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Developing a Hierarchical Model for the Drivers of Digital Banking – an Interpretive Structural Modelling Approach

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Abstract: *In its resolve for digital banking, the researchers have developed various models like TAM, UTAUT 1 and UTAUT 2 which aim to identify the key drivers of digital banking. This study primarily intends to comprehend the significance of different drivers of digital banking by developing a hierarchical model of key drivers of digital banking. The hierarchical model is done using Interpretive Structural Modeling (ISM. The study comprises of the drivers that could be directly impacting the adoption of digital banking. These constructs have been categorized and mapped using driving power-dependence diagram.*

Keywords: TAM; UTAUT; MICMAC; Interpretive Structural Modeling

JEL Classification: G20

Introduction

Digitalization is redefining the business practices and developments by providing a vast choice to customers along with ease of transactions (Barnes, 2002). The spread of internet is significantly affecting the customers' life and customers are gradually spending more time virtually (Thakur and Srivastava, 2014). Banking is one of those industries which can make use of the digital shift for enhancing the customer experience (Keswani and Chaturvedi, 2010). The adoption of digital platforms is still a challenge in many countries (Almaiah, 2018; Salloum and Shaalan, 2018). Its adoption in developing economies is poorer as compared to developed economies (Hanafizadeh et al., 2014; Alalwan et al., 2016; Almaiah, 2018; Salloum and Shaalan, 2018).

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Literature Review

The banking sector has faced multi facet challenges in the developing economies (Mostafa, and Eneizan, 2018). Big queues for banking transactions and remote locations of bank branches often wastes considerable amount of time (Dupas et al., 2012). Banks also charged high maintenance cost to the customers (Beck et al., 2008), which demoralized customers for having bank account, due to the low disposable income (Bachas et al., 2016). The digitalization and contactless banking could tackle the problems of maintenance cost and time wastage (Ivatury and Mas, 2008). The introduction of automatic teller machines (ATM) and mobile financial services (MFS) brings hope to promote contactless banking (Laukkanen & Pasanen, 2007). MFS is a special version of traditional banking system, aiming to ease the essential banking services (RBI, 2014).

Adoption Models

Technology adoption is one of the most sought after fields of many disciplines such as psychology, communication, management and health sciences (Liu *et al*., 2017; Sulehri and Ahmed, 2018;).The most important frameworks that measure the technology adoption are Theory of Reasoned Action (TRA) by Fishbein and Ajzen, (1975), Theory of Planned Behavior (TPB) by Ajzen (1991), Task Technology Fit (TTF) by Goodhue *et al*.,(1995), Unified theory of acceptance and use of technology (UTAUT) by Venkatesh *et al*. (2003)

Table 1: Key Factors of Digital Banking

Sr. No.	Predictor	About	Researchers
1	Performance Expectancy	The person's perception that adoption of any given technology will enhance the performance.	Fakhoury and Baker, (2016), Killian *et al*.(2017), Basri (2018), Moorthy *et al*., (2019)
2	Effort Expectancy	It reflects the ease of usage of any particular technology. It explains the effort required to adopt any technology.	Killian *et al*.(2017), Basri (2018), Moorthy *et al*., (2019)
3	Social Influence	The level of influence of social group on any individual. The expectation of social peers influences the individual to adopt any technology.	Killian *et al*.(2017), Basri (2018), Sunny and George (2018) , Moorthy *et al*., (2019)
4	Hedonic Motivation	It refers to the delight in the adoption of any new technology. The motivation of this construct is of emotional nature.	Alalwan *et al*. (2015), Malaquias and Hwang (2016), Killian *et al*.(2017)
5	Price Value	This construct deals with the sensitivity of price. The perception of price is evaluated through comparison of cost and benefits.	Dootson *et al*. (2016), Killian *et al*.(2017)
6	Facilitating Conditions	The environmental (external and internal) conditions that promotes technological adoption. The accessibility of the required resources and conditions facilitates technology adoption.	Killian *et al*.(2017), Moorthy *et al*., (2017), Mullan *et al*. (2017), Basri (2018), Moorthy *et al*., (2019).
7	Satisfaction	The satisfaction is determined by the evaluation of the cumulative experience.	Park *et al*. (2017), Koloseni and Mandari (2017)
8	Perceived Trust	The belief of a person that the new technology will satisfy the expectations.	Xin *et al*. (2015), Shankar and Kumari (2016), Koksal (2016), Koloseni and Mandari (2017),
9	Personal Innovativeness	It is the intent of any person for the adoption of technology.	Koivisto *et al*. (2016), Shankar and Datta (2018), Humbani and Wiese (2018), Jun *et al*. (2018)
10	Behavioural Intentions	It reflects the inclination of the people towards exhibiting a particular conduct. The intent to adopt any technology could reflect a person's behaviour on technology usage.	Koloseni and Mandari (2017), Munoz-Shankar and Datta (2018), Jun *et al*. (2018), Phuah *et al*. (2018), Aljawder and Abdulrazzaq (2019),
11	Perceived Risk	The risk and uncertainty could be felt in monetary, societal, time, security or performance terms.	Park *et al*. (2017), Wu *et al*. (2017), Phuah *et al*. (2018), Liu *et al*. (2019), Shao *et al*. (2019).

Research Methodology

In order to examine the drivers of digital banking adoption the current study employs Interpretive Structural Modeling (ISM). It is a statistical driven method which systematically represents any complex phenomenon (Warfield, 1974). ISM could convert unrelated variables into a structured model (Hughes *et al*., 2016). The authors aimed to establish the most impactful drivers for digital banking. The eleven drivers stated in literature review were employed to run ISM

Table 2: ISM in Banking: A review of key studies

Steps performed in ISM:

i.	Identification of the requisite variables which drives the adoption of digital banking (Table1).
ii.	Examination of the relationship amongst the variables
iii.	Developing structural self-interaction matrix (SSIM) (Table 3).
iv.	Using SSIM development of initial reachability matrix (IRM) (Table 4).
v.	Using SSIM development of final reachability matrix (FRM) (Table 5 & 6)
vi.	Calculating the dependence and driving power of each of the variables (Figure 1).
vii.	Creating ISM based hierarchical model (Figure 2).
viii.	Performing MICMAC analysis

Results

Structural Self Interaction Matrix

1. V = Element 1 leads to 2;
2. A = Element 2 leads to 1;
3. X = Element 1and 2 leads to each other; and
4. O = Element 1and 2 are not related.

Table 3: Structural self interaction matrix of factors

Sr. No.	Enablers	1	2	3	4	5	6	7	8	9	10	11
1	Performance Expectancy		A	A	V	V	A	V	X	V	V	V
2	Effort Expectancy	V		A	V	V	A	V	X	V	V	V
3	Social Influence	V	V		V	V	A	A	V	V	V	V
4	Hedonic Motivation	A	A	A		A	A	A	A	A	A	A
5	Price Value	A	A	A	V		A	X	A	V	V	V
6	Facilitating Conditions	V	V	V	V	V		V	V	V	V	V
7	Satisfaction	A	A	V	V	X	A		V	V	V	V
8	Perceived Trust	X	X	A	V	V	A	A	V	V	V	A
9	Personal Innovativeness	A	A	A	V	A	A	A	A		A	A
10	Behavioral Intentions	A	A	A	V	A	A	A	A	V		A
11	Perceived Risk	A	A	A	V	A	A	A	V	V	V	

Initial Reachability Matrix

After formation of SSIM, Initial reachability matrix is produced. This is done by substituting X, V, O, and A by 1 and 0 as per the following convention:

(1) If (x, y) entry in SSIM is V, then the (x, y) entry will be replaced by 1 and the (y, x) entry by 0

(2) If (x, y) entry is A, then the (x, y) entry will become 0 and the (y, x) entry will become1.

(3) If (x, y) entry is X, then (x, y) entry and the (y, x) entry both will become 1.

(4) If (x, y) entry is O, then both (x, y) and (y, x) entry will become 0.

Table 4: Initial Reachability Matrix of factors

S. No.	Enablers	1	2	3	4	5	6	7	8	9	10	11
1	Performance Expectancy	1	0	0	1	1	0	1	1	1	1	1
2	Effort Expectancy	1	1	0	1	1	0	1	1	1	1	1
3	Social Influence	1	1	1	1	1	0	0	1	1	1	1
4	Hedonic Motivation	0	0	0	1	0	0	0	0	0	0	0
5	Price Value	0	0	0	0	1	0	1	0	1	1	1
6	Facilitating Conditions	1	1	1	1	1	1	1	1	1	1	1
7	Satisfaction	0	0	1	1	1	0	1	1	1	1	1
8	Perceived Trust	1	1	0	1	1	0	0	1	1	1	0
9	Personal Innovativeness	0	0	0	1	0	0	0	0	1	0	0
10	Behavioral Intentions	0	0	0	1	0	0	0	0	1	1	0
11	Perceived Risk	0	0	0	1	0	0	0	1	1	1	1

Table 5: Final reachability matrix of factors using Transivity

Sr. No.	Enablers	1	2	3	4	5	6	7	8	9	10	11
1	Performance Expectancy	1	1	1	1	1	0	1	1	1	1	1
2	Effort Expectancy	1	1	1	1	1	0	1	1	1	1	1
3	Social Influence	1	1	1	1	1	0	1	1	1	1	1
4	Hedonic Motivation	0	0	0	1	0	0	0	0	0	0	0
5	Price Value	0	0	1	1	1	0	1	1	1	1	1
6	Facilitating Conditions	1	1	1	1	1	1	1	1	1	1	1
7	Satisfaction	1	1	1	1	1	0	1	1	1	1	1
8	Perceived Trust	1	1	0	1	1	0	1	1	1	1	1
9	Personal Innovativeness	0	0	0	1	0	0	0	0	1	0	0
10	Behavioral Intentions	0	0	0	1	0	0	0	0	1	1	0
11	Perceived Risk	1	1	0	1	1	0	0	1	1	1	1

Table 6: Final Reachability Matrix of Factors

Sr. No.	Enabler	1	2	3	4	5	6	7	8	9	10	11	Driving Force
1	Performance Expectancy	1	1	1	1	1	0	1	1	1	1	1	10
2	Effort Expectancy	1	1	1	1	1	0	1	1	1	1	1	10
3	Social Influence	1	1	1	1	1	0	1	1	1	1	1	10
4	Hedonic Motivation	0	0	0	1	0	0	0	0	0	0	0	1
5	Price Value	0	0	1	1	1	0	1	1	1	1	1	8
6	Facilitating Conditions	1	1	1	1	1	1	1	1	1	1	1	11
7	Satisfaction	1	1	1	1	1	0	1	1	1	1	1	10
8	Perceived Trust	1	1	0	1	1	0	1	1	1	1	1	9
9	Personal Innovativeness	0	0	0	1	0	0	0	0	1	0	0	2
10	Behavioral Intentions	0	0	0	1	0	0	0	0	1	1	0	3
11	Perceived Risk	1	1	0	1	1	0	0	1	1	1	1	8
	Dependence Power	7	7	6	11	8	1	7	8	10	9	8	

Level Partition

Table 7: Iteration 1

	Reachability Matrix	**Antecedents**	**Intersections**	
1	1,2,3,4,5,7,8,9,10,11	1,2,3,6,7,8,11	1,2,3,7,8,11	
2	1,2,3,4,5,7,8,9,10,11	1,2,3,6,7,8,11	1,2,3,7,8,11	
3	1,2,3,4,5,7,8,9,10,11	1,2,3,5,6,7,	1,2,3,5,7	
4	4	1,2,3,4,5,6,7,8,9,10,11	4	LEVEL 1
5	3,4,5,7,8,9,10,11	1,2,3,5,6,7,8,11	3,5,7,8,11	
6	1,2,3,4,5,6,7,8,9,10,11	6	6	
7	1,2,3,4,5,7,8,9,10,11	1,2,3,5,6,7,8	1,2,3,5,7,8	
8	1,2,4,5,7,8,9,10,11	1,2,3,5,6,7,8,11	1,2,5,7,8,11	
9	4,9	1,2,3,5,6,7,8,9,10,11	9	
10	4,9,10	1,2,3,5,6,7,8,10,11	10	
11	1,2,4,5,8,9,10,11	1,2,3,5,6,7,8,11	1,2,5,8,11	

Table 8: Iteration 2

	Reachability Matrix	**Antecedents**	**Intersections**	
1	1,2,3,5,7,8,9,10,11	1,2,3,6,7,8,11	1,2,3,7,8,11	
2	1,2,3,5,7,8,9,10,11	1,2,3,6,7,8,11	1,2,3,7,8,11	
3	1,2,3,5,7,8,9,10,11	1,2,3,5,6,7,	1,2,3,5,7	
5	3,5,7,8,9,10,11	1,2,3,5,6,7,8,11	3,5,7,8,11	
6	1,2,3,5,6,7,8,9,10,11	6	6	
7	1,2,3,5,7,8,9,10,11	1,2,3,5,6,7,8	1,2,3,5,7,8	
8	1,2,5,7,8,9,10,11	1,2,3,5,6,7,8,11	1,2,5,7,8,11	
9	9	1,2,3,5,6,7,8,9,10,11	9	**LEVEL 2**
10	9,10	1,2,3,5,6,7,8,10,11	10	
11	1,2,5,8,9,10,11	1,2,3,5,6,7,8,11	1,2,5,8,11	

Table 9: Iteration 3

	Reachability Matrix	**Antecedents**	**Intersections**	
1	1,2,3,5,7,8,10,11	1,2,3,6,7,8,11	1,2,3,7,8,11	
2	1,2,3,5,7,8,10,11	1,2,3,6,7,8,11	1,2,3,7,8,11	
3	1,2,3,5,7,8,10,11	1,2,3,5,6,7,	1,2,3,5,7	
5	3,5,7,8,10,11	1,2,3,5,6,7,8,11	3,5,7,8,11	
6	1,2,3,5,6,7,8,10,11	6	6	
7	1,2,3,5,7,8,10,11	1,2,3,5,6,7,8	1,2,3,5,7,8	
8	1,2,5,7,8,10,11	1,2,3,5,6,7,8,11	1,2,5,7,8,11	
10	10	1,2,3,5,6,7,8,10,11	10	LEVEL 3
11	1,2,5,8,10,11	1,2,3,5,6,7,8,11	1,2,5,8,11	

Table 10: Iteration 4

	Reachability Matrix	Antecedents	Intersections	
1	1,2,3,5,7,8,11	1,2,3,6,7,8,11	1,2,3,7,8,11	
2	1,2,3,5,7,8,11	1,2,3,6,7,8,11	1,2,3,7,8,11	
3	1,2,3,5,7,8,11	1,2,3,5,6,7,	1,2,3,5,7	
5	3,5,7,8,11	1,2,3,5,6,7,8,11	3,5,7,8,11	LEVEL 4
6	1,2,3,5,6,7,8,11	6	6	
7	1,2,3,5,7,8,11	1,2,3,5,6,7,8	1,2,3,5,7,8	
8	1,2,5,7,8,11	1,2,3,5,6,7,8,11	1,2,5,7,8,11	LEVEL 4
11	1,2,5,8,11	1,2,3,5,6,7,8,11	1,2,5,8,11	LEVEL 4

Table 11: Iteration 5

	Reachability Matrix	Antecedents	Intersections	
1	1,2,3,7	1,2,3,6,7	1,2,3,7	LEVEL 5
2	1,2,3,7	1,2,3,6,7	1,2,3,7	LEVEL 5
3	1,2,3,7	1,2,3,6,7	1,2,3,7	LEVEL 5
6	1,2,3,6,7	6	6	
7	1,2,3,7	1,2,3,6,7,8	1,2,3,7	LEVEL 5

Table 12: Iteration 6

	Reachability Matrix	Antecedents	Intersections	
6	1,2,3,6,7	6	6	**LEVEL 6**

MICMAC Analysis

- **QUADRANT I –"Autonomous Enablers"** are those with weak driving power and dependency (0 to 5).
- **QUADRANT II-"Dependent Enablers"** The dependent factors represent the second quadrant with weak driving power (0 to 5) and strong dependence (6 to 11).
- **QUADRANT III "Linkage Factors"** Third group has the "linkage factors" with strong driving power and dependence.
- **QUADRANT IV "Independent Enablers**" Fourth group comprises of "independent factors" with high driving power but poor dependence.

Figure 1: Driving Power and Dependency diagram

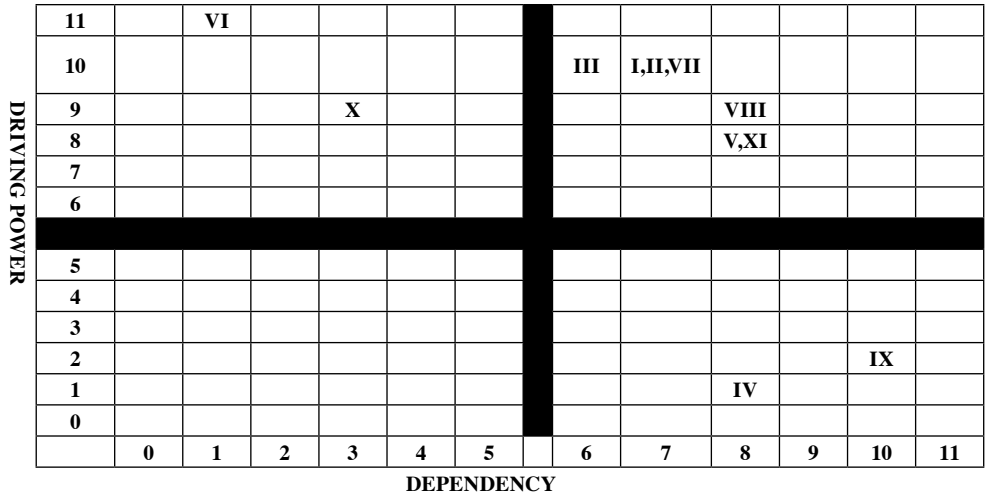
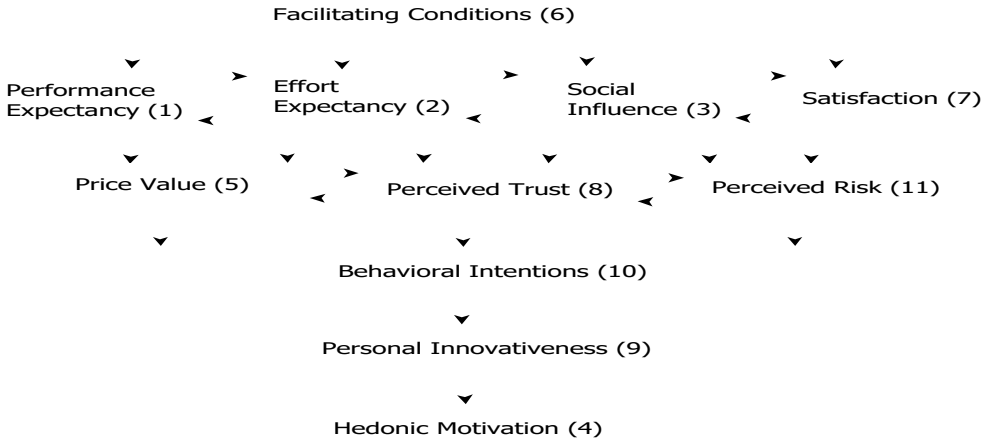


Figure 2: ISM Model



Conclusion

It is evident from the results that 'facilitating Conditions' is an independent variable and hence is not influenced by any of the other determinants of digital banking adoption. It is also the most significant cause for the adoption of digital banking. It not only enhances the digital banking adoption but also drives the other important variables of digital banking adoption. The findings are similar to the findings of Chawla and Joshi, (2019). Until and unless the environmental conditions (both inter-

nal and external) do not support digital banking adoption, a person could not comprehend the value of digital banking adoption and hence the performance expectancy of that person would remain low. Similarly the study indicates 'Behavioral Intentions' as the second independent variable and an important driving force for digital banking adoption. No matter how well the facilitating conditions are, if the person does not intend to adopt anything, it will not yield any results. If the intentions are positive a person will be willing to make extra efforts in adopting the digital banking. The results are comparable with the results of Gupta *et al*., (2019). It also suggests that behavioral intention is positively related performance expectancy as an important driving force. The relationship between the behavioral intention and performance expectance has also been established by Wang *et al*., (2017) and Farah *et al*. (2018), but results also suggest contradiction in the direction of relationship, i.e. it suggests that it is the performance expectancy which drives behavioral intention and not the other way around.

The result also indicates that effort expectancy and performance expectancy are having strong driving power for banking adoption. This finding is comparable with the finding of Wang et al., (2017), but contradicts the findings of Sánchez-Torres *et al*., (2018).

Implications

Managerial Implications

The current study could help the top management of banking industry in taking necessary steps to ensure adoption of digital banking by their employees and customers. Since facilitating condition was determined as the most important driving force, which not only drives the adoption, but also influences the other driving forces. Therefore, it is recommended that the managers must provide suitable environment, so that the desired level of performance and effort expectancy for digital banking adoption could be achieved. Top management is also advised to provide the required infrastructure, so that the adoption rate could be optimized.

Theoretical Implications

This papers attempts to fulfill it by proposing a model for the variables that drives the digital banking adoption. It also adds value to the plethora of knowledge in the domain of banking and technology.

REFERENCES

Ajzen, I. (1991), "The theory of planned behavior", Organizational Behavior and Human Decision Processes, Vol. 50 No. 2, pp. 179-211.

Alalwan, A.A., Dwivedi, Y.K., Rana, N.P., Lal, B. and Williams, M.D. (2015), "Consumer adoption of internet banking in Jordan: examining the role of hedonic motivation, habit, self-efficacy and trust", Journal of Financial Services Marketing, Vol. 20 No. 2, pp. 145-157.

Aljawder, M. and Abdulrazzaq, A. (2019), "The effect of awareness, trust, and privacy and security on students' adoption of contactless payments: an empirical study", International Journal of Computing and Digital Systems, Vol. 8 No. 6, pp. 669-676.

Almaiah, M.A. (2018) 'Acceptance and usage of a mobile information system services in University of Jordan', Education and Information Technologies, pp.1–23 [online] https://doi.org/10.1007/s10639-018-9694-6.

Bachas, P., Paul, G. and Sean, H. (2016), "Banking on trust: how debit cards help the poor to save more", Working Paper.

Barnes, S (2002). The mobile commerce value chain: analysis and future developments. International Journal of Information Management. 22(2), 91--108

Basri, S. (2018), "Determinants of adoption of mobile banking: evidence from rural Karnataka in India", International Journal of Trade and Global Markets, Vol. 11 Nos 1-2, pp. 77-86.

Beck, T., Demirgu¨c¸–Kunt, A. and Martinez Peria,M.S. (2008), "Banking services for everyone? Barriers to bank access and use around the world", The World Bank Economic Review, Vol. 22 No. 3, pp. 397-430.

Chawla, D., & Joshi, H. (2019). Consumer attitude and intention to adopt mobile wallet in India–An empirical study. International Journal of Bank Marketing. https://doi.org/10.1108/IJBM-09-2018-0256. 11 No. 1, pp. 22-40, available at: https://doi.org/10.1108/JABS-11-2015-0191

Dootson, P., Beatson, A. and Drennan, J. (2016), "Financial institutions using social media – do consumers perceive value?", The International Journal of Bank Marketing, Vol. 34 No. 1, pp. 9-36.

Fakhoury, R. and Baker, D.S. (2016), "Governmental trust, active citizenship, and e-government acceptance in Lebanon", Journal of Leadership, Accountability and Ethics, Vol. 13 No. 2, pp. 36-52.

Fishbein, M. and Ajzen, I. (1975), Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research, Addison-Wesly, Boston, MA.

Goodhue, D.L. and Thompson, R.L. (1995), "Task-technology fit and individual performance", MIS Quarterly, Vol. 19 No. 2, pp. 341-356

Gupta, S. D., Raychaudhuri, A., & Haldar, S. K. (2018). Information technology and profitability: evidence from Indian banking sector. International Journal of Emerging Markets.

Hanafizadeh, P., Behboudi, M., Koshksaray, A.A. and Tabar, M.J.S. (2014), "Mobile-banking adoption by iranian bank clients", Telematics and Informatics, Vol. 31 No. 1, pp. 62-78.

Humbani, M. and Wiese, M. (2018), "A cashless society for all: determining consumers' readiness to adopt mobile payment services", Journal of African Business, Vol. 19 No. 3, pp. 409-429.

Hughes, D. L., Dwivedi, Y. K., Rana, N. P. & Simintiras, A. C. (2016). Information systems project failure–analysis of causal links using interpretive structural modelling. Production Planning & Control, 27(16), 1313-1333.

Ivatury, G. andMas, I. (2008), The Early Experience with Branchless Banking, CGAP, Washington, DC.

Jun, J., Cho, I. and Park, H. (2018), "Factors influencing continued use of mobile easy payment service: an empirical investigation", Total Quality Management and Business Excellence, Vol. 29 Nos 9-10, pp. 1043-1057

Keswani, S. and Chaturvedi, M. (2010), "Impact of customer's awareness on their satisfaction: a study on e-banking in Gwalior City", SIES Journal of Management, Vol. 6 No. 2, pp. 81-93.

Killian, D., Kabanda, S. and Kilian, D. (2017), "Mobile payments in South Africa: middle income earners' perspective", Pacific Asia Conference On Information Systems (PACIS), Association For Information System, p. 53.

Koivisto, K., Makkonen, M., Frank, L., & Riekkinen, J. (2016). Extending the technology acceptance model with personal innovativeness and technology readiness: a comparison of three models. BLED 2016: Proceedings of the 29th Bled eConference" Digital Economy", ISBN 978-961-232-287-8.

Koksal, M.H. (2016), "The intentions of Lebanese consumers to adopt mobile banking", The International Journal of Bank Marketing, Vol. 34 No. 3, pp. 327-346.

Koloseni, D. and Mandari, H. (2017), "Why mobile money users keep increasing? Investigating the continuance usage of mobile money services in Tanzania", Journal of International Technology and Information Management, Vol. 26 No. 2, pp. 117-145.

Laukkanen, T. and Pasanen, M. (2007), "Mobile banking innovators and early adopters: how they differ fromother online users?", Journal of Financial Services Marketing, Vol. 13 No. 2, pp. 86-94.

Liu, Y., Segev, S., & Villar, M. E. (2017). Comparing two mechanisms for green consumption: cognitive-affect behavior vs theory of reasoned action. Journal of Consumer Marketing.

Malaquias, R.F. and Hwang, Y. (2016), "An empirical study on trust in mobile banking: a developing country perspective", Computers in Human Behavior, Vol. 54, January, pp. 453-461.

Moorthy, K., Ling, C.S., Fatt, Y.W., Yee, C.M., Yin, E.C.K., Yee, K.S. and Wei, L.K. (2017), "Barriers of mobile commerce adoption intention: perceptions of generation X in Malaysia", Journal of Theoretical and Applied Electronic Commerce Research, Vol. 12 No. 2, pp. 37-53.

Moorthy, K., T'ing, L.C., Yee, K.C., Huey, A.W., In, L.J., Feng, P.C. and Yi, T.J. (2019), "What drives the adoption of mobile payment? A Malaysian perspective", International Journal of Finance and Economics, Vol. 25 No. 3, pp. 349-364.

Mostafa, A. A., & Eneizan, B. (2018). Factors affecting acceptance of mobile banking in developing countries. International Journal of Academic Research in Business and Social Sciences, 8(1), 340-351.

Munoz-Leiva, F., Climent-Climent, S. and Li_ebana-Cabanillas, F. (2017), "Determinants of intention to use the mobile banking apps: an extension of the classic TAM model", Spanish Journal of Marketing-ESIC, Vol. 21 No. 1, pp. 25-38.

Park, M., Jun, J. and Park, H. (2017), "Understanding mobile payment service continuous use intention: an expectation-confirmation model and inertia", Quality Innovation Prosperity, Vol. 21 No. 3, pp. 78-94.

Phuah, K.T., TingJL, J.L. and Wong, K.K.S. (2018), "Understanding customer intention to use mobile payment services in Nanjing, China", International Journal of Community Development and Management Studies, Vol. 2, pp. 49-60.

RBI (2014), "Operating guidelines for payments banks", [Online] available at: www.rbi.org.in/Scripts/BS_PressReleaseDisplay.aspx?prid=32615

Salloum, S.A. and Shaalan, K. (2018) 'Factors affecting students' acceptance of e-learning system in higher education using UTAUT and structural equation modeling approaches', in International Conference on Advanced Intelligent Systems and Informatics, pp.469–480, Springer.

Sánchez-Torres, J. A., Sandoval, A. V., & Alzate, J. A. S. (2018). E-banking in Colombia: factors favouring its acceptance, online trust and government support. International Journal of Bank Marketing.

Shankar, A. and Datta, B. (2018), "Factors affecting mobile payment adoption intention: an Indian perspective", Global Business Review, Vol. 19 No. 3, pp. S72-S89.

Shankar, A. and Kumari, P. (2016), "Factors affecting mobile banking adoption behavior in India", Journal of Internet Banking and Commerce, Vol. 21 No. 1, pp. 1-24.

Shao, Z., Zhang, L., Li, X. and Guo, Y. (2019), "Antecedents of trust and continuance intention in mobile payment platforms: the moderating effect of gender", Electronic Commerce Research and Applications, Vol. 33, p. 100823

Sulehri, N. A., & Ahmed, M. (2017). Theory of reasoned action and retail agglomerations buying behavior for urban consumers. The Business & Management Review, 9(2), 263-266.

Sunny, P. and George, A. (2018), "Determinants of behavioral intention to use mobile wallets–a conceptual model", Journal of Management, Vol. 5 No. 5, pp. 52-62.

Thakur, R., Srivastava, M. (2014). Adoption readiness, personal innovativeness, perceived risk and usage intention across customer groups for mobile payment services in India. Internet Research. 24(3), 369--392

Venkatesh, V., Morris, M.G., Davis, G.B. and Davis, F.D. (2003), "User acceptance of information technology: toward a unified view", MIS Quarterly, Vol. 27 No. 3, pp. 425-478.

Wang, M., Cho, S., & Denton, T. (2017). The impact of personalization and compatibility with past experience on e-

Warfield, J.N. (1974). Developing subsystem matrices in structural modelling. IEEE Transactions on Systems, Man, and Cybernetics, 1, 74-80.

Xin, H., Techatassanasoontorn, A.A. and Tan, F.B. (2015), "Antecedents of consumer trust in mobile payment adoption", The Journal of Computer Information Systems, Vol. 55 No. 4, pp. 1-10.