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Mohammed Hisyam Selamat
University Utara Malaysia, hisyam1349@uum.edu.my

Yogesh K. Dwivedi
Swansea University, ykdwivedi@gmail.com

Muhammad Syahir Abd Wahab
University Utara Malaysia, syahir@uum.edu.my

Mohd Amir Mat Samsudin
University Utara Malaysia, amir@uum.edu.my

Michael D. Williams
Swansea University, m.d.williams@swansea.ac.uk

See next page for additional authors

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Authors
Mohammed Hisyam Selamat, Yogesh K. Dwivedi, Muhammad Syahir Abd Wahab, Mohd Amir Mat Samsudin, Michael D. Williams, and Banita Lal

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Factors Affecting Malaysian Accountants' Broadband Adoption and Use Behavior

Mohamad Hisyam Selamat
College of Business, Universiti Utara Malaysia, Sintok, Malaysia
hisyam1349@uum.edu.my

Yogesh K. Dwivedi
School of Business and Economics, Swansea University, Swansea, UK
ykdwivedi@gmail.com

Muhammad Syahir Abd Wahab
College of Business, Universiti Utara Malaysia, Sintok, Malaysia
syahir@uum.edu.my

Mohd Amir Mat Samsudin
College of Business, Universiti Utara Malaysia, Sintok, Malaysia
amir@uum.edu.my

Michael D. Williams
School of Business and Economics, Swansea University, Swansea, UK
m.d.williams@swansea.ac.uk

Banita Lal
Nottingham Business School, Nottingham Trent University, Nottingham, UK
banita.lal@ntu.ac.uk

ABSTRACT

The aim of this study was to examine the factors affecting the adoption of broadband Internet in a developing country context by focusing upon Malaysia. The data relating to these factors was collected using a survey approach. The findings of this paper suggest that constructs such as relative advantage, utilitarian outcomes, service quality and primary influence are important factors affecting Malaysian accountants' broadband adoption and Internet use behaviour. The paper proceeds to outline the research limitations and implications.

Keywords

Adoption, accountant, broadband, consumers, factors, impact, Malaysia, usage

INTRODUCTION

Although broadband diffusion is considered to be an important policy issue in many countries around the globe, there are few studies that have been conducted in order to understand this critical technology management issue within the context of developing countries. The reason for this lack of broadband adoption studies from the developing country perspective could be attributed to the late rollout of broadband services, slow infrastructure development, low tele-density and slow rate of adoption. Since developing countries such as Malaysia are currently lagging in terms broadband adoption -as the current level of adoption is approximately 11% (Keong, 2007) compared to developed countries where adoption rates typically exceed 50%- it is important to undertake research that may help to explain why this is the case, and where an understanding of the determining factors may help to accelerate the process of consumer adoption in developing nations such as Malaysia.

The deployment and adoption of broadband is still in its infancy in Malaysia. A recently published Malaysian broadband market report highlighted the problem of slow broadband adoption amongst the general Malaysian population and the possible barriers inhibiting its widespread diffusion. The report stated that:

"*Malaysia has been heavily promoting itself as an Information Technology hub in the Asia region. On the back of the Multimedia Super Corridor project, high-tech companies have been at least establishing a presence in Malaysia. But the wider community has not really been embracing technology. There has been surprisingly little interest in broadband Internet, the national broadband penetration being only slightly over 3% at the end of 2006*" (Anonymous, 2007).

The problem of slow broadband adoption has been taken seriously by the Malaysian government as they are continuously revising their policy and changing the target growth according to the adoption rate. Recent news from ZDNet Asia further highlights the slow growth of broadband in Malaysia and its consequences:

"*The slow uptake of broadband services has led the Malaysian government to revise its earlier optimistic penetration targets, prompting industry observers to call for market reform. The government had previously set a target of 75 percent adoption*

rate by 2010, but only 11.7 percent of Malaysia's 5.5 million households currently have broadband access, up from 7 percent in 2005. This disappointing state of affairs recently prompted a Cabinet Committee chaired by Deputy Prime Minister Najib Tun Razak to revise the target down to 50 percent by 2010" (Keong, 2007).

Given the situation of Malaysia in terms of the current adoption rate, it was regarded that understanding the effect of the potential factors upon consumers' broadband adoption and usage may help to encourage further diffusion and management of high speed Internet. Therefore, the aim of this study was: *to understand the factors affecting the broadband adoption behavior of Malaysian accountants*. The reasons for selecting accountants sample is provided in methodology section.

Having introduced the topic of interest, Section 2 provides a brief review of relevant literature followed by a brief discussion on the theoretical basis for examining the adoption of broadband in Section 3. Section 4 then provides a brief discussion of the research methods utilized for data collection. The findings are presented in Section 5. Finally the conclusions, including the limitations and contributions of this research, are provided in Section 6.

LITERATURE REVIEW

Recently, a few studies on broadband adoption were undertaken to investigate influential factors in developing economies such as Bangladesh, India, Kingdom of Saudi Arabia and Pakistan. The study on broadband adoption in Bangladesh concluded that attitude, primary influence, secondary influence and facilitating conditions resources are important factors for explaining consumers' behavioral intentions to adopt broadband (Dwivedi et al. 2007a). The key findings of the study on the Kingdom of Saudi Arabia were that the factors with the main influence on attitude towards adoption of broadband were usefulness, service quality, age, usage, type of connection and type of accommodation (Dwivedi and Weerakkody 2007). Khoumbati et al. (2007) examined the factors affecting consumers' adoption of broadband in Pakistan. This study concluded that primary influence, facilitating conditions resources, cost and perceived ease of use are significant factors for explaining consumers' behavioral intentions to adopt broadband in Pakistan (Khoumbati et al. 2007). Finally, a study on broadband adoption within the Indian context found that the relative advantage, hedonic outcomes and cost are significant factors for explaining consumers' behavioral intentions to adopt broadband in India (Dwivedi et al. 2007b).

From the above discussion, it can be observed that the factors affecting the individual level of broadband adoption in different countries vary. This argument was further supported by a panel discussion (held in IFIP8.6-2007) on the global diffusion of broadband. Panel members from different countries argued and agreed that the context and factors that affect broadband adoption at both the micro and macro level are diverse and therefore the findings from one study cannot be applied directly to study broadband adoption issues in other countries. Hence, empirical studies should be conducted to examine the influential factors in countries with slow rates of broadband adoption (William et al. 2007). Since the broadband adoption rate in Malaysia is unexpectedly slow, this has provided us with impetus to undertake this exploratory study in order to understand the perception of consumers regarding broadband adoption and its usefulness in Malaysia. Its worthwhile contribution would be to understand the reasons for consumer adoption and non-adoption of subscription-based technologies such as broadband from a developing country perspective. The next section briefly discusses the theoretical basis for examining the factors of consumer adoption and non-adoption of broadband in Malaysia.

THEORETICAL BASIS

The constructs included in this study were adapted and modified from the conceptual model of broadband adoption (Dwivedi 2005;2007). This model is derived from the model of technology adoption in households (Venkatesh & Brown 2001). The proposed conceptual model assumed that the dependent variable 'broadband adoption' is influenced by several independent variables that include the attitudinal (relative advantage, utilitarian outcomes, hedonic outcomes and service quality), normative (primary influence and secondary influence), control factors and (knowledge, self-efficacy and facilitating conditions resources). A detailed discussion and justification for including the aforementioned constructs is not possible to include here due to space limitation, however, theoretical information on these constructs can be obtained from original sources (Dwivedi, 2005; Venkatesh & Brown 2001).

RESEARCH METHEDOLOGY

The survey method was utilized for this study (Choudrie and Dwivedi 2005a). A self-administered questionnaire comprised the primary survey instrument for data collection, since it addresses the issue of reliability of information by reducing and eliminating differences in the way that the questions are asked, and how they are presented (Fowler 2002). Furthermore, questionnaires facilitate the collection of data within a short period of time from the majority of respondents, which was a significant issue for this research (Fowler 2002). Keeping the above in mind, multiple and closed questions were mainly included in the questionnaire. The literature review provided an initial understanding of broadband adoption and the basis for

the development of a draft questionnaire. The eventual final questionnaire consisted of a total of 13 questions. All 13 questions were close-ended, multiple, Likert scale type in nature. From 13, one question was Likert scale type that consisted of 40 sub questions or items. Total number of items for each construct is presented in Table 2. However, due to space limitations these items are not described within the paper, however, interested readers can find them from original source Dwivedi et al. (2006). All 40 Likert scale type questions/items were adapted from Dwivedi et al. (2006) and Choudrie and Dwivedi (2006b) and demographic categories were adapted from Choudrie and Dwivedi (2005b). Although the adapted questions were rigorously validated in source studies, we conducted a reliability test to confirm whether the adapted measures were internally consistent. The findings on this are presented in Table 2.

Since a reliable sample frame that represents the whole Malaysian population is not readily available or affordable for researchers, we focused our investigation on a particular segment of the Malaysian population: people who are employed as a 'Chartered Accountant'. Further reasons for such selection were that individuals in such a profession were more likely to have broadband at home or in their office due to professional and business needs, which was the issue for investigation. Thus, the sample of this study consisted of Malaysians employed as Chartered Accountants. The population consisted of Malaysian audit firms registered with the Malaysian Institute of Accountants. There are 1373 audit firms in Malaysia (Malaysian Institute of Accountants Members Directory, 2007). Using the systematic sampling technique, we selected a sample of 302 Accountancy firms by considering every fourth firm from the sample frame. The questionnaire was sent to the Chartered Accountant of each of the selected audit firms. The questionnaire was administered either as an email attachment or via postal service between August and November 2007. 124 usable questionnaires were returned within the specified time, resulting in a 41% response rate.

The initial stage of data analysis involved checking the responses and providing a unique identification number to each response. Using SPSS (version 14), the research generated the descriptive statistics (i.e. frequencies, percentage and tables) and reliability tests, factor analysis and regression analysis were conducted to analyze and present the research findings.

FINDINGS

Demographic and Internet access profile of survey respondents

Table 1 presents the demographic and Internet access profile of the survey respondents. Of the 124 responses received, 54% were in the 25-34 year-old age group, which formed the largest response category. The 35-44 year-old age group was the next largest (23.4%). In terms of gender, more male than female respondents (m=58.1%, f=41.9%) participated in the survey (Table 1). All respondents possessed educational qualifications, with 36.3% having an undergraduate degree and 4.8% educated to master/postgraduate level. 8.9% of respondents reported other educational qualifications (Table 1). Responses for household annual income varied between 7.3% for the RM60,000-RM69,000 category and 26.6% for the above RM70,000 category (Table 1). Of the 124 respondents, only 60.5 percent represented the adopters of Internet at home and the remaining 39.5 percent were non-adopters (Table 1). Of the 60.5 percent Internet adopters, 25.3 percent possessed a narrowband connection and 74.7 percent stated that they had a broadband connection at home (Table 1).

	Freq.	%		Freq.	%
Age			Gender		
25-34 YEARS	67	54.0	MALE	72	58.1
35-44 YEARS	29	23.4	FEMALE	52	41.9
45-54 YEARS	21	16.9	Total	124	100.0
55-64 YEARS	3	2.4	Home Internet Access		
65-74 YEARS	4	3.2	YES	75	60.5
Total	124	100.0	NO	49	39.5
Income			Total	124	100.0
RM20,000-RM29,000	20	16.1	Type of Internet Access		
RM30,000-RM39,000	12	9.7	DIAL-UP METERED	18	14.5
RM40,000-RM49,000	24	19.4	DIAL-UP UN-METERED	1	.8
RM50,000-RM59,000	26	21.0	BROADBAND WITH DSL/ADSL	31	25.0
RM60,000-RM69,000	9	7.3	BROADBAND WITH CABLE MODEM	12	9.7
ABOVE RM70,000	33	26.6	WIRELESS	13	10.5

Total	124	100.0	N/A	49	39.5
Education			Total	124	100.0
DEGREE	107	86.3	Narrowband vs. Broadband		
MASTER	6	4.8	Narrowband	19	25.3
OTHERS	11	8.9	Broadband & Wireless	56	74.7
Total	124	100.0	Total	75	100.0
Alternative Internet Access Places			Duration of Internet Connection at Home		
WORK PLACE	87	70.2	LESS 12 MONTH	9	7.3
PUBLIC ACCESS POINTS	9	7.3	12-24 MONTH	4	3.2
LOCAL LIBRARY	2	1.6	25-36 MONTH	9	7.3
INTERNET CAFE	26	21.0	ABOVE 36 MONTH	53	42.7
Total	124	100.0	Total	75	100.0

Table 1. Demographic Information of the Survey Respondents

Reliability test

Table 2 illustrates the Cronbach's coefficient alpha values that were estimated to examine the internal consistency .80 for behavioral intention construct. Both utilitarian outcomes and primary influence possessed a reliability value of 0.95. The Cronbach's coefficient alpha values for remaining constructs illustrated in the Table 2. Hinton et al (2004) have suggested four cut-off points for reliability, which includes excellent reliability (0.90 and above), high reliability (0.70-0.90), moderate reliability (0.50-0.70) and low reliability (0.50 and below) (Hinton et al, 2004, pp 364). The aforementioned values suggest that of the ten constructs, six possess excellent reliability and the remaining four illustrate high reliability. None of the constructs demonstrated a moderate or low reliability (Table 2). The high Cronbach's α values for all constructs imply that they are internally consistent. That means all items of each constructs are measuring the same content universe (i.e. construct). For example, both the items of BI are measuring the same content universe of behavioral intention. Similarly, all ten items of UO are measuring the content universe of utilitarian outcomes construct. In brief, the higher the Cronbach's α value of a construct, the higher the reliability is of measuring the same construct.

Constructs	N	Number of Items	Cronbach's Alpha (α)	Type
Behavioural Intention	124	2	0.80	High Reliability
Relative Advantage	124	4	0.89	High Reliability
Utilitarian Outcomes	124	10	0.95	Excellent Reliability
Hedonic Outcomes	124	4	0.85	High Reliability
Service Quality	124	4	0.97	Excellent Reliability
Primary Influence	124	3	0.95	Excellent Reliability
Secondary Influence	124	2	0.92	Excellent Reliability
Facilitating Conditions Resources	124	4	0.87	High Reliability
Knowledge	124	3	0.91	Excellent Reliability
Self-efficacy	124	3	0.94	Excellent Reliability

LEGEND: N= Sample Size

Table 2. Reliability of Measurements

Descriptive statistics

Table 3 presents the means and standard deviations of the items related to all 11 constructs included in the study to measure the perceptions regarding broadband adoption. The means and standard deviations of aggregated measures for all the 11 constructs are also illustrated in Table 4.

The respondents showed strong agreement for both of the items of the behavioral intentions (BI1 and BI3), as the mean score varies between 5.69 (SD=1.46) and 5.98 (SD=1.25) (Table 3) with an average score of 5.84 (SD=1.24) (Table 4). Item BI2 of the behavioral intention to change service provider (BISP) construct was also agreed strongly by survey respondents (M = 6.02, SD = 2.17) (Table 3). Amongst the attitudinal constructs the respondents agreed strongly for all of the items of the relative advantage constructs, where item RA1 scored the maximum (M = 6.06, SD = 1.22) and minimum (M = 5.66, SD =

1.62) for item RA3 (Table 3) with the high average score of aggregate measure (M = 5.92, SD = 1.17) (Table 4). A strong agreement was also made for the utilitarian outcomes (M = 5.50, SD = 1.15) and service quality (M = 5.63, SD = 2.19) constructs by survey respondents (Table 4). The importance of hedonic outcomes was relatively less agreed with an average mean score of 4.16 and standard deviations of 1.57 (Table 4). Amongst the normative constructs, primary influence rated above average (M = 4.97, SD = 1.39) and was agreed more strongly than the secondary influence which was rated slightly above than average (M = 4.28, SD = 1.67) on a 7 point likert scale (Table 4). Self-efficacy was rated stronger (M = 5.64, SD = 1.19) than the other control constructs, namely knowledge (M = 5.29, SD = 1.28) and facilitating conditions resources (M = 5.09, SD = 1.33) (Table 5).

SN	Items	N	Mean	SD	SN	Items	N	Mean	SD
1	BI1	124	5.69	1.46	21	HO4	124	2.58	2.08
2	BI2	124	6.02	2.17	22	SQ1	124	5.57	2.39
3	BI3	124	5.98	1.24	23	SQ2	124	5.66	2.22
4	RA1	124	6.06	1.22	24	SQ3	124	5.60	2.31
5	RA2	124	5.98	1.27	25	SQ4	124	5.66	2.24
6	RA3	124	5.66	1.62	26	PI1	124	4.99	1.46
7	RA4	124	5.97	1.22	27	PI2	124	4.97	1.51
8	UO1	124	5.93	1.20	28	PI3	124	4.93	1.43
9	UO2	124	5.86	1.16	29	SI1	124	4.27	1.76
10	UO3	124	5.72	1.31	30	SI2	124	4.29	1.70
11	UO4	124	5.85	1.25	31	K1	124	5.28	1.28
12	UO5	124	5.13	1.58	32	K2	124	5.33	1.42
13	UO6	124	5.37	1.49	33	K3	124	5.26	1.44
14	UO7	124	5.65	1.25	34	S1	124	5.70	1.31
15	UO8	124	4.92	1.59	35	S2	124	5.62	1.25
16	UO9	124	5.14	1.43	36	S3	124	5.58	1.19
17	UO10	124	5.44	1.46	37	FCR1	124	5.38	1.43
18	HO1	124	4.95	1.78	38	FCR2	124	4.90	1.68
19	HO2	124	4.82	1.84	39	FCR3	124	4.85	1.67
20	HO3	124	4.28	1.86	40	FCR4	124	5.24	1.48
N: Total number of responses. SD: Standard Deviation									

Table 3. Descriptive Statistics

The aforementioned descriptive statistics are the cumulative scores obtained from both broadband and narrowband consumers, and it is expected that the mean score may differ for the two groups. Hence, the findings that illustrate the cross sectional view are presented in the next subsection, which demonstrates broadband consumers' perception of having broadband significantly higher than its narrowband counterpart.

SN	Construct	NI	*N*	Descriptive			
				Mean	Min	Max	*SD*
1	Behavioural Intention	2	124	5.84	2.00	7.00	1.24
2	BISP	1	124	6.02	1.00	8.00	2.17
3	Relative Advantage	4	124	5.92	3.00	7.00	1.17
4	Utilitarian Outcomes	10	124	5.51	3.00	7.00	1.15
5	Hedonic Outcomes	4	124	4.16	1.00	7.00	1.57
6	Service Quality	4	124	5.63	1.00	8.00	2.19
7	Primary Influence	3	124	4.97	2.00	7.00	1.39
8	Secondary Influence	2	124	4.28	1.00	7.00	1.68
9	Facilitating Conditions Resources	4	124	5.09	1.75	7.00	1.33

10	Knowledge	3	124	5.29	1.67	7.00	1.28
11	Self-efficacy	3	124	5.64	1.00	7.00	1.19

NI: Total number of variables or items. *N*: Total number of responses. *SD*: Standard Deviation

Table 4. Summary of Descriptive Statistics

Differences between broadband adopters and non-adopters: *t*-Test

Table 5 presents the means and standard deviations of the all the ten aggregate measures included in the study for both narrowband and broadband consumers. Table 5 also provides the results of the *t*-test, which tested the differences between the narrowband and broadband consumers on these constructs. The findings indicate that with the exception of hedonic outcomes, secondary influence and facilitating conditions resources, the non-adopters and adopters of broadband differ significantly on the mean score for the remaining seven constructs. Even though overall both groups (i.e. non-adopters and adopters) view the adoption of broadband positively, the mean scores indicate that adopters have significantly more positive perceptions on the various constructs (except service quality) than non-adopters.

Construct	Non-Adop. vs. Adop.	*N*	*M*	*M* Difference	*SD*	*t*	df	*P* (2-tailed)
BI	Non-Adopter	68	5.41	0.88	1.37	4.34	113	.000
	Adopter	56	6.32		.84			
RA	Non-Adopter	68	5.68	0.52	1.25	2.56	121	.012
	Adopter	56	6.20		.99			
UO	Non-Adopter	68	5.33	0.40	1.21	1.96	121	.052
	Adopter	56	5.72		1.05			
HO	Non-Adopter	68	3.95	0.47	1.59	1.69	119	.093
	Adopter	56	4.42		1.53			
SQ	Non-Adopter	68	6.88	-2.76	1.91	-9.21	120	.000
	Adopter	56	4.11		1.43			
PI	Non-Adopter	68	4.73	0.54	1.46	2.19	121	.030
	Adopter	56	5.26		1.27			
SI	Non-Adopter	68	4.36	-0.17	1.54	-0.56	107	.576
	Adopter	56	4.19		1.84			
K	Non-Adopter	68	4.90	0.87	1.27	4.01	121	.000
	Adopter	56	5.77		1.13			
SE	Non-Adopter	68	5.29	0.75	1.34	3.84	111	.000
	Adopter	56	6.05		.80			
FCR	Non-Adopter	68	5.01	0.19	1.41	0.80	121	.427
	Adopter	56	5.20		1.24			

Table 5. *t*-Tests to Examine Equality of Group Means

Discriminant analysis

To confirm the effectiveness of various factors for discriminating adopters from non-adopters, a discriminant analysis was performed using broadband adoption as the dependent variable and behavioral intention, relative advantage, utilitarian outcomes, hedonic outcomes, service quality, primary influence, secondary influence, facilitating conditions resources, knowledge and self-efficacy as the predictor variables. A total of 124 cases were analyzed. The findings are presented in Tables 6–7. A single determinant function was calculated. The value of this function was significantly different for the non-adopters and adopters ($\chi 2$ (10, N = 124) = 82.927, $p < .001$). The correlations between the predictor variables and the discriminant function suggested that service quality was the best predictor of the future adoption of broadband whilst secondary influence was found to be least useful (Table 7).

Variable	Function

SQ	.779
BI	-.364
K	-.345
SK	-.319
RA	-.218
PI	-.188
UO	-.168
HO	-.146
FCR	-.069
SI	.050

Table 6. Structure Matrix

Overall, the discriminant function successfully predicted the outcome for 85.5% of the cases, with accurate predictions being made for 82.4% of the non-adopters consumers and 89.3% of the adopters (Table 7).

	Adopter vs. Non-Adopters	Predicted Group Membership		Total
		Non-Adopter	Adopter	
Count	Non-adopter	56	12	68
	Adopter	6	50	56
%	Non-adopter	82.4	17.6	100.0
	Adopter	10.7	89.3	100.0
a. 85.5% of original grouped cases correctly classified.				

Table 7. Classification Results

Frequency of Internet Use

Table 8 illustrates the difference between broadband and narrowband consumers in terms of the frequency of usage or accessibility to the internet. The results indicate clear differences and suggest that the majority of broadband consumers (41.3%) access or use the internet several times a day in comparison to 2.7% of the narrowband consumers. However, the numbers of broadband consumers decrease as the frequency of Internet access decreases. Generally, broadband consumers' online habits in terms of their frequency of Internet access differ from narrowband consumers. Broadband consumers belong to the more frequent categories whilst narrowband consumers belong to the less frequent categories (Table 8). The chi-square test confirmed a significant difference ($\chi 2$ (5, N = 75) = 16.75, p = .005) between narrowband and broadband consumers in terms of the frequency of Internet access (Table 8).

Frequency of Internet access	Narrowband		Broadband	
	Frequency	Percent	Frequency	Percent
Several times a day	2	2.7	31	41.3
About once a day	6	8.0	13	17.3
3-5 days a week	4	5.3	6	8.0
1-2 days a week	2	2.7	4	5.3
Once every few weeks	1	1.3	1	1.3
Less often	4	5.3	1	1.3
Total	19		56	
χ^2 Test (N=75) Type of connection X Frequency of Internet Access				
	Value	df	*p* (2-sided)	
Pearson χ^2	16.75	5	.005	

Table 8. Frequency of Home Internet Access

A binary correlation test was also conducted to examine if there was an association between frequency of Internet access and broadband adoption. The results obtained from this test suggest that there was a significant correlation between frequency of Internet access and broadband adoption (Table 9).

		Broadband Adoption
Frequency of internet access	Correlation Coefficient	-.442(**)
**Correlation is significant at the 0.01 level (2-tailed).	Sig. (2-tailed)	.000
	N	75

Table 9. Spearman's rho Correlations to Show Association between Duration of Internet Access and Broadband Adoption

Duration of Internet Use

Table 10 illustrates the difference between broadband and narrowband consumers in terms of total time spent on the Internet on a daily basis. Similar to the frequency of internet access, the results indicate that clear differences occur between narrowband and broadband consumers. Generally broadband consumers increase as the number of hours increase. Contrastingly, the number of narrowband consumers increase as the hours decrease. 5.3% of narrowband consumers spend less than half an hour in contrast to no broadband consumers. However, in the 3-4 hours category, broadband consumers (14.7%) exceeded the narrowband consumers (4%). 12.1% of broadband consumers spent more than four hours on the Internet on a daily basis, in comparison to 0% of narrowband users (Table 10). The chi-square test confirmed a significant difference ($\chi 2$ (5, N = 75) = 20.85, p = .008) between the narrowband and broadband consumers in terms of the total time spent on the Internet on a daily basis (Table 10).

Duration of Internet access	**Narrowband**		**Broadband**	
	Frequency	**Percent**	**Frequency**	**Percent**
<1/2 hour	4	5.3	0	0
1/2-1 hour	4	5.3	3	4.0
>1-2 hour	8	10.7	27	36.0
>2-3 hour	0	0	6	8.0
>3-4 hour	3	4.0	11	14.7
=>4 hour	0	0	9	12.1
Total	19		56	
χ^2**Test (N=75)** Type of connection X Duration of Internet Access				
	Value	**df**	***p* (2-sided)**	
Pearson χ^2	20.85	5	.008	

Table 10. Duration of Internet Access on a Daily Basis

A binary correlation test was also conducted to examine if there was any association between duration of Internet access and broadband adoption. The results obtained from this test suggest that there was a significant correlation between duration of Internet access and broadband adoption (Table 11).

		Broadband Adoption
Duration of internet access	Correlation Coefficient	.350(**)
**Correlation is significant at the 0.01 level (2-tailed).	Sig. (2-tailed)	.002
	N	75

Table 11 Spearman's rho Correlations to Show Association between Duration of Internet Access and Broadband Adoption

CONCLUSION

This study examined the factors affecting the adoption of broadband Internet in Malaysia. The following main conclusions are drawn from this research. Findings from the descriptive statistics suggested that all the constructs included in this study rated strongly. This suggested that the respondents showed strong agreement in factors included in the study for examining the adoption of broadband. There was then an examination of the differences between the adopters and non-adopters of broadband, employing the t-test and discriminant analysis techniques. The results from the *t*-test and discriminant analysis suggested that significant differences occur between the responses obtained from the narrowband and broadband consumers with regards to attitudinal, normative and control constructs. The findings related to the usage of the Internet suggested that broadband consumers significantly differ to narrowband users in terms of the online habits and variety of Internet use.

As broadband technologies enable a range of communication and Internet services, studying individuals from Malaysia add one more perspective for understanding the adoption of broadband in developing countries. Thus, this research presents one of the initial efforts towards understanding the broadband adoption behavior of consumers outside of the context of developed countries. The findings are specifically useful for ISPs and policy makers of Malaysia, as specified above. Factors that are reported as being significant are important and require attention in order to encourage the further adoption and usage of Internet in the country. Additionally, the cost of using the traditional telephone network is very high so broadband Internet can be used as a replacement for offering communication services such as instant messaging or Internet Protocol (IP) telephony.

This study has its limitations, such as the generalization of these findings to the whole of Malaysia and the inability to supplement the questionnaire data with interviews or adopt a longitudinal approach to data collection. However, due to time and resource constraints, such limitations could not be overcome. For instance, future research of a similar nature may entail a longer data collection period, which will subsequently eliminate any variables that may have produced anomalies in the result.

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