Consumer Online Behaviour: A perspective on Internet Banking Usage in Three Non-Western Countries

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Abstract

The paper investigate whether information technology adoption/usage is ubiquitous, especially technology imported into non-industrial nations. Date is collected online/offline in the three countries and a total of (677) actual internet banking users in (Egypt, Saudi Arabia, and Jordan) answered the questionnaire. Structural equation modelling is employed to examine the fit of the data to the model. Data analysis shows an adequate fit to the model under current usage conditions. Facilitating conditions were not strong determinants of usage behaviour and social influences were weak determinants of behaviour intentions. However, performance expectancy and effort expectancy were found to be key determinants of internet banking usage behaviour in all three countries. The results should enhance our understanding of consumer motivation of using internet banking technology. This understanding can aid our efforts when promoting the e-service.

1. Introduction

The ubiquity of internet and modern communication gadgets added challenges to service providers and the banking Industry in particular, which is constantly challenged by the advancements in communication technology and increased change in customers demand for e-services mainly for convenience purposes and cost reduced. The banking industry, highly affected by technology evolution, has transformed the way banks deliver their services,

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using technologies such phone banking, Internet banking, and mobile banking. Online banking as a service channel option is the focus of this study. The paper aims at defining the determinants of online banking usage in three non-western countries based on the model of unified theory of acceptance and use of technology (UTAUT); which is developed in the western world. Additionally, the paper tests the viability of the aggregated model in non-western countries such as Jordan, Egypt, and Saudi Arabia.

Extant body of research tackled technology adoption/acceptance behavior among individuals and groups under mandatory and voluntary contexts. The UTAUT is an aggregated model incorporating eight other technology acceptance models. Venkatesh, et.al (2003) propos effort expectancy, performance expectancy, and social influences as predictors of behavioral intentions towards acceptance of information technology while facilitating conditions directly impact usage behavior. Dwivedi et al. (2011) and Taiwo & Downe (2013) indicate that although the UTAUT has been tested under different contexts and various applications, the findings are diverse and not always consistent with the originated model.

2. Methodology and Design

The measurement scale for the research instrument was adopted from the original UTAUT model and was back translated into Arabic Language, tested on small scale for clarity and understandability and adjusted for wording in the three markets. An online survey was used for collecting data from each country and was supported by an offline survey due to low response rate towards the end. A total of 677 usable surveys were screened for normality and multivariate collinearity based on Byrne's (2010) guidelines the findings permitted proceeding with structural equation modeling testing. The research hypotheses are depicted in figure (1)
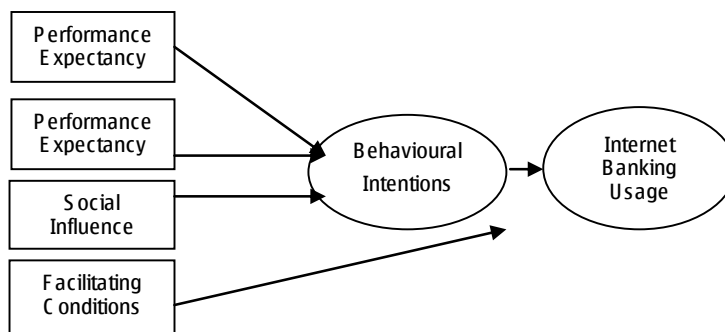

Figure 1. Research model

The study is applying the CFA approach to assess the model plausibility. The measurement model assessment showed that samples have acceptable model fit indices indicating plausible measurement model. However the convergence validity check showed three parameters of facilitating conditions construct are not well presented (squared multiple correlation and average variance extracted <.05). The discriminating validity also showed high covariance between facilitating conditions construct and usage construct making facilitating construct candidate to elimination. Two parameters from social influence construct also had low (<.5) factor loading and squared multiple correlations.

Applying the model refinement criteria to sample resulted in measurement model specification that produced improved model fit reading: CMIN =342.65 DF = 94 CMIN/DF = 3.645, GFI= 940, CFI=976, RMSEA = .063 (LO: 56 HI: 70) p = .52. Constructs' convergent validity measured by factor loadings, variance extracted and reliability are presented in table (1).

Table 1. Standardized factor loadings, Variances Extracted, and Reliability estimates for all samples

	PE	EE	SI	BI	USE
PE1	.843				
PE2	.933				
PE3	.882				
EE2		.817			
EE3		.881			
EE4		.835			
SI1			.888		
SI2			.893		
BI1				.894	
BI2				.942	
BI3				.942	
BI4				.878	
USE1					.839
USE2					.887
USE3					.779
USE4					.865
AVE	.786	.713	.793	.836	.712
Reliability (α)	.915	.879	$r^2 = .884$	.952	.907

Discriminant validity testing resulted in all constructs average variance extracted (AVE) being bigger than constructs squared correlations. Having established and acceptable convergence and discriminant validity, the next step was testing the performance expectancy, effort expectancy, and social influences although the latter had the lowest impact as per the standardized regression weights (.07). Additionally, the model fit indices were not acceptable, which called for eliminating the social influence construct from the model. By re-running the model with only two behavioural determinant and the results showed that performance expectancy compared to effort expectancy has more impact on behavioural intention (standardized regression weights is .600 vs. .531) also standardized total effect (.519 vs. .460). Behaviour intention has the highest direct impact on usage behavioural (.865) while performance expectancy has the biggest indirect effect on usage behaviour (table 2)

Table 2. Standardized Total Effect

	Performance Expectancy	Effort Expectancy	Behaviour intentions
Behaviour intentions	.600	.531	.000
Actual use	.519	.460	.865

3. Discussion and conclusion

The current study seeks to determine whether the unified theory of acceptance and use of technology is usable in explaining determinants of usage behaviour in non-western countries within the online context. For this purpose, data was collected from three non-western countries and for analysis reasons; a combined data file of all samples is used in structural equation modelling. The measurement model revealed that the model is plausible under current

usage conditions. Al-Qeisi & Al-Abdallah, (2013; 2014), Floh and Treiblmaire (2006) and Aladwani and Palvia (2002) report similar findings indicating online context encompass other determinant for usage. Venkatesh and Davis (2000); Morris and Venkatesh (2000) and Venkatesh et al. (2003) also report while individuals becoming well versed in certain technology the impact of social influences on usage behaviour tends to decrease.

On the other hand, this research finding with regard to performance expectancy (TAM's perceived usefulness equivalent) impact on behaviour intentions confirm with Davis et al. (1989), Venkatesh, (2000) and Venkatesh and Morris (2000) research findings. Moreover, Taylor & Todd (1995) reaffirmed that TAM's perceived usefulness is an important indicator for the technology acceptance. The higher impact of performance expectancy on behaviour intentions compared to effort expectancy also confirms with Venkatesh et al. (2003), Wang and Shih (2009) and Dijk et al. (2008) research findings.

In Conclusion, results should enhance our understanding of consumer motivation of using internet banking technology in non-western countries. This understanding can aid our efforts when promoting the e-service. Findings can also be taken further to investigate the strength of these determinants for each market separately and also future research might propose an extension that incorporates other determinants of online behaviour. Technology acceptance research is yet to unlock one-time determinants, particularly that internet applications are rapidly evolving and technology research need to keep with this base for new determinants.

Appendix 1

Variable	Definition	Operational Definition
Performance Expectancy	The degree to which an individual believes that using internet banking will help him/her attain gains in performing banking tasks through this channel.	PE1: I find internet banking useful PE2: Using internet banking enables me to accomplish banking tasks more quickly PE3: Using internet banking increases the effective use of my time in handling my banking tasks PE4: Using internet banking increases the quality of my banking services output at minimal efforts.
Effort Expectancy	The degree of ease associated with the use of internet banking.	EE1: My interaction with internet banking is clear and understandable EE2: I am skilful at using internet banking EE3: Learning to use the internet banking system is easy for me EE4: I find it easy to get the internet banking system to do what I want it to do
Social Influences	The degree to which an individual perceives that important others believe he/she should use internet banking and also measures bank staff support in usage of the internet channel.	SI1: People who are important to me think that I should use internet banking facilities SI2: People who influence my behavior think I should use internet banking. SI3: The bank staffs are helpful in the use of the internet banking system. SI4: The branch encourages the use of internet channel
Facilitating Conditions	The degree to which an individual believes that the bank and technical infrastructure exists to support use of the online access system.	FC1: I have the resources necessary to use the system at the branch FC2: I have the knowledge necessary to use the system FC3: The system is not compatible with other systems I use. FC4: A specific person (or group) is available for assistance with system difficulties
Behavioural Intentions	Refers to an individual's readiness to perform a given behavior	BI1: I intend to continue use IB services BI2: I predict I would use IB services in the future BI3: I plan to use IB services to improve the outcomes
Usage Behaviour	Actual use of the system	UB1: I consider myself a regular user of IB services UB2: I prefer to use IB services when available UB3: I do most banking task online UB4: My tendency is towards using IB services whenever possible

Source: Venkatesh et al. (2003) with adaptation to reflect internet usage behaviour.

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