

# Factors that Determine Behavioural Intention: A Review of Literature from 2015 to 2019

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It is the desire of every marketer to understand what makes their customers purchase their products or services. One way to understand customers' purchase intentions is to determine what predicts their purchase behaviour. Several models have been developed to comprehend what triggers behaviour. Among the well-known models is the theory of reasoned action, the theory of planned behaviour, the technology acceptance model, and the unified technology acceptance and use of technology (UTAUT), including theories '1', and '2'. These models have one thing in common; they determine that behavioural intention predicts behaviour. This study intends to shed light on what has been found as significant or insignificant predictors of behavioural intention. The findings reveal that performance expectancy has always been one of the strongest predictors. However, other UTAUT constructs do not show the consistencies expected.

**Keywords:** *Unified technology acceptance and use of technology, Behavioural intention, Performance expectancy, Effort expectancy, Social influence, Facilitating conditions.*

## Introduction

Marketers always try to understand how consumers think and behave in relation to the products, services or experiences they endeavour to market. To fathom the minds of their consumers, marketers need to understand what determines consumers' intentions. Fishbein and Ajzen (1975, p.369) assert that "if anyone wants to know whether or not an individual will perform a given behavior, the simplest and probably most effective thing one can do is to ask the individual whether he intends to perform that behavior". Therefore, 'intention' is assumed to be the immediate antecedent of behaviour (Ajzen, 1991), where "one makes a self-implicated statement as to a future course of action" (Bagozzi 1983, p.145). Extant

literature reveals various antecedents of intention in various contexts. This paper aims at investigating the determinants of behavioural intention (BI) and in various contexts.

## **Theoretical Foundations**

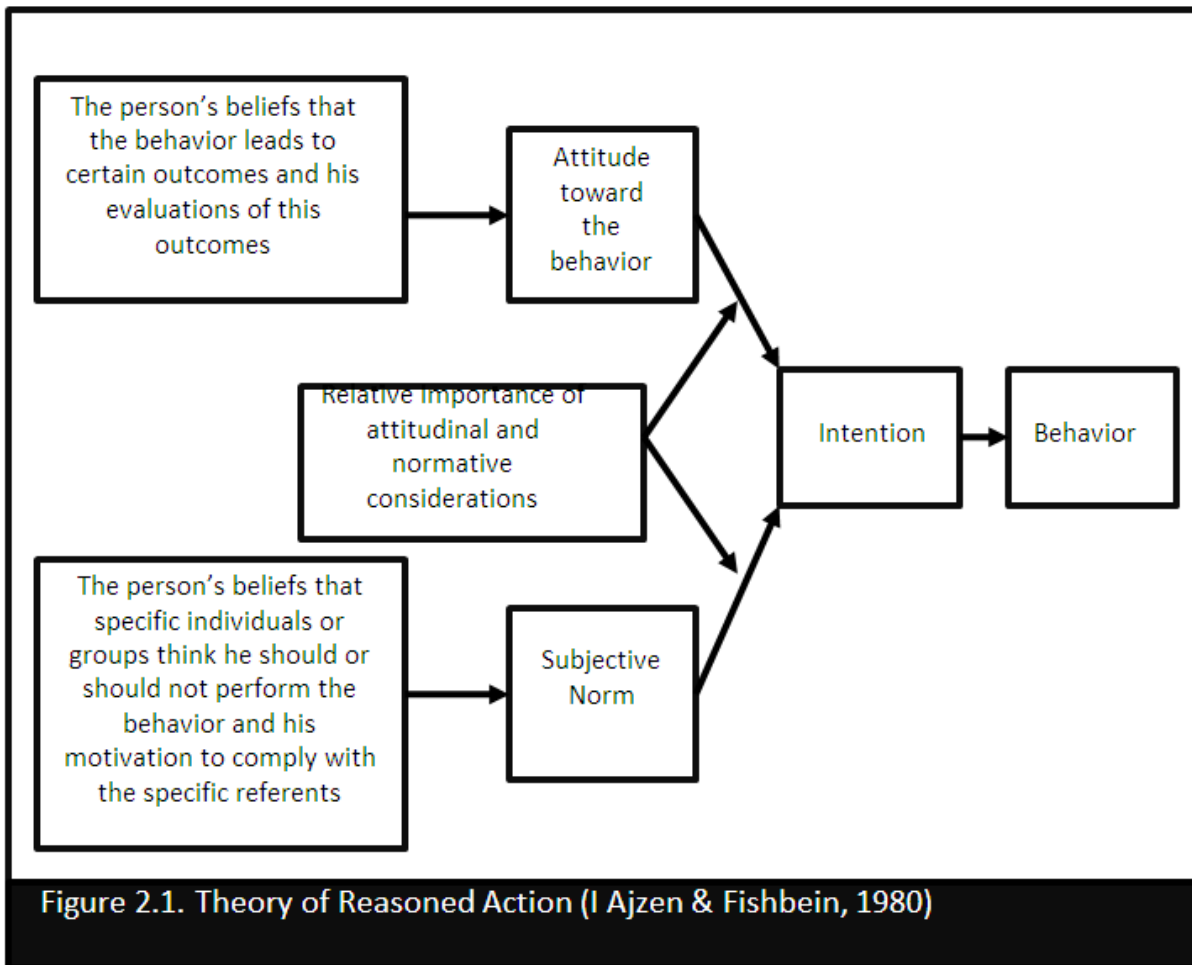
### ***Behavioural Intention***

Fishbein and Ajzen (1975, p.369) stipulate that the simplest and probably the most effective way to assess whether an individual will perform a given behaviour is to ask whether the individual intends to perform that behaviour. Bagozzi concludes that 'intention' is assumed to be the immediate antecedent of behaviour (Bagozzi 1983, p.145). The purchase intention indicates the likelihood that consumers will plan or be willing to purchase a certain product or service in the future (Wu, Yeh, & Hsiao, 2011). Extant literature has proved that an increase in purchase intention indicates an increase in the chance of purchasing (Chen, Hsu, & Lin, 2010). Similarly, online purchase intention has been proven to have a significant relationship with actual purchasing (Morwitz, Steckel, & Gupta, 2007; Pavlou & Fygenson, 2006). Wang et al. (2013) assert that purchase intention is the customer's willingness to make purchases on social commerce websites (Wang, Yeh, & Liao, 2013).

### ***Theory of Reasoned Action (TRA)***

Studies about BI have received much attention, especially since the introduction of the theory of reasoned action (TRA) by Fishbein and Ajzen in 1975. The TRA is a widely studied model from social psychology, which is concerned with the determinants of consciously intended behaviours. The TRA is used to investigate and understand attitude and behaviour. According to the TRA, a person's performance of a specified behaviour is determined by his or her BI to perform the behaviour, and BI is jointly determined by the person's attitude, and subjective norms concerning the behaviour in question (see Figure 1), with relative weights typically estimated by regression (Davis, Bagozzi, & Warshaw, 1989).

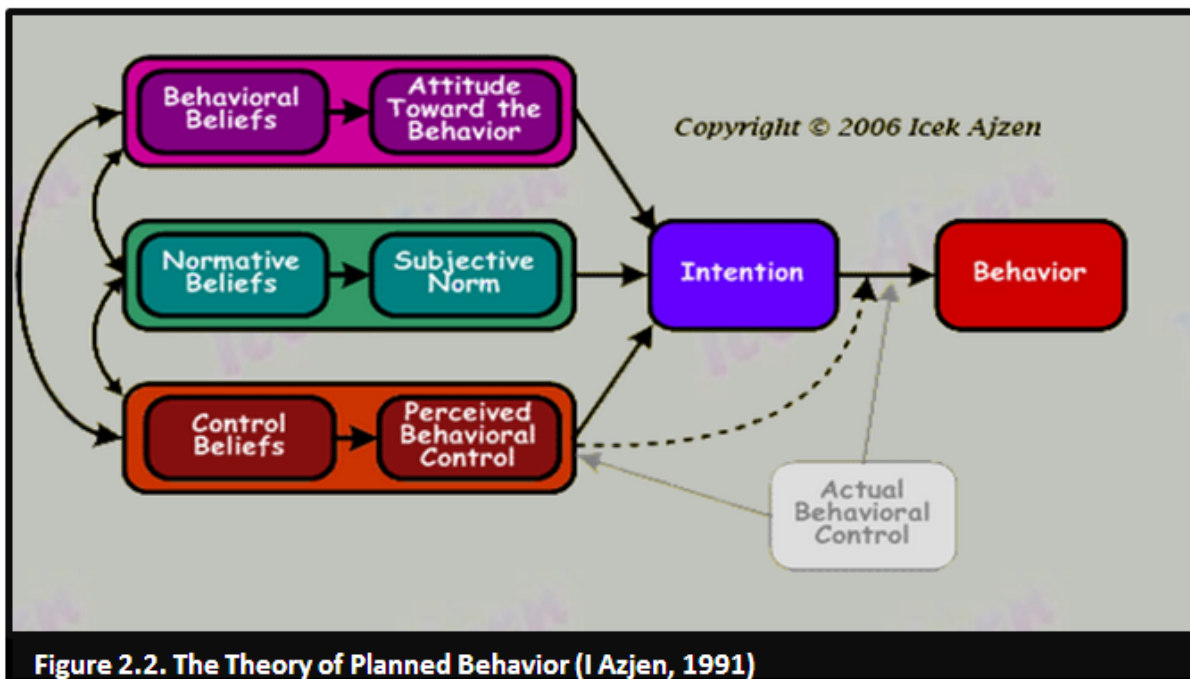
**Figure 1.** Theory of Reasoned Action



### *Theory of Planned Behaviour*

An extension of the TRA and grounded in psychology, the theory of planned behaviour (TPB) is proposed to predict the intention to perform a given behaviour, over which individuals have an incomplete volitional control. The intentions were assumed to capture the motivational factors that influence certain behaviour, and they also act as indicators on how hard people are willing to try or how much effort people plan to exert in order to perform the behaviour (Ajzen, 1985). According to the TPB, people's actions are determined by their intentions, which are influenced by their perceived behavioural control, besides attitude, and subjective norms. The perceived behavioural control refers to the perception of internal and external resource constraints on performing the behaviour (Ajzen, 1985).

**Figure 2.** Theory of Planned Behaviour (Ajzen, 1991)



### *Technology Acceptance Model*

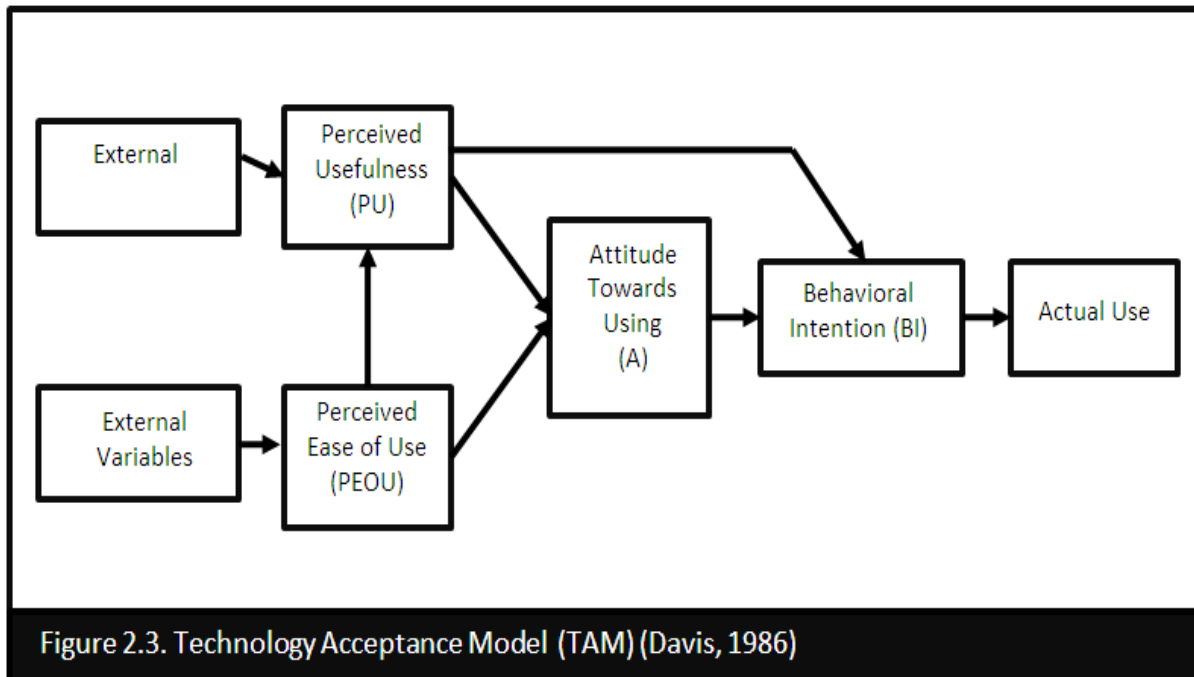
Adapted from the TRA, the technology acceptance model (TAM) was first developed by Davis (1986) to predict the adoption of an information system in organisational settings. According to Davis (1986), the TAM was developed to improve our understanding of user acceptance processes, and to provide the theoretical basis for a practical “user acceptance testing” (Davis, 1985). The model proposed that ease of use (EOU) and perceived usefulness (PU) of the technology play important roles in the probability of IS adoption. The EOU will also influence the PU, and both will influence the attitude towards using the system. Attitude was defined as a user’s evaluation of the desirability of using the system, and attitude will predict the intention to use, where in turn, the intention to use will predict the actual use of the system (Davis et al., 1989).

In applying the TAM, Sin et al. (2012) argued that PU was the most dominant factor that influences young consumers’ online purchase intentions through social media, followed by perceived ease of use (PEOU), and subjective norm (Sin, Nor, & Al-Agaga, 2012). A similar finding was presented by Velarde (2012), who posited that PU has a positive impact on the attitude towards online purchasing ( $p < 0.05$ ). The results also showed that PEOU has a strong impact on the attitude towards online purchasing ( $p < 0.01$ ) (Velarde & Krontalis, 2012).

Legris et al. conducted a meta-analysis on the TAM, and TAM 2, and concluded that overall, the two explain about 40 per cent of the system’s use. An analysis of empirical research using

the TAM shows that the results are not completely consistent or clear (Legris, Ingham, & Collerette, 2003). Another statistical meta-analysis of the TAM was conducted by King et al. (2006). The results show the TAM to be a valid and robust model that has been widely used, but which potentially has wider applicability. It also revealed the power of meta-analysis as a rigorous alternative to qualitative and narrative literature review methods (King & He, 2006).

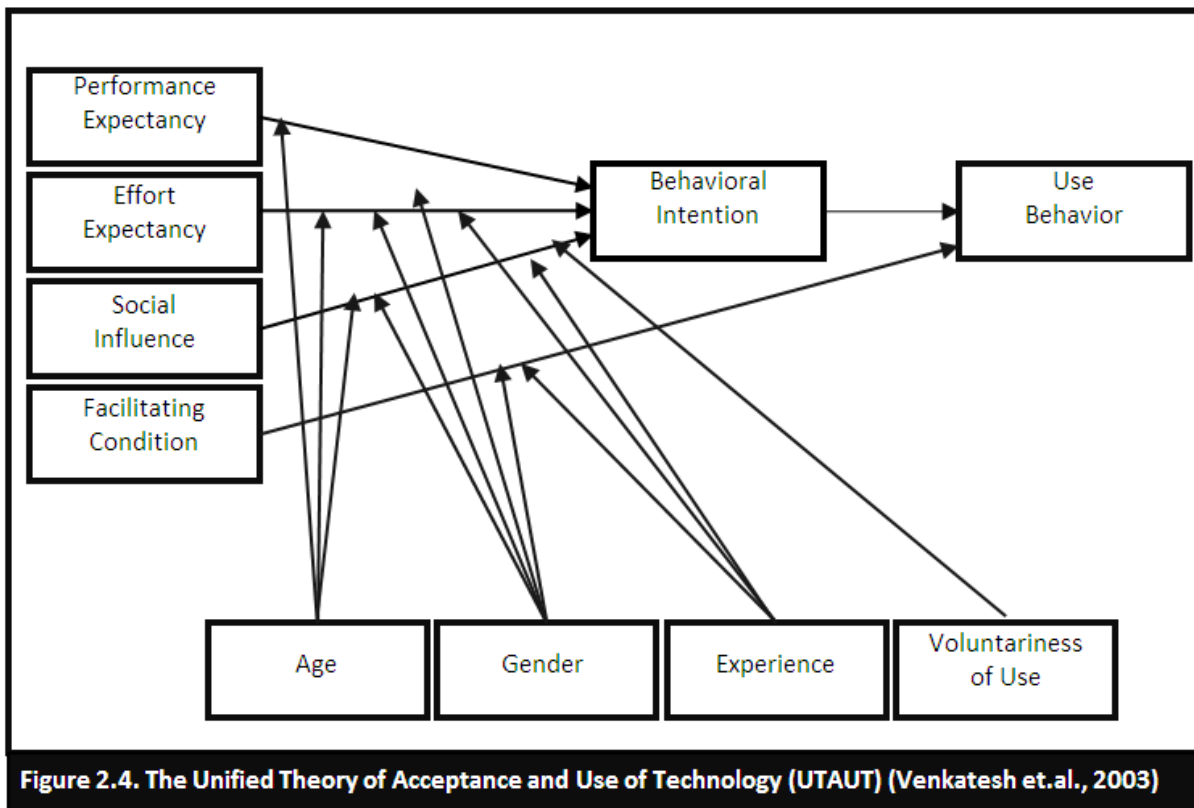
**Figure 3.** Technology Acceptance Model (Davis, 1985)



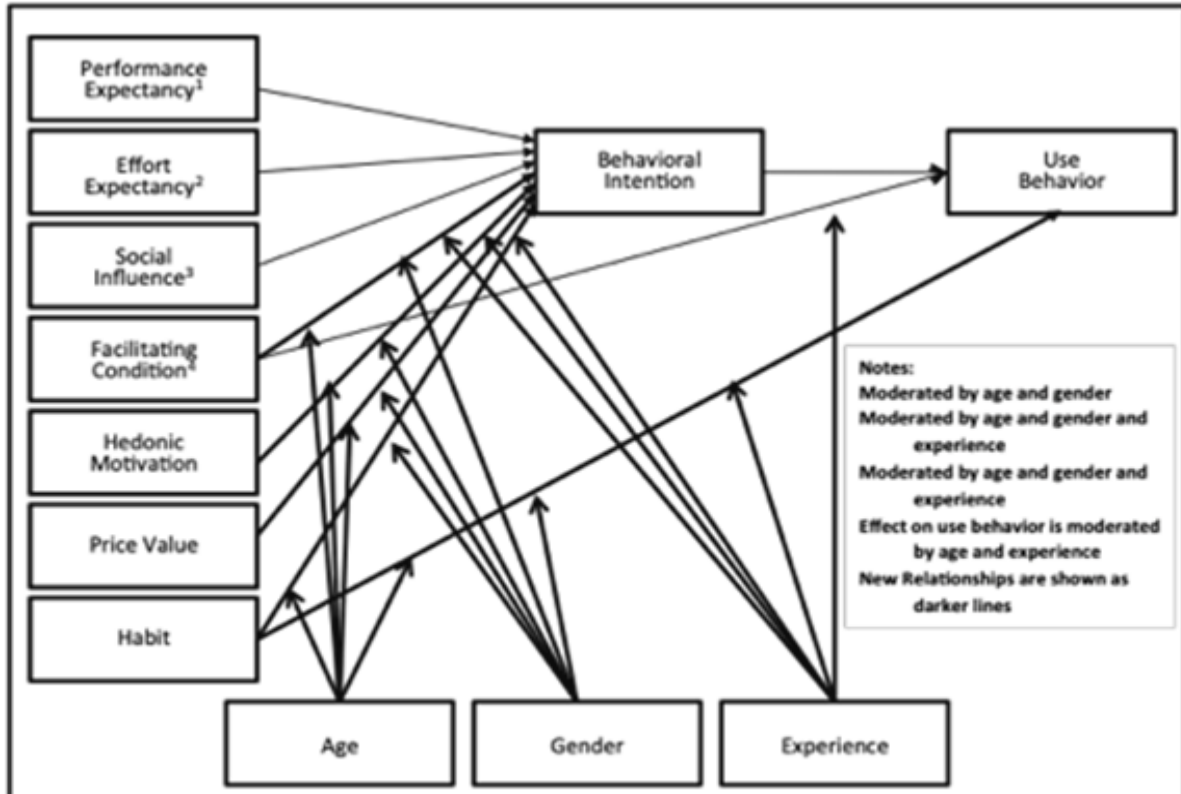
### *Unified Theory of Acceptance and Use of Technology*

The TRA, TPB, and TAM, as well as other dominant models including the diffusion of innovation theory (DOI), social cognitive theory (SCT), motivation model (MM), and model of personal computer utilisation (MPCU), bear a number of limitations. For example, the previous models use simple technologies and are individual oriented, most of the participants were students, most studies were retrospective, the nature of measurement were generally cross-sectional, and most of the studies were voluntary in nature (Al-Qeisi, 2009). To overcome these limitations, Venkatesh et al. (2003) carried out three different studies and at three different points in time: post training, one month after implementation, and three months after implementation. Meanwhile, actual usage behaviour was measured over the six-month post-training period. Based on user acceptance literature and the results of the models' comparison, collectively, attitude, computer self-efficacy, and anxiety were hypothesized not to have a direct effect on BI. The constructs that have a direct effect on BIs and usage are: performance expectancy, effort expectancy, social influences, and facilitating conditions (Al-Qeisi, 2009; Venkatesh, Morris, Davis, & Davis, 2003).

**Figure 4.** Unified Theory of Acceptance and Use of Technology 1 (Venkatesh et al., 2003)



**Figure 5.** Unified Theory of Acceptance and Use of Technology 2 (Venkatesh, Thong, & Xu, 2012).



**Figure 2.5.** The Unified Theory fo Acceptance and Use of Technology 2 (UTAUT 2), Venkatesh et al. (2012)

The unified theory of acceptance and use of technology 2 (UTAUT2) retains the main relationships from the original UTAUT (also known as UTAUT1) and adds new constructs and relationships that extend the applicability of the UTAUT to the consumer context. Venkatesh et al. (2012) have provided empirical support for the applicability of the UTAUT2 to the consumer context via a two-stage online survey of 1,512 mobile Internet consumers. The variance explained in both BI (74 per cent), and technology use (52 per cent) are substantial, compared to the baseline UTAUT, which explained 56 per cent and 40 per cent of the variance in intention and use, respectively. The results from the UTAUT2 are also comparable to those obtained in the Venkatesh et al. (2003) study of the UTAUT in the organisational context (70 per cent, and 48 per cent, respectively). This suggests that the proposed extensions are critical to making the predictive validity of the UTAUT in a consumer context comparable to what was found in the original UTAUT studies, which were in an organisational context (Venkatesh et al., 2012).

### ***Core Constructs of UTAUT2***

The UTAUT2 is an extension of the UTAUT. The core constructs of the UTAUT retained in the UTAUT2 are performance expectancy, effort expectancy, social influence, and facilitating condition. In addition to these constructs, Venkatatesh et al. (2012) added the constructs of hedonic motivation, price value, and habit. However, the voluntariness of use as a moderator is omitted. Venkatesh et al. (2012) posit that beyond these changes and relative to the original UTAUT conceptualisation, they dropped voluntariness, which was one of the moderators, and added a link between facilitating conditions (moderated by age, gender, and experience), and BI (Venkatesh et al., 2012).

#### ***Performance Expectancy***

Performance expectancy is defined as ‘the degree to which an individual believes that using the system will help him or her to attain gains in a job’ (Davis, 1993). The theoretical background of this variable comes from usefulness perceptions (TAM), extrinsic motivation (MM), job-fit (MPCU), relative advantage (DOI), and outcome expectations (SCT) (Diaz & Loraas, 2010; Shin, 2009).

Diaz et al. (2010) claim that within each of the individual models they tested, the variables related to performance expectancy were the strongest predictor of intention to use the target technology (Diaz & Loraas, 2010). Donaldson (2011) conducted a study on the use of mobile technology and data regarding the readiness of students to adopt mobile technology in their academic setting against the literature on community college student BI to use, and the actual use of mobile technology. Donaldson’s study confirmed the ability of the UTAUT’s independent variables of performance expectancy, social influence, facilitating conditions, and the additional construct of perceived playfulness in predicting students’ behavioural intent to use mobile devices for learning (Donaldson, 2011). However, Taiwo and Downe (2013) found that only the relationship between performance expectancy, and BI is strong, while the relationships between effort expectation, social influence, and BI are weak. Similarly, the relationship between the facilitating condition, BI, and use behaviour is also weak (Taiwo & Downe, 2013).

#### ***Effort Expectancy***

In the UTAUT, effort expectancy is defined as ‘the degree of ease associated with the use of the system’. According to Venkatesh et al. (2003), this factor was derived from the PEOU factor, as proposed in the TAM. Three factors from the existing models capture the concept of effort expectancy, as follows: PEOU, complexity, and EOU (Shin, 2009). Salim (2012) reveals that effort expectancy has a significant impact on BI (Salim, 2012). Jeng and Tzeng



(2012) conclude that the higher the level of PEOU, the greater the willingness of the consumer to adopt the system (Jeng & Tzeng, 2012).

### ***Social Influence***

Social influence is ‘the degree to which a user perceives that significant persons believe technology use to be important’ (Diaz & Loraas, 2010). Moore and Benbasat (1991) define image as the degree to which using a technology innovation is perceived to enhance an individual’s image or status in his or her social group. Meanwhile, subjective norm and image have different labels, and each of these factors contains the explicit or implicit notion that the individual’s behaviour is influenced by the way in which they believe others will view them, as a result of having used the technology (Moore & Benbasat, 2009). Malhotra posits that social influence is similar to the factor ‘subjective norm’, as defined in the TAM2, an extension of the TAM (Venkatesh & Davis, 2000).

In TAM2, the subjective norm exerts a significant direct effect on usage intentions over and above perceived usefulness, and PEOU for mandatory systems. However, none of the social influence constructs are significant in voluntary contexts (Davis, 1993; Malhotra & Galletta, 1999). Salim (2012) posits that social influence has a significant impact on BI (Salim, 2012). Chong (2013) reveals that subjective norms exert significance in mobile commerce (m-commerce) adoption because consumers are highly likely influenced by their peers, family, and the media. However, subjective norm was not found to significantly affect intention (Dennisa, Jayawardhena, & Papamatthaiou, 2010). This finding corroborates with previous meta-analysis conducted by Armitage and Conner (Armitage & Conner, 2001). In a meta-analysis conducted on subjective norms to shed light on the divergent findings within the literature, subjective norms were found to be partially mediated by attitude towards technology use (Schepers & Wetzels, 2007).

### ***Facilitating Conditions***

Facilitating conditions is defined as the degree to which an individual believes that organisational and technical infrastructure exists to support use of the system. A similar discussion can be found in the MPCU by Thompson et al. (1991). The underlying construct of the facilitating condition is operationalised to include aspects of the technological and/or organisational environment that are designed to remove barriers to use (Keong, Ramayah, Kurnia, & Chiun, 2012).

However, an interesting and important extension to the UTAUT is to model facilitating conditions specific to the technology acceptance context of interest (Diaz & Loraas, 2010). Although the facilitating condition is found to be important, it is ranked as the least important

predictor among all the predictors. The facilitating condition has no significant relationships with m-commerce adoption, and the neural network is able to capture its importance (Chong, 2013).

### ***Hedonic Motivation***

Hedonic motivation is defined as ‘the fun or pleasure derived from using a technology, and it has been shown to play an important role in determining technology acceptance and use’ (Brown & Venkatesh 2005). In IS research, such hedonic motivation, which is conceptualised as perceived enjoyment, has been found to influence technology acceptance and use directly (Van der Heijden, 2004; Thong et al., 2006). Thus, hedonic motivation was added as a predictor of consumers’ BI to use a technology (Venkatesh et al., 2012).

### ***Price Value***

Venkatesh et al. (2012) stipulate that price value ‘is consumers’ cognitive tradeoff between the perceived benefits of the applications and the monetary cost for using them’. The price value is positive when the benefits of using a technology are perceived to be greater than the monetary cost, and such price value has a positive impact on intention. Thus, price value was added as a predictor of BI to use a technology (Venkatesh et al., 2012).

### ***Experience and Habit***

Venkatesh et al. (2012) added habit to the UTAUT. Prior research has introduced two related yet distinct constructs, namely experience, and habit. According to Venkatesh et al. (2012), experience, as conceptualised in prior research (Kim & Malhotra, 2005; Venkatesh et al., 2003), reflects an opportunity to use a target technology and is typically operationalised as the passage of time from the initial use of a technology by an individual.

Habit has been defined as the extent to which people tend to perform behaviours automatically because of learning (Limayem et al., 2007), while Kim et al. (2005) equate habit with automaticity. Ajzen and Fishbein (2005) also noted that feedback from previous experiences will influence various beliefs, and consequently, future behavioural performance. Pahnla et al. (2011) postulate that integrating the UTAUT with habit provides a better explanatory value than the UTAUT without habit (Pahnla, Siponen, & Zheng, 2011). Voluntariness is excluded since the behaviour under consideration is discretionary and totally voluntary (Al-Qeisi, 2009).

## Methodology

Following the study's intent to investigate the determinants of BI within literature over the past five years, only the studies found in various websites hosting scientific journals, such as Emerald, Science Direct, Sage Publication, JStore, and Google Scholar, were identified, listed, and further analysed. This initial search produced 103 papers, all bearing the keyword of 'intention'.

## Results

### *Key Determinants of Behavioural Intention*

The study reveals that the constructs of the UTAUT2 are part of the key determinants of BI. It also suggests that attitude, a construct from the previous models (TRA, TPB, and TAM), appears to be a significant predictor of BI. In addition, this investigation finds trust, brand related constructs, and risk determinants of BI — please refer to Table 1 below.

**Table 1:** Constructs Determining Behavioural Intention

No.	Independent Variable	Dependent Variable	Studies	Number of Studies
1	Performance Expectancy	Behavioural Intention	Lim, Y. J., Osman, A., Salahuddin, S. N., Romle, A. R., & Abdullah, S. (2016); Hajli, N. (2015); Sheikh, Z., Islam, T., Rana, S., Hameed, Z., & Saeed, U. (2017); Yeh, M. L., & Tseng, Y. L. (2017); Naranjo-Zolotov, M., Oliveira, T., & Casteleyn, S. (2018); Khalilzadeh, J., Ozturk, A. B., & Bilgihan, A. (2017), Dumpit, D. Z., & Fernandez, C. J. (2017); Ain, N. U., Kaur, K., & Waheed, M. (2016); Kurfalı, M., Arifoğlu, A., Tokdemir, G., & Paçin, Y. (2017); Yan, H., & Pan, K. (2015); Rana, N. P., Dwivedi, Y. K., Williams, M. D., & Weerakkody, V. (2016); Baptista, G., & Oliveira, T. (2015); Arenas-Gaitán, J., Peral-Peral, B., & Ramón-Jerónimo, M. A. (2015); Madigan, R., Louw, T., Wilbrink, M., Schieben, A., & Merat, N. (2017); Pobee, F., & Opoku, D. (2018); Chopdar, P. K., Korfiatis, N., Sivakumar, V. J., &	23

			Lytras, M. D. (2018); Chaouali, W., Yahia, I. B., & Souiden, N. (2016); Kusumoaji, S. H., & Indrawati. (2015); Alalwan, A. A. (2020); Mouakket, S. (2015); Chen, Y., Yang, L., Zhang, M., & Yang, J. (2018); Chen, Y., Yang, L., Zhang, M., & Yang, J. (2018); Chen, Y., Yang, L., Zhang, M., & Yang, J. (2018); Peng, W., Yuan, S., & Ma, W. (2018); Alalwan, A. A. (2020).
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**Table 2:** Constructs Determining BI (Continued)

No.	Independent Variable	Dependent Variable	Studies	Number of Studies
2	Effort Expectancy	Behavioural Intention	Naranjo-Zolotov, M., Oliveira, T., & Casteleyn, S. (2018); Dumpit, D. Z., & Fernandez, C. J. (2017); Hoque, R., & Sorwar, G. (2017); Arenas-Gaitán, J., Peral-Peral, B., & Ramón-Jerónimo, M. A. (2015); Pobee, F., & Opoku, D. (2018); Chopdar, P. K., Korfiatis, N., Sivakumar, V. J., & Lytras, M. D. (2018).	6
3	Subjective Influence	Behavioural Intention	Zhang, Y., Jing, L., Bai, Q., Shao, W., Feng, Y., Yin, S., & Zhang, M. (2018); Marmaya, N. H., Zakaria, Z., & Mohd Desa, M. N. (2019); Peng, W., Yuan, S., & Ma, W. (2018); Filieri, R., & Lin, Z. (2016); Dixit, S., Jyoti Badgaiyan, A., & Khare, A. (2019); Sarmah, B., Sharma, S., & Gupta, S. (2017); Rahim, A., Safin, S. Z., Kheng, L. K., Abas, N., & Ali, S. M. (2016); Lim, Y. J., Osman, A., Salahuddin, S. N., Romle, A. R., & Abdullah, S. (2016); Kusumoaji, S. H., & Indrawati. (2015); Du, H., Liu, D., Sovacool, B. K., Wang, Y., Ma, S., & Li, R. Y. M. (2018); Naranjo-Zolotov, M., Oliveira, T., & Casteleyn, S. (2018); Khalilzadeh, J., Ozturk, A. B., & Bilgihan, A. (2017); Md Husin, M., Ismail, N., & Ab Rahman, A. (2016); Ain, N. U., Kaur, K., & Waheed, M.	18

			(2016); Kurfalı, M., Arifoğlu, A., Tokdemir, G., & Paçin, Y. (2017); Madigan, R., Louw, T., Wilbrink, M., Schieben, A., & Merat, N. (2017); Mouakket, S. (2015); Khalilzadeh, J., Ozturk, A. B., & Bilgihan, A. (2017).	
4	Facilitating Conditions	Behavioural Intention	Zhang, Y., Jing, L., Bai, Q., Shao, W., Feng, Y., Yin, S., & Zhang, M. (2018); Marmaya, N. H., Zakaria, Z., & Mohd Desa, M. N. (2019); Dixit, S., Jyoti Badgaiyan, A., & Khare, A. (2019); Sarmah, B., Sharma, S., & Gupta, S. (2017); Yeh, M. L., & Tseng, Y. L. (2017); Du, H., Liu, D., Sovacool, B. K., Wang, Y., Ma, S., & Li, R. Y. M. (2018); Naranjo-Zolotov, M., Oliveira, T., & Casteleyn, S. (2018); Kurfalı, M., Arifoğlu, A., Tokdemir, G., & Paçin, Y. (2017); Rana, N. P., Dwivedi, Y. K., Williams, M. D., & Weerakkody, V. (2016); Pobee, F., & Opoku, D. (2018); Sánchez-Torres, J. A., Arroyo-Cañada, F. J., Montoya-Restrepo, L. A., & Rivera-González, J. A. (2017); Chopdar, P. K., Korfiatis, N., Sivakumar, V. J., & Lytras, M. D. (2018).	12
5	Price Value	Behavioural Intention	Dewanti, R., Pratiwi, V. I., & Chang, A. (2016).	1
6	Hedonic Motivation	Behavioural Intention	Gan, C., & Wang, W. (2017); Alawan A. A. (2020); Kaufmann, H. R., Petrovici, D. A., Filho, C. G., & Ayres, A. (2016) (two cases); Sheikh, Z., Islam, T., Rana, S., Hameed, Z., & Saeed, U. (2017).	4
7	Habit	Behavioural Intention	Alawan A. A. (2020); Sheikh, Z., Islam, T., Rana, S., Hameed, Z., & Saeed, U. (2017); Veeramootoo, N., Nunkoo, R., & Dwivedi, Y. K. (2018).	3
8	Attitude	Behavioural Intention	Zhu, W., Yao, N. (Chris), Ma, B., & Wang, F. (2018); Shaouf, A., Lü, K., & Li, X. (2016); Lee, E.-B., Lee, S.-G., & Yang, C.-G. (2017) (two cases); Kudeshia Amresh	17

			<p>Kumar, C. (2017); Sarmah, B., Sharma, S., &amp; Gupta, S. (2017); Moriuchi, E., &amp; Jackson, P. (2017); Du, H., Liu, D., Sovacool, B. K., Wang, Y., Ma, S., &amp; Li, R. Y. M. (2018); Quoquab, F., Pahlevan, S., Mohammad, J., &amp; Thurasamy, R. (2018); Elkaseh, A. M., Wong, K. W., &amp; Fung, C. C. (2016) (two cases); Nadeem, W., Andreini, D., Salo, J., &amp; Laukkanen, T. (2015); Awiagah, R., Kang, J., &amp; Lim, J. I. (2016); Leung, X. Y., Bai, B., &amp; Stahura, K. A. (2015) (three cases); Rana, N. P., Dwivedi, Y. K., Williams, M. D., &amp; Weerakkody, V. (2016); Turan, M., &amp; Kara, A. (2018), Aldo, B., &amp; Syarief, S. (2015); Herz, M., &amp; Rauschnabel, P. A. (2019); Khalilzadeh, J., Ozturk, A. B., &amp; Bilgihan, A. (2017).</p>	
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On the contrary, some of the following constructs did not consistently predict BI. For example, effort expectancy, subjective influence, facilitating conditions, price value, hedonic motivation, and habit. The following table is a list of the previous mentioned constructs, as well as other constructs that did not predict BI.

**Table 2:** Constructs Failed to Predict Behavioural Intention

No.	Independent Variable	Dependent Variable	Studies	Number of Studies
1	Effort Expectancy	Behavioural Intention	<p>Tsai, H. Y. S., &amp; LaRose, R. (2015); Alalwan, A. A. (2020); Yeh, M. L., &amp; Tseng, Y. L. (2017); Shao, C., &amp; Kwon, K. H. (2019); Chaouali, W., Yahia, I. B., &amp; Souiden, N. (2016); Yeh, M. L., &amp; Tseng, Y. L. (2017); Ain, N. U., Kaur, K., &amp; Waheed, M. (2016); Kurfalı, M., Arifoğlu, A., Tokdemir, G., &amp; Paçin, Y. (2017); Baptista, G., &amp; Oliveira, T. (2015); Sheikh, Z., Islam, T., Rana, S., Hameed, Z., &amp; Saeed, U. (2017); Baptista, G., &amp; Oliveira, T. (2015).</p>	11
2	Social	Behavioural	Alalwan, A. A. (2020); Chaouali, W., Yahia,	10

	Influence	Intention	I. B., & Souiden, N. (2016); Shao, C., & Kwon, K. H. (2019); Awiagah, R., Kang, J., & Lim, J. I. (2016); Baptista, G., & Oliveira, T. (2015); Arenas-Gaitán, J., Peral-Peral, B., & Ramón-Jerónimo, M. A. (2015); Pobee, F., & Opoku, D. (2018); Sheikh, Z., Islam, T., Rana, S., Hameed, Z., & Saeed, U. (2017); Chopdar, P. K., Korfiatis, N., Sivakumar, V. J., & Lytras, M. D. (2018); Yeh, M. L., & Tseng, Y. L. (2017).	
3	Brand	Behavioural Intention	Dewanti, R., Pratiwi, V. I., & Chang, A. (2016); Shaouf, A., Lü, K., & Li, X. (2016); Coursaris, C. K., Balogh, B. A., Van Osch, W., & Balogh, B. A. (2016); Lee, E.-B., Lee, S.-G., & Yang, C.-G. (2017); Kudeshia Amresh Kumar, C. (2017) (two cases); Filieri, R., & Lin, Z. (2016); Dehghani, M., & Tumer, M. (2015) (two cases); Haque, A., Anwar, N., Yasmin, F., Sarwar, A., Ibrahim, Z., & Momen, A. (2015); Rahim, A., Safin, S. Z., Kheng, L. K., Abas, N., & Ali, S. M. (2016); Kaufmann, H. R., Petrovici, D. A., Filho, C. G., & Ayres, A. (2016); Tuan, M., Thi, P., Ly, M., & Trung, T. (2019); Martins, J., Costa, C., Oliveira, T., Gonçalves, R., & Branco, F. (2019); Leung, X. Y., Bai, B., & Stahura, K. A. (2015) (two cases); Schivinski, B., & Dabrowski, D. (2016) (two cases); Carlson, J., Rahman, M., Voola, R., & De Vries, N. (2018).	15
4	Trust	Behavioural Intention	Byun, K. A., & Dass, M. (2015); Chen, Y., Yang, L., Zhang, M., & Yang, J. (2018); Shareef, M. A., Dwivedi, Y. K., Kumar, V., Davies, G., Rana, N., & Baabdullah, A. (2018); Liu, D., & Guo, X. (2017); Rahman, Z., Moghavvemmi, S., Suberamanaian, K., Zanuddin, H., & Bin Md Nasir, H. N. (2018); Nadeem, W., Andreini, D., Salo, J., & Laukkanen, T. (2015); Hajli, N. (2015); Kurfalı, M., Arifoğlu, A., Tokdemir, G., &	18



			Paçin, Y. (2017) (two cases); Yan, H., & Pan, K. (2015); Yu, C., Zhang, Z., Lin, C., & Wu, Y. J. (2019) (two cases); Chaouali, W., Yahia, I. B., & Souiden, N. (2016); Chiu, J. L., Bool, N. C., & Chiu, C. L. (2017) (two cases); Shao, Z., Zhang, L., Li, X., & Guo, Y. (2019).	
5	Risks (negative)	Behavioural Intention	Khan, M. J., Chelliah, S., & Ahmed, S. (2018) (two cases); Wang, Y., & Hazen, B. T. (2016); Zhu, W., Yao, N. (Chris), Ma, B., & Wang, F. (2018); Zhao, X., Deng, S., & Zhou, Y. (2017); Shao, Z., Zhang, L., Li, X., & Guo, Y. (2019); Chopdar, P. K., Korfiatis, N., Sivakumar, V. J., & Lytras, M. D. (2018); Shao, Z., Zhang, L., Li, X., & Guo, Y. (2019); Khalilzadeh, J., Ozturk, A. B., & Bilgihan, A. (2017).	8

**Table 3:** Constructs Failed to Predict BI (continued)

No.	Independent Variable	Dependent Variable	Studies	Number of Studies
1	Facilitating Conditions	Behavioural Intention	Alalwan, A. A. (2020); Kusumoaji, S. H., & Indrawati (2015); Khalilzadeh, J., Ozturk, A. B., & Bilgihan, A. (2017); Awiagah, R., Kang, J., & Lim, J. I. (2016); Ain, N. U., Kaur, K., & Waheed, M. (2016); Hoque, R., & Sorwar, G. (2017); Baptista, G., & Oliveira, T. (2015); Madigan, R., Louw, T., Wilbrink, M., Schieben, A., & Merat, N. (2017); Sheikh, Z., Islam, T., Rana, S., Hameed, Z., & Saeed, U. (2017); Khalilzadeh, J., Ozturk, A. B., & Bilgihan, A. (2017).	10
2	Price Value	Behavioural Intention	Peng, W., Yuan, S., & Ma, W. (2018); Alawan A.A. (2020).	2
3	Hedonic Motivation (HM)	Behavioural Intention	Peng, W., Yuan, S., & Ma, W. (2018).	1
4	Attitude	Behavioural Intention	Dixit, S., Jyoti Badgaiyan, A., & Khare, A.	2



		Intention	(2019); Marmaya, N. H., Zakaria, Z., & Mohd Desa, M. N. (2019).	
5	Brand	Behavioural Intention	Kaufmann, H. R., Petrovici, D. A., Filho, C. G., & Ayres, A. (2016); Moriuchi, E., & Jackson, P. (2017).	2
8	Trust	Behavioural Intention	Ayeh, J. K., Au, N., & Law, R. (2016); Byun, K. A., & Dass, M. (2015); Kurfalı, M., Arifoğlu, A., Tokdemir, G., & Paçin, Y. (2017); Khalilzadeh, J., Ozturk, A. B., & Bilgihan, A. (2017).	4
7	Risk (negative)	Behavioural Intention	Byun, K. A., & Dass, M. (2015); Khan, M. J., Chelliah, S., & Ahmed, S. (2018) (three cases); Gan, C., & Wang, W. (2017); Veeramootoo, N., Nunkoo, R., & Dwivedi, Y. K. (2018); Chopdar, P. K., Korfiatis, N., Sivakumar, V. J., & Lytras, M. D. (2018).	5

### ***List of Other Determinants***

This study also found numerous other determinants of BI, including among them: aesthetics, consumer engagement, consumer involvement, eWOM, WOM, motivation, online review, online rating, online tracking, satisfaction, flow, reputation, familiarity, and even several Chinese terms, such as ‘ganqing’, ‘mianzi’, ‘renqing’, and ‘mianzi’ are the preconditions to establish a ‘guanxi’, which is an exclusive social circle that involves sharing and exchanging resources to attain mutual benefits. On the other hand, ‘qanging’ represents an affective construct to measure the strength of guanxi-based relations. It is an exclusive circle of social connection, in which one within the circle is regarded as an in-group member, and the one outside the circle is regarded as a stranger (Lisha, Goh, Yifan, & Rasli, 2017).

### **Discussion and Conclusion**

The study reveals several significant determinants of BI and in numerous contexts, across a number of countries. The studies investigated in this research were conducted in Bangladesh, Brazil, China, Colombia, Ghana, Greece, India, Indonesia, Italy, Jordan, Korea, Malaysia, Mozambique, Philippines, Portugal, Saudi Arabia, Singapore, Spain, Taiwan, the United Kingdom, the United States (US), Tunisia, Turkey, the United Arab Emirates, and Vietnam. The contexts employed included adopting television streaming, broadband Internet, e-business adoption, e-Commerce, e-Government services, e-participation, Facebook, and halal food.

HEIs, Internet banking and mobile payment services, LMS, mass media, mobile health services and applications, mobile banking, mobile electronic, mobile food ordering applications, online and mobile shopping applications, modified foods, networking applications, new energy vehicles, NFC technology, online learning, online public grievance redressal system, productivity applications, public transport, smartphones, social commerce, and social media and tourist guides (METG).

The analysis reveals performance expectancy is a predictor of BI in all the studies, either directly or indirectly. This is consistent with previous findings (Diaz & Loraas, 2010; Donaldson, 2011; Taiwo & Downe, 2013). Performance expectancy is a good predictor of BI in various contexts, and in a number of countries. For example, in the context of mobile health applications in China (Chen, Y., Yang, L., Zhang, M., & Yang, J., 2018), productivity applications in the US (Peng, W., Yuan, S., & Ma, W., 2018), mobile food ordering applications in Jordan (Alalwan, A. A., 2020), online shopping in Malaysia (Lim, Y. J., Osman, A., Salahuddin, S. N., Romle, A. R., & Abdullah, S., 2016), and mobile payments in Taiwan (Yeh, M. L., & Tseng, Y. L., 2017).

However, effort expectancy is not always a determinant of BI. Only seven studies found effort expectancy to directly affect BI, while three studies proved that effort expectancy affects BI indirectly, and 12 studies revealed contrary results. Effort expectancy is not a predictor in the previous studies. For example, see Park et al. (2007); Zhou, (2012); Guo (2014); Vanneste et al. (2013); and Alshehri et al. (2012) (Chang, Wahid, & Ismail, 2015).

Social influence was represented in 18 studies presented in Table 9. One study revealed that social influence has a positive significant relationship with BI, which is moderated by age. However, social influence is not a good predictor of BI in eleven of the studies. Social influence is also not a predictor (moderated by gender and income) to adopting television streaming in Indonesia. This corroborates with previous findings. For example, Nassuora (2013) posits that SI is not a determinant of BI upon the acceptance of mobile learning within the higher education setting in Saudi Arabia.

Facilitating conditions predicted BI in 12 of the studies but failed to do so in ten of the studies. The price value was investigated in three studies. Only one of the three studies proved that price value is a determinant of BI (Dewanti, R., Pratiwi, V. I., & Chang, A., 2016). Hedonic motivation (HM) was proven to be a significant determinant of BI in six of the studies investigated.

Interestingly, outside the technology acceptance model's constructs discussed above, the study reveals that attitude, brand, and trust are among the most frequent determinants of BI. A total of 21 studies found attitude to be a significant predictor of BI. For example, see Zhu,

W., Yao, N. (Chris); Ma, B., & Wang, F. (2018); Shaouf, A., Lü, K., & Li, X. (2016); Lee, E.-B., Lee, S.-G., & Yang, C.-G. (2017); and Lee, E.-B., Lee, S.-G., & Yang, C.-G. (2017). A total of 21 brand related constructs, such as brand loyalty, brand image, brand equity, brand attachment, brand name, and brand popularity, were found to predict intention. For example, see Dewanti, R., Pratiwi, V. I., & Chang, A. (2016) in regard to brand loyalty; and Shaouf, A., Lü, K., & Li, X. (2016) regarding attitudes towards brand. Trust, such as trustworthiness, disposition to trust, and perceived trust, was also found to affect BI. The investigation reveals 18 of the studies prove that trust relates directly to BI.

## **Conclusion**

The UTAUT or UTAUT2 have claimed to be robust in predicting BI. The UTAUT2 produced a substantial improvement in the variance explained in BI (56 per cent to 74 per cent), and technology use (40 per cent to 52 per cent) (Venkatesh et al., 2012). Despite this claim, this study reveals that several constructs failed to be investigated thoroughly in UTAUT or UTAUT2, which show significant relationships with BI. These constructs are: attitude, adopted from the TPB, TRA, and TAM; and trust, and brand related properties. In addition, there are determinants that significantly relate to BI. For example, eWOM, WOM, motivation, risks (time risk, and performance risk), online review, online rating, online tracking, satisfaction, flow, reputation, and familiarity.

## **Limitation**

This study bears several limitations, including the number of papers examined. Accordingly, in future studies, it would be more accurate to increase the number of papers examined. The other key limitation is the ability to draw a statistical conclusion upon each research study examined. This was due to a great variety of research topics, methods, constructs, and contexts.

## REFERENCES

- Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In *Action Control* (pp. 11–39). Retrieved from [https://link.springer.com/chapter/10.1007/978-3-642-69746-3\\_2](https://link.springer.com/chapter/10.1007/978-3-642-69746-3_2)
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50, 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Al-Qeisi, K. I. (2009). *Analyzing the Use of UTAUT Model in Explaining an Online Behavior*. Department of Marketing and Branding, Brunel University.
- Armitage, C. J., & Conner, M. (2001). Efficacy of the Theory of Planned Behaviour: A Meta-Analytic Review. *British Journal of Social Psychology*, 40(July 2017), 471–499. <https://doi.org/10.1348/014466601164939>
- Chang, A., Wahid, N. A., & Ismail, I. (2015). A review on UTAUT: Is it Useful for MSMEs? In *the 11th Asain Academy of Management International Conference, 2-4th October 2015*. Penang, Malaysia. Retrieved from <http://aamc2015.usm.my/>
- Chen, Y.-H., Hsu, I. C., & Lin, C.-C. (2010). Website attributes that increase consumer purchase intention: A conjoint analysis. *Journal of Business Research*, 63(9–10), 1007–1014. <https://doi.org/10.1016/j.jbusres.2009.01.023>
- Chong, A. Y.-L. L. (2013). Predicting m-commerce adoption determinants: A neural network approach. *Expert Systems with Applications*, 40(2), 523–530. <https://doi.org/10.1016/j.eswa.2012.07.068>
- Davis, F. D. (1985). *A Technology Acceptance Model for Empirically Testing New End-User Information Systems: Theory and Results*. The Sloan School of Management, Massachusetts Institute of Technology. Retrieved from [en.scientificcommons.org](http://en.scientificcommons.org)
- Davis, F. D. (1993). User acceptance of information technology: system characteristics, user perceptions and behavioral impacts. *International Journal of Machie Studies*, 38, 475–487.
- Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User Acceptance of Computer Technology: A Comparison of Two Theoretical Models. *Management Science*, 35(8), 982–1003. <https://doi.org/10.1287/mnsc.35.8.982>
- Dennisa, C., Jayawardhena, C., & Papamatthaiou, E.-K. (2010). Antecedents of internet shopping intentions and the moderating effects of substitutability. *The International Review of Retail, Distribution and Consumer Research*, 20(4), 411–430.



<https://doi.org/10.1080/09593969.2010.504008>

- Diaz, M. C., & Loraas, T. (2010). Learning new uses of technology while on an audit engagement: Contextualizing general models to advance pragmatic understanding. *International Journal of Accounting Information Systems*, 11(1), 61–77. <https://doi.org/10.1016/j.accinf.2009.05.001>
- Donaldson, R. L. (2011). *Florida state university libraries student acceptance of mobile learning*. The Florida State University.
- Jeng, D. J.-F., & Tzeng, G.-H. (2012). Social influence on the use of clinical decision support systems : Revisiting the Unified Theory of Acceptance and Use of Technology by the fuzzy DEMATEL technique. *Computers & Industrial Engineering*, 62, 819–828. <https://doi.org/10.1016/j.cie.2011.12.016>
- Keong, M. L., Ramayah, T., Kurnia, S., & Chiun, L. M. (2012). Explaining intention to use an enterprise resource planning (ERP) system: an extension of the UTAUT model. *Business Strategy Series*, 13(4), 173–180. <https://doi.org/10.1108/17515631211246249>
- King, W. R., & He, J. (2006). A meta-analysis of the technology acceptance model. *Information and Management*, 43(6), 740–755. <https://doi.org/10.1016/j.im.2006.05.003>
- Legris, P., Ingham, J., & Collerette, P. (2003). Why do people use information technology? A critical review of the technology acceptance model. *Information and Management*, 40(3), 191–204. [https://doi.org/10.1016/S0378-7206\(01\)00143-4](https://doi.org/10.1016/S0378-7206(01)00143-4)
- Lisha, C., Goh, C. F., Yifan, S., & Rasli, A. (2017). Integrating guanxi into technology acceptance: An empirical investigation of WeChat. *Telematics and Informatics*, 34(7), 1125–1142. <https://doi.org/10.1016/j.tele.2017.05.003>
- Malhotra, Y., & Galletta, D. F. (1999). Extending the Technology Acceptance Model to Account for Social Influence: Theoretical Bases and Empirical Validation. In *Proceedings of the 32nd Hawaii International Conference on System Sciences*.
- Moore, G. C., & Benbasat, I. (2009). Development of an Instrument to Measure the Perceptions of Adopting an Information Technology Innovation. *Information Systems Research*, 2(3). <https://doi.org/10.1080/13538320902995758>
- Morwitz, V. G., Steckel, J. H., & Gupta, A. (2007). When do purchase intentions predict sales? *International Journal of Forecasting*, 23(3), 347–364. <https://doi.org/10.1016/j.ijforecast.2007.05.015>



- Pahnila, S., Siponen, M., & Zheng, X. (2011). <Integrating Habit into UTAUT: The Chinese eBay Case.pdf>. *Pacific Asia Journal of the Association for Information Systems*, 3(2), 104-117. Retrieved from <http://aisel.aisnet.org/pajais/vol3/iss2/2>
- Pavlou, P. A., & Fygenson, M. (2006). Understanding and Predicting Electronic Commerce Adoption: An Extension of the Theory Of Planned Behavior. *MIS Quarterly*, 30(1), 115–143. <https://doi.org/10.1109/GLOCOMW.2012.6477580>
- Salim, B. (2012). An Application of UTAUT Model for Acceptance of Social Media in Egypt: A Statistical Study. *International Journal of Information Science*, 2(6), 92–105. <https://doi.org/10.5923/j.ijis.20120206.05>
- Schepers, J., & Wetzels, M. (2007). A meta-analysis of the technology acceptance model: Investigating subjective norm and moderation effects. *Information & Management*, 4490–103. <https://doi.org/10.1016/j.im.2006.10.007>
- Shin, D. H. (2009). Towards an understanding of the consumer acceptance of mobile wallet. *Computers in Human Behavior*, 25(6), 1343–1354. <https://doi.org/10.1016/j.chb.2009.06.001>
- Sin, S. S., Nor, K. M., & Al-Agaga, A. M. (2012). Factors Affecting Malaysian young consumers' online purchase intention in social media websites. *Procedia - Social and Behavioral Sciences*, 40, 326–333. <https://doi.org/10.1016/j.sbspro.2012.03.195>
- Taiwo, A. A., & Downe, A. G. (2013). The Theory of User Acceptance and Use Of Technology (UTAUT)- A Meta-Analytic Review Of Empirical Findings. *Journal of Theoretical and Applied Information Technology*, 49(1), 110-119.
- Velarde, V. D. V., & Krontalis, A. K. (2012). *Determinants of online purchasing behavior- An empirical investigation using an extension of the Theory of Planned Behavior*. Aarhus University.
- Venkatesh, V., & Davis, F. D. (2000). Theoretical extension of the Technology Acceptance Model: Four longitudinal field studies. *Management Science*, 46(2), 186–204. <https://doi.org/10.1287/mnsc.46.2.186.11926>
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User Acceptance of Information Technology: Toward a Unified View. *MIS Quarterly*, 27(3), 425–478. <https://doi.org/10.1016/j.inoche.2016.03.015>
- Venkatesh, V., Thong, J. Y. L., & Xu, X. (2012). Consumer Acceptance and use of Information Technology: Extending the Unified Theory of Acceptance and use of Technology. *MIS Quarterly*, 36(1), 157–178. <https://doi.org/10.1042/bst0120672>



- Wang, Y.-S., Yeh, C.-H., & Liao, Y.-W. (2013). What drives purchase intention in the context of online content services? The moderating role of ethical self-efficacy for online piracy. *International Journal of Information Management*, 33(1), 199–208. <https://doi.org/10.1016/j.ijinfomgt.2012.09.004>
- Wu, P. C. S., Yeh, G. Y.-Y., & Hsiao, C.-R. (2011). The effect of store image and service quality on brand image and purchase intention for private label brands. *Australasian Marketing Journal (AMJ)*, 19(1), 30–39. <https://doi.org/10.1016/j.ausmj.2010.11.001>