Social Media Exposure, Intention Antecedents and Fake News Sharing Behaviour in Abu Dhabi, UAE

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Abstract

The study aims to the impact of social media exposure and behavioural antecedents on fake news sharing behaviour among social media users in Abu Dhabi, UAE using the Theories of Planned Behaviour (TPB) and Reasoned Action (TRA) as the theoretical foundation. The quantitative research methodology using Partial Least Squares – Structural Equation Modelling (PLS-SEM) was employed. The research targeted responses from social media users in Abu Dhabi Emirate. The study found that the background factors of individual, social and knowledge experiences define social media platform exposure of social media users in Abu Dhabi. Exposure to social media has a significant effect on social media users' attitudes and perceived norms, but not perceived behavioural control. Nonetheless, attitudes and norms have no significant effect on behavioural intention to spread fake news. Only perceived behavioural control has an impact on fake news behavioural intention and actual fake news behaviour. The model fit was satisfactory with GoF index of 0.4951, and the SRMR, d_ULS, d-G, Chi-Square, NFI fit indices were all within the acceptable range. Thus, the data fit the theory adequately. The study contributes to the existing body of knowledge by establishing that fake news behavioural intention has a significant influence on social media users' actual fake news behaviour.

Keywords
Fake news, Social Media, Behavioural Intention, Attitude, Background factors.

1. Introduction
Recent years have been accompanied by the rapid growth of modern forms of web technologies that are widely known as social media services or social networking services (Al-Ghaith 2015). The increase in popularity of some of the social media platforms such as Facebook, Instagram and Twitter have come along with an increase in the influence of social media on the daily lives of the individual. This development has attracted and continues to command scholars' attention to the contribution of social media to social and behavioural norms of the public (Zhang *et al*., 2014). Of keen interest to the present discussion and many other studies in the recent decade is the threat of social media in global political developments (Bennett, 2012; Bonilla and Rosa, 2015). The UAE Government and other government agencies in other parts of the globe have been observed to assume their own strategies response to negative threats posed by social media, and in efforts to preserve truth and trust as the cornerstone of socio-economic development (Bradshaw and Howard, 2017; Park et al., 2018).

The threat posed by social media may not be underscored because of the virtual nature of these platforms (Bradshaw and Howard, 2017; Bradshaw and Howard, 2018). Several reports have shown the potential of social media networks to spread misinformation and create public unrest which threatens national security (Gupta and Kumaraguru, 2011; Nayak, 2014). Social media networks have also been shown to present challenges to law enforcement in other areas like fake identities behind the social media accounts that target law enforcement agencies with malicious attacks. These fake accounts also create problems in areas of privacy violation and compromise the security of innocent citizens among other threats (IACP, 2013; Nexis, 2012).

Social media is a double edge sword. It can be used to either promote or demote something by its users. The social media could pose a threat to national stability through fake news. The social media platforms abate fake news by exhibiting helplessness to handle the situation resulting into post-fact overshadowing 'truthiness' in the society (Pundir and Devi, 2021). Facts are sacrificed on the altar of emotions. Though social media companies are responding to the fake new merchants by providing avenue to report fake news, employing personal to handle such reports and suspending suspicious and fake accounts; governments around the globe are putting measures to arrest the spread of fake news via social media in their countries in order to achieve national stability. For instance, the Indian government is collaborating with 'WhatsApp' to tame sharing of fake news (Balkrishna and Shrivastava, 2018). In UAE, the government has also prosecuted many social media offenders. Governments are becoming more attentive to the threat of social media exposure to fake news. This is due to the experience of the threat of social media riding on technology through the dissemination of fake news and leading to outcomes such as the Arab Springs and the Astroturf Campaigns.

Thus, it is important to understand how citizens' exposure to social media influences how they perceive and treat fake news and how they behave. This phenomenon can be conceptualised through the Theory of Reasoned Action (TRA) and Theory of Planned Behaviour (TPB). The theories postulated that human behaviour regarding a particular phenomenon is influenced by their intention to perform the behaviours which is fuelled by their attitude towards the behaviour, their perceived social norms and perceived behavioural control. These antecedents of intentions are also influenced by inhibiting factor which are part of the TRA constructs (Aboelmaged and Gebba, 2013; Alam and Sayuti, 2011; Beck and Ajzen, 1991; Pundir and Devi, 2021; H. Usman and Lizam, 2016; Hamza 2017). In the attempt to curb the increasing threat on social media in the UAE and surrounding regions, the present study builds on the theory of reasoned action and the theory of planned behaviour as a base for the framework to help comprehend and recommend avenues to deal with the threat posed by social media in the Abu Dhabi. In the specific application of the theories, the study focuses on the propensity for the social behaviour of human interactions to lead to unwanted behavioural threat and insurgency within the country. It offers a critical look at the contribution the background social media users' individual, social and knowledge factors which are part of the TRA constructs, to the attitudes, norms and perceived behavioural control (TPB constructs). It also considers the propensity for an internal or external source of fake news to influence how the exposure to the social media and the behaviour interact.

The theory of planned behaviour offers the chance to predict behavioural outcomes or how people behave as they are exposed to certain information (Ajzen, 1991). With the concept of social media exposure to fake news at the heart of the study, the threat is defined within the context of how opinions and views are manipulated in a direction that spurs instability among the local population. With several cases including popular ones like the Arab Springs and Brexit movements, the present study assesses how Social behaviour of human interaction that leads to undesirable outcomes be controlled. The present study makes a significant addition to this body of knowledge by building on the underlying concept of social media exposure to fake news within the scope of the United Arab Emirates and Abu Dhabi in particular.

To attain a true picture of social media exposure to fake news threat to the UAE and with specific reference to the Emirate of Abu Dhabi, the present study focusses on social media users within the two main cities of Abu Dhabi City and Al Ain. Numbering approximately 2 million active users in this region, the present study draws on this population in the need to conceptualise the key characteristics of the threat posed such exposure on social media platforms. The study employs the quantitative research methodology in a survey research sample to reach an adequate sample to support an objective empirical observation.

2. Literature Review

This section presents the theoretical framework of the research. The framework consists of four main groups of variables. The independent variable is presented as a formative construct with three main sub-variables in the areas of individual, social and knowledge factors, as originally conceptualized by Fishbein and Ajzen (2010). The main set of antecedents of the theory of planned behaviour serves as a mediator in this event with the three main variables of attitude and perceived behavioural control. Subsequently, these antecedents predict intention as originally conceptualised, and intention, actual behaviour as originally conceptualized by Ajzen (2015). The source of fake news is also used as a predictor of behavioural intention. The relationship between the variables of the study and all areas of the research model are presented in figure 1.

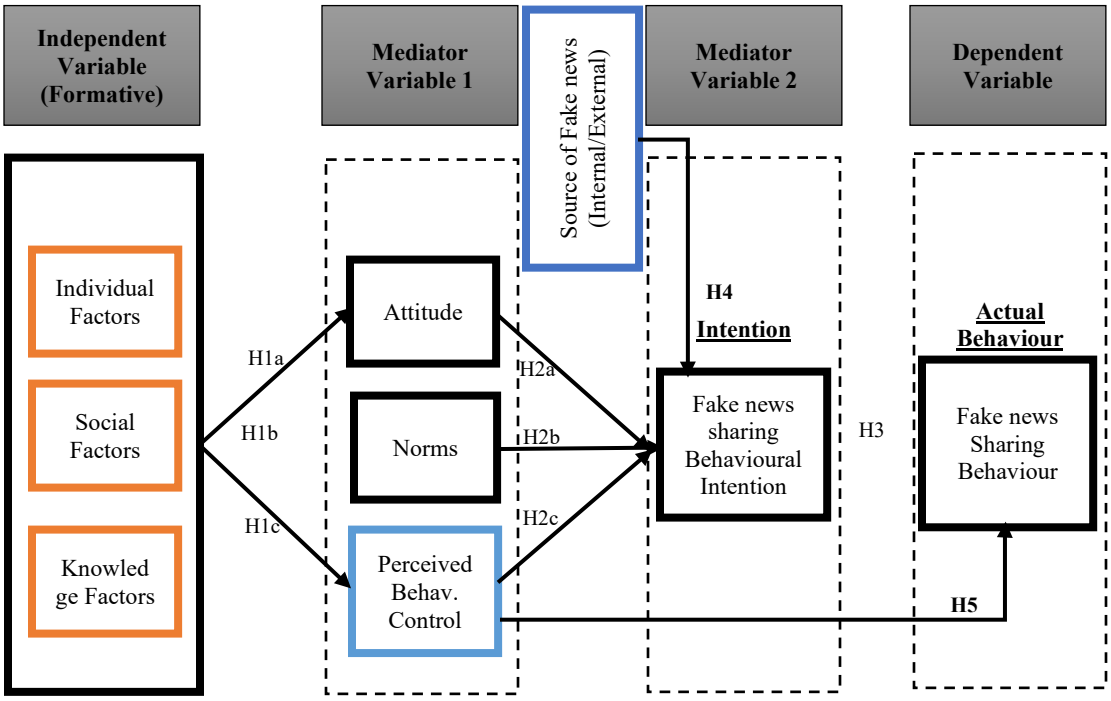

Figure 1. Theoretical Framework

3. Methodology

This research adopted quantitative survey research design based on deductive reasoning paradigm. For this study, a number of reasons were considered as justification of this aspect of the research design. The first reason is that it will permit the establishment of causal relationships to test the research hypotheses, using statistical approaches. The study population of constitute all social media users in the Abu Dhabi Emirate. According to GMI (2018), the population of social media users above the age of 18 in the region total about 1,950,000. Sekaran and Bougie (2016) and Saunders *et al*., (2012) approach to sample size determination is considered based on which approximately 412 respondents were taken as the study. Data was collected using questionnaire instrument using structure questionnaire with a five-point likert scale. The collected data was analysed using Partial Least Squares – Structural Equation Modelling (PLS-SEM) to test the research hypotheses. Two stage PLS-SEM evaluation criteria was adopted (Hair et al., 2014). First stage involved the evaluation of measurement models using reliability, factor loading, convergent validity and discriminant validity. The second stage involved the assessment of the structural model by evaluating the path coefficients, coefficient of determination (R^2), the effect sizes (F^2), the predictive relevance (Q^2) and fitness indices.

4. Results

Prior to the main analysis, the demographic characteristics of the respondents was observed. It was noted that the characteristics of the sample resembles the population of the study. The quality of the data was also observed. Accordingly, the normality of the data, outliers, multicollinearity, missing values and wrong postings were all observed and none pose any threat to this study. The result of the PLS-SEM analysis is presented based on the two stages earlier noted in methodology.

4.1 Measurement Model Assessment

The reflective measurement model is evaluated by assessing the level of reliability and the convergent validity of the models. For PLS-SEM, the most preferable reliability measure is the composite reliability (Memon and Rahman, 2013). However, as a check, other measures of reliability – Cronbach's Alpha and rho_A – were also used in addition to the composite reliability. The convergent validity of the reflective measurement models measures ability of the models to explain the indicator's variance (Wong, 2016). Assessment of the convergent validity of the

convergent validity was conducted by examining items factors loadings and their significance, the Average Variance Extracted (AVE) and the number of iterations the measurement model converges based on the established recommendations (Jeo F Hair, Sarstedt, Hopkins, and Kuppelwiesser, 2014; Joe F Hair, Sarstedt, Ringle, and Mena, 2011; Lowry and Gaskin, 2014; Memon and Rahman, 2013; Wong, 2016). The result of the convergent validity and reliability is presented in table 1 below.

Table 1. Reflective model reliability and convergent validity

Constructs	Items	Loadings **	Cronbach's Alpha	Rho_A	Composite Reliability	AVE
Attitude	Att1	0.876	0.882	0.885	0.927	0.809
	Att2	0.922				
	Att3	0.900				
Behaviour	Beh1	0.762	0.864	0.867	0.902	0.648
	Beh2	0.830				
	Beh3	0.833				
	Beh4	0.803				
	Beh5	0.796				
Intention	Int1	0.903	0.897	0.900	0.925	0.711
	Int2	0.845				
	Int3	0.851				
	Int4	0.739				
	Int5	0.869				
Perceived Behavioural control	PBC1	0.867	0.881	0.880	0.913	0.678
	PBC2	0.849				
	PBC3	0.855				
	PBC4	0.790				
	PBC5	0.750				
Perceived Norm	PN1	0.879	0.893	0.908	0.922	0.703
	PN2	0.875				
	PN3	0.893				
	PN4	0.798				
	PN5	0.736				
Source of Fake news	SOCEx	0.899	0.784	0.786	0.902	0.822
	SOCInt	0.914				

Table 1 shows the convergent validity and reliability of the reflective measurement models. To achieve convergent validity, items are required to load high and be significant. A factor loading is required to be at least 0.7 (Hair *et al*., 2014). In the first PLS algorithm run, the 25 items factor loadings shows that 23 of the items have loadings above 0.7 except ATT4 and ATT5 with loadings of -0.149 and 0.160 respectively. This result indicated that the two items affect the validity of the measurement model and was removed to run the modified model. The deletion was based on the recommendation of Hair *et al*. (2014b) that items with loadings below 0.4 should be deleted to improve convergent validity. The improved model shows that all the items in 'attitude' model are above the 0.7 recommended thresholds and are all significant. The modification the Cronbach's alpha, rho_A, composite reliability and AVE of Attitude construct from 0.530, 0.836, 0.735, 0.483 to 0.882, 0.885, 0.927, and 0.809 respectively. The reliability measures of the modified attitude construct are all above the 0.7 threshold and the AVE of 0.809 is above the required 0.5 threshold. Thus, the reliability and convergent validity of the reflective measurement models is achieved.

Even though all other constructs were modelled reflectively, social media exposure was modelled *formatively*. Unlike the reflective measurement models, the assessment of formative measurement models entails the evaluation constructs validity. The indicators are required to contribute significantly to the latent constructs (Hanafiah, 2020). The result of the construct validity is presented in table 2 below.

Table 2. Construct validity

	Outer weight	T Statistics	P Values
SME Ind -> SME (Social Media Exposure)	0.193	3.144	0.002
SME Kn -> SME (Social Media Exposure)	0.969	37.017	0.000
SME Soc -> SME (Social Media Exposure)	-0.025	0.399	0.690

The result in table 2 shows that the 'SME Ind' indicator and 'SME kn' indicator significantly contribute to the latent construct. However, 'SME Soc' is not significant. The first two indicators therefore achieve the construct validity. The last indicator, although did not achieve the required threshold is retained because retaining it will not change the original underlying construct (Khan, 2016). The discriminant validity of the reflective measurement models were assessed using Heterotrait-Monotrait (HTMT) ratio as presented in Table 3.

Table 3. Discriminant Validity of the reflective Models using HTMT

	ATT	**BEH**	**INT**	**PBC**	**PN**
ATT (Attitude)					
BEH (Behaviour)	0.061				
INT (Intention)	0.040	0.710			
PBC (Perceived Behavioural Control)	0.025	0.750	0.777		
PN (Perceived Norm)	0.490	0.041	0.044	0.033	
SOC (Source)	0.133	0.582	0.518	0.527	0.058

Table 3 shows the discriminant validity assessed using HTMT criterion. The result shows that the highest HTMT ratio is between PCB and BEH as indicated by 0.750. HTMT is required to be less than 0.85 to achieve discriminant validity (Henseler, Ringle, and Sarstedt, 2015). Thus, the reflective measurement models achieved discriminant validity based on HTMT criterion. The discriminant validity of the formative constructs is measured using collinearity diagnostics and none posse any multicollinearity issue. Accordingly, the discriminant validity is achieved. Structural Model Assessment

4.2 Assessment of Structural Model

The assessment of the structural model involves the evaluation of the path coefficient which indicate the individual influence of each path (measurement model) on the endogenous construct; the coefficient of determination (R^2) which explains the level of model variance explained by the exogenous constructs; the effect size (f^2) which reveals the individual size of effect that each exogenous construct has on the endogenous construct; the predictive relevance (Q^2) based on cross-validated redundancy; and the Goodness-of-Fit (GoF) which shows the overall goodness of the structural model (Jeo F Hair et al., 2014; Joe F Hair et al., 2011; Henseler and Sarstedt, 2012; Lowry and Gaskin, 2014; Memon and Rahman, 2013; Vinzi, Trinchera, and Amato, 2010; Wong, 2016).The structural model of the study is presented in Figure 1 below.

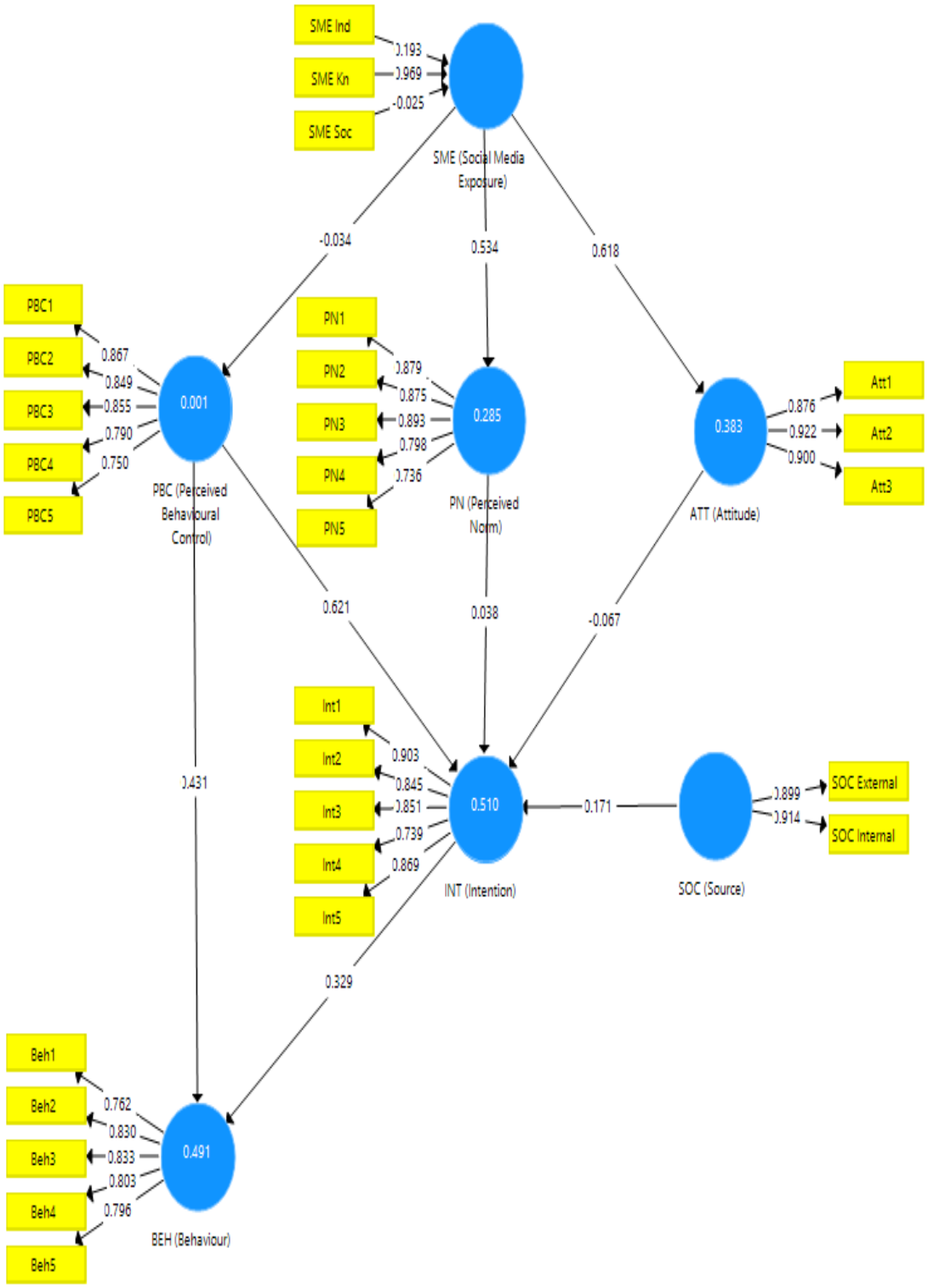

Figure 1. Structural Model

The significance of the model coefficients is presented in Figure 2 using T-statistics obtained 5000 samples bootstrapping.

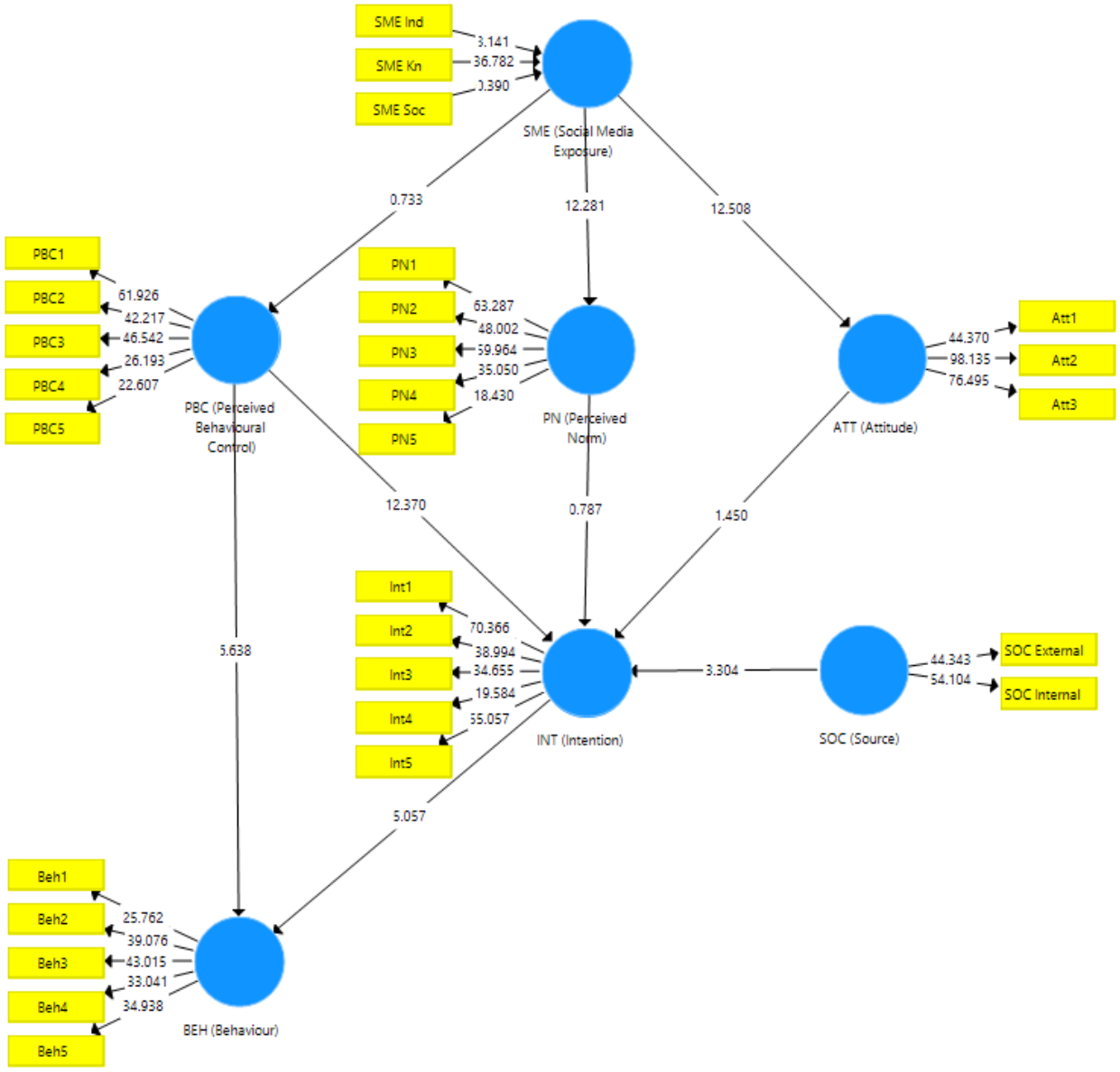

Figure 2. Structural Model T Statistics

Based on the structural model in Figure 1 and 2, out of the 9 direct paths, 6 paths are significant. This shows that majority of the direct paths are significant and therefore the research structural model has the required quality. The R^2 of the structural model is presented in Table 4.

Table 4. R^2 Assessment

Constructs	R Square	R Square Adjusted
ATT (Attitude)	0.383	0.381
BEH (Behaviour)	0.491	0.489
INT (Intention)	0.510	0.505
PBC (Perceived Behavioural Control)	0.001	-0.002
PN (Perceived Norm)	0.285	0.283

The R^2 assessment shows that the main endogenous construct of the research (Behaviour) has an R^2 value of 0.491. This result shows that about 49 per cent of the variance in social media fake news behaviour is explained by the behavioural intention of fake news and perceived behavioural control. The result also shows that behavioural intention has R^2 of 0.510. This result indicated that about 51 per cent of the variation in behavioural intention is explained by its antecedents (attitude, personal norm, and perceived behavioural control). Other R^2 are attitude (0.383), personal norm (0.285) and perceived behavioural control (0.001) explained by exposure to social media factors. The main constructs of the research therefore have moderate R^2 values. This shows that the values are within average and therefore the models have good predictive accuracy quality (Hair *et al*., 2014). The effect sizes of the research constructs on their respective R^2 is presented in Table 5.

Table 5. Effect Sizes

	ATT	**BEH**	**INT**	PBC	**PN**
ATT (Attitude)			0.007		
INT (Intention)		0.109			
PBC (Perceived Behavioural Control)		0.188	0.632		
PN (Perceived Norm)			0.002		
SME (Social Media Exposure)	0.620			0.001	0.399
SOC (Source)			0.047		

The effect size assessment shows that behavioural intention has small effect size on behaviour while perceived behavioural control has medium effect size on behaviour as indicated by f^2 value of 0.109 and 0.188 respectively. Social media exposure has large, small, and large effect sizes on attitude, perceived behavioural control and perceived norm as indicated by f^2 values of 0.620, 0.001, and 0.399 respectively. The predictive relevance of the structural model was measured using cross-validated redundancy as presented in Table 6.

Table 6. Predictive Relevance (Q^2)

	SSO	**SSE**	**Q^2 (=1-SSE/SSO)**
ATT (Attitude)	1,113.000	797.692	0.283
BEH (Behaviour)	1,855.000	1,317.911	0.290
INT (Intention)	1,855.000	1,234.520	0.334
PBC (Perceived Behavioural Control)	1,855.000	1,854.306	0.000
PN (Perceived Norm)	1,855.000	1,522.865	0.179
SME (Social Media Exposure)	1,113.000	1,113.000	
SOC (Source)	742.000	742.000	

Table 6 shows the predictive relevance of the structural model. It shows that the endogenous constructs have cross-validated redundancy (Q^2) values greater than 0 indicating good predictive relevance of the structural model. Finally, the model produced a goodness of fit (GoF) of 0.4951. Based on Akter (2011) submission, the GoF of the research model is considered large which confirms the quality of the research models.

4.3 Hypotheses Testing

The result of the research hypotheses are presented in table 7 below.

Table 7. Hypotheses testing

H	Statement	β	t-stat	p-Value	Remarks
H1a	Social media platform has a significant effect on attitudes of social media users	0.618	12.524	0.000	Accepted

H1b	Social media platforms have a significant effect on perceived norms of social media users.	0.534	12.148	0.000	Accepted
H1c	Social media platforms have a significant effect on perceived behavioural control of social media users.	-0.034	0.733	0.463	Rejected
H2a	Attitude has a significant effect on fake news behavioural intention of social media users	-0.072	1.560	0.119	Rejected
H2b	Perceived norms have a significant effect on behavioural intention of social media users	0.035	0.729	0.292	Rejected
H2c	Perceived behavioural control has a significant effect on behavioural intention of social media users.	0.633	12.767	0.000	Accepted
H3	Behavioural intention resulting from social media usage has a significant effect on the actual behavioural outcome.	0.317	4.491	0.000	Accepted
H4	The fake news sources of social media have a significant effect on behavioural intention.	0.188	3.725	0.000	Accepted
H5	Perceived behavioural control has a significant effect on the actual fake news behaviour of social media users.	0.416	6.722	0.000	Accepted

The result of the hypotheses testing shows that of the 9 hypotheses, 6 were accepted while the remaining 3 were rejected. The result shows that hypotheses H1c, H2a and H2b were not supported.

5. Conclusion

This study concluded that on social media, all three factors within the scope of the individual, social and knowledge significantly define social media platform exposure. Individual elements relevant to social media exposure include personality, mood, emotions, perceived risk and perceived opportunity. Knowledge factors relevant to social media exposure include ethnic and social class. Knowledge factors relevant to social media exposure include corruption, the standard of living, politics, leadership and general knowledge areas; these knowledge areas attract or influence social media users' interests on the social media platforms. The study found that that social media platform exposure has a significant effect on the attitudes and perceived norms of social media users in Abu Dhabi. It is however concluded that social media exposure does not have a significant effect on perceived behavioural control. These conclusions indicate that social media platform exposure has the tendency to change attitudes and affect the what users consider socially normal; however, the social media users still retain control over their own behaviours in terms of their propensity and locus to act.

The study findings indicate that the attitude and perceived norms influenced by social media exposure does not lead to fake news behavioural intention. Social media users rather control their fake news behavioural intention through their perceived behavioural control. And their perceived behavioural controls are not exposed to the influencing traits of social media platforms usage. This conclusion affirms that the transformation of social media exposure into behaviour is impeded by a critical break in the chain within the exposure-behavioural antecedents- intention continuum, at least within the context of Abu Dhabi Emirate. It was also found that that fake news behavioural intention has the propensity to influence actual fake news behaviour of social media users in the UAE, and specifically Abu Dhabi. Similarly, internal-external fake news source does influence the intention to behave.

References

Aboelmaged, M., and Gebba, T. R., Mobile banking adoption: an examination of technology acceptance model and theory of planned behavior, *International journal of business research and development*, vol. 2, no. 1, pp. 35–50, 2013.

Ajzen, I., The theory of planned behavior, *Organizational behavior and human decision processes*, vol. 50, no. 2, pp. 179-211, 1991.

Ajzen, I., The theory of planned behaviour is alive and well, and not ready to retire: a commentary on Sniehotta, Presseau, and Araújo-Soares, *Health Psychology Review*, vol. 9, no. 2, pp. 131-137, 2015.

Alam, S. S. and Sayuti, N. M., Applying the Theory of Planned Behavior (TPB) in halal food purchasing, *International Journal of Commerce and Management*, vol. 21, no. 1, pp. 8–20, 2011.

Al-Ghaith, W., Applying the technology acceptance model to understand social networking sites (sns) usage: Impact of perceived social capital, *International Journal of Computer Science and Information Technology (IJCSIT)*, vol. 7, no. 4, pp. 105-117, 2015.

Balkrishna and Shrivastava, R., Government warns Whats App over fake news, says company needs to filter its service. India Today, available at: www.indiatoday.in/india/story/ government-warns-whatsapp-over-fake-news-says-company-needs-to-filter-its-service-1276765- 2018-07-04 (accessed 9 January 2020), 2018.

Beck, L. and Ajzen, I., Predicting dishonest actions using the theory of planned behavior, *Journal of Research in Personality*, vol. 25, no. 3, pp. 285–301, 1991.

Bennett, W. L., The personalization of politics: Political identity, social media, and changing patterns of participation, *The ANNALS of the American Academy of Political and Social Science*, vol. 644, no. 1, pp. 20-39, 2012.

Bonilla, Y. and Rosa, J., #Ferguson: Digital protest, hashtag ethnography, and the racial politics of social media in the United States. *American Ethnologist*, vol. 42, no. 1, pp. 4-17, 2015.

Bradshaw, S. and Howard, P., *Troops, trolls and troublemakers: A global inventory of organized social media manipulation*. Computational Propaganda Research Project de Oxford University, Oxford, UK. Retrieved from: http://comprop.oii.ox.ac.uk/publishing/troops-trolls-and-trouble-makers-a-global-inventory-of-organized-social-media-manipulation, 2017.

Bradshaw, S. and Howard, P. N., *Challenging Truth and Trust : A Global Inventory of Organized Social Media Manipulation* (Computational Propaganda Research Project No. 2018.1), 2018.

Fishbein, M. and Ajzen, I., *Predicting and changing behavior: The reasoned action approach*. Psychology press, 2010.

GMI, Social Media Users https://www.globalmediainsight.com/blog/uae-facebook-users/ , 2018.

Gupta, A. and Kumaraguru, P., *Twitter explodes with activity in Mumbai blasts! a lifeline or an unmonitored daemon in the lurking?*. Technical report, IIIT-Delhi, 2011.

Hair, J F, Hult, G. T. M., Ringle, C. M. and Sarstedt, M., *A primer on partial least squares structural equation modeling (PLS-SEM)*. Thousand Oaks, California: SAGE Publication, Inc., 2014.

Hair, Jeo F, Sarstedt, M., Hopkins, L. and Kuppelwiesser, V. G., Partial Least Squares Structural Equation Modeling (PLS-SEM): An Emerging Tool for Business Research, *European Business Review*, vol. 26, no. 2, pp. 106–121, 2014.

Hair, Joe F, Sarstedt, M., Ringle, C. M. and Mena, J., An assessment of the use of partial least squares structural equation modeling in marketing research, *J. of the Acad. Mark. Sci.*, no. March, 2011.

Hanafiah, M. H. (2020), Formative vs. reflective measurement model: guideline for structural equation modelling research, *International Journal of Analysis and Applications*, vol. 18, no. 5, pp. 876–889, 2020.

Henseler, J. and Sarstedt, M., Goodness-of-fit indices for partial least squares path modeling, *Computational Statistics*, vol. 28, no. 2, pp. 565–580, 2012.

Henseler, J., Ringle, C. M. and Sarstedt, M., A new criterion for assessing discriminant validity in variance-based structural equation modeling, *Journal of the Academy of Marketing Science*, vol. 2015, no. 43, pp. 115–135, 2015.

IACP, *IACP Social Media Survey*, Retrieved 2 December, 2020 from http://www.iacpsocialmedia.org/Portals/1/documents/2013SurveyResults.pdf., 2013.

Khan, E. A., Dewan, M. N. A. and Chowdhury, M. H., Reflective or formative measurement model of sustainability factor? A three industry comparison, *Corporate Ownership and Control Journal*, vol. 13, no. 2, pp. 83–92, 2016.

Lowry, P. B. and Gaskin, J., Partial Least Squares (PLS) Structural Equation Modeling (SEM) for building and testing behavioral causal theory : when to choose it and how to use it. In *IEEE Transactions on Professional Communication*, Vol. 57, pp. 123–146, 2014.

Memon, A. H. and Rahman, I. A., Analysis of cost overrun factors for small scale construction projects in malaysia using PLS-SEM method, *Modern Applied Science*, vol. 7, no. 8, pp. 78–88, 2013.

Nayak, V., *92 Million Facebook Users Makes India The Second Largest Country* [STUDY]. Retrieved from http://www.dazeinfo.com/2014/01/07/facebook-inc-fbindia-demographic-users-2014/, 2014.

Nexis, L., *Risk Solutions. Survey of law enforcement personnel and their use of social media in investigations*. Retrieved from www.lexisnexis.com/investigations., 2012.

Park, M., Seo, J., Han, J., Oh, H. and Lee, K., Situational awareness for hybrid warfare: risk measurement between cyber warfare and nuclear warfare. In *ECCWS 2018 17th European Conference on Cyber Warfare and Security, Academic Conferences and publishing limited,* p. 360, 2018.

Pundir, V. and Devi, E. B., Arresting fake news sharing on social media : a theory of planned behavior approach. *Management Research Review*, (Ahead of print), https://doi.org/10.1108/MRR-05-2020-0286, 2021.

Saunders, M., Lewis, P. and Thornhill, A., *Research methods for business students* (6th Edn.). Harlow: Pearson Education, 2012.

Sekaran, U. and Bougie, R., *Research methods for business: A skill building approach*. John Wiley and Sons, 2016.

Usman, H. and Lizam, M., Determinants of intention of using mortgage in financing home ownership in Bauchi, Nigeria, *International Journal of Housing Markets and Analysis*, vol. 9, no. 3, 2016.

Usman, Hamza, Garba, M. H. and Abdullahi, I., Predicting intention of using mortgage in financing homeownership in Nigeria : Application of theory of planned behaviour, *The Social Sciences*, vol. 12, no. 3, pp. 509–516, 2017.

Vinzi, V. E., Trinchera, L. and Amato, S., PLS path modeling : from foundations to recent developments and open issues for model assessment and improvement. In E. V. Vinzi, L. Trinchera, and S. Amato (Eds.), *Handbook of Partial Least Squares* (pp. 47–82). Berlin: Springer, 2010.

Wong, K. K., Technical note: mediation analysis, categorical moderation analysis, and higher-order constructs modeling in partial least squares structural equation modelling, *The Marketing Bulletin*, vol. 26, no. May, 2016.

Zhang, H., Lu, Y., Gupta, S. and Zhao, L., What motivates customers to participate in social commerce? The impact of technological environments and virtual customer experiences, *Information and Management*, vol. 51, no. 8, pp. 1017-1030, 2014.

Biographies

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Hamza Usman earns his PhD in Real Estate and Facilities Management from Faculty of Technology Management and Business, Universiti Tun Hussein Onn Malaysia (UTHM). He earns B. Tech. in Estate Management from Abubakar Tafawa Balewa University (ATBU) Bauchi, Nigeria, Masters in Real Estate and Facilities Management from Universiti Tun Hussein Onn Malaysia. He works as a Lecturer in the Department of Estate Management and Valuation, ATBU, Bauchi. He is a registered Estate Surveyor and Valuer (RSV) and an Associate Member of Nigerian Institution of Estate Surveyors and Valuers (ANIVS). He has published several journal and conference papers.