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Article

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Suggested Citation: Faizal, Sellywati Mohd; Jaffar, Nahariah; nor, Azleen Shabrina Mohd (2022) : Integrate the adoption and readiness of digital technologies amongst accounting professionals towards the fourth industrial revolution, Cogent Business & Management, ISSN 2331-1975, Taylor & Francis, Abingdon, Vol. 9, Iss. 1, pp. 1-14, https://doi.org/10.1080/23311975.2022.2122160

Cogent Business & Management

ISSN: (Print) (Online) Journal homepage: www.tandfonline.com/journals/oabm20

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To cite this article: Sellywati Mohd Faizal, Nahariah Jaffar & Azleen Shabrina Mohd nor (2022) Integrate the adoption and readiness of digital technologies amongst accounting professionals towards the fourth industrial revolution, Cogent Business & Management, 9:1, 2122160, DOI: 10.1080/23311975.2022.2122160

To link to this article: https://doi.org/10.1080/23311975.2022.2122160

Published online: 08 Sep 2022.

Mohd Faizal et al., *Cogent Business & Management* (2022), 9: 2122160
https://doi.org/10.1080/23311975.2022.2122160

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ACCOUNTING, CORPORATE GOVERNANCE & BUSINESS ETHICS | RESEARCH ARTICLE

Integrate the adoption and readiness of digital technologies amongst accounting professionals towards the fourth industrial revolution

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Received: 15 July 2022
Accepted: 02 September 2022

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Reviewing editor:
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Abstract: Due to the impact of Fourth Industrial Revolution (IR4.0), the accounting professionals are expected to undergo a big challenge. Currently, the development and integration of new technologies in society and industry have an unprecedented impact on the working environment. Therefore, there is a need for accounting professionals to diversify their ability to adopt IR4.0 and digital technologies. Upskilling and reskilling accountants to adopt digital technologies would help them to be relevant to future job demand. Whether the accounting professionals are now well-prepared to accept these digital technologies in their working lives has become a question. Therefore, this study develops a framework on the accounting professionals' willingness and readiness to adopt this change. This study aimed to assess the readiness of accountants to accept digital technologies by adopting and integrating the Unified Theory of Acceptance and

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PUBLIC INTEREST STATEMENT

The present study discusses the readiness and acceptance of accounting professional toward digital technologies in the Industrial Revolution 4.0 (IR 4.0) era. Digital technologies is a vital challenge that could influence the way accountants perform their jobs. To sustain in the job market, the accounting professionals need to equip themselves with the technology revolution and adopt it in their daily tasks. However, they may not be ready to accept the changes due to some reasons. Therefore, to understand the issue, this study integrated two theories, the Unified Theory of Acceptance and Use of Technology (UTAUT) and the Technology Readiness (TR). Seven factors have been identified and tested to influence the behavioural intention of the accounting professionals to accept the technologies. These factors are performance expectancy, effort expectancy, social influence, facilitating conditions, optimism, innovativeness and discomfort. The findings revealed that only performance expectancy, social influence and optimism significantly influenced the behavioural intention to adopt the digital technologies. This study extends the integration of UTAUT and TR from the accounting professionals' perspectives.

Use of Technology (UTAUT) and the Technology Readiness (TR). These theories proposed a framework to understand factors that influence accounting professionals to adopt digital technology in their workplace. The questionnaire was used and distributed randomly to accounting professionals from various organisations. The results found that performance expectancy, social influence and optimism support the prediction.

Subjects: Attitudes & Persuasion; Social Influence; Accounting; Management of Technology

Keywords: UTAUT; TR; digital technologies; accounting professional; behavioural intention

1. Background

Digital technologies are rapidly expanding, drawing the attention of fiscal authorities as they transform the global economy. Online businesses and transactions, big data and social media are examples of transformation due to digital technologies. Digital technologies cannot be ignored or avoided in order to be sustainable and competitive in the market.

However, technologies give rise to worries that humans will eventually be replaced or automated by either machines or robots in the workforce that leading to unemployment. Likewise, digital technologies also pose challenges to and have an impact on the accounting profession. In June 2017, Bloomberg Businessweek disclosed numerous studies conducted in the United States, the United Kingdom, and Europe found that the most vulnerable occupation to the disruption of digital technologies in IR4.0 is accounting, especially low-level accountants whose main daily tasks are to record business transactions. They are expected to lose their jobs because of automation (Hart, 2017). Notwithstanding, the impact of digital technologies can be embraced by accounting professionals by upskilling and reskilling themselves as it would strengthen their individual roles in the organisation. Therefore, there is a need for accounting professionals to adopt digital technologies, such as artificial intelligence, data analytics, block chain and virtual reality.

However, this may raise another concern whether they are ready to adopt digital technology changes in their working environment. Therefore, the goal of this study is to increase current understanding of the factors that influence digital technologies adoption by accounting professionals in the light of UTAUT and integrate it with the Technology Readiness (TR). Based on UTAUT, the users' acceptance of a new information system has an impact on the successful information system adoption (Davis, 1989; Succi & Walter, 1999; Venkatesh & Davis, 1996; Venkatesh et al., 2003). If the users are unwilling to accept the adoption, the organisation will not reap the full benefits (Davis & Venkatesh, 1996). According to Succi & Walter, 1999), the users were more likely to change their practice and spend time and effort to start use the new technology if they are willing to accept a new information system. The more users are willing to make changes, the more time and effort spent to use the new technology. Nonetheless, currently there are limited studies on integration of UTAUT and TR into technology acceptance from the accounting professionals' perspective. Therefore, to bridge the aforesaid research gap, the purpose of this study is to extend the UTAUT by integrating it with TR that could impact on the adoption of digital technologies. As such, this study will contribute to the advancement of knowledge by discussing and exploring the adoption of digital technologies by the accounting professionals.

2. Theoretical background and research hypotheses

2.1. Theoretical background

2.1.1. The unified theory of acceptance and use of technology (UTAUT)

UTAUT was introduced by Venkatesh et al. (2003). They proposed the UTAUT based on a review of different theories and other literature about acceptance and use of technology. The four factors of

UTAUT models that directly predict the behavioural intention to use technologies were performance expectancy, effort expectancy, social influence, and facilitating conditions. Additionally, there are four moderators identified which consist of gender, age, experience and voluntariness of use. According to Shibl et al. (2013), the UTAUT was praised for its quality of prediction in which it could explain about 70% of the variance in the behavioural intention to use technology as compared to other models of about 40% of variance (Venkatesh et al., 2003). The UTAUT predicts that behavioural intention will have a significant positive impact on the use of technology behaviour. Behavioural intention refers to a measure of the strength of one's intention to perform a specific behaviour. It is consistent with the underlying theory for all of the intention models. Findings of this relation have been supported by many studies, such as Venkatesh et al. (2003), Martins et al. (2014), Baptista and Oliveira (2015), and Rahi et al. (2019), and Al-Saedi et al. (2020).

The UTAUT is widely applied on the research of Information Technology. Numerous literatures have been conducted with regard to UTAUT on the adoption of various technologies, such as the internet banking (Martins et al., 2014); open data technologies (Zuiderwijk et al., 2015); mobile banking (Baptista & Oliveira, 2015); e-learning (El-Masri & Tarhini, 2017) and Building Information Modelling (BIM; Howard et al., 2017). The UTAUT are often modified to be suitable and useable in the context of research (Zuiderwijk et al., 2015) and to include potential moderating variables which is great in predicting users' technology acceptance (Sun & Zhang, 2006). Therefore, this study will amend the original UTAUT to suit the context of digital technologies adoption amongst accounting professionals by integrating it with TR. Details of other predictors were explained in the following paragraphs.

2.1.2. The technology readiness (TR)

TR was developed by Parasuraman (2000) and was known as TR Index (TRI) 1.0. The indexes are used to measure the technology readiness by using the National Technology Readiness Survey (NTRS). Basically, TRI has four dimensions, i.e. optimism, innovativeness, discomfort and insecurity. These dimensions are distinguished into two drivers, i.e. motivators (optimism and innovativeness) and inhibitors of technology readiness (discomfort and insecurity). TRI 1.0 originally comprised 36 items of NTRS to indicate these four dimensions before the 36 items were reduced and modified into 16 items in 2014 and become TRI 2.0 (Parasuraman & Colby, 2015).

Specifically, optimism means people's view and belief on how technology could help them to increase control, efficiency and flexibility in their lives. Innovativeness indicates a possibility of people to be a pioneer and leader in the technology. Whereas, discomfort is the feeling of lack of control over the technology and lastly, insecurity is feeling or beliefs that using the technology may lead to harmful or negative consequences (Parasuraman & Colby, 2015). Previous studies have used TR to assess technology readiness in different context that showed a higher TR index which was associated with higher readiness and adoption rates of technology, such as consumer (Chiu & Cho, 2020; Sun et al., 2020; Wiese & Humbani, 2020) and education (Kaushik & Agrawal, 2021; Warden et al., 2022). Therefore, this study believed that the TR is an appropriate theory to explain accountant profession's readiness to use and accept digital technologies.

2.2. Research hypotheses

The key variables of UTAUT include the performance expectancy, effort expectancy, social influence and facilitating conditions. Performance expectancy refers to "the degree to which an individual believes that using the system will help him or her to attain gains in job performance" (Venkatesh et al., 2003, p. 447). Davis (1989) stated that people believed that certain technology that can help them to enhance their performance in influencing people's intentions whether to use the technology or not. Prior research studies proved that performance expectancy is the strongest predictor of behavioural intention (Baptista & Oliveira, 2015; El-Masri & Tarhini, 2017; Zuiderwijk et al., 2015). People will use technology if they believe it will have positive outcomes.

Effort expectancy is defined as "the degree of ease associated with the use of the system" (Venkatesh et al., 2003, p. 450). The UTAUT predicts that effort expectancy positively affects the behavioural intention. When people feel technology is easy to use and does not require much effort, they will have intention to use and adopt the technology. Effort expectancy is equivalent to the perceived ease of use of Technology Acceptance Model. According to Davis (1989), ease of use is the degree to which a person believes that by using a particular system, he will be free of effort. It is the system behavioural beliefs that directly influence acceptance towards use (Wixom & Todd, 2005). As such, Users are more likely to accept an application that is perceived to be easier to use than another (C. C. Chang et al., 2012). They disclosed that perceived ease of use is the main factor which motivates users to use the online learning because of effortless; however, they can still enhance their knowledge and performance. Similarly, students are willing to accept the use of mobile learning when they perceived that the technology is easy to use in their learning process (Park et al., 2012).

Social influence is related to "the degree to which an individual perceives that important for others to believe that he or she should use the new system" (Venkatesh et al., 2003, p. 451). It reflects the effects of environmental factors, for example, the opinions of friends, relatives, superiors and other individuals who are important to users on their behaviours. These individuals' opinions will influence users' intention to adopt the technology. Zuiderwijk et al. (2015) found that social influence has strong prediction of the user behavioural intention to use and accept open data technologies.

Facilitating conditions is defined as "the degree to which an individual believes that an organisational and technical infrastructure exists to support use of the system" (Venkatesh et al., 2003, p. 453). An organisational and technical infrastructure may include knowledge, ability and resources. IR4.0 technologies require user to have certain set of skills to use, access and configure the tools. Users who have access to a favourable facilities condition will have the intention to use and adopt the technologies (Bapista & Oliveira, 2015).

UTAUT has been used widely in different technologies adoption, for example, in mobile payment adoption (Al-Saedi et al., 2020); electronic service quality (Rahi et al., 2019); and use of healthcare wearable devices (Wang et al., 2020). These studies proved that UTAUT variables had significant influence on user's intention.

Therefore, some accountants believe that they should adopt any digital technologies in their daily working tasks if these help them to attain positive outcomes in their job performance. The digital technologies must be easy to use to support their daily task and require less effort and time to handle. Accountants tend to accept technologies if their organisation shows support and encouragement, besides the ability of an organisation to provide good facilities, resources or infrastructure will influence the accountants to use and adopt the digital technologies. Based on the above discussion, the followings hypotheses are provided:

Hypothesis 1: Performance expectancy has a behavioural intention relationship to adopt and accept digital technologies.

Hypothesis 2: Effort expectancy has a behavioural intention relationship to adopt and accept digital technologies.

Hypothesis 3: Social influence has a behavioural intention relationship to adopt and accept digital technologies.

Hypothesis 4: Facilitating conditions has a behavioural intention relationship to adopt and accept digital technologies.

The technology readiness basically refers to "people's propensity to embrace and use new technologies for accomplishing goals in home life and at work" (Parasuraman, 2000, p. 308). Wiese and Humbani (2020) investigated technology readiness of South African users to use mobile payment applications by taking into consideration the demographics factors; attitude, perceived ease of use, usefulness and continuance intention. The results revealed that the mobile users were optimistic to use mobile payments because it offered the control, flexibility and efficiency as well as innovative tendency. However, the users have low level of discomfort, they feel insecure to use these mobile payments despite its ability to work efficiently. Though, by focusing only on two TRI indicators, namely optimism and innovativeness, Sun et al. (2020) found a positive correlation between technology readiness with technology acceptance in hospitality industry.

From the educational context, technology readiness amongst students would help them to be prepared with the modern teaching and learning approach via online class. Warden et al. (2022) investigated technology readiness amongst university students by considering their self-efficacy, engagement, and achievement in online class. Overall, the findings reported that students had self-efficacy in completing technological tasks regardless of their level of technology readiness. When students were less comfortable with technology, they had lower self-efficacy in social and academic interactions with classmates. In the most recent study in education, Kaushik and Agrawal (2021) used TRI 2.0 to examine factors that can encourage or discourage students in India to adopt the online learning or e-learning platforms given different levels of enrolment, diversified streams and separate courses. The results found that the students were motivated to use e-learning. They were optimistic and innovative to accept e-learning. Unfortunately, discomfort feeling of unavailability of e-learning anytime or anywhere could inhibit them from using e-learning (Kaushik & Agrawal, 2021).

Hypothesis 5: Optimism positively affects the behavioural intention to adopt and accept digital technologies.

Hypothesis 6: Innovativeness positively affects the behavioural intention to adopt and accept digital technologies.

Hypothesis 7: Discomfort negatively affects the behavioural intention to adopt and accept digital technologies.

Hypothesis 8: Insecurity negatively affects the behavioural intention to adopt and accept digital technologies.

The previous research works had found the integration of UTAUT and TR. Reyes-Mercado and Barajas-Portas (2020) examined the intensity of use of advertising platforms in small and medium enterprises in Mexico and they confirmed that all UTAUT variables and TR were strong predictors. Cruz-Cárdenas et al. (2019) conducted comparative research on the use of technology-based products and services in Ecuador and Russia. However, their study only focused on the demographic factors of UTAUT which were age and gender, while TR was used to represent the measurement of attitude towards technology. As a results, demographic and attitude towards technology showcased a high predictive ability in both countries.

In the health industry with the objective to determine the factors influencing the adoption of medical application by hospital patients in Taiwan, Y. Z. Chang et al. (2020) confirmed that TR moderated the relation between performance expectancy and behavioural intention. Nonetheless,

performance expectancy, effort expectancy, and social influence significantly and positively affected the behavioural intention to use the digital apps.

Meanwhile, Qasem (2021) adopted UTAUT2 by using hedonic motivation, price value, and habit as additional variables to the existing UTAUT variables. Furthermore, she only examined the influence of TR constructs of optimism and innovativeness used to see their impact on UTAUT2 and the behavioural intention of "try-on" technology in the context of e-fashion retailing. The findings indicated that performance expectancy was the only variable that was influenced by the TR construct and a factor for behavioural intention.

Previous studies on the Technology Acceptance Model (TAM) explored the association between technology readiness and perceived usefulness as well as the perceived ease of use (Walczuch et al., 2007). The combination of these two theories is known as technology readiness and acceptance model (TRAM; Chiu & Cho, 2020; Jin, 2020). Optimism and innovativeness are positive drivers of technology readiness, and they are closely related to a given technology's perceived ease of use and perceived usefulness (Chiu & Cho, 2020; Jin, 2020; Walczuch et al., 2007). In contrast, discomfort and insecurity are negatively related to the perceived ease of use and perceived usefulness (Chiu & Cho, 2020; Jin, 2020; Walczuch et al., 2007). According to Venkatesh et al. (2003), the perceived usefulness is pertained to performance expectancy, while perceived ease of use is related to effort expectancy; hence, this study developed the following hypotheses to further investigate the relation between each TR construct, UTAUT and behavioural intention.

Hypothesis 9a: Optimism positively affects performance expectancy

Hypothesis 9b: Optimism positively affects effort expectancy

Hypothesis 10a: Innovativeness positively affects performance expectancy

Hypothesis 10b: Innovativeness positively affects effort expectancy

Hypothesis 11a: Discomfort negatively affects performance expectancy

Hypothesis 11b: Discomfort negatively affects effort expectancy

Hypothesis 12a: Insecurity negatively affects performance expectancy

Hypothesis 12b: Insecurity negatively affects effort expectancy

3. Methodology

This study applied a quantitative approach using a questionnaire to obtain the respondents' opinion and information on the issues of this study. The respondents were selected amongst accounting professionals working in different industries. The accounting professionals comprised accountants, auditors, advisors, tax experts and any accounting-related job. A simple random sampling was used to select accounting professionals in Klang Valley due to its high density of population. A total of 380 samples were selected to take part in this study.

Items in the questionnaires were adapted and modified from prominent research on the related topics. The UTAUT constructs consists of four items for each construct in Venkatesh et al. (2003), Venkatesh et al. (2012), Baptista and Oliveira, (2015), and Zuiderwijk et al. (2015). To gauge the technology readiness, the TRI 2.0 was utilised with 16 items[1] (Parasuraman & Colby, 2015). Each item used five-point Likert-scale (1 = "strongly disagree," and 5 = "strongly agree").

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The questionnaire was created in English using Google Form and was divided into five sections: the cover page, the consent to participate, the respondents' background, the UTAUT section, and the TR section. The final version of the questionnaire survey was sent for the ethical procedure before being distributed to the respondents. The data were collected through an online survey sent via email. The email addresses of the respondents were obtained from the Malaysian Institute of Accountants (MIA) website and the authors' personal contacts. Prior to completing the survey, the respondents were required to give their consent to participate in the survey. As a result, 112 respondents participated in the survey.

4. Data analysis and results

4.1. Respondents' background

The demographic data showed that the majority of respondents were female with a total of 67 (59.8%). In terms of types of organisations, 44 respondents (39.2%) were working in the non-Big Four and non-audit firms, respectively. Only 21.4% of the respondents were working in Big Four firms. A total of 61% of the respondents had less than one year of work experience in accounting-related jobs and 19% were working in accounting field between 1 and 5 years. The respondents were also asked about the digital technologies being used in their firms. Amongst the digital technologies were big data, machine learning, artificial intelligent, blockchain, and audit automation. It was also found that 80% of them used digital technologies daily.

4.2. Analysis of measurement model

This study used a reflective measurement model for its constructs. The summary of the reflective measurement model evaluation by using Smart PLS3 is presented in Table 1. Convergent validity of the model was measured based on the loading, composite reliability (CR) and average variance extract (AVE). As presented in Table 1, all constructs were retained except for insecurity as the outer loadings were very low for all the items measuring insecurity. For other items, by measuring the remaining constructs, all items were retained as the outer loadings were above 0.708, except for item B6A (0.678). According to Hair et al. (2014) a standardised loading greater than 0.5 for each item was considered as a reliable loading. Therefore, this study retained item B6A in the model. For internal consistency, CR for all the constructs were above 0.7. Meanwhile, all AVE scores were above 0.5 which indicated adequate convergent validity and there was no multi-collinearity issue as all VIF values were less than 5. (Hair et al., 2017).

The discriminant validity was measured by cross loading, Fornell-Larcker Criterion and Heterotrait-Monotrait (HTMT). The analysis showed that loading of items on the associated constructs were all greater than all of its loading on other constructs. As a result, it is possible to conclude that the indicators of different constructs were not interchangeable. These results revealed a satisfactory discriminant validity (Henseler et al., 2015). Furthermore, Table 2 displays the Fornell-Larcker Criterion results, whereby each construct explained better the variance on its own items than the variance of other constructs. Finally, the findings of HTMT results did not include the value of 1, denoting that discriminant validity was established. Figure 1 exhibits that the *r* squared (r^2) for behavioural intention was 0.821, which indicated that this construct was substantially explained by the independent variables (Chin, 1998). Additionally, the r^2 for performance expectancy was 0.63 which denoted that this construct was substantially explained (Chin, 1998) by the TRI factors (optimism, innovativeness and discomfort). Effort expectancy's r^2 was 0.443, indicating that this construct was moderately explained (Chin, 1998) by the TRI factors (optimism, innovativeness and discomfort).

Next, a structural equation modelling was performed on the framework of this study. Figure 1 shows the graphical representation of the structured model by using bootstrapping.

The summary of the results is presented in Table 3. The results indicated that performance expectancy, social influence and optimism were the strong predictors of behavioural intention with *p* value less than 0.05 ($p < 0.05$). The model also suggested that optimism and innovativeness had

Table 1. Summary of measurement model results

Constructs	Items	Item reliability	Internal consistency	Convergent
			Reliability	Validity
		Loading	Composite reliability	AVE
Behavioural intention	B1A	0.967	0.978	0.936
	B1B	0.978		
	B1C	0.958		
Performance expectancy	B2A	0.928	0.968	0.882
	B2B	0.946		
	B2C	0.940		
	B2D	0.944		
Effort expectancy	B3A	0.861	0.928	0.763
	B3B	0.885		
	B3C	0.884		
	B3D	0.865		
Social influence	B4A	0.897	0.940	0.797
	B4B	0.795		
	B4C	0.945		
	B4D	0.926		
Facilitating conditions	B5A	0.914	0.943	0.805
	B5B	0.912		
	B5C	0.910		
	B5D	0.852		
Optimism	C1A	0.928	0.963	0.866
	C1B	0.929		
	C1C	0.919		
	C1D	0.948		
Innovativeness	C2A	0.787	0.925	0.755
	C2B	0.898		
	C2C	0.910		
	C2D	0.875		
Discomfort	C3A	0.777	0.931	0.771
	C3B	0.889		
	C3C	0.909		
	C3D	0.930		

significant relation with effort expectancy, while optimism was the only TR construct that affected performance expectancy (B = 0.440; p = 0.000).

5. Discussion

Accounting profession is moving forward to face a new challenge in line with the new changes in technologies. In order to be competitive and relevant in the IR4.0 era, it requires the accounting professionals to equip themselves with the latest technologies. Therefore, this study was conducted to determine this profession readiness in accepting and adopting the digital technologies. Two technology theories, UTAUT and TR have been incorporated and seven factors have been tested to

Table 2. Fornell-Larcker criterion results

	BI	DI	EE	FC	IN	OO	PE	SI
BI	**0.968**							
DI	−0.088	**0.878**						
EE	0.622	−0.143	**0.874**					
FC	0.594	−0.106	0.646	**0.897**				
IN	0.289	0.174	0.477	0.559	**0.869**			
OP	0.785	−0.154	0.578	0.529	0.330	**0.931**		
PE	0.869	−0.157	0.616	0.509	0.201	0.791	**0.939**	
SI	0.740	−0.079	0.614	0.725	0.385	0.664	0.653	**0.893**

Note: PE: Performance Expectancy; EE: Effort expectancy; SI: Social Influence; FC: Facilitating Conditions; OP: Optimism; IN: Innovativeness; DI: Discomfort

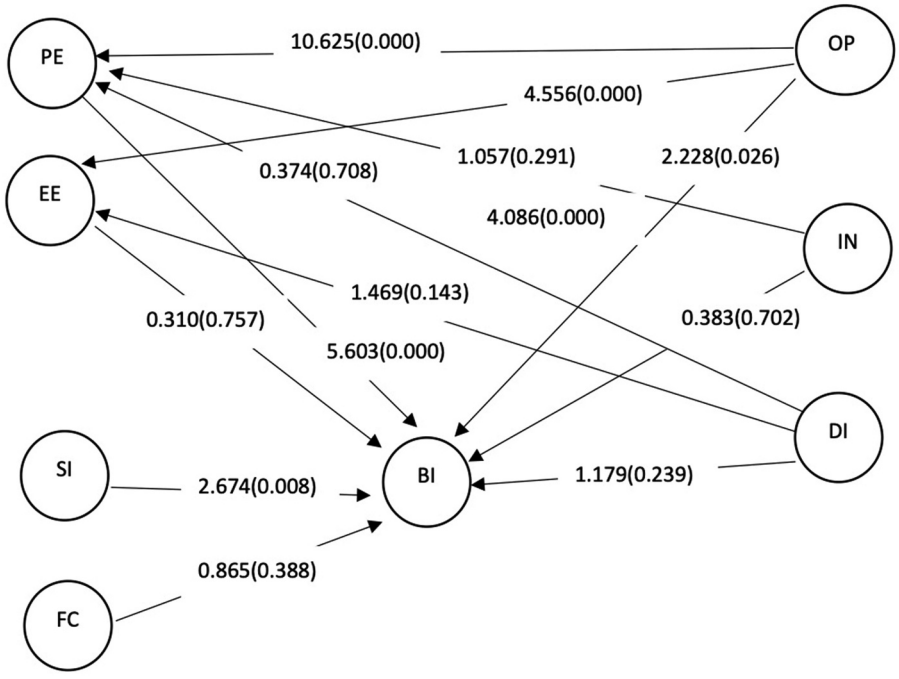

Figure 1. Structural model.

Note: PE: Performance Expectancy; EE: Effort expectancy; SI: Social Influence; FC: Facilitating Conditions; OP: Optimism; IN: Innovativeness; DI: Discomfort

influence the behavioural intention of the profession after insecurity was dropped from further analysis due to loading issue. This study also determined the relation between TR and performance expectancy and effort expectancy. Three hypotheses have been finalised to examine these relations.

The first part of the findings was factors that influenced behavioural intentions towards digital technology adoption. Three out of seven factors analysed in this study significantly influenced the behavioural intention to adopt the digital technologies. The findings indicated that performance expectancy, social influence and optimism were the determinant of behaviour intention to accept and adopt the technologies. It revealed that accounting professionals were keen to use any digital technology if it can help them to perform well in their jobs. They were optimistic when digital technology could help them to gain more control, efficiency, and flexibility in their daily work. Furthermore, they were more likely to accept new technologies if they receive encouragement from their company management, friends, or colleagues. This result was consistent with the majority of previous studies on the influence of these factors on behavioural intention in various contexts (e.g, Rahi et al., 2019; Al-Saedi et al., 2020).

Table 3. Summary of results

Hypothesis	Relationship	Path coefficient, B	t values	p values	Decision
H1	Performance Expectancy -> Behavioural Intention	0.558	5.603	0.000	**Supported**
H2	Effort expectancy -> Behavioural Intention	0.023	0.310	0.757	Not Supported
H3	Social Influence -> Behavioural Intention	0.212	2.674	0.008	**Supported**
H4	Facilitating Conditions -> Behavioural Intention	0.075	0.865	0.388	Not Supported
H5	Optimism -> Behavioural Intention	0.167	2.228	0.026	**Supported**
H6	Innovativeness -> Behavioural Intention	−0.019	0.383	0.702	Not Supported
H7	Discomfort -> Behavioural Intention	0.070	1.179	0.239	Not Supported
H9a	Optimism -> Performance Expectancy	0.808	10.625	0.000	**Supported**
H9b	Optimism -> Effort expectancy	0.440	4.556	0.000	**Supported**
H10a	Innovativeness -> Performance Expectancy	−0.062	1.057	0.291	Not Supported
H10b	Innovativeness -> Effort expectancy	0.356	4.086	0.000	**Supported**
H11a	Discomfort -> Performance Expectancy	−0.022	0.374	0.708	Not Supported
H11b	Discomfort -> Effort expectancy	−0.137	1.469	0.143	Not Supported

The second part of this study finding was to examine the impact of optimism, innovativeness and discomfort on performance expectancy and effort expectancy. The findings revealed that optimism had a positive and significant influence on performance expectancy and effort expectancy, which was consistent with the previous research conducted by Qasem (2021). It demonstrated that the accounting professionals were optimistic and confident about digital technologies if they are useful and simple to use in assisting them to achieve their job performance. Likewise, innovativeness also affected the effort expectancy in which accounting professionals perceived those technologies as easy to use if they are leader or expert in digital technology. Nevertheless, these results contradicted Qasem (2021) research, who found that innovativeness did not affect the effect expectancy but rather performance expectancy.

However, the findings also showed that effort expectancy, facilitating condition, innovativeness and discomfort had no impact on behavioural intention to adopt digital technologies. As a result, it was different from earlier studies, particularly in terms of the impact of effort expectancy and facilitating condition on user's intention. The possible explanations include the fact that accountants perceived that the organisation would offer the necessary assistance and training prior to the deployment of new technologies to ensure that the personnel could utilise them without difficulty. Other than that, the interaction between innovativeness and discomfort exerted no influence on behavioural intention. It could be explained to the possibility that whether they are a leader in technology or not and regardless of how much control they feel they have over it, the accountant can still use the technologies if they choose to do so.

Also, this study also indicated that innovativeness and discomfort have no interaction with performance expectancy. We inferred that the result was because the accounting professional believe that the technologies can enhance their work efficiency without being a leader in the technologies or having no control over it.

6. Contributions and limitations

This study is in line with the Malaysian Government strategies to promote IR4.0 and digital technologies and to encourage human capital development. The outcome of this study provided greater insights to enhance understanding of the acceptance of digital technologies in the service industry amongst accounting professionals in their working environment. This study will contribute to advancement of knowledge by discussing and exploring the adoption of IR4.0 tools and digital technologies to the accounting professionals. There were two main contributions of this study. Firstly, this study investigated digital technologies adoption and acceptance amongst accounting professionals in Malaysia. Evolving of work environment in the digital era could change jobs demand that requires accounting professional to reskill and upskill their knowledge in digital technologies so that they are ready to accept and use the digital technologies.

Secondly, the integrating of UTAUT and TR determinants to assess the behaviour intention of adoption and acceptance is the theoretical contribution of this study. This study varies from earlier integration literatures of these theories in terms of the application of all UTAUT and TR constructs. For example, Reyes-Mercado and Barajas-Portas (2020) only assessed TR as a one variable; Qasem (2021) employed UTAUT2 and concentrated only on optimism and innovativeness of TR constructs; and Sinha et al. (2019) looked at the link between TR and Adoption Readiness (AR) explicitly as major factors. Three of four AR constructs are originally from UTAUT.

Moreover, a limited study was conducted to examine the digital technologies adoption in the service industry, especially in accounting profession. Therefore, this study supported the initiatives taken by MIA to organise national initiatives on IR4.0 for the service sector. Besides, this study will create awareness by the accounting professionals on the need to upskill and reskill themselves with digital technologies. Therefore, they are able to compete and be relevant in the accounting industry. Awareness should also be exposed to the accounting students and lecturers on the importance of IR4.0 tools and digital technologies that require enhancement of knowledge and skill. Consequently, students who are expected to be future accountants to equip themselves with the new movement required by the industry.

This study comes with challenges. Data collection had to be conducted online via email due to the COVID-19 outbreak and the movement control order (MCO). As a result, some respondents did not complete the questionnaire despite receiving a few reminders and it had an impact on the number of respondents in the study. Low response rates from the respondents, amongst other things, may be the cause of unsupported results.

Acknowledgements
We would like to thank Multimedia University, Malaysia for funding our project under IRFund (Seeding) (MMUI/210097) and all respondents who involved in this project.

Funding
This work was supported by the Multimedia University [IRFund (Seeding) (MMUI/210097)]; Multimedia University [under IRFund (Seeding) (MMUI/210097)].

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Disclosure statement
This research is financed by Multimedia University under the IR Fund. However, there are no relevant financial or non-financial competing interests to report as this project does not produce any intellectual property or commercial outcome, solely for academic research purpose.

Citation information
Cite this article as: Integrate the adoption and readiness of digital technologies amongst accounting professionals towards the fourth industrial revolution, Sellywati Mohd Faizal, Nahariah Jaffar & Azleen Shabrina Mohd nor, *Cogent Business & Management* (2022), 9: 2122160.

Note
1. These questions comprise the Technology Readiness Index 2.0 which is copyrighted by A. Parasuraman and Rockbridge Associates, Inc., 2014. This scale may be duplicated only with written permission from the authors.

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Cogent Business & Management **(ISSN: 2331-1975) is published by Cogent OA, part of Taylor & Francis Group.**