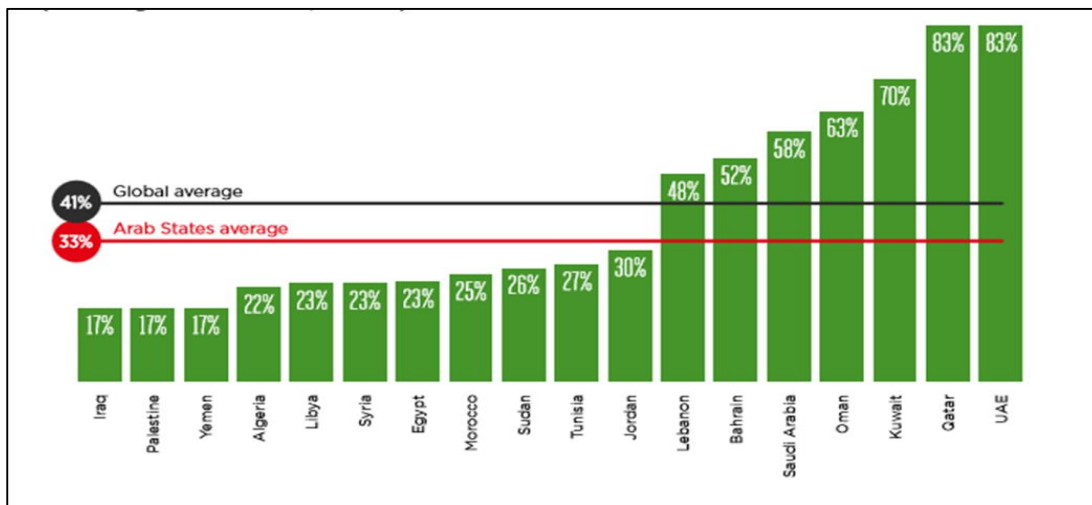
Consumers are the end users of mobile phones. Their views and opinions are crucial for highlighting the major issues related to the regulatory frameworks that can affect the way they use their mobile phones. This research constitutes the first step in a project involving an in-depth investigation of the regulatory issues surrounding mobile phone use in UAE. The main aim of this research is to investigate the issues and challenges facing mobile phone adoption from the young consumers' perspective. Accordingly, the research question is; what are the perceptions of young Arab customers of the challenges facing the mobile telecommunication market which are affecting their use of mobile phones in UAE?

This research addresses specific regulatory issues that are directly related to consumers' use of mobile phones. This research is important as it is the first research that explores the challenges facing an efficient use of mobile phones by young Arab customers to identify the issues surrounding the use of mobile phones in UAE from the young consumers' (who form the largest segment of the population) perspective rather than the perspective of telecommunication companies or policymakers in UAE to begin with.

2. Background

The population of UAE in 2015 was (9.4m) with a GDP per capita-PPP (Purchasing Power Parity) is (604.96 USD billion) (ASDA'A Burson-Marsteller, 2015, p.29). The mobile cellular subscription (per 100 people) was 178 in 2014 in UAE (World Bank, 2016a). 4G networks were launched in UAE with a fast network connection (GSMA, 2015). According to the GSMA's (2015) report, UAE has the highest smartphone penetration level in the Arab states. Smartphone penetration level is 83% (GSMA, 2015) as shown in figure (1) below.

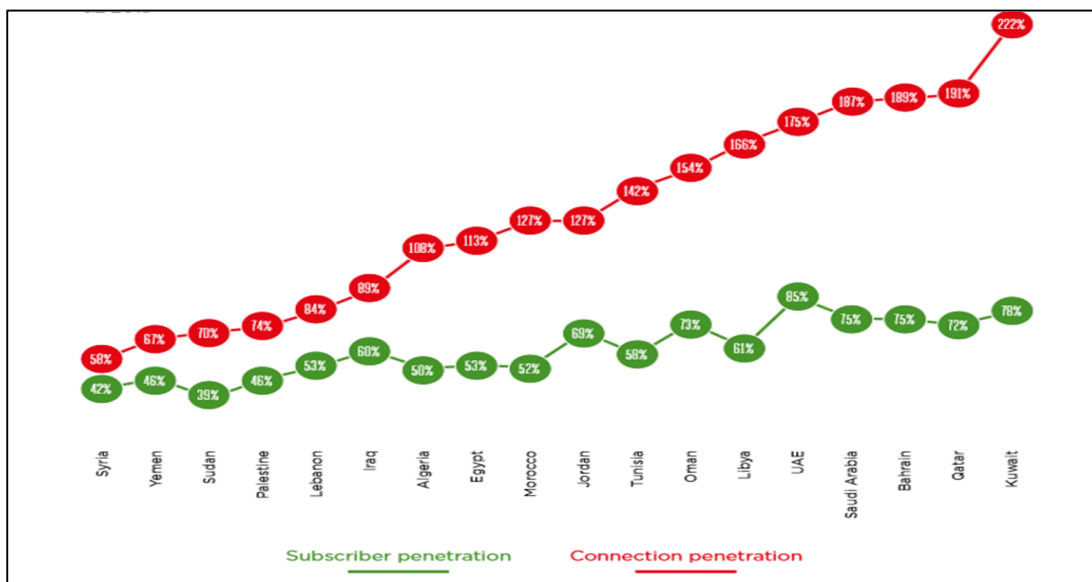
Figure (1): Arab States smartphone adoption



Source: GSMA, 2015, p. 12

In UAE, the percentage of mobile connections is 175%, while the percentage of mobile unique subscribers is 85% (GSMA, 2015) as shown in figure (2) below.

Figure (2): Mobile penetration in the Arab States by country



Source: GSMA, 2015, p.8

The percentage of unemployment among young Arabs aged 15-24 years old is 9.9% (ASDA 'A Burson-Marsteller, 2014, p.28). UAE was selected as 'the country young Arabs like to live in'

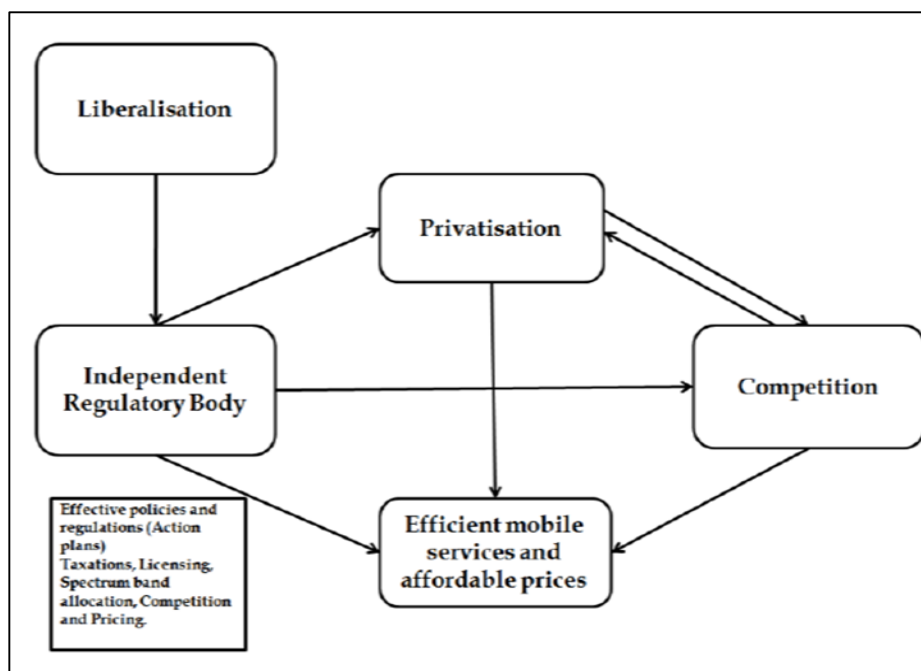
as they see it as an ideal country with a strong economy and outstanding infrastructure (ASDA'A Burson-Marsteller, 2014, p. 18).

3. Regulatory issues in the mobile telecommunication industry in UAE

Ziani et al., (2015) investigated mobile phone and Internet usage by young Arabs (university students) in the GCC countries in a recent study. More specifically, how they obtain the news via their mobile phones. The sample included university students from Bahrain, Kuwait, Saudi Arabia, UAE and Oman. The authors found that young Arabs in UAE are more active in using their mobile phones to access the Internet than other GCC countries including; Bahrain, Kuwait, Saudi Arabia, UAE and Oman (Ziani et al., 2015).The authors found that mobile phones acted as a communication tool between Arabs and a platform for news sharing (Ziani et al., 2015).

Ameen and Willis (2016) proposed a regulatory framework (figure (3)) which showed that liberalisation, having an independent regulatory body, privatisation and competition are all important factors required for providing efficient mobile services and affordable prices which directly affect consumers' use. Increasing competition in the market and removing government's control, restrictions and barriers is crucial.

Figure (3): Telecom Regulatory Framework in the Arab States



Source: Ameen and Willis, 2016

In the UAE, Etisalat is still the dominant and major player in the telecommunication market followed by du which started operating in 2005 (Diab, 2010). Etisalat's operations exceed the UAE to 16 other countries (even outside the Arab region) (Ellam, 2008). Furthermore, Etisalat's operations extend beyond mobile operations to fixed lines and other services (Ellam, 2008) including the Internet, leased and other data services (TRA, 2013). There is a high number of customers in UAE who demand pre-paid rather than post-paid contract services (Diab, 2010).

The telecom market in UAE is a duopoly between two major companies (Ellam, 2008). The main mobile operators in the UAE are Etisalat (Emirates Telecommunication Corporation) and du (Emirate Integrated Telecommunication Company PJSC) (Kamli, 2012). In 2011, Etisalat had a larger mobile market share than du in the mobile market in UAE (Kamli, 2012). In addition to this duopoly, the Ministry of Finance owns 60% of Etisalat (Ellam, 2008). A number of small licences were granted between 2010 and 2013. However, Etisalat and du remain the dominants (TRA, 2014). This indicates a high level of market monopoly. International call minutes have increased with a decrease in SMS and Multimedia Messaging Service (MMS) between 2012 and 2013. In fact, according to the reports created by TRA in 2013 and 2014, the use of SMS and MMS has been decreasing since 2009. ITU recently allowed the two companies Etisalat and du to provide pre-paid packages without obtaining regulatory approval. This allows two Mobile Network Virtual Operators (MNVOs) namely Virgin and Axiam Telecom to start offering their services but the lack of competition remains. Nevertheless, the two companies, Etisalat and du are still mainly owned by the government. This lack of competition can have an adverse effect on consumers' use as it limits the choices the individual consumer has in terms of offers and promotions. More importantly, it directly affects the pricing strategies and the final prices offered to customers and it limits the choices of offers consumers can have.

The prices of mobile phones and their services are high. However, due to the high GDP level, a significant number of individuals own more than one mobile device (Sabri et al., 2011). Ellam (2008) stated "*A royalty fee of 50% of the pre-tax profit makes Etisalat the second largest contributor to the UAE government budget after oil revenues*" (p.11). High fees are paid for taxes and regulatory aspects by Etisalat and Du (Ellam, 2008). The high royalty fees paid by

Etisalat and du can be one of the main reasons for the high prices of mobile phones and mobile services offered in UAE.

The Telecommunication Regulatory Authority (TRA) is the regulatory body in UAE. TRA is responsible for managing the frequency spectrum in UAE as well as being responsible for all regulatory and policy procedures (TRA, 2013). Nevertheless, it is still controlled by the government. The liberalisation of the network in UAE is required as the network is owned by the government. It should be clear whether these funds are required, if so, they should be spent on the mobile network infrastructure as it should be considered as a major industry. The International Telecommunication Union (2013) report also stated that there is a need to promote the private sector investment as well as allowing foreign investments. In particular, the allowance of foreign investment will increase innovation in the sector in different countries and making it open to new, more advanced technologies.

There are restrictions on Voice Over Internet Protocol (VOIP) applications such as Skype and Viber in order for Etisalat and du to keep dominating the market (Freedomhouse, 2013, p.575). A deal took place between the UAE telecom companies and Apple to disable FaceTime from all iPhones in UAE (Freedomhouse, 2015).

In 2012, the UAE allocated 700 MHz spectrum to mobile (Connect Arab Summit follow-up, 2012). However, this approach was not taken by other Arab countries. The International Telecommunication Union (2013) indicates a need for careful allocation of the spectrum between different technologies using different methods including; clearing some bands which are used for outdated services and “*reframing*” which is (according to the report) “*Relocating existing users to a different band; including compensation and relocation*”(International Telecommunication Union, 2013, p.60). The GSMA’s (2015) report indicated that there is a need for increasing the spectrum level as the use of mobile services increases more in Arab countries.

The use of mobile phones in the UAE and the GCC countries in general can have many ethical issues due to users misusing their mobile phones like using them as cheating tools in or to talk to others while driving (Sabri et al., 2011) or using them to have secret relationships between

males and females (Hameededdin, 2010), the advantages of using them far exceed these disadvantages. Some mobile services integrated within the mobile device such as the mobile camera that were misused were thought of as a threat to the privacy of other people, especially females in the GCC countries, specifically in Saudi Arabia (Ibahrine, 2009). Mobile phones can be used for texting and exchanging images and videos between males and females, who according to the culture of some Arab countries, in particular the GCC countries should be separated (Ibahrine, 2009). Although new laws were introduced to ban such activities in some of these countries for example Saudi Arabia (Srivastava, 2005; Murugaboopathi et al.,2013), these incidents are still occurring. This forms a threat to the structure of the Arab culture. The use of mobile phones in certain situations forms a threat and it can create certain fears to protect the culture and Islamic religion.

4. Methodology

In order to understand the studied phenomenon and since the main aim of this research is to examine young Arab customers' perceptions of the regulatory issues affecting their use of mobile phones in UAE, a questionnaire was distributed. A total of 533 questionnaires were distributed face-to-face to young Arabs aged 18-29 years old in households in the city of Dubai. There were two main reasons for targeting young Arabs (actual users) aged 18-29 years old. First, the population of UAE is generally young (Library of Congress, 2007; The Economist Intelligence Unit, 2009; Wwww.census.gov, 2013; World Bank, 2016b) which makes selecting this age group more representative of the population. Second, young people are usually more interested in using technology than older people (Alkhunaizan and Love, 2012). The questionnaires were distributed using multi-stage cluster sampling in which three districts were selected in the city of Dubai (as it is the largest city in UAE) from a table of listed numbers using the proportion to size method.

This research adopted probability sampling by using multistage cluster sampling. Multistage cluster sampling is useful for the case of this research since the research covered a wide geographical area. Multistage cluster sampling is suitable for research taking place in large geographical areas (Bryman and Bell, 2011, p. 182). Dubai is divided into communities. Each of these communities includes sub-communities. The selected communities were Al-Twar, Jumeirah and Al-Barshaa based on the Probability Proportional to Size (PPS) method. All sub-

communities that constitute these communities were included and the questionnaires were distributed there to individuals aged 18-29 years old.

Yamane's (1967) formula was used for calculating the sample size in Dubai. The formula used to calculate the sample size for each country was Yamane's (1967, p. 886) formula. The formula is as follows;

$$n = \frac{N}{1 + N * (e)^2}$$

Where:

n is the sample size

N is the population size

e is the precision level (in this case it is 5% (0.05))

Confidence interval 95%

The total population of Dubai in 2014 was 2,213,845 people (www.citypopulation.de, 2014)

$$n = 2,213,845 / 1 + 2,213,845 \times (0.05)^2$$

$$n = 2,213,845 / 5,534$$

$$n = 400 \text{ participants}$$

When calculating the sample size, researchers must consider the issue of non-response rate (Bryman and Bell, 2011, p.188). In general, the minimum response rate should be 75% (Fowler, 2002, p.42). In addition to the sample size above, 25% was added to cover the possible non-response rate in order to reach a minimum of 400 completed questionnaires. The final distributed questionnaires in the three communities in Dubai was $(100/75 \times 400 = 533)$. Accordingly, the total number of questionnaires distributed in all sub-communities in these three communities was 533 questionnaires. The questionnaire was distributed face-to-face in households. A full ethical approval was obtained prior to the data collection. After the data screening process, a total of 437 fully completed questionnaires were obtained. The questionnaire included questions asking respondents about their demographic information, whether they own a mobile phone and the number of years they had their mobile phones for.

This was followed by another section asking them whether they agree that there are challenges facing their use of mobile phones in UAE. Then, a question asking them to select the challenges that they think are present as shown in the next section. The collected data were analysed using descriptive statistics in SPSS software.

5. Results

Respondents were born in different countries. A total of 268 respondents (61.3% of the total number of respondents) were born in UAE (table 1). The rest of the respondents were born in other Arab countries including; Egypt 56 respondents (12.8% of the total respondents), Iraq 10 respondents (2.3% of the total respondents), Jordan two respondents (0.5% of the total respondents), Kuwait 30 respondents (6.9% of the total respondents), Lebanon 4 respondents (0.9% of the total respondents), Morocco two respondents (0.5% of the total respondents), Qatar 45 respondents (10.3% of the total respondents) and finally Saudi Arabia 20 respondents (4.6% of the total respondents).

Table (1): Countries in which the respondents were born

	Frequency	Percent	Valid Percent	Cumulative Percent
UAE	268	61.3	61.3	61.3
Egypt	56	12.8	12.8	74.1
Iraq	10	2.3	2.3	76.4
Jordan	2	.5	.5	76.9
Kuwait	30	6.9	6.9	83.8
Lebanon	4	.9	.9	84.7
Morocco	2	.5	.5	85.1
Qatar	45	10.3	10.3	95.4
Saudi Arabia	20	4.6	4.6	100.0
Total	437	100.0	100.0	

In terms of the length of time they have lived in UAE, the number of years was varied from three years to 29 years (as shown in table (2) below). (60.4%) of them have lived in UAE for 18 years or more and (39.6%) have lived there for less than 18 years. Some of them lived in UAE since they were born while others were born in other Arab countries but they were living

there for some time. However, none of these responses were excluded from the research due to the nature of the population of UAE, having a high number of people from other countries. Furthermore, obtaining information from a resident of a country for three years who is a user of a mobile phone is still considered sufficient to obtain valuable information.

Table (2): The length of time respondents were living in Dubai

	Frequency	Percent	Valid Percent	Cumulative Percent
3.00	41	9.4	9.4	9.4
4.00	34	7.8	7.8	17.2
5.00	25	5.7	5.7	22.9
6.00	18	4.1	4.1	27.0
7.00	15	3.4	3.4	30.4
8.00	9	2.1	2.1	32.5
9.00	5	1.1	1.1	33.6
10.00	13	3.0	3.0	36.6
11.00	2	.5	.5	37.1
12.00	4	.9	.9	38.0
14.00	4	.9	.9	38.9
15.00	3	.7	.7	39.6
Valid 18.00	61	14.0	14.0	53.5
19.00	67	15.3	15.3	68.9
20.00	24	5.5	5.5	74.4
21.00	48	11.0	11.0	85.4
22.00	21	4.8	4.8	90.2
23.00	4	.9	.9	91.1
24.00	1	.2	.2	91.3
25.00	8	1.8	1.8	93.1
26.00	8	1.8	1.8	95.0
27.00	6	1.4	1.4	96.3
28.00	9	2.1	2.1	98.4
29.00	7	1.6	1.6	100.0
Total	437	100.0	100.0	

In terms of the respondents' age, the sample was distributed almost evenly among the two age groups (as shown in table (3) below), with a total of (226) respondents (51.7%) aged 18-22

years old and a total of (211) respondents (48.3%) aged 23-29 years old. In terms of gender, the sample was also split nearly evenly between the two groups. There was a total of (231) male respondents (52.9%) and a total of (206) female respondents (47.1%) (as shown in table (4)). In terms of education, there was a high number of respondents with high education levels in UAE's sample samples. (11.4%) of the respondents were at a high school level, (17.6%) of the respondents were at or had a diploma, while a high number of respondents were at the bachelor degree level or bachelor degree holders (55.4%), (7.6%) were at a master degree level and finally (8%) were at a PhD degree level (table (5)).

Table (3): Age of respondents

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 18-22	226	51.7	51.7	51.7
23-29	211	48.3	48.3	100.0
Total	437	100.0	100.0	

Table (4): Gender of respondents

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Male	231	52.9	52.9	52.9
Female	206	47.1	47.1	100.0
Total	437	100.0	100.0	

Table (5): Education level

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid High School	50	11.4	11.4	11.4
Diploma	77	17.6	17.6	29.1
Bachelor Degree	242	55.4	55.4	84.4
Master Degree	33	7.6	7.6	92.0
PhD Degree	35	8.0	8.0	100.0
Total	437	100.0	100.0	

In terms of employment, the highest percentage of respondents were employed (53.3%), followed by students (34.6%) as shown in table (6) below. A small number of participants were self-employed (5.3%) and a small number of them were unemployed and looking for work (5.3%), while only (1.4%) of them were unemployed and not looking for work and only one respondent had selected 'other' (0.2%).

Table (6): Employment

	Frequency	Percent	Valid Percent	Cumulative Percent
Employed	233	53.3	53.3	53.3
Self-employed	23	5.3	5.3	58.6
Unemployed and currently looking for work	23	5.3	5.3	63.8
Valid Unemployed and not looking for work	6	1.4	1.4	65.2
Student	151	34.6	34.6	99.8
Other	1	.2	.2	100.0
Total	437	100.0	100.0	

Only (31.1%) of the respondents had an annual income less than \$10,000, (14.6%) of the respondents had an annual income of \$10,000 to \$19,000, (20.8%) of them had an annual income of \$20,000 to \$29,000, (21.5%) had an annual income of \$30,000 to \$39,000 per year. A smaller number of respondents indicated that their annual income was \$40,000 to \$49,000 (only 4.8% of the respondents) and (7.1%) of the respondents had an income of \$50,000 or more per year as shown in table (7) below.

Table (7): Income levels

	Frequency	Percent	Valid Percent	Cumulative Percent
Less than \$10,000	136	31.1	31.1	31.1
\$10,000 to \$19,000	64	14.6	14.6	45.8
Valid \$20,000 to \$29,000	91	20.8	20.8	66.6
\$30,000 to \$39,000	94	21.5	21.5	88.1
\$40,000 to \$49,000	21	4.8	4.8	92.9

\$50,000 or more	31	7.1	7.1	100.0
Total	437	100.0	100.0	

In terms of the respondents' use of mobile phones, the results revealed that all respondents were users of mobile phones, with a high level of experience (68%) of them had more than ten years experience in using mobile phones. Also, (13%) of them had less than ten years experience in using mobile phones, (11.4%) of them had less than seven years experience in using mobile phones. Only a small number of them had less than five years experience (3.9%) and less than three years experience (3.7%) as shown in table (8) below.

Table (8): Experience level in using mobile phones

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Less than 3 years	16	3.7	3.7	3.7
Valid Less than 5 years	17	3.9	3.9	7.6
Valid Less than 7 years	50	11.4	11.4	19.0
Valid Less than 10 years	57	13.0	13.0	32.0
Valid More than 10 years	297	68.0	68.0	100.0
Total	437	100.0	100.0	

The results of the analysis of the collected data showed that nearly half of the respondents from UAE (47.1% of the respondents) thought that there are some challenges and problems in mobile phone use while (52.9%) answered 'No' to this question (table (9)). The results showed that restrictions on mobile services was the main problem as (26.5%) of all respondents selected this option. The second problem selected by the respondents was the high prices of mobile phones (24.5%), followed by high prices of mobile Internet (22.4%), market monopoly by the provider (22%), high prices of tariffs by the provider (21.5%), ethical issues (20.4%), bad Internet connection (17.4%), cultural issues (17.6%), lack of regulations (12.1%), finally poor ICT infrastructure which was the least selected option by the respondents (7.6%) and none of them selected 'Other'.

Table (9): Descriptive statistics/ Challenges Facing mobile phone adoption and usage

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes	206	47.1	47.1	47.1
No	231	52.9	52.9	100.0
Total	437	100.0	100.0	

	YES	NO		YES	NO
POORICT	7.60%	92.40%	BADNET	17.40%	82.60%
LACKOFREG	12.10%	87.90%	MONOPOLY	22.00%	78.00%
HIGHPRICETAR	21.50%	78.50%	RESTMOBAPPS	26.50%	73.50%
HIGHPRICEMOB	24.50%	75.50%	ETHICISSUES	20.40%	79.60%
HIGHPRICEINT	22.40%	77.60%	CULTUISSUES	17.60%	82.40%
			OTHER	0.00%	100.00%

6. Discussion

The results showed that nearly half of the respondents agreed that challenges still exist for mobile phone adoption and use in UAE. These issues were namely; the lack of government regulations and policy making, high prices of tariffs by the provider, high prices of mobile handsets, high prices of mobile Internet by the providers, market monopoly and being restricted from certain mobile applications including Voice Over IP applications such as Skype, Viber and FaceTime.

When participants were asked whether they think that there are any challenges facing mobile phone adoption and use in UAE, nearly half of them (47%) agreed that challenges exist. The highest number of them selected restrictions on mobile services as one of the main challenges facing mobile phone adoption. Market monopoly was also one of the main challenges selected by participants. Previous reports showed that there is no freedom of information in UAE (Freedomhouse, 2013, p.756) and that restrictions are in place on Voice-Over-Internet Protocol (VOIP) applications to maintain the control of the two main companies (du and Etisalat) which are owned (directly and indirectly) by the government (Freedomhouse, 2013,p.757). This was

also confirmed in previous reports (Freedomhouse, 2013; 2015). The two telecommunication companies have restricted access to many mobile phone applications including Skype and Viber. Face time was also disabled in iPhones in UAE by Apple as part of their deal with the telecommunication companies in UAE (Freedomhouse, 2015). However, in June (2015), Etisalat decided to allow (20%) of its shares to be owned by foreign investors (Freedomhouse, 2015). Only a small number of respondents selected poor ICT infrastructure, followed by lack of regulations which was selected by a small number of respondents.

The results in this research showed that many respondents who come from UAE and other Arab countries but residents in Dubai found that the high prices of mobile tariffs, high prices of mobile phones and high prices of the Internet are challenges facing mobile phone use. Surprisingly, some of the respondents selected bad network as a challenge too but the UAE has already launched 4G network which is fast and available to users there (GSMA, 2015). A slightly higher number of respondents selected ethical issues than cultural issues. The results of this research also revealed that prices of mobile handsets and mobile services are important even for users in rich countries like the UAE. The findings of this research highlighted that young Arab customers in UAE are concerned with the restrictions on mobile services, high prices of mobile tariffs, mobile Internet and mobile handsets. Since these issues are linked to other regulatory issues and mobile market structures, policymakers and mobile companies are required to work together to improve the situation.

The results showed that the respondents are generally aware of the issues surrounding them in terms of the mobile market structure and the regulations affecting their use. This awareness increases the pressure on policymakers and mobile companies to find feasible solutions and more flexible but effective regulations that can increase customer satisfaction. Accordingly, the revenues of mobile companies operating in UAE will increase.

7. Limitations and future work

The data collected in this research were obtained from young customers aged 18-29 years old only. Future studies can collect data from customers from other age groups to compare their results with the results of this research. Also, the research is concerned with urban areas only. Future research can collect data from rural areas to understand the perceptions of customers there.

Despite the importance of investigating young Arab consumers on mobile phone use (the end users), a more in-depth investigation of the issues raised in this research is still required by collecting data from policymakers and mobile companies in UAE. A major area for future work which will build upon the primary results obtained in this research is to collect data from policymakers, government representatives and mobile companies to find solutions to the issues highlighted in the literature and confirmed by the participants. It is within the researchers' intentions to take the results of this research and conduct in-depth interviews with mobile companies and policymakers in UAE for further investigation.

8. Implications and conclusions

The implications of this study are not limited to the increase of mobile phone penetration as it is already high in UAE but to support an efficient use and a better exploitation of all services available through mobile phones as well as increasing revenues obtained by mobile companies. The findings of this research have practical implications for telecommunication companies and policymakers in UAE to help them to increase customer satisfaction. There is certainly a need for an increased competition in the mobile market as well as decreasing government's control over this market. There is also a need for careful planning of policies and regulations especially in terms of taxes paid by the telecommunication companies. Also, setting the right regulations in relation to ethical and cultural issues and ensuring that customers are fully aware of them is required. The liberalisation of the market and the inclusion of private mobile companies that can operate freely in the market is crucial for better pricing and providing a variety of offers and promotions to customers. These factors have significant effects on prices of mobile handsets and mobile Internet which were identified by the respondents as major issues in mobile phone adoption and use. Furthermore, telecommunication companies are required to allow access to VOIP services such as Skype, Viber and FaceTime. An understanding of the effect these issues have on customers' satisfaction and use of mobile phones and services is crucial.

This research confirms what was found in previous literature and highlights that young Arab customers are in fact aware of the regulatory issues and the current structure of the mobile market in UAE.

References

- Abbasi, J. (2011) Information and Communication Technology in the Middle East: Situation as of 2010 and Prospective Scenarios for 2030. CASE Network Studies and Analyses
- Alfaki, I. And Ahmed, A. (2013) 'Technological readiness in the United Arab Emirates towards global competitiveness' *World Journal of Entrepreneurship, Management and Sustainable Development*, 9 (1), pp.4-13
- Alkhunaizan, A. and Love, S. (2012) What drives mobile commerce? An empirical evaluation of the revised UTAUT model. *International Journal of Management and Marketing Academy*, 2 (1), pp. 82-99
- Alshurideh, M., Bataineh, A., Alkurdi, B. and Alasmr, N. (2015) Factors Affect Mobile Phone Brand Choices – Studying the Case of Jordan Universities Students, 8 (3), pp. 141-155
- Ameen, N. and Willis, R. (2016) 'Current and Future Challenges Facing Mobile Phone Use in the Arab World' *International Journal of Embedded Systems*, 4 (1), pp.1-6
- ASDA'A Burson-Marsteller (2014) Arab Youth Survey [online] <http://arabyouthsurvey.com/wp-content/themes/arabyouth-english/downloads/AYS-Whitepaper-en.pdf> (accessed 24/11/2014)
- ASDA'A Burson-Marsteller (2015) Arab Youth Survey [online] <http://arabyouthsurvey.com/media/wp-content/themes/arabyouth/english/downloads/2015-AYS-White-Paper-EN.pdf> (accessed 20./03/2016)
- Bryman, A. and Bell, E. (2011) *Business Research Methods*. Oxford University Press
- Cheng, R. (2009). Virgin mobile joins rivals in lowering prices. *Wall Street Journal – Eastern Edition*, 253(83), B5-B5.
- Connect Arab Summit follow up (2012) Connect Arab Summit follow up 2012 [Online] <http://www.itu.int/en/ITU->

D/Conferences/connect/Documents/Post%20Connect%20Arab%20Summit%20Report%20(English).pdf (accessed 06/05/2014)

Diab, S. (2010) Telecommunication broadband explosion [online] http://www.rasmala.com/equity_report/Rasmala_Telecommunications_Sector_Report_12May2010.pdf (accessed 25/03/2014)

Ellam, I (2008) 'UAE Telecom Sector' [online] Al Mal Capital <http://content.argaam.com.s3-eu-west-1.amazonaws.com/244db147-3f5c-41d0-a3be-e7aadcb5a6f5.pdf> (accessed 16/05/2014)

Emirates247.com (2015) Du Q3 profit falls 12.3%; mobile subscribers drop [online] <http://www.emirates247.com/business/economy-finance/du-q3-profit-falls-12-3-mobile-subscribers-drop-2015-11-03-1.609157> (accessed 16/08/2016)

Emirates247.com (2016) Etisalat and du's profits decline in Q1 [online] <http://www.emirates247.com/business/corporate/etisalat-and-du-s-profits-decline-in-q1-2016-04-26-1.628427> (accessed 16/08/2016)

Fowler, F.J. (2002) Survey Research Methods. 3rd edition, Sage Publications, Newbury Park, CA.

Freedomhouse (2013) Freedom on the Net 2013' A Global Assessment of Internet and Digital Media [online] https://freedomhouse.org/sites/default/files/resources/FOTN%202013_Full%20Report_0.pdf (accessed 03/12/2015)

Freedomhouse (2015) 'Freedom on the Net 2015, United Arab Emirates' [online] https://freedomhouse.org/sites/default/files/resources/FOTN%202015_United%20Arab%20Emirates.pdf (accessed 03/12/2015)

GSMA (2013) Arab States Mobile Observatory 2013 [online] http://www.gsma.com/publicpolicy/wpcontent/uploads/2012/03/GSMA_MobileObservatory_ArabStates2013.pdf (accessed 04/05/2014)

GSMA (2015) 'The Mobile Economy: Arab States 2015' [online] <https://gsmaintelligence.com/research/?file=7910cff3a3e6f96219cd50e31d6d3e1c&download> (accessed 20/12/2015)

Hameededdin, N. (2010) New Communication Technologies and Social Change: Cell Phone Effects on the Saudi Family [online] <http://www.american.edu/soc/communication/upload/hameededdin2010.pdf> (accessed 22/04/2014)

Ibahrine, M. (2009) Mobile Communication and Sociopolitical Change in the Arab World [online] *Quaderns de la Mediterrania*, 11 http://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&frm=1&source=web&cd=1&ved=0CDEQFjAA&url=http%3A%2F%2Fwww.iemed.org%2Fpublicacions%2Fquaderns%2F11%2F8_mobile_communication.pdf&ei=SaZBU_KfNo2jhgfZpICgCA&usq=AFQjCNGockwHdT9lhMBDYxkJIxxDyfh88A&bvm=bv.64125504,d.d2k (accessed 06/04/2014)

International Telecommunication Union (2013) Telecom/ICT regulatory reform evolution: Achievements and Way Forward ARAB Region Report [Online] https://www.itu.int/ITU-D/arb/Special_About/2013/Arab-Book/Arab-Book-PDF-E.pdf (accessed 12/05/2014)

Itp.net (2016) UAE telco du profits fall [online] <http://www.itp.net/606426-uae-telco-du-profits-fall> (accessed 16/08/2016)

Kamli, A. (2012) Arab ICT Use and Social Networks Adoption: Report [online] <http://www.kacst.edu.sa/en/about/publications/Other%20Publications/Arab%20ICT%20Use%20Report%202012.pdf> *Madar Research and Development* (accessed 14/05/2014).

Library of Congress (2007) COUNTRY PROFILE: UNITED ARAB EMIRATES (UAE) [online] <https://www.loc.gov/rr/frd/cs/profiles/UAE.pdf> (accessed 16/08/2016)

Mackay, M. M., and Weidlich, O. (2007). Case study: Conducting a web-based survey of mobile content usage by Australian mobile phone customers. *International Journal of Mobile Marketing*, 2(1), 28-33.

- Murugaboopathi, G., Sankar, G. And Praveen, T. (2013) Impact of Mobile Phones on Human Life Cycle. *International Journal of Emerging Science and Engineering (IJESE)*, 1 (6), pp. 61-63, ISSN: 2319–6378
- Rouibah, K., and Hamdy H., (2009) Factors Affecting Information Communication Technologies Usage and Satisfaction: Perspective From Instant Messaging in Kuwait. *Journal of Global Information Management*, 17 (2), pp. 1-29.
- Sabri, K., Al-Nakeeb, A. and Alrawi, K. (2011) Mobile Technology and the Gulf society: Perception and Attitude. In: Abdel-Wahab, A. and El-Masry, A. (2011) ‘Mobile Information Communication Technologies Adoption in Developing Countries’ IGI Global, Chapter 13, pp. 195-204
- Srivastava, L. (2005) Mobile phones and the evolution of social behaviour. *Behaviour and Information Technology*, 24 (2), pp. 111 – 129
- Sutherland, E. (2007). The regulation of the quality of service in mobile networks [online] *Info.*, 9(6), 16-23. <http://dx.doi.org/10.1108/1463669071082766> (accessed 17/08/2016)
- The Economist Intelligence Unit (2009) The GCC in 2020 The Gulf and its People A report from the Economist Intelligence Unit Sponsored by the Qatar Financial Centre Authority [online] <http://graphics.eiu.com/upload/eb/Gulf2020part2.pdf> (accessed 16/08/2016)
- TRA (2013) UAE Telecommunications Sector: Developments and Indicators, 2009-2012 [Online] Fourth Annual Sector Review file:///C:/Users/HP/Downloads/fourth_Annual_Market_Review.pdf (accessed 16/05/2014)
- TRA (2014) UAE Telecommunication Sector Development and Indicators, 2010-2013 [Online] Fifth Annual Sector Review file:///C:/Users/HP/Downloads/5th-Annual-Market-Review-Final%20(1).pdf (25/01/2015)
- Virta, H., Puumalainen, K, and Tuppuru, A. (2011) Mobile Telephony and Economic growth in developing economies. In: Abdel-Wahab, A. and El-Masry, A. (2011) Mobile Information Communication Technologies Adoption in Developing countries’ IGI Global, Chapter 11, pp. 161-171

- Williams, C., Strusani, D., Vincent, D. Kovo, D. And Llp, D. (2013) The Economic Impact of Next-Generation Mobile Services: How 3G Connections and the Use of Mobile Data Impact GDP Growth [online]in:Bilbao-Osorio, B., Dutta, S. And Lanvin, B. (2013) The Global Information Technology Report 2013: Growth and Jobs in a Hyperconnected World. chapter 1.6 http://www3.weforum.org/docs/WEF_GITR_Report_2013.pdf (accessed 14/05/2013)
- World Bank (2016a) Mobile cellular subscriptions (per 100 people) [online] <http://data.worldbank.org/indicator/IT.CEL.SETS.P2> (accessed 12/03/2016)
- World Bank (2016b) Population ages 15-64 (% of total) [online] <http://data.worldbank.org/indicator/SP.POP.1564.TO.ZS?locations=AE> (accessed 16/08/2016)
- Www.census.gov (2013) International Data Base Population Estimates and Projections Methodology [online] <http://www.census.gov/population/international/data/idb/estandproj.pdf> (accessed 16/08/2016)
- Www.thenational.ae (2016) Du extends earnings slump as government royalties, mobile revenue decline hit Q2 results [online] <http://www.thenational.ae/business/telecoms/du-extends-earnings-slump-as-government-royalties-mobile-revenue-decline-hit-q2-results> (accessed 18/08/2016)
- Yamane, Taro. (1967) Statistics: An Introductory Analysis. 2nd edition, New York: Harper and Row.
- Ziani, A.Elareshi, M. and Gunter, B. (2015) The Use of Mobile Phone and the Internet in Obtaining Local News in GCC Regions: University Students' Perspectives. *Donnish Journal of Media and Communication Studies*, 1 (1), pp.001-010