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Factors Influencing Digital Security in Malaysia's Journey through Industry Revolution 5.0

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Abstract. This study investigates how security awareness, trust in digital platforms, and the convenience of digital services influence the adoption of digital services in Malaysia, with user experience as a mediating factor. Drawing on the Technology Acceptance Model (TAM) and UTAUT, a survey of 244 early-career IT professionals in Selangor was analyzed using structural equation modeling. Results indicate that security awareness significantly affects both user experience and adoption, while convenience strongly enhances user experience but does not directly drive adoption. Contrary to conventional views, trust in digital platforms did not significantly predict adoption. These findings highlight the need for digital service providers to prioritize security education, intuitive design, and institutional trust-building strategies. The study contributes to the emerging discourse on Industry 5.0 by providing empirical insights into Malaysia's digital transformation and offering guidance for policymakers and service providers seeking to foster secure, user-centric digital ecosystems.

Keywords: Digital security, industry revolution 5.0, user experience, digital adoption, trust and security awareness.

1. Introduction

It is also the era of digital services, having been shaped by the emergence of Industry Revolution 5.0 to revolutionize Malaysia, which is increasingly in line with the realization of the role of technology in life. The focus is on human-centered designs and how technology interacts with the user experience. It is essential to recognize what drives the adoption of these services as digital platforms continue to multiply. These components, including security awareness, trust in digital platforms, and the efficiency of digital services, have been critical in shaping user behavior. Contextualized within the unique digital landscape of Malaysia, this study investigates the effects of security awareness, trust in digital platforms, and the convenience of digital services on Malaysian adoption of digital services with user experience moderation as the linking mechanism, thus broadening the discussion of digital transformation in this part of Southeast Asia (Kurniasari, 2021; Dahmani & Youssef, 2023).

The importance of such a study can be noted in the background section of this article, which discusses the growing complexity of the digital environment, which puts more responsibilities on the users to adopt digital security practices. As digital services proliferate, many users still doubt whether they can be used securely. Trust is one of the most important factors that drives users to use digital services, and studies show that how trustworthy we think a service is has a bearing on how likely we are to use it (Muhammad et al., 2022; Kantika et al., 2022). The perceived risk of these services, related to security or privacy, will either make or break the consumer adoption of digital services. If the customers perceive that the degree of convenience is worth the possible perceived risks, they will adopt it or move to other options. As such, the main problem is the difficulty of establishing a secure and trusted digital space that motivates users to adopt digital services entirely (AKMAN, 2023; Punyatoya, 2019).

By considering and scouring existing literature, we found a gap in the research, specifically, how security awareness influences trust and user experience in Malaysia. Many studies have focused on identifying the factors that promote digital service adoption; however, few studies have integrated these factors into a comprehensive framework in which the user experience acts as a mediator between different elements (Toth et al., 2020; Martínez-Navalón et al., 2023). Furthermore, Malaysia's unique socio-economic and cultural context calls for localised research to identify specific barriers and facilitators of digital service adoption. As such, this study seeks to address these gaps by offering some empirical insight on how these variables interlink to habituate user behavior in Malaysia's evolving digital ecosystem (Zhghenti & Gedenidze, 2022).

This study explores the interrelationships between security awareness, trust in digital platforms, and convenience of digital services with user experience as a mediating factor in adopting digital services in Malaysia. This research paper aims to identify the significance of these factors on user adoption by utilizing quantitative research methods and quantifying their impact on user acceptance rates, thus providing practical guidance for the stakeholders in the digital economy. In sum, this research will advance our understanding of improving end-user engagement with their digital services, which can help build a more secure and user-friendly digital environment (Stephany et al., 2020; Zhenguo et al., 2018).

This research is important because it can be used to advise the necessary parties, such as policymakers, digital service providers, and educators, on the issues and elements of concern that can lead to the adoption of digital services in Malaysia. The findings of this research can inform development strategies to increase user trust in digital platforms through a focus on strengthening security awareness. Moreover, such findings may add to the larger dialogue around digital transformation and economic empowerment in the developing nations, highlighting the importance of collaboration between various stakeholders to establish a friendly ecosystem for digital service adoption (Galhotra & Dewan, 2020; D'Hauwers et al., 2020). Digital services are constantly changing, and understanding how these changes affect the economy will be key to establishing a sustainable and

prosperous digital economy in Malaysia and elsewhere (Nübel et al., 2021; Zhghenti & Chkareuli, 2021).

2. Literature Review

2.1. Industry revolution 5.0 and digital transformation in Malaysia

Industry revolution 5.0 is a holistic approach that conceptualizes the synergy of sophisticated machines and humans working together in symbiotic partnerships towards common objectives. When Industry 4.0 was focused on the automation of manufacturing technologies and data exchange, the new revolution underlines the centrality of humanity and ethical considerations in technology (Ahmed et al., 2024). For digital services, this consequential statement demands consumer protection, renewed user experience, security, and trust in digital services. Realizing the need for this transition, the government of Malaysia is encouraging initiatives that enable the transition of companies across the sectors in Malaysia, especially SMEs (Rupeika-Apoga et al., 2022). The COVID-19 pandemic has accelerated the adoption of digital services, and, as a result, organizations have adapted their reliance on digital solutions to meet demands and adapt to the changes imperative to remain competitive. Digital adoption trends in Malaysia show a strong inclination towards digital banking and e-commerce channels. This transformation has been accelerated by the COVID-19 pandemic, prompting many consumers and companies to quickly embrace digital solutions to overcome the new barriers posed by social distancing and lockdown measures. As of early 2022, approximately 89 percent of the Malaysian population had utilized digital services, with over 29 million active internet users (Zulkifli, 2024). Moreover, the regulatory landscape is shifting towards supporting digital banking initiatives, exemplified by the rise of virtual banks and improved payment systems (Pradipta et al., 2023). Nevertheless, some challenges still exist, especially regarding digital literacy and trust in these services, which are key to promoting widespread use (Kanapathipillai, 2023). Malaysia needs to realise its ambitions of Industry 5.0; policymakers and businesses need to understand these trends and what they mean for digital services in the future.

2.2. Digital security and its dimensions

2.2.1. Security awareness

User training is vital to the digital world since security awareness empowers users to traverse possible risks effectively. The interactive aspects of security awareness training cannot be overstated, standing as the first line of defense against cyber threats, through which the user is empowered to identify and minimise the potential risks related to the use of digital services (Gupta, 2024). However, there are persistent challenges in educating users about the differences in the levels of digital literacy. Many people do not know basic security practices of creating strong passwords and identifying phishing attempts (Olaniyi, 2024). Moreover, new attack vectors tend to appear faster than it takes to educate users, making it a very sensitive issue (Babitsch et al., 2023). This underlines the importance of building a security awareness culture with continuous education and training to increase resistance to cyber threats and improve secure digital behaviour (Adinda, 2022).

2.2.2. Trust in digital platforms

Trust in digital platforms is important for users to engage with and adopt digital services. Developing and maintaining this trust requires strong security protocols, including but not limited to encryption and biometric authentication, which are vital to building user confidence (Gupta, 2024). Moreover, transparent data handling and clear security practices communication significantly increase users' trust in digital systems (Kaur et al., 2021). However, keeping trust is a big challenge as a security breach can quickly lose a user's trust. Data have shown that users tend to use more platforms that make strides

towards security and privacy in their product offerings, making it a good point of focus for organizations to build trust, Kaihatu (2023). Also, the issue of institutional trust has been previously recognized; users also consider the background and credibility of the institutions behind digital platforms when they make trust decisions (Toth et al., 2020).

2.2.3. Convenience of digital services

While digital services make life easier, this convenience comes at a price: robust security controls are needed to ensure that users stay safe. As these platforms are easily accessible, they increase user participation and open users up to risks if not adequately protected (Olaniyi, 2024). Usability was another piece of the puzzle, a necessary priority in order for users to subscribe to the secure solution, with research showing a willingness amongst users to lose some level of security in favour of convenience, crossing their fingers that they could practice reasonable security practices, i.e., safe password usage or enabling two-factor authentication (Oberer & Erkollar, 2018). This means digital services should be designed from the ground up to be accessible and secure, enabling users to navigate their platforms without safety concerns (Pratiwi, 2023). Sectors where sensitive information is contained, including banking and healthcare, require this balance, and users must feel safe processing/accessing these services (Tan et al., 2023). This will help improve user enjoyment and loyalty in the long run.

2.2.4. User experience

User experience (UE) is how a person feels about using a product, system, or service. It significantly influences how users perceive and interact with digital services (Gupta, 2024). It affects the adoption of digital services by determining user behavior and satisfaction. A good user experience can improve user attention, decrease feelings of powerlessness, and generate loyalty that could increase the service adoption rate. With its many functionalities, digital platforms are also challenging for tailoring user interfaces, which can improve the user experience by shaping these interactions (Zarnowiecki et al., 2020). Furthermore, good UE design can alleviate perceived risks related to digital services, which, in turn, can increase user trust and confidence in these services (Zaini, 2024).

2.2.5. Adoption of digital services

User experience significantly influences how people perceive and approach digital services, as XUX ensures, it is "the experience a person has when using a digital service." Positive user experiences significantly increase users' intention to use digital services as they view these platforms as reliable and a user-friendly experience (Pierson, 2021). Personalization, intuitive navigation, and responsive design are just a few features of a satisfying user experience that builds trust and a willingness to continue using the app (Purwanto et al., 2020). On the other hand, the lack of a good user experience may cause users to become frustrated and abandon the platform because users consider it unsafe or difficult to use (Zhen-guo et al., 2018). Additionally, UI/UX design can benefit from and evolve upon customer suggestions, ensuring that digital services are user-specific and relevant to the domains (Méndez-Rivera, 2023). Do not forget that user experience is key for organisations looking to improve their digital services' uptake and long-term use within an ever-more competitive market (Andako, 2023). Factors such as user perceptions, technological readiness, and the user experience can influence digital service adoption. Digital adoption refers to integrating and leveraging digital technologies into existing operations and processes, which is essential for successful digital transformation efforts. Research shows that constructs such as performance expectancy, effort expectancy, and trust are significantly impacted through the unified theory of acceptance and the use of technology (UTAUT2) model (Nguyễn et al., 2020; Pratiwi, 2023). For instance, Nguyễn et al. (2020) discovered that the extent to which a customer in Vietnam has intentions to adopt digital banking services was affected by these three factors.

In Malaysia, Tiong (2020) highlighted other factors like perceived ease of use and usefulness when examining the relationship between intention to use digital banking services and perceived usefulness. It suggests that user needs and addressing the users' concerns surrounding data security are some drivers of adopting digital health services. Moreover, the feedback loop between user experience and adoption can work favourably for digital platforms, where thriving user experiences can drive their use and loyalty. Thus, organizations looking to increase the utilization of digital services must work on trust, experience, and value communication of their services to develop a more engaged user group.

2.3. Hypothesis development

According to studies, implementing security awareness increases user confidence in digital platforms, improving user experience. Research suggests that consumers who see security measures as successful are more likely to use digital services, improving their experience actively (Kamarulzaman et al., 2022). Even though available research yields inconsistent results. Security challenges, especially those related to e-commerce and financial technologies, highlight consumer security views. According to recent research (Ernita et al., 2022), these perceptions strongly influence user satisfaction and likelihood to utilise the service again. This association suggests that security awareness initiatives can improve digital user experiences (Chen et al., 2023).

H1a: There is a significant relationship between security awareness and user experience

Empirical studies suggest that security awareness increases user confidence, making it more straightforward for consumers to embrace various digital solutions, particularly in educational and financial settings (Haney & Lutters, 2020). Chaudhary et al. (2023) also observed that a comprehensive understanding of digital data security increases customers' inclination to use digital platforms. Garzoni et al.'s (2020) research shows that companies must prioritise security knowledge while encouraging digital service uptake.

H1b: There is a significant relationship between security awareness and the adoption of digital services

A recent study suggests that security expertise increases user experience by boosting confidence in digital systems, making them more straightforward to adopt (Gupta & Shukla, 2024). User satisfaction and desire to utilise digital technologies increase when they perceive greater security. This mediation effect shows how perceived security, user experience, and digital service adoption interact (Saifudin et al., 2023).

H1c: User experience has a mediating effect on the relationship between security awareness and adoption of digital services

A recent study shows that trust dramatically improves user experience. This is because digital interfaces make individuals feel safer and happier. Trust also affects how users engage with digital platforms, which impacts their overall experience and satisfaction. This relationship emphasises the need for trust to improve user interactions and digital service uptake (Loh et al., 2024).

H2a: There is a significant relationship between trust in digital platforms and user experience

A recent study shows that customers are more willing to adopt digital services when they trust them. Trivedi and Yadav (2020) say trust minimises internet hazards. Research also shows trustworthy platforms increase customer contact and facilitate seamless digital service uptake (Zarnowiecki et al.,

2020). This relationship shows that trust is essential to a good user experience and confident digital adoption (Azni et al., 2024).

H2b: There is a significant relationship between trust in digital platforms and adoption of digital services

Trust affects user experience and digital platform use (Baabdullah et al., 2019). Improved user experience, which is distinguished by reliability and satisfaction, increases digital service adoption rates, highlighting the importance of trust in the adoption process (Jiang et al., 2021).

H2c: user experience has a mediating effect on the relationship between trust in digital platforms and adoption of digital services

Convenience improves user experience by reducing friction during service interactions, which boosts pleasure and engagement. Data suggests that accessibility and simplicity of use improve the user experience, which increases adoption rates (Susanto et al., 2023). Lee and Kim's (2020) study emphasises the importance of ease in creating exceptional digital user experiences.

H3a: There is a significant relationship between the convenience of digital services and user experience

Customers prefer efficient and accessible solutions; recent research has demonstrated that convenience increases adoption rates (Foroughi et al.,2019). According to Shankar and Rishi's 2020 study, customers' willingness to utilise digital services is driven by time savings and ease of use. This highlights the importance of convenience in adoption.

H3b: There is a significant relationship between the convenience of digital services and the adoption of digital services

Convenient digital services boost user experience and adoption intentions. Saifudin et al. (2023) found that user perceptions of digital service capabilities or advantages positively affect adoption. Excellent convenience design makes interactions more fluid, which improves user experience and boosts digital service uptake (Indama, 2022). This interaction highlights how user experience optimises service acceptance in a digitally dominated world (Rodrigues et al., 2023).

H3c: user experience has a mediating effect on the relationship between the convenience of digital services and the adoption of digital services

A recent study reveals that a good user experience boosts digital service adoption. According to Saifudin et al. (2023), satisfied customers are more inclined to use many digital channels. Usability, accessibility, and happiness increase digital service adoption rates (Rodrigues et al., 2023).

H4: There is a significant relationship between user experience and adoption of digital services

2.4. Theoretical framework

Specifically, the study is underpinned by existing theory on digital service adoption, most notably the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology

(UTAUT). The TAM is a technology adoption model developed by Davis, which identified perceived ease of use and usefulness as two major determinants of technology adoption (Tiong, 2020). Digital services like internet banking and online shopping have made this model popular and relevant for analyzing user attitudes toward digital services (Tiong, 2020). To illustrate, Tiong (2020) examined the adoption of digital banking services in Malaysia and found that perceived usefulness and ease of use are key factors in determining users' behavioural intentions to adopt these services, which is in accordance with the basic principles of TAM.

Moreover, as part of TAM, the UTAUT model can be considered a broader view by adding new constructs like social influence and facilitating conditions that can elucidate the factors influencing technology adoption (Indama, 2022). This model has been validated in various contexts such as healthcare and public services, highlighting its relevance in understanding the process of digital service adoption dynamics (Nikou et al., 2020) and for example, used a capabilities approach model to highlight factors facilitating and hindering adoption of digital healthcare technologies among elderly users, emphasizing the role of user capabilities and contextual factors in why certain users adopt (Nikou et al., 2020).

In addition, combining these theories provides a robust understanding of factors impacting technology acceptance in the Malaysian context. This study explores the constructs of both TAM and UTAUT to investigate the mediating role of security awareness, trust, and individual users' experience on the relationship between technology acceptance factors and the adoption of digital services (Khasawneh, 2024). Such hybrid synthesis deepens the academic discussion and provides actionable recommendations for practitioners interested in improving user interactions with digital media (Rodrigues et al., 2023).

3. Methodology

3.1. Sampling and data collection

This study used a positivist paradigm and a deductive research approach. Data was collected using a structured questionnaire survey of early-career employees working in information technology (IT) in Selangor, Malaysia. The IT industry was chosen as one of the important sectors in Malaysia's digital transformation journey, Industry Revolution 5.0. It is anticipated that companies in this sector will need to develop environments that both attract and hold onto talented, young professionals. Selangor was selected as the site of study as the IT sector in this state is a key contributor to Malaysia's digital economy. In line with insights required for Industry Revolution 5.0, its IT concentration provides a conducive setting for studying the dynamics of early-career employees within digital security and technological advancement (Appendix A).

Since no specific frame could be drawn for the target population, convenience sampling, a non-probability sampling technique, was used. Sourcing early-career employees for tech-focused companies within Selangor was considered an appropriate method. Before collecting data, a power analysis was performed to obtain the minimum sample size required to estimate the study's structural model (Figure 1) using G*Power 3.1.9.4 software (Faul et al., 2007). The sample size of 244 observations was determined using the G*Power 3.1.9.4 software, a widely recognized tool for conducting power analysis. It was estimated that the analysis would require detecting a medium effect size (0.15) with 95% statistical power against the 5% significance level (0.05). While IBM SPSS 27 and Smart PLS 4 were used for data analysis. The target population comprised early-career IT professionals in Selangor, Malaysia, selected due to their relevance in engaging with digital services as part of Malaysia's Industry Revolution 5.0 and currently employed in the IT sector. Individuals in the early stages of their career (typically within the first 10 years of employment). Residing or working

in Selangor. Regular users of digital platforms in both professional and personal contexts. The survey questionnaire included a short note to the respondents regarding informed consent, indicating that they were participating voluntarily and could withdraw their responses at any time. In order to achieve an adequate response rate and compensate for potential non-responses, the survey was distributed to 976 members (roughly 4 times the necessary sample size). Surveys were circulated both physically and digitally for maximum reach and participation. This all-encompassing approach ensured data quality and reliability for further analysis.

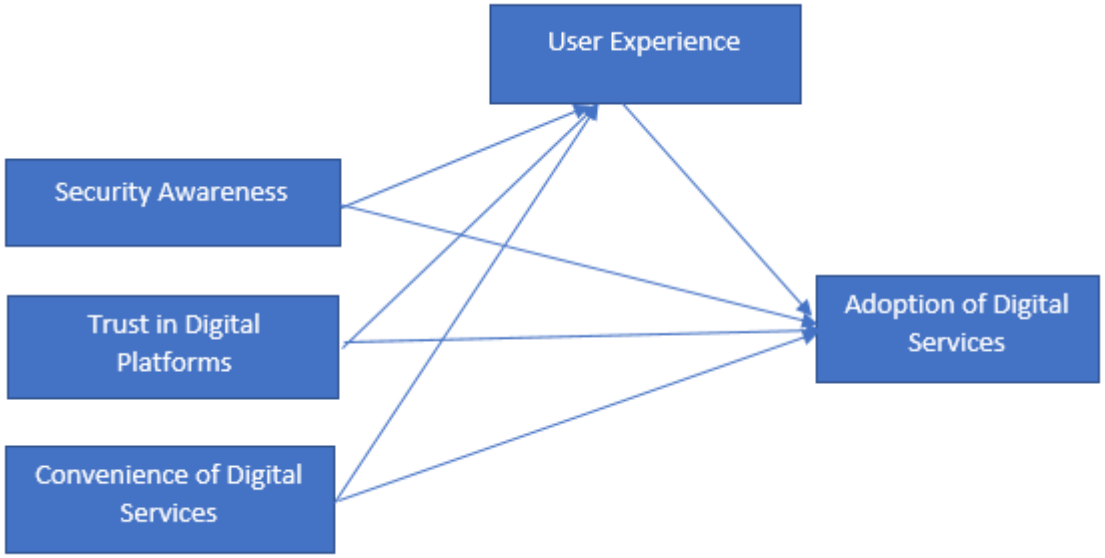

Fig.1: Conceptual model.
Source: Developed by authors

Table 1. Demographic profile of the respondents

Variable	Categories	Percentage	Mean	Std. Deviation
Gender	Male	48.4	1.52	0.501
	Female	51.6		
Age	20-25 years	18.4	2.79	1.242
	26-30 years	24.6		
	31-35 years	26.6		
	36-45 years	20.5		
	46 years to Above	9.8		
Education Level	Diploma	10.7	2.93	1.128
	Bachelor's	25.0		
	Master's	34.4		
	PhD	20.1		
	Others	9.8		
Occupation	Student	22.1	2.42	1.001

	Employed	29.5		
	Self-employed	32.8		
	Unemployed	15.6		
	Retired	0.00		
How often do you use digital services	Daily	36.1	2.48	0.962
	Weekly	30.3		
	Monthly	18.4		
	Rarely	15.2		
	Never	0.00		

Source: Outcome from SPSS for descriptive analysis

The characterization of the survey respondents is shown in Table 1. This considers essential variables: gender, age, education level, occupation, and usage frequency of digital service. The gender distribution is almost equally represented, with slightly more female replies (51.6%) than males (48.4%). This indicates variety and gender balance in the sample, given the scope of the study. Most respondents are young; the age range with the highest percentage (26.6%) is 31-35. The sample is biased in favour of younger groups, characteristic of studies of early-career employees in the Information Technology (IT) sector. About 34.4% of the respondents are educated at the level of Master's and 20.1% at the PhD level. Just 10.7% have a diploma, which would fit with early-career professionals being the higher education target. This means the sample mainly comprises people with higher education, which might impact their views and opinions about digital services. Employment Status: Self-employed (32.8%); Employee (29.5%); Civil servant (20.5%); Unemployed (17.2%); Other (0%); Student (0%); Retired individual (0%) A significant percentage (22.1%) includes students, suggesting that some respondents may be currently pursuing their studies while holding part-time jobs or internships. Some other percentage of respondents would not be considered part of the active labour force, such as those who are retired, with only 15.6% unemployed. Most participants use digital services regularly. 36.1 % use digital services daily and 30.3 % use them weekly. That means they are very familiar with and many are heavy users of digital technologies, and, thus, relevant for research on the adoption of digital services.

3.2. Measurements

A designed questionnaire was used to explore all study variables, and it also contained demographic information such as gender, age, education level, occupation, and frequency of digital service usage. Reliable and valid scales from previous studies were used to measure the variables. All survey items were also given in their English version. Security awareness (SA) was measured with a five-item scale adapted from Nurkholis and Anggraini (2020). Respondents self-rated their knowledge of digital security practices such as updating passwords and using secure connections on five-point Likert scales ranging from "1 = Strongly Disagree" to "5 = Strongly Agree." The internal consistency of this scale, as assessed by Cronbach's alpha, was 0.751, which indicates acceptable internal consistency. A five-item scale adapted from (Fedorko et al., 2021) was used to measure TDP. In this scale, items were related to respondents' trust in the security and reliability of digital services and were rated on a five-point Likert scale, which included "1 = Strongly Disagree" to "5 = Strongly Agree." The Cronbach's alpha value is 0.729 for that scale.

CDS was assessed using a five-item scale developed based on Le et al. (2023). We assessed the ease of use and accessibility of digital services from respondents using a five-point Likert scale, with "1 = Strongly Disagree" and "5 = Strongly Agree." Cronbach's alpha for this scale was 0.728. The five quality scale adopted from (Ahmed et al., 2023) was used to operationalize user experience (UE). This

measure gauged participants' overall satisfaction and perceived usability of digital platforms. Items were rated on a five-point Likert scale from "1 = Strongly Disagree" to "5 = Strongly Agree" with a Cronbach alpha of 0.744 for the scale.

Adopting Digital Services (ADS) was assessed using a five-item scale adapted from Muflih (2022). This scale measured respondents' utilization and continued intention to use digital services. The items were rated on a five-point Likert scale ranging from "1 = Strongly Disagree" to "5 = Strongly Agree." Cronbach's alpha for this scale was 0.732.

Statistical Analyses, including the Kaiser-Meyer-Olkin (KMO) test and Bartlett's test of sphericity, were conducted to test the adequacy of the data for factor analysis. The KMO overall measure of sampling adequacy was 0.784, indicating adequate sampling (>0.50). Bartlett's test gave a strong rationale for factorability (value=2561.348, df = 190, $p < 0.01$). The factor loadings of all items were above the threshold of 0.60, indicating that the reliability and validity of the measurement scales were supported.

3.3. Common method bias

This study took several actions to reduce the potential CMB, based on the suggestions by Podsakoff et al. (2012) and Tehseen et al. (2017). There are six significant contributions to the credibility of the study, namely, first people were told that their answers would be private and confidential and their data would only be used for research; Second, the measurements from the survey were each on different pages, and participants were asked to read each statement carefully and answer honestly, and that the data would be used only for research purposes. Surveys included definitions of any unfamiliar terminology and specific questions to reduce ambiguity of items (Tourangeau, 2000). Moreover, a single-factor Harman test was run to examine for CMB as well, as a principal component factor analysis with all the primary constructs. This test was conducted as a post-hoc analysis following data collection to determine whether a single factor accounted for the most variance in the data (Chang et al., 2010). The outcome showed that the explained data variance was only at 38% by one factor, below a threshold of 50% (Fuller et al., 2016; Svensson et al., 2018). This indicates that standard method variance is not likely to pose a serious threat to this study.

4. Data Analysis and Results

The study data were analyzed preliminarily, using SPSS version 27.0, including examining missing values, outlier tendency, and determination of means, medians, values, and normality assumptions. There were no missing values, and outliers were also not found; the skewness values ranged from −2.214 to 0.289, and the kurtosis values ranged from −1.284 to 7.433. It has also been explained by (Kline et al., 2011) that the findings have suggested that non-normality did not significantly impact the parameter estimation and standard deviation of the model, as all the absolute skewness values were low, with all the absolute values of skewness being less than eight, and kurtosis values were lower than ten.

Table 2. Pearson correlations

Constructs					
Adoption Digital Services	1.000				
Security Awareness	0.548	1.000			
Trust in Digital Platforms	0.519	0.697	1.000		

Convenience of Digital Services	0.474	0.627	0.707	1.000	
User Experience	0.570	0.617	0.624	0.720	1.000

Source: Outcome from SPSS for descriptive analysis

The relationships among constructs (Adoption of Digital Services (ADS), Security Awareness (SA), Trust in Digital Platforms (TDP), Convenience of Digital Services (CDS), and User Experience (UE)) of the study are illustrated in Table 2: Pearson Correlations. Analysis showed that there was a moderate positive correlation with ADS and SA (0.548), TDP (0.519), and CDS (0.474), which means that higher security awareness, trust, and convenience are associated with a higher level of digital service adoption. User experience has a strong GER (0.570), with ADS confirming its importance in driving adoption. TDP correlates positively and powerfully with SA (0.697), suggesting that security-conscious users also trust digital platforms. CDS and UE also have a high correlation (0.720), which points out that comfortable services increase user satisfaction. Overall, these findings indicate that trust, security, and convenience are critical to uptake digital services.

Table 3. Convergent validity and reliability of constructs

Constructs	**Cronbach's alpha**	**Composite reliability (rho_a)**	**Composite reliability (rho_c)**	**Average variance extracted (AVE)**
ADS	0.732	0.734	0.848	0.651
CDS	0.728	0.731	0.830	0.550
SA	0.751	0.765	0.843	0.576
TDP	0.729	0.734	0.831	0.551
UE	0.744	0.747	0.839	0.566

Source: Outcome from Smart-PLS4.

Table 3 reports the constructs' measurement model results. The Cronbach's alpha and composite reliability values, consistently exceeding the 0.7 threshold, confirm the constructs' internal reliability. The AVE values greater than 0.5 demonstrate that the measurement items are valid measures of their respective constructs. The high level of reliability, as indicated by the α and CR values, and the valid to high AVE values, indicate that the constructs are well-formed and suitable for further statistical examinations such as SEM. The measurement model findings in Figure 2 lay the foundation for this study. These allow acceptance of the hypothesis and test mediation since they are anchored on validated constructs. The measurement statistics, reliability, and validity show that the instrument applied in the present study is robust and can adequately collect data on the identified constructs.

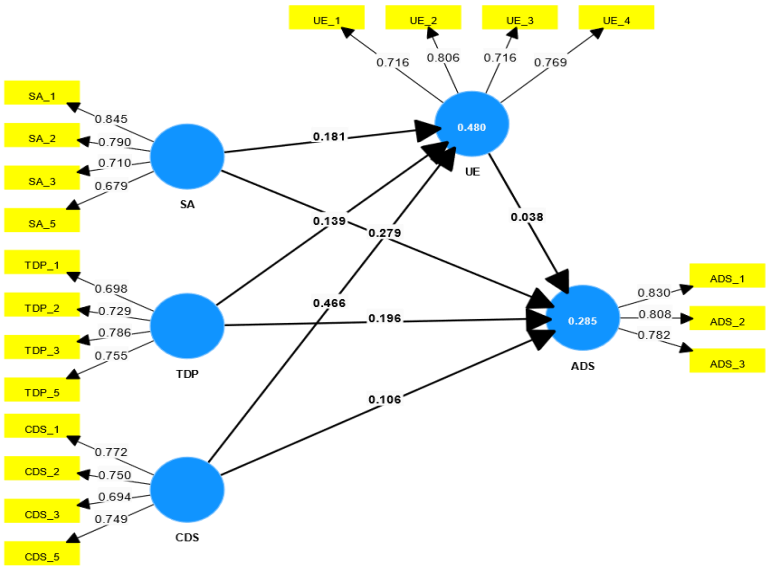

Fig.2: Structural model

Source: Outcome from SmartPLS 4

Table 4. Discriminant validity assessment using Fornell and Larcker criteria

	ADS	**CDS**	**SA**	**TDP**	**UE**
ADS	0.807				
CDS	0.411	0.742			
SA	0.486	0.551	0.759		
TDP	0.468	0.646	0.653	0.743	
UE	0.365	0.656	0.529	0.559	0.753

Source: Outcome from Smart-PLS4.

The square roots of AVE - the diagonal values of Table 4 are all greater than the off-diagonal elements (correlations), confirming the discriminant validity of the measures for each construct. This means that each construct will always be different and refer to a different concept or part of the theoretical framework. Discriminant validity ensures that between constructs, such as adoption, security awareness, trust, and convenience, there is no overlap in concept for clarity in the model. Overall, the availability of discriminant validity enhances the reliability of the structural model and makes the hypothesis testing more credible. In other words, the uniqueness of constructs validates the theoretical framework, meaning that the findings represent relationships between different elements.

Table 5. Discriminant validity assessment using HTMT criterion

	ADS	**CDS**	**SA**	**TDP**	**UE**

ADS					
CDS	0.559				
SA	0.649	0.746			
TDP	0.635	0.887	0.897		
UE	0.494	0.884	0.707	0.751	

Source: Outcome from Smart-PLS4.

The Heterotrait-Monotrait Ratio (HTMT) is used to evaluate the discriminant validity of the constructs, as reported in Table 5. Discriminant validity asses' different measurements and constructs. One of the new and much more powerful tools to evaluate this is the HTMT criterion, which concentrates on the ratio of between-construct correlations to within-construct correlations. This means that HTMT values are well below the strict 0.85 threshold, demonstrating discriminant validity. Some of those values (CDS and TDP: 0.887; SA and TDP: 0.897) are slightly above 0.85 but are still under the exploratory limit of 0.90. Great discriminant validity is observed for pairs such as ADS and UE (0.494) and TDP and UE (0.751). The increase of HTMT values for CDS against TDP and SA against TDP indicate a relevant overlap or common variance between constructs, meaning that consecutive analysis is needed to demonstrate the separation of constructs. As such, the HTMT results confirm the discriminant validity of the most pairs of constructs, as they should represent different theoretical meanings. Higher HTMT values could suggest the need for further conceptual development or clarity to maintain distinctiveness among constructs, leading to more meaningful research findings. The results increase the confidence in the structural model because most of the constructs were empirically unique.

As table 6 demonstrate, the first hypothesis (H1a) that Security Awareness (SA) is positively and significantly impacts user experience (UE) is accepted. This indicates that the greater awareness of digital security makes users have great experience in dealing with digital economy platforms. All that said, H1b Security Awareness (SA) has an enormous effect on the Adoption of Digital Services (ADS). More security-conscious users are thus likelier adopters of digital services. H2a: Trust in Digital Platforms (TDP) does not have statistically significant effect on User Experience (UE) at 0.05 significance level. This indicates that, in this model, trust does not significantly affect user experience. H2b: TDP drives ADS marginally significantly, yet does not reach conventional 0.05 significance levels. It is a weak relationship that needs more exploration. H3a: Digital Services (DS) is Highly Positive for user experience (UE) in Luxury Product Services. The outcome indicates that greater availability and use of digital services greatly enhances user experience. H3b: The effect of Convenience of Digital Services (CDS) on Adoption of Digital Services (ADS) is not statistically significant in this model. Although convenience may add to the overall experience of the user, it is not a key determinant for the adoption of digital services. H4: User experience (UE) does not directly affect the adoption of digital services (ADS). This indicates that user experience is a factor for satisfaction but doesn't necessarily drive adoption in the context studied.

Security Awareness (SA) should positively influence User Experience (UE) and Adoption of Digital Services (ADS). It reinforces the need to educate security to drive higher use and acceptance of these digital platforms. It reinforces the need of effortless and accessible platforms to the users to improve the user satisfaction as services provided through everyone and anywhere is significantly impacting UE which is known as Convenience of Digital Services (CDS).

Trust in Digital Platforms (TDP) has no significant impact on User Experience (UE) or Adoption of Digital Services (ADS). This shows how trust, perhaps counterintuitively, might not be the foremost driver of the user experience or adoption in this model a conclusion at odds with some theories. User Experience (UE) does not have a direct effect on Adoption (ADS), which means that other factors (like security awareness or convenience issues) may have proven much more specific in relation to whether the user decided to adopt or not.

Table 7 summarizes the indirect effects (mediation effects) results on the constructs analyzed via structural equation modeling (SEM).

H1c: The effect of Security Awareness (SA) on Adoption of Digital Services (ADS) through User Experience (UE) is not significant. Thus, although security awareness impacts the user experience, it is not indirect enough to explain the adoption of digital services in this model.

H2c: The influence of Trust in Digital Platforms (TDP) on Adoption of Digital Services (ADS) via User Experience (UE) is not significant either. This suggests that although trust affects user experience without mediation, user experience demonstrates no mediating effect on adoption based on trust.

H3c: There is no significant indirect effect of the Convenience of Digital Services (CDS) on Adoption of Digital Services (ADS) through User Experience (UE). The mediation of convenience enhances user experience but not a significant boost in adoption.

The indirect effects in all three hypotheses (H1c, H2c, and, H3c) are NOT significantly different from zero, meaning that although UE can strengthen the relationship between the independent variables (SA, TDP, CDS) and the ADS, it does not pass as a strong mediator in this context. The absence of prominent mediation suggests that direct effects (i.e., Security Awareness affecting Adoption) are potentially of higher concern in terms of affecting adoption than the mediated paths via user exertion.

Table 6. Hypothesis testing results

Hypothesis	Relationship	Original sample (O)	Sample mean (M)	SD	t-value	p-value	Decision	f^2	2.5%	97.5%
H1a	SA->UE	0.181	0.185	0.077	2.365	0.018	Significant	0.034	0.037	0.338
H1b	SA->ADS	0.279	0.287	0.092	3.039	0.002	Significant	0.057	0.116	0.471
H2a	TDP->UE	0.139	0.143	0.084	1.646	0.100	Not Significant	0.017	-0.021	0.310
H2b	TDP->ADS	0.196	0.195	0.105	1.879	0.060	Not Significant	0.024	-0.006	0.402
H3a	CDS->UE	0.466	0.463	0.079	5.877	0.000	Significant	0.231	0.300	0.613
H3b	CDS->ADS	0.106	0.103	0.101	1.044	0.297	Not Significant	0.007	-0.093	0.298
H4	UE->ADS	0.038	0.036	0.095	0.398	0.690	Not Significant	0.001	-0.145	0.226

Source: Outcome from Smart-PLS4.

Table 7. Hypothesis indirect effects

Hypothesis	Relationship	Original sample (O)	Sample mean (M)	SD	t-value	p-value	Decision	2.5%	97.5%
H1c	SA->UE->ADS	0.007	0.005	0.019	0.361	0.718	Not Significant	-0.035	0.044
H2c	TDP->UE->ADS	0.005	0.006	0.016	0.326	0.745	Not Significant	-0.024	0.043
H3c	CDS->UE->ADS	0.018	0.018	0.045	0.390	0.697	Not Significant	-0.062	0.117

Source: Outcome from Smart-PLS4.

Table 8. R-square

	R-square	R-square adjusted
ADS	0.285	0.273
UE	0.480	0.473

Source: Outcome from Smart-PLS4.

The R-squared (R^2) and Adjusted R-squared (Adjusted R^2) for the dependent variables of this study are reported in Table 8. For the Adoption of Digital Services (ADS), the independent variables in the model (Security Awareness, Trust in Digital Platforms, Convenience of Digital Services and User Experience), explained 28.5% of the variance in the Adoption of Digital Services, $R^2 = 0.285$. That indicates moderate explanatory power, i.e. that other factors (not included in this model) also contribute to adoption behaviours. After adjusting for the number of predictors in the model returns an Adjusted R^2 of 0.273 meaning that 27.3% of the variance in Adoption of Digital Services can be explained. The slight decrease from the unadjusted R^2 shows that the model is not overfitting and that the predictors are relatively strong.

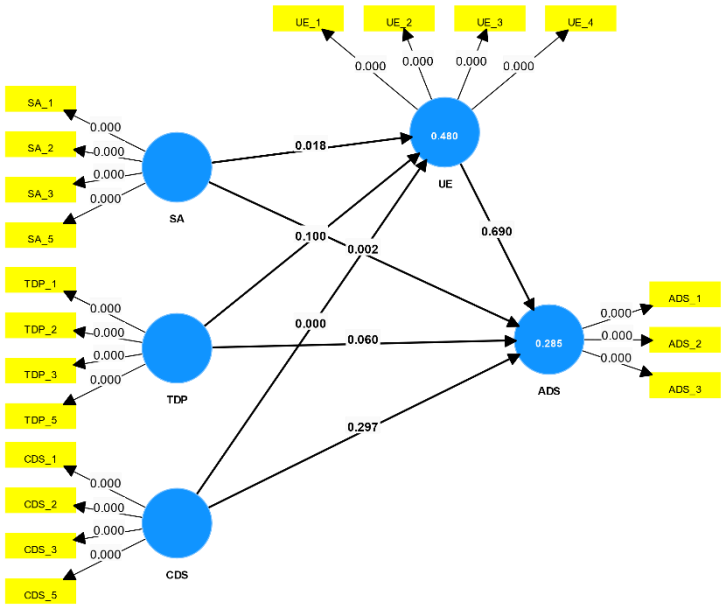

Fig.3: Structural model

Source: Outcome from SmartPLS 4

The correlation (Figure 3) of independent variables (Security Awareness, Trust in Digital Platforms, Convenience of Digital Services) for dependent variable (User Experience (UE), R^2: 0.480, and which explains 48% of the variance of (User Experience (UE)). Such high explanatory power means the factors in the model play a large role in determining the user experience on digital platforms. Adj R^2: 0.473, after adjustment to the number of predictors 47.3% of the variance in User Experience is explained. The predictors play a hugely role in attitudes and behaviors of users also reflects strongly in

the positive factor loadings essentially making their significant associated presence felt in the dependent variables.

The explanatory power of User Experience (UE) is relatively robust (48%), suggesting that the model significantly accounts for the factors that affect user satisfaction and interaction with digital platforms. This is dominated by Perceived benefits of Digital Service (40.9%), followed by No repeat visit to large banks (34.9%), where Adoption of Digital Services (ADS) has a much lower explanatory power of relatively low (28.5%), indicating that although the model exposes the main drivers for adoption, adoption behaviors are likely driven significantly also by also external factors including e.g perceived risk, cost / benefit considerations, or external influences.

Table 9. Model fit

	Saturated model	**Estimated model**
SRMR	0.076	0.076
d_ULS	1.112	1.112
d_G	0.372	0.372
Chi-square	497.331	497.331
NFI	0.712	0.712

Source: Outcome from Smart-PLS4.

As for the model fit, Table 9 shows that the structural model exhibited acceptable model fit indices. Model fit indices are crucial for assessing whether the model's assumptions align with the observed data. A SRMR value of 0.076 shows that the model has an acceptable fit. This number is less than the acceptable 0.08 mark, which is a good sign. Small values of d_ULS (1.112) and d_G (0.372) indicate that there is a little difference between the observed and implied covariance matrices, implies good fit. The Chi-square shows the model do not seriously misfit (497.331). The Chi-square statistic is sensitive to minor differences in large sample sizes, and the value alone does not determine fit. The NFI value of 0.712 is less than the range, 0.90, indicating that the model can be further improved. So, it indicates that the model has an acceptable but far from great fit according to this specific index.

5. Discussion

The effects of security awareness, trust in digital platforms, and convenience of digital services on the adoption of digital services in Malaysia. Security awareness significantly impacts user experience and adoption, which shows that by being security aware, users adopt faster. Subscribe to our newsletter on application security. Three key user experience-focused features were selected through machine learning, and while convenience significantly influenced user experience, it had no significant effect on adoption, demonstrating that ease of use is insufficient to drive adoption. Paradoxically, trust in digital platforms did not directly impact adoption, contradicting traditional perceptions. The study highlights the need for security education and user-friendly designs, yet implies that other factors can encourage adoption. User experience increases engagement and enjoyment (Gupta, 2024), but security and confidence in the digital service tend to promote adoption (Muhammad et al., 2022). A positive encounter may not overcome Malaysian adoption barriers. These hurdles include data privacy,

trustworthiness, and digital literacy volatility. The research also shows that security knowledge strongly influences adoption, suggesting consumers may prioritise safety and dependability over satisfaction when choosing a new service (Kantika et al., 2022). Without security and trust, enjoyable user experiences will not encourage adoption. Positive user experiences boost happiness but do not encourage adoption. This research highlights the need to concurrently address several aspects that drive digital adoption, which deepens our understanding of its dynamics.

5.1. Main findings

The study of the antecedents of the acceptance of digital services in Malaysia by investigating the impacts of security awareness (SA), trust in digital technology (TDP), and convenience of digital services (CDS) in Malaysia, and the mediation of user experience (UE) between these factors. The results provide a few vital takeaways that help shine light on the interplay of factors driving Malaysian adoption of digital services.

This research found that security awareness (SA) had a significant positive predictive effect on user experience (UE) as well as adoption of digital services (ADS). This supports previous studies' need to emphasize security knowledge as an influence on users adopting the digital platform (Kantika et al., 2022). Users are becoming increasingly aware of possible security risks when using digital services. When they experience positive results with these services, their perception of security as an enabler of trust and satisfaction is enhanced further (Gupta, 2024). Moreover, these findings indicate that the contribution of security awareness to adoption is direct in nature, in that it boosts user confidence in the safety and reliability of digital services, and this supports earlier empirical research on the relationship between security concerns and adoption behavior (Muhammad et al., 2022). This underscores the importance of continued security awareness education to build trust and promote adoption of digital services, especially in places like Malaysia, where digital literacy and security awareness are significant barriers (Olaniyi, 2024).

It was noteworthy to say that the study declared no main impact of trust in digital platforms (TDP) on adoption of digital services (ADS), even though TDP had a moderate positive influence on user experience (UE). This result contrasts with a large body of literature that identified trust as a key factor in adopting all technologies (Toth et al., 2020; Dahmani & Youssef, 2023). Trust in digital platforms is important for user experience, but is not a direct driver of adoption. However, the results suggest that factors beyond trusting beliefs, like security concerns and perceived benefits, can also shape adoption decisions. Of particular note is how this contrasts with an historically-held view that the lack of trust is the foremost hindrance to the adoption of digital services (Kaihatu, 2023), which the above findings strongly oppose, instead suggesting that the driving roadblock is less about things like trustworthiness and more to do with how well the user is engaged with and content with the digital service they choose.

It concluded that the convenience of digital services (CDS) significantly influenced user experience (UE), emphasizing that being easy to use and accessible are key determinants of user satisfaction. The second relates to previous literature on the role of usability of digital services in driving user engagement (Olaniyi, 2024). Smooth and easy-to-access digital services have always been associated with better user experience and satisfaction. This suggests that although digital services could be appealing, they would not automatically lead to use, so ease of use is essential in user satisfaction, not the main/only element that leads to the adoption of digital services (ADS) in current research. This finding suggests that good should not only be associated with convenience. However, it should instead be supported by additional services, such as security and trust, to seriously listen to users when using digital services to the maximum.

While user experience (UE) substantially impacted user satisfaction, it was not a major mediator of the relationship between the independent constructs (security awareness, trust, and convenience) and the adoption of digital services. This result contradicts the hypothesis that positive user experiences

influence use adoption (Zaini, 2024). This means that for some products, a good user experience might help with loyalty and satisfaction of an existing user, but will not be the primary factor that helps adoption and the would-have-been consumer. This suggests that user experience is important to establish long-term engagement, but does not directly transfer to immediate adoption decisions.

The study gives insights into the balance of security, trust, convenience, and user experience in driving digital service adoption, and we found that security awareness emerged as a significant factor influencing both user experience and adoption, confirming the need for improved digital literacy initiatives. Trust and convenience did influence user experience, but did not directly impact adoption, suggesting that more factors may be influential when considering whether to adopt. These findings will provide some insights for digital service providers. While user experience is important to enhance, investing in trust, perceived benefits, and security education may be a better approach to increase digital service usage.

5.2. Theoretical contributions

This study adds to the digital service adoption literature by combining security awareness, trust in digital platforms, and convenience into a single framework. These findings challenge the models that place trust as the primary driver of adoption (Toth et al., 2020; Dahmani & Youssef, 2023) and suggest that the security awareness aspect may be more fundamental in influencing the user experience and subsequent adoption behaviour. The unique contribution of the paper lies in focusing on the intermediary effect of user experience (UE), which indicates that a positive experience increases user engagement but does not ensure greater adoption. This is consistent with emerging perspectives that adoption is driven by various determinants, such as perceived value, security issues (Muhammad et al., 2022; Zhen-guo et al., 2018). Additionally, in the context of Industry Revolution 5.0, the study highlights the role of human-centred digital platforms that leverage user trust and security awareness to enable digital platform usage. Privacy concerns and corporate reputation are indeed crucial to trust. Consumer trust in a platform increases when they believe it is protecting their data, which can improve the user experience (Gupta, 2024). A solid brand image can also reduce security concerns, making digital services more comfortable for users (Kaihatu, 2023). These components of trust may not immediately lead to adoption choices, but they do assist in creating enjoyable user experiences, which are crucial for long-term involvement. Another moderator of security awareness and convenience is trust. When users take security steps and find the service convenient, Toth et al.'s 2020 research found that trust reassures customers of the platform's trustworthiness. Muhammad et al. (2022) believe that trust enhances the user's sense of security and reduces the perceived threats of the technology, which helps the adoption process.

5.3. Practical contributions

The findings provide various practical implications for digital service providers, policymakers, and businesses who strive to improve the adoption of digital services in Malaysia:

Educating users about digital security can have a powerful positive impact in terms of Security Awareness (SA) on both User Experience (UE) and Adoption (ADS). Security providers should conduct awareness campaigns supplemented with perception activities to make their platforms safe and secure. Clearly illustrated security practices (such as encryption and data protection policies) can alleviate user concerns and generate trust. Although the convenience of digital services (CDS) significantly impacts user experience (UE), enterprises need to keep working on user design, accessibility, and ease of navigation to provide smooth and blissful usability of digital services. It would help service providers mitigate this problem by conducting continuous user feedback sessions and iterative design improvements to their service to align them with user expectations. While trust in the digital platform (TDP) did not lead to adoption in this study, its contribution toward improving User Experience must be acknowledged. This institutional trust is built over time through service providers and users

establishing connections that illustrate the providers being both reliable and committed to the privacy and safety of the user data. This might include third-party independent certifications, transparency in how it processes and manages its data, and solid customer service response protocols. The research shows that user experience matters, but user adoption may be more determined by external factors (such as social influence, incentives, or marketing strategies). This transformation requires a more deliberate, holistic approach to digital adoption strategies, considering social proof, peer recommendations, and incentives to stimulate users to accept new digital services.

5.4. Limitations

The results may not be generalizable to the broader population or to other problem sets, given the specificity of the research focused on early-career employees and IT in Selangor, Malaysia. Further research could also investigate how these factors shape the uptake of digital services across distinct age cohorts, occupations, or geographic locations. The study is naive based on some factors (Security Awareness, Trust, Convenience, and User Experience). Overall, other factors such as perceived risk, social influence, and financial incentives could contribute to the process of adoption, which must be included in future models. It is a cross-sectional design and therefore causality cannot be inferred. Longitudinal designs may be possible in future studies to further examine the long-term impact of security awareness, trust, and user experience on the use of digital services.

This cohort was chosen because of its importance to Malaysia's emerging digital economy, especially as young professionals drive digital adoption in the IT sector (Ahmed et al., 2024). However, focusing on this group may limit the generalisability of our findings to other demographics, such as older adults, rural residents, and those with various vocational backgrounds. Younger workers may have stronger digital knowledge and flexibility while using digital platforms, which may improve security, trust, and convenience. However, older adults or those unfamiliar with digital technologies may be more sceptical or face barriers such as limited digital infrastructure (Kanapathipillai, 2023). Digital services may also be regarded and adopted differently according to regional infrastructure and socioeconomic inequalities. These discrepancies can dramatically impact adoption. Since this is the case, we suggest that future studies include more people from different age groups, vocations, and locations. This would reveal the characteristics that affect digital service uptake in Malaysia and other comparable countries.

5.5. Future research

Future models may incorporate other constructs, such as perceived risk, perceived value, or social influence, to offer a broader consideration of the elements that motivate the adoption of digital services. In Malaysia's specific socio-economic environment, it would be relevant to examine if cultural factors play a significant role in adopting digital services, especially in developing economies. This might help uncover region-specific obstacles or facilitators of adoption. Longitudinal studies might provide more robust evidence of how security awareness and trust changes over time affect long-term engagement and sustained adoption of digital services.

The above criteria are crucial in technology adoption models, such as the Unified Theory of Acceptance and Use of Technology (UTAUT) (Nguyễn et al., 2020). To stay narrow, this study focuses on security knowledge, trust, ease, and user experience. This ensured a thorough analysis of these crucial areas of Malaysia's digital environment. However, we acknowledge that perceived risk can strongly impact user adoption decisions. Data privacy, financial transaction safety, and information abuse are common deterrents (Muhammad et al., 2022). Like the preceding argument, social influence, such as peer recommendations or societal trends, can help people accept digital services. Financial incentives like discounts and loyalty programs can minimise the perceived costs of early adoption. Although these variables were not the primary focus of the inquiry, we acknowledge their importance and suggest including them in future research to better understand digital service adoption trends. In Malaysia's burgeoning digital economy, studying how these components interact with security

awareness, trust, and convenience may provide more insight. A future longitudinal study may help identify long-term factors.

6. Conclusion

This study provides empirical evidence on the factors shaping digital service adoption in Malaysia under the framework of Industry 5.0. The results underscore that security awareness plays a central role, directly enhancing both user experience and adoption, while convenience improves satisfaction but does not guarantee uptake. Unexpectedly, trust in digital platforms, though important for user perception, was not a decisive predictor of adoption. These findings suggest Malaysian users prioritize tangible security assurances over trust-based perceptions or usability alone. For practitioners, this highlights the importance of sustained digital literacy initiatives, transparent communication of security practices, and the integration of user-centric design. For policymakers, the results suggest the need for stronger institutional frameworks that reinforce trust through regulation and certification. While the study is limited to young IT professionals in Selangor, it provides a foundation for broader research across different demographic and regional contexts. Future studies should integrate additional factors such as perceived risk, social influence, and financial incentives, and employ longitudinal or cross-country designs. By addressing these dimensions, Malaysia can accelerate its digital transformation journey and better align with the human-centered ethos of Industry Revolution 5.0.

Author's contribution statements

All authors have approved the final manuscript

H. M. Mahfuzur Rahman: Conceptualization and execution of the research; Methodology; Software; Data curation; Writing of original draft; Literature Review; Conclusion of the study; Discussion; Review and formatting.

Shereen Khan: Conceptualization; Writing; Supervision; Discussion; Review.

Nasreen Khan: Conceptualization; Supervision; Discussion; Review.

Olivia Tan Swee Leng: Conceptualization; Supervision; Discussion; Review.

Ethical approval

This study was obtained from the Research Ethics Committee of Multimedia University, Malaysia with the approval number (EA0992024). All participants were informed about the purpose of the study, their rights to confidentiality, and their ability to withdraw at any time without penalty. Informed consent was obtained from all individual participants included in the study. The study adhered to the ethical standards as prescribed in the 1964 Declaration of Helsinki and its later amendments.

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Appendix A

Section 1: General Information

Que No	Questionnaire	Scale				
1	Gender	Male			Female	
2	Age	20-25 years	26-30 years	31-35 years	36-45 years	46 years to Above
3	Education Level	Diploma	Bachelor's	Master's	PhD	Others
4	Occupation	Student	Employed	Self-employed	Unemployed	Retired
5	How often do you use digital services?	Daily	Weekly	Monthly	Rarely	Never

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

Section 2: Security Awareness

No	Questionnaire	1	2	3	4	5
SA1	**I am aware of the potential security risks associated with using digital services.**					
SA2	**I regularly update my passwords for online accounts to enhance security.**					
SA3	**I understand the importance of using secure connections (e.g., HTTPS) when accessing digital services.**					
SA4	**I have received training or information about online security practices.**					
SA5	**I believe that my personal information is adequately protected when using digital services.**					

Source: Nurkholis & Anggraini (2020).

Section 3: Trust in Digital Platforms

No	Questionnaire	1	2	3	4	5
TDP1	I trust that the digital services I use are secure and reliable.					
TDP2	I feel confident sharing personal information on digital platforms.					
TDP3	I believe that digital service providers take necessary measures to protect my data.					
TDP4	I have had positive experiences with customer service from digital platforms.					
TDP5	I would recommend digital services to others based on my trust in them.					

Source: (Fedorko et al., 2021).

Section 4: Convenience of Digital Services

No	Questionnaire	1	2	3	4	5
CDS1	I find it easy to navigate digital services.					
CDS2	Digital services save me time compared to traditional methods.					
CDS3	I can access digital services from anywhere at any time.					
CDS4	I prefer using digital services over in-person services due to their convenience.					
CDS5	I believe that digital services are designed to meet my needs effectively.					

Source: (Le et al., 2023).

Section 4: User Experience

No	Questionnaire	1	2	3	4	5
UE1	My overall experience with digital services has been positive.					

UE2	**I find the interfaces of digital services to be user-friendly.**					
UE3	**I am satisfied with the speed of transactions on digital platforms.**					
UE4	**I feel that digital services are tailored to enhance my user experience.**					
UE5	**I would continue to use digital services based on my positive experiences.**					

Source: (Ahmed et al., 2023).

Section 5: Adoption of Digital Services

No	**Questionnaire**	**1**	**2**	**3**	**4**	**5**
ADS1	**I actively use digital services in my daily life.**					
ADS2	**I intend to increase my use of digital services in the future.**					
ADS3	**I believe that digital services provide significant benefits over traditional services.**					
ADS4	**I am likely to recommend digital services to others.**					
ADS5	**I feel comfortable using new digital services as they become available.**					

Source: (Muflih, 2022)