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## A PILOT STUDY ON THE INTENTION TO USE ROBO-ADVISORS AMONG MILLENNIALS AND GEN Z IN MALAYSIA

**Suhaily Maizan Abdul Manaf<sup>1\*</sup>**

*Arshad Ayub Graduate Business School, Universiti Teknologi MARA Cawangan Kelantan, Malaysia  
suhailymaizan@uitm.edu.my*

**Md Khairu Amin Ismail<sup>2</sup>**

*Faculty of Business and Management, Universiti Teknologi MARA Cawangan Kelantan, Malaysia  
mkai01@uitm.edu.my*

**Shahsuzan Zakaria<sup>3</sup>**

*Malaysian Academy of SME & Entrepreneurship Development, Universiti Teknologi MARA Shah Alam,  
Selangor, Malaysia  
shah81@uitm.edu.my*

**Abstract:** Robo-advisor, a recent advancement in the financial-technology sector, is still in its early stages in the Malaysian market, focusing on millennials and Gen Z. This research discusses factors influencing the intention to use robo-advisors through a pilot test that has been conducted to assess the usability and reliability of the survey questionnaire. The quantitative study has used an online survey method, applying purposive sampling for data collection. The questionnaires have been distributed via Google Form to potential investors aged 18 to 45 in Malaysia through WhatsApp, Telegram, and Facebook. A pilot study of 30 completed questionnaires has been analysed by examining the factor loadings, composite reliability (CR), and average variance extracted (AVE). Findings show that each loading ranges from 0.627 to 0.967, the CR index ranges from 0.903 to 0.976, and the AVE ranges between 0.613 and 0.873, indicating the constructs' good reliability. Therefore, the measurement items are acceptable for future research on a larger scale. It is obvious that the findings of this preliminary study can be utilised to enhance the content of the questionnaire before commencing the primary investigation. This study contributes to the literature and provides an initial overview of the factors influencing the intention to use robo-advisors in Malaysia, highlighting its potential impact on the financial technology sector.

**Keywords:** Behavioural Intention, Gen Z, Millennials, Pilot study, Robo-advisors

### 1. Introduction

The financial-services revolution has attracted the attention of major industry stakeholders, including banks, regulators, and customers (Recskó & Aranyossy, 2024). Currently, the most recent innovation emerging in the wealth-management platforms is robo-advisors (Kwon, Jeong, & Chung, 2022; Nguyen, Chew, Muthaiyah, Teh, & Ong, 2023). They are online wealth-management providers that use portfolio-management algorithms to provide investing recommendations to their clients for low fees automatically; hence, the introduction of robo-advisors has triggered the need to understand factors that shape investors' behavioural intentions towards using these platforms. Looking at the digital transformation in the fund-management industry, it is worth observing that robo-advisors can perform as well as traditional fund managers, along with the growth potential of the platforms.

#### 1.1. Problem Statement & Research Objectives

Although robo-advising offers numerous advantages, its usage has not yet accelerated and still has room for growth as this industry is still relatively new in Malaysia (Khoo, Ong, & Liew, 2024). This is because the lack of engagement by young adults in investment activities has led to serious financial issues and literacy, which, in turn, affect retirement planning (Mohta & Shunmugasundaram, 2024). However, as robo-advisory services have evolved, understanding consumer perceptions and trust towards these platforms have become increasingly essential (Khoo et al., 2024).

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<sup>1\*</sup> Corresponding author: Arshad Ayub Graduate School, Universiti Teknologi MARA, Cawangan Kelantan, Malaysia, suhailymaizan@uitm.edu.my

Meanwhile, this pilot study has been carried out to suit two objectives, which are (1) to analyse the reliability and validity of each measurement item; and (2) to prepare a set of instruments for further investigation. Therefore, this pilot study has been committed to identifying any instances of ambiguous question directions that may pose comprehension challenges throughout the research process. In the context of information technology adoption, this study has used the Unified Theory of Acceptance and Use of Technology (UTAUT), which is a technological-acceptance concept developed by Venkatesh, Moris, Davis, and Davis (2003). The UTAUT seeks to elucidate user intention to use an information system and subsequent usage behaviour.

## **2. Literature Review**

### **2.1. *Intention to Use Robo-Advisors***

The actual use behaviour among investors on the adoption of robo-advisory services refers to the investors' overt propensity to utilise automated digital platforms to aid their investment decision-making process (Hoe, 2023; Ramesh, Amudha, Prasob, & Francis, 2023). There are various factors that influence the adoption of robo-advisory services. Theoretically, Venkatesh and Davis (2000) have demonstrated a habitually high correlation between behavioural intention and actual use. Meanwhile, recent studies by Roh, Park, and Xiao (2023) have also claimed that behavioural intention substantially impacts the determination of intention to use.

### **2.2. *Performance Expectancy***

Performance expectancy refers to users' perceptions that utilising technology will offer advantages to them in carrying out specific tasks (Venkatesh et al., 2003). This factor explains a belief that using certain technologies will benefit or improve the performance of the individuals in executing certain tasks. In other words, performance expectancy is the users' tendency to embrace robo-advisors contingent upon their perceptions that robo-advisors can effectively facilitate financial and investment management (Gan, Khan, & Liew, 2021). In the meantime, Senyo and Osabutey (2020) have claimed that performance expectancy is significantly related to a behavioural intention to use mobile money services. This relationship highlights the importance of users' expectations regarding the effectiveness and benefits of a technology in influencing their intentions to adopt it.

### **2.3. *Effort Expectancy***

Effort expectancy, or the ease of using a system (Venkatesh et al., 2003), is crucial in influencing behavioural intention to use robo-advisors. Studies show that, when robo-advisors are perceived as user-friendly and require minimal effort, user adoption increases significantly (Nguyen et al., 2023; Nourallah, 2023). In the competitive FinTech landscape, investment providers can gain advantages by designing intuitive, accessible interfaces to attract a broader audience, including less tech-savvy users. This approach enhances initial adoption rates and fosters long-term engagement, making effort expectancy a key factor in the successful implementation of robo-advisors in financial services

### **2.4. *Social Influence***

Social influence refers to users' reliance on others' opinions and recommendations when adopting or using technologies (Venkatesh et al., 2003) like robo-advisors. It is evident that peer pressure, expert endorsements, and social networks significantly shape users' attitudes towards new systems. Studies by Gan et al. (2021), Gerlach and Lutz (2019), Nguyen et al. (2023), and Yeh et al. (2022) have highlighted that social influence strongly impacts behavioural intention to use robo-advisors. This is because, when users perceive positive endorsements from peers or experts, they are

more likely to adopt the technology, making social influence a crucial factor in user adoption and behaviour.

## **2.5. Facilitating Conditions**

Facilitating conditions refer to users' perceptions of the resources and support needed to use a technology (Venkatesh et al., 2003), such as robo-advisors. Key aspects include robust technical infrastructures, secure data encryption, and comprehensive user supports, such as tutorials and responsive customer services. Studies show that these conditions significantly influence users' behavioural intentions and actual use of financial technology. When the users perceive strong, reliable infrastructures and supports, they are more likely to adopt and continue using the technology, highlighting the importance of facilitating conditions in user engagement (Gan et al., 2021; Yeh et al., 2022).

## **2.6. Financial Literacy**

A study by Isaia and Oggero (2022) demonstrates that financial literacy plays a pivotal role in using robo-advising services. Alomari and Abdullah (2023), in their study of behavioural intention to adopt cryptocurrency as an investment alternative, stated that people with extensive knowledge (financial literacy) are more likely to make informed decisions about using cryptocurrencies. Individuals with greater financial literacy are more likely to adopt cryptocurrency compared to those with lesser financial literacy since they possess a quicker comprehension of Bitcoin information and make more informed choices (Zhao & Zhang, 2021).

## **3. Methodology**

The pilot study has utilised purposive sampling to select 30 existing investors aged 18 to 45 with online investment experience, ensuring the relevance of the data. Before the pilot test was run, a preliminary test had been conducted, and the questionnaire had undergone face and content validity assessment by seven experts in education, language, and methodology. Based on their feedback, modifications have been made to the questionnaire. The pilot study has then evaluated the validity and reliability of each measurement item, aligning with the recommended practices.

The pilot test, conducted over two weeks, has involved the distribution of the electronic questionnaires via Google Form across various social media platforms, including WhatsApp, Telegram, and Instagram. The study has utilised the closed-ended questions (Sekaran & Bougie, 2016) with a seven-point Likert scale (1=Strongly Disagree to 7=Strongly Agree) to gather responses. All constructs have been adapted from the previous literature, and the questionnaire format has ensured respondents to choose from the predetermined alternatives.

## **4. Findings and Discussions**

The 30 data have been analysed using two software programmes, which are Statistical Product and Service Solutions (SPSS) for measuring the frequency test and SmartPLS4.1 for measuring variance-based structural equation modelling (SEM) using partial least squares (PLS) path modelling. Results have evidenced that most respondents are female (60%) and male (40%). About 66.7% of the respondents live in urban areas, while 33.3% live in rural areas. It is found that 13.3% of the respondents live in the northern region, 16.7% in the southern region, 46.7% in the central region, and 23.3% in the eastern region. Most of the respondents are in the 36-40 age group (40%), followed by 41-45 years (23.3%), 31-35 years (16.7%), 26-30 years (13.3%), and 18-25 years (6.7%). In terms of the highest academic qualifications, there are 10% of the respondents who are master's degree holders, followed by bachelor's degree holders (23.3%), PhD and diploma holders (20%), and others (3.3%). In connection with the investment experience, half of the respondents have 1-5 years of

investment experience, 23.3% have more than 10 years of experience, 16.7% have less than a year of experience, and 10% have 6-10 years of experience.

In the meantime, Table 1 below exhibits the results of the measurement model. The measurement-model analysis has been used to evaluate the reliability and validity of the data, which include seven variables, namely performance expectancy, effort expectancy, social influence, facilitating conditions, financial literacy, behavioural intention, and use behaviour of robo-advisors. Therefore, the loading values should be higher than 0.5 (Ramayah, Cheah, Chuah, Ting, & Memon, 2018), as the other items have high loading scores. Based on the measurement-model results, the loadings for this study are found to be between 0.627 and 0.967.

In the interim, Composite Reliability (CR) and Average Variance Extracted (AVE) have also been used to elaborate on the reliability of the data. Hair, Matthews, Matthews, and Sarstedt (2017) have proposed that convergent validity can be established if the AVE is  $>0.5$  and the CR is  $>0.7$ . The measurement-model results have demonstrated that the AVE is between 0.613 and 0.873 and the CR is between 0.903 and 0.976, which are higher than the threshold values proposed by Hair et al. (2017) and Ramayah et al. (2018). Therefore, this pilot study is confirmed to be further analysed for a final investigation with a larger number of respondents.

**Table 1:** Results of the measurement model

Variable	Loadings	CR	AVE	Variable	Loadings	CR	AVE
Use Behaviour	0.926	0.964	0.845	Behavioural Intention	0.897	0.963	0.840
	0.923				0.960		
	0.912				0.880		
	0.966				0.921		
	0.866				0.922		
Performance Expectancy	0.867	0.947	0.748	Effort Expectancy	0.855	0.969	0.838
	0.867				0.941		
	0.853				0.967		
	0.863				0.939		
	0.869				0.932		
	0.872				0.854		
Social Influence	0.627	0.903	0.613	Facilitating Conditions	0.940	0.976	0.873
	0.926				0.943		
	0.846				0.967		
	0.846				0.954		
	0.764				0.884		
	0.644				0.917		
Financial Literacy	0.758	0.955	0.781				
	0.897						
	0.949						
	0.898						
	0.894						
	0.896						

## 5. Conclusion

Conducting a pilot study to investigate the intention of Malaysian millennials and Gen Z to use robo-advisors is essential for validating the research design. The high proportion of positive responses confirmed the questionnaire's reliability and supported its use in the main study. Meanwhile, the pilot study has also demonstrated the effectiveness of online surveys for data collection. Additionally, current investors' feedback has validated the instruments' suitability, highlighting the relevance of the UTAUT theory in assessing behavioural intention in financial

technology. This study has underscored the importance of pilot studies in enhancing research design and advancing knowledge in robo-advisor utilisation.

## 6. Acknowledgement

This work is supported by a Conference Support Grant provided by Institut Pengajian Siswazah (IPSi/PASP/CSF/Pin.2024), assisted by Arshad Ayub Graduate Business School, Universiti Teknologi MARA Cawangan Kelantan.\

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