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Exploring Factors Affecting Fixed Broadband Adoption in Oman: Pilot Study

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Abstract

This study intends to examine various attitudinal, normative and control factors influencing users' behavioural intention to adopt fixed broadband in Oman. A Quantitative method based on survey approach relating to the attitudinal, normative, and control variables has been utilized. Regression analysis is conducted to test the role of numerous variables on users' behavioural intentions to adopt fixed broadband in Oman. The results of the study revealed that the behavioural intention of Omani users towards fixed broadband adoption is significantly affected by Primary Influence, Hedonic Outcomes, Self-Efficacy, Perceived Ease of Use and Relative advantage. Considering the slow growth of fixed broadband in Oman, this study provides policy makers and broadband service providers in Oman with an insight understanding about factors that can have an influence on users' intention to adopt the broadband technology. Theoretically, this paper is useful for providing baseline data for studies on broadband adoption in Oman in general and its impact on information science in specific.

Keywords: behavioural Intention, Broadband, Adoption, Fixed broadband

1.0   Introduction

Broadband technology is considered as an essential component of the knowledge-based economy (Lee & Brown, 2008). Access to both fixed and mobile broadband is becoming an indicator of this economy. The widespread use of broadband (BB) has economic and social impacts in terms of business opportunities and information access. BB industry is driving innovation, community, economic development, education, health care and e-services (Ferro, Leonardis, & Dadayan, 2007). It is established as a requirement for bridging the digital divide (Mossberger, Tolbert, & McNeal, 2008) and for its beneficial effects on Gross Domestic Product (GDP) and attracting foreign investment (Ferro et al., 2007; Qiang, Rossotto, & Kimura, 2009). Besides, it is an indicator of a country's "e-readiness" (Choudrie & Dwivedi, 2004).

While the deployment and diffusion of fixed broadband are advanced in developed and leading developing countries, as observed from the literature review, the developing countries are experiencing slow growth of fixed broadband adoption and diffusion. This is also clearly the case in Oman, which is lagging behind other regional and developed countries in terms of fixed broadband adoption and diffusion (OBNS, 2013). The government of Oman is nevertheless aware of the economic and social benefits of broadband for residents and businesses in general and Oman's digital society in particular. Hence, it launched its broadband strategy (OBNS) in 2013 to develop a national broadband network across Oman. Accordingly, the government of Oman has allocated massive investment for developing the network to promote broadband provision and increase demand (OBNS, 2013).

Since the introduction of fixed broadband in Oman in 2004, its adoption and diffusion have been slow, and its demand among Omani users has not increased as expected. The slow growth of broadband in Oman was attributed to factors from both the supply and the demand sides. On the supply side, the slowness is due to lack of BB infrastructure, limited affordability of fixed BB, limited reach of the access networks, high prices compared to international standards and slow BB speed (ONBS, 2013). According to ONBS (2013), availability of fixed broadband access networks is (64%) for ADSL technology and (1 %) for fiber optic technology. The penetration rate of fixed broadband is (44.01 %) per household, which represents (4.51) per (100) people compared to the global average of (13.07) (ITU, 2014). On the demand side, ONBS has identified the following four primary barriers to broadband use in Oman: digital illiteracy, lack of local contents, the cost of services and lack of security awareness reduces the value of BB for Omani users.

Although both the supply and demand side are responsible for slow BB diffusion in Oman, previous studies have argued that the diffusion of BB is more "demand constrained" than "supply constrained" (Choudrie and Dwivedi, 2006; Haring, Rohlfs & Shooshan,2002). Despite that, users are the major contributors to stimulating demand for broadband; there is a lack of research in this area within the context of Oman. Oman's national broadband strategy does not, however, include an in-depth investigation of the demand side from users' perspectives.

It is important to investigate the factors affecting Omani users' decision and behavioural intention to adopt and use broadband to encourage further BB adoption and diffusion and remove the main obstacles that constrain future demand. Moreover, understanding the determining factors may help to facilitate both broadband adoption in Oman in general and the application of BB services such as e-government.

Therefore, this study aimed to examine empirically the factors affecting the behavioural intention of Omani users towards the adoption of fixed broadband by addressing the following research questions:

RQ1: What are the factors that determine the decision of Omani users towards broadband adoption?
RQ2: what is the relationship associated with the factors and intention to adopt broadband among Omani users?
RQ3: Which factors have a greater influence with Omani users towards broadband adoption?
This study comprises of five sections. The first one provides an overview followed by a brief discussion on the theoretical background and the research model. The methodology of the study will be discussed in the third section. After that, the fourth section presents a detailed interpretation of findings. The last section provides the conclusions and the contributions of the study.

2.0 Theoretical Framework

The theoretical constructs included in this research study was adapted from the model of Choudrie & Dwivedi (2004). The review of the various theories and models of broadband adoption indicated the validity of using the model of Choudrie & Dwivedi (2004) to investigate the adoption of BB. This model is based on Theory of Planned Behaviour (TPB) and the Model of Adoption of Technology in Household (MATH). Various studies have adapted theory of planned behaviour as a base method to investigate the adoption of information technology (Ajzen, 1985, 1988, 1991; Ajzen & Fishbein, 1986). According to this theory, the individuals' usage of information technology is driven by their behavioural intentions. It composed of three constructs namely Attitudes (Personal belief towards the IT usage outcomes), Subjective (Belief towards behaviors of IT usage on expectations of other people) and Perceived Behavioral Control (personal belief towards IT capability usage).

The Model of the Adoption of Technology in the Household (MATH) was utilized by (Venkatesh & Brown, 2001) to investigate the adoption of PC in the US. MATH consists of three primary constructs, which are attitudinal belief, normative belief, and control belief. Attitudinal belief is described by three elements which are Utilitarian Outcomes, Hedonic Outcomes, and Social Outcomes. Primary and Secondary influences explain the normative belief construct while the control belief constructs encompassed perceive ease of use, perceived knowledge, and perceived cost.

The initial assumption made by this study is that broadband adoption (dependent variable) is affected by three independent variables: attitudinal, normative and control. These constructs were applied throughout the investigation to assess whether these factors also have an influence on the behavioural intention of broadband users in the Oman context. So far, few studies have undertaken this type of investigation in relation to developing countries in general and the GCC countries in particular.

This study, though, examines the impact of the following constructs on Omani users' behavioural intention (BI) towards broadband adoption (Fig.1):
1. Attitudinal: describes the individual's perception towards broadband technologies, It is measured by Relative Advantage (RA); Utilitarian Outcomes (UO); Hedonic

Outcomes (HO); and Service Quality (SQ) (Ooi, Sim, Yew, & Lin, 2011; Dwivedi & Irani, 2009; Dwivedi, 2007).

2. Normative: describes the social influences that may affect the intention to adopt broadband and is measured by Primary Influences (PI), and Secondary Influences (SI) (Ooi, Sim, Yew, & Lin, 2011; Dwivedi & Irani, 2009; Dwivedi, 2007).

3. Control : this affects the ability to initiate and maintain a broadband subscription and is measured by Perceived Knowledge (PK), Perceived Ease of Use (PEOU), Perceived Cost (PC), Self-Efficacy (SE) and Facilitating Conditions Resources (FCR) (Ooi, Sim, Yew, & Lin, 2011;Dwivedi & Irani, 2009; Dwivedi, 2007).
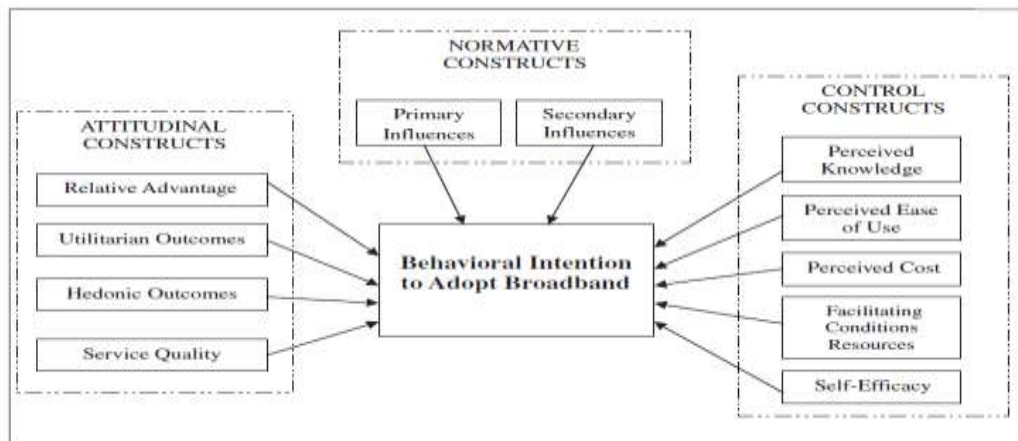

Fig 1: The Research Model (Adapted from Choudrie & Dwivedi,2004)

3.0 Methodology

Qualitative method approach was utilized to investigate the adoption of fixed broadband within the context of Oman.

3.1 Study Population and Sampling

The population of the study is composed of households of undergraduates of Sultan Qaboos University (SQU). Undergraduates numbered (13175) in total (excluding foundation year students), distributed by the college, gender and geographical location in Oman based on statistics of the Deanship of Admissions and Registration in fall 2015. SQU has been selected because it is the only major public university and the largest university in Oman, and comprises students from the different governorates of Oman who represent different cultural backgrounds. Thus, the outcomes of this study can be generalized to represent the households population in Oman.

According to Dwivedi (2008), good sampling requires selecting a subset of a population that is representative of the whole population. Stratified sampling technique has been utilized to choose the sample of the pilot study from the target sample of the populations. The selection was based on the gender, academic discipline and geographical location in Oman. For this pilot study, a total 200 samples have been selected representing (15%) from the sample of the actual study. According to Baker (1994), the appropriate sample size of a pilot study is 10-20 of the sample size of the actual study.

 3.2   Data Collection Methods

Based on a systematic review of published works on broadband adoption, a self-administered questionnaire was considered to be the most appropriate primary instrument for this study to collect the required data from the target population within the limits of resources and time. Survey method using questionnaire is commonly used for studying technology adoption issues (Dwivedi, 2008). Also, the questionnaire has the advantage of covering a wide area of the target population and offering a standardized form of responses (Holmström, Ketokivi, & Hameri, 2009). It addresses the issue of information reliability by eliminating and reducing the differences in asking or presenting the questions (Holliday, 2007)

The literature review provided an initial understanding of broadband adoption as a basis for the development of the questionnaire.

4.0 Data Analysis and Research Findings

Out of 200 questionnaires distributed by email, a total of 54 responses were obtained with a response rate of 27%. The response rate achieved in this study is comparable with recent studies on broadband adoption (Ooi, Lin, et al., 2011; Mugeni, Wanyembi, & Wafula, 2012; Manzoor, 2014; Nyondo, Anatory, & Mtonyole,2014) in Malaysia, Kenya, India, and Tanzania respectively. SPSS software was used to analyze the data obtained from responses to the questionnaires by conducting descriptive, reliability tests and regression analysis.

4.1 Reliability Test

The internal consistency of the measures was examined using Cronbach's coefficient. According to Hinton et al. (2004), there are four cut-off points for reliability, which includes (0.90 and above) for excellent reliability, (0.70-0.90) for high reliability, (0.50-0.70) for moderate reliability and (0.50 and below) for low reliability.

As stated in the table (1), Cronbach's α for this study varied between 0.952 for utilitarian outcomes and 0.620 for behavioural intention. Perceived Cost, self-efficacy and service quality factors possessed excellent reliability with Cronbach's values of (0.925), (0.915) and (0.907) respectively. Other factors demonstrated high reliability were hedonic outcomes (0. 863), facilitating condition resources (0.859), relative advantage (0.843), perceived ease of use (0.799), secondary influence (0.744) and perceived knowledge (0.733). Primary influence implied moderate reliability with Cronbach's value of 0.664.

The values above of Cronbach alpha for this study suggested internal consistency with high to excellent reliability for all constructs except for primary influence and behavioural intentions, which possessed moderate reliability.

Factors	N of Items	Cronbach's Alpha	Type
RA: Relative Advantage	6	.843	High reliability
HO: Hedonic Outcomes	5	.863	High reliability
UO: Utilitarian Outcomes	11	.952	Excellent reliability
SQ: Service Quality	4	.907	Excellent reliability
PI: Primary influence	3	.664	Moderate reliability

Factors	N of Items	Cronbach's Alpha	Type
SI: Secondary Influence	2	.744	High reliability
PK: Perceived Knowledge	3	.733	High reliability
PEOU: Perceived Ease Of Use	3	.799	High reliability
SE: Self-Efficacy	3	.915	Excellent reliability
PC: Perceived Cost	3	.925	Excellent reliability
FCR: Facilitating Condition Resources	5	.859	High reliability
BI: Behavioural Intention	3	.620	Moderate reliability

Table 1. Reliability values (N=54)

4.2 Descriptive Statistics

The following sections will describe the mean and standard deviations of the dependent and independents factors which have been used to measure the factors affecting the adoption of fixed broadband in Oman.

Descriptive statistics for BI:

In this study, BI to subscribe to broadband was measured using three questions. Table (2) illustrates the mean and standard deviations of aggregate measures for the three constructs used to measure the BI. Respondents of the survey showed strong agreement for all the items used to measure the BI with an average score (M = 3.899, SD = 0.918503). Respondents showed high interest to switch to fiber optic technology in the future which scored the maximum (M= 4.2264, SD=.77563)

Factors	Detailed Factors	Mean	Std. Deviation	Rank
Behavioural Intention (BI)	Scale_BI	3.899	0.918503	1
	FBI1	3.6604	1.01798	
	FBI2	3.8113	.96190	
	FBI3	4.2264	.77563	

Table 2. Descriptive Statistics for behavioural intention (N=54)

Descriptive Statistics for Attitudinal Factors:

Table (3) illustrates the mean and standard deviations of the aggregated items of four constructs used to measure the attitudinal factors. Utilitarian outcomes constructs expressed substantial agreement with the highest average score for the aggregate measure (M=4.026, SD=0.888). Hedonic outcome construct was ranked the second highest score among the attitudinal factors (M=3.977, SD=0.904). Following hedonic outcome, relative advantage expressed moderately strong agreement by the survey respondents (M=3.704, SD=1.035). The least ranked construct in the attitudinal construct segment was the service quality construct with the lowest average mean score of 2.783.

Factors	Detailed Factors	Mean	Std. Deviation	Rank
RELATIVE ADVANTAGE (RA)	**Scale_RA**	**3.704**	**1.035117**	**3**
	FRA1	3.4340	1.10086	
	FRA2	3.6226	1.06023	
	FRA3	3.4528	1.06637	
	FRA4	3.7925	1.14956	
	FRA5	3.9057	.94593	
	FRA6	4.0189	.88775	
HEDONIC OUTCOME (HO)	**Scale_HO**	**3.977**	**0.903586**	**2**
	FHO1	3.7736	1.03108	
	FHO2	3.8113	.98169	
	FHO3	4.0566	.79458	
	FHO4	4.1698	.75284	
	FHO5	4.0755	.95774	
UTILITARIAN OUTCOME (UO)	**Scale_UO**	**4.026**	0.888021	**1**
	FUO1	4.2500	.78902	
	FUO2	4.1923	.90832	
	MUO3	4.1154	.89997	
	FUO4	4.0962	.91308	
	MUO5	3.7692	.98250	
	MUO6	3.8269	.98461	
	MUO7	3.8269	.94394	
	MUO8	4.1731	.73354	
	FUO9	3.7692	.96234	
	FUO10	4.0577	.82637	
	FUO11	4.2115	.82454	
SERVICE QUALITY (SQ)	**Scale_SQ**	**2.783**	**1.173923**	**4**
	FSQ1	2.6226	1.24385	
	FSQ2	3.1132	1.06807	
	FSQ3	2.7547	1.14196	
	FSQ4	2.6415	1.24181	

Table 3.Descriptive Statistics for Attitudinal Constructs (N=54)

Descriptive Statistics for Normative Factors:

Table (4) illustrates the mean and the standard deviation of aggregate measures for two constructs used to measure the normative factors. Primary influence construct scored the highest for the aggregate measure (M=3.378, SD=0.961393). This indicates that the influence perceived from a social group (i.e., family members, friends, colleagues) has a significant effect on the users' decision towards broadband adoption in Oman.

Factors	Detailed Factors	Mean	Std. Deviation	Rank
	Scale_PI	**3.378**	0.961393	**1**

Primary Influence	FPI1	3.0192	1.01923	
	FPI2	3.9615	.92803	
	FPI3	3.1538	.93692	
Secondary Influence	**Scale_SI**	**3.189**	1.121755	**2**
	FSI1	3.0755	1.12402	
	FSI2	3.3019	1.11949	

Table 4. Descriptive Statistics for Normative Constructs

Descriptive Statistics for Control Factors:

Table (5) illustrates the mean and the standard deviation of aggregate measures for five constructs used to measure the control factors. Perceived cost (PC) exhibit high agreement followed by Perceived Ease of Use (PEOU) with an average mean of 4.226 and 3.994 respectively. Then, the control constructs, namely Self-Efficacy ($M = 3.956$, $SD = 0.76109$), Facilitating Conditions Resources ($M = 3.634$, $SD = 0.88902$) and Perceived Knowledge ($M = 3.568$, $SD = 1.029153$)

Factors	Detailed Factors	Mean	Std. Deviation	Rank
PK	**Scale_PK**	**3.568**	**1.029153**	**5**
	FPK1	3.6296	.91726	
	FPK2	3.5556	1.09315	
	FPK3	3.5185	1.07705	
PEOU	**Scale_PEOU**	**3.994**	**0.718137**	**2**
	FPEOU1	3.9811	.66479	
	FPEOU2	3.9623	.78354	
	FPEOU3	4.0377	.70608	
SE	**Scale_SE**	**3.956**	**0.76109**	3
	FSE1	3.9057	.79091	
	FSE2	3.9623	.73281	
	FSE3	4.0000	.75955	
PC	**Scale_PC**	**4.226**	**0.822167**	1
	FPC1	4.2264	.80004	
	FPC2	4.1887	.87830	
	FPC3	4.2642	.78816	
FCR	**Scale_FCR**	**3.634**	**0.88902**	4
	FFCR1	3.6038	.86246	
	FFCR2	3.7736	.75042	
	FFCR3	3.5849	.79503	
	FFCR4	3.3396	1.15930	
	FFCR5	3.8679	.87789	

Table 5. Descriptive Statistics for Control Factors

4.3 Measuring User's Behavioral Intention

Ordinary Least Squares Regression was employed with behavioural intention as the dependent variable and eleven variables as predictor variables. The predictor variables

comprise Relative Advantage (RA), Utilitarian outcomes (UO), Hedonic outcomes (HO), Service quality (SQ), Primary influence (PI), Secondary Influence (SI), Perceived knowledge (PK), Perceived ease of use (PEOU), Self-efficacy (SE), Perceived cost (PC) and Facilitating Condition Resources (FCR) .

The adjusted R^2 for previous models used to investigate the behavioural intention varied between 0.32 and 0.555. As stated in tables (6 and 7), this study reported R^2 of 0.468 (F= 5.075, p< 0.001) which can be compared with earlier models (Davis, Bagozzi, & Warshaw, 1989; Manzoor, 2014) and the guiding model of broadband adoption (Dwivedi, 2005) that expressed R^2 of 0.43. The predictive power of the regression model R^2 of this study suggests an appropriate level of explained variance (Hinton et al., 2004). This indicates that the independent variables postulated in this study are important for understanding the behavioural intention towards the adoption of fixed broadband in Oman.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.763a	.583	.468	.74906

a. Predictors: (Constant), PC, PI, HO, SQ, PK,RA, SI, FCR, UO, PEOU, SE

Table 6. Model Summary

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	31.326	11	2.848	5.075	.000a
	Residual	22.444	40	.561		
	Total	53.769	51			

a. Predictors: (Constant), PC,PI, HO, SQ, PK, RA, SI, FCR, UO, PEOU, SE

b. Dependent Variable: BI

Table 7. ANOVA[b]

Out of eleven predictor variables used in the validated model, five of the variables found to be very significant in explaining the variation in the behavioural intention BI (Table). These are PEOU (β=-1.481, *p*< 0.001), SE (β=1.301, *p=0.003)*, PI (β =.406, *p=0.038)*,HO (β =.343*, p=0.006)* and RA(β =-.335, *p=0.018)*.

The size of β suggests that PEOU had the largest impact on explaining of variations of users' BI (Table 8) to adopt broadband, followed by SE, PI, HO, and RA. Other factors UO, SQ, SI, PK, PC, and FCR, were found insignificant in explaining the BI towards broadband adoption by Omani households.

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.959	1.031		1.900	.065
	RA	-.121	.049	-.335	-2.461	.018
	HO	.146	.050	.343	2.927	.006
	UO	-.026	.020	-.239	-1.280	.208
	SQ	.071	.048	.216	1.484	.146
	PI	.251	.117	.406	2.150	.038
	SI	-.044	.073	-.090	-.603	.550
	PK	.161	.090	.262	1.782	.082
	PEOU	-.661	.144	-1.481	-4.595	.000
	SE	.810	.251	1.301	3.221	.003
	FCR	.030	.062	.109	.485	.630
	PC	.010	.073	.016	.139	.890

a. Dependent Variable: FBI

Table 8. Regression Analysis: Coefficients (Dependent variable: Broadband Intention)

5.0 Discussion

This study aimed to examine the factors that have a significant impact on users' behavioural intention towards fixed broadband adoption in Oman. The finding of this study found to be comparable with the previous studies in broadband adoption within the context of developing countries. In comparison to Bangladesh (Dwivedi et al., 2006), Pakistan (Dwivedi et al., 2007), Malaysia (Ooi, Lin, et al., 2011), Kenya (Mugeni, Wanyembi, & Wafula, 2012), India, (Manzoor, 2014) and Tanzania (Nyondo, Anatory, & Mtonyole,2014) ; our results show that five constructs namely Perceived ease of use (PEOU), Self-Efficacy (SE), Primary Influences (PI), Hedonic Outcomes (HO) and Relative Advantage (RA) have similar results. Meanwhile, other factors Utilitarian Outcomes (UO), Service Quality (SQ), Secondary Influence (SI), Perceived Knowledge (PK), Perceived Cost (PC) and Facilitating Condition Recourses (FCR) were found to be contradicted as comparing to the same studies. Further explanations of our results are provided in the following section.

The findings of the study exhibit that perceived ease of use (PEOU) has the largest impact on influencing BI to adopt broadband. This suggests that it is essential to encourage users to enhance their skills to use computers, the internet, nomadic and wireless devices. Considering that the adoption of broadband is attributed to factors from both supply and demand sides, the role of government from a demand perspective is to identify and provide relevant skills in using a computer, the internet and other related emerging technologies and applications (i.e. e-government and e-commerce) to the citizen to reduce the digital illiteracy. IT education in schools and universities has a major role to play in increasing digital literacy. Such strategy is presented in Oman in terms of information technology courses for school students from grade 5-10 and IT

courses for university students; in addition to national IT training given by Information Technology Authority (ITA) with a presence of community knowledge centers. Community knowledge centers are 20 centers covering the governorates of Oman, and 50% of them are allocated to women. Although such strategy is in place by ITA which considers the key enabler of broadband in Oman from the demand side, the PEOU showed a significant relationship with intention to use broadband services. For this purpose, the policy makers in Oman should take into consideration the review of digital literacy programs to take account of smartphones and tablets. Growth in the use of smartphones and tablets, where the level of digital literacy required is low, could help significantly in getting people in Oman to use the broadband Internet.

Through our findings, self-efficiency (SE) has been positively associated with the user's intention to adopt broadband in Oman. The significant influence of self-efficacy makes it resemble the work of the anchor factor to encourage the BI among Omani household users toward adopting broadband as it concerns individual beliefs on how eligible and confident when they are exploring broadband services. Which means the higher level of user's confidence who are confident with the technology they acquire, the more likely they will adopt the broadband services. This study postulated that households' users had the capability to use the broadband services efficiently. Also, household users started to use the internet since 1997 when it was first launched in Oman. Thus, most of them have the computer knowledge, and they are more prepared to use the broadband services.

From our results, primary influence (PI) was found to be a third influential factor towards BI broadband adoption. As Table (8) showed that PI has larger influence as compared with secondary influence. This represents the fact that influence perceived from peers and family is most influential than secondary sources (newspaper, news or magazines). As user express high agreement in social media (Facebook, Twitter, and YouTube) as stated in the table (4), Service providers should take into consideration the effect of these channels which are frequently used among youngster to attract customers and to influence others to switch to adopt broadband as well.

Our finding also indicated that hedonic outcomes were found to have a significant impact on BI to adopt broadband while utilitarian outcomes UO was not. This provides an indication that the Omani users adopt broadband for hedonic reasons rather than utilitarian reasons. In this sense, users believe that using the broadband internet not only for its utilitarian benefits such as work performance or task completion but also for more towards satisfying their pleasurable experience and emotional needs. This factor has been the most influential factor in broadband adoption in the UK as a developed country and   South Korea as a leading developing country. In South Korea that is the world's highest broadband adoption, the broadband was promoted successfully by utilizing online gaming as a killer application which attracted users to subscribe to broadband services (Lee, O'Keefe, & Yun, 2003). For this reason, developing countries should identify in their strategy to promote the adoption and diffusion rate of broadband the applications and contents that are leading motivators for users to subscribe to broadband internet. This study showed high agreement by Omani users on hedonic factors and specifically on social networking, online gaming, video, music, and sharing of digital media. This could be the 'killer' factor for broadband service providers in Oman to increase the demand rate by focusing on entertainment-based services.

Relative advantage of fixed broadband over its complements mobile broadband (Williamson, 2010) found to be very influential in explaining variations in BI of

broadband adoption. Considering the elements of RA construct, notably provides faster access to the internet, high download/upload speed, mobility at home and unlimited access to the internet, policy makers and regulators have an important role in enabling an appropriate environment to foster the broadband internet. Introducing national broadband strategy and competition environment would improve the broadband services in terms of speed, quality of services, cost and reliability. Specifically, the broadband strategy would play a significant role in broadband development by setting clear targets to accelerate the broadband infrastructure development from the supply side and promote its adoption and usage from the demand side.

5.0 Conclusion and Implications

5.1   Conclusion
This study investigated the factors affecting the fixed broadband adoption by households in Oman. Based on the findings and discussion, it can be concluded that eleven factors were postulated to be correlated to the BI of broadband in Oman. The Statistical analysis showed that out of these factors, five found to have a significant impact on the BI, namely, Primary Influence, Hedonic Outcomes, Self-Efficacy, Perceived Ease of Use and Relative advantage. Out of the theses five factors, PEOU construct had the largest impact in the explanation of variations of BI.
The findings of the study are significant in providing the stakeholders of broadband in Oman attention to the important factors affecting the BI to encourage further adoptions of broadband.

5.2   Practical Contribution
The outcomes of this study generate important issues that may help the stakeholders of the broadband market in Oman including the policy makers, regulators and service providers in understanding the users' adoption of broadband. Policymaker could benefit from the findings of this study to update the national broadband strategy and stimulate the demand side of broadband in Oman. There are five important factors, which are attributed to fixed broadband adoption from demand perspective, which are Primary Influence, Hedonic Outcomes, Self-Efficacy, Perceived Ease of Use and Relative advantage

5.3   Theoretical contribution

This study provides several implications in the field of knowledge with regard to broadband adoption. It validated the proposed model adapted from the previous models such as the TPB and MATH to achieve an in-depth understanding of households' acceptance of the fixed broadband adoption in Oman. Furthermore, it examined the relationship between broadband adoption and the eleven predictor variables of the model which are the RA, UO, HO, SQ, PI, SI, PK, PEOU, SE, PC and FCR. This study in the context of Oman will provide a baseline data for the study of broadband adoption for other developing countries in general and The Gulf Cooperation Council (**GCC**) countries in Specific.

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