Available Online at www.e-iph.co.uk
Indexed in Clarivate Analytics WoS, and ScienceOPEN

E-B Environment - Behaviour Proceedings Journal

KICSS2023

Kedah International Conference on Social Science and Humanities
UiTM Kedah (Online), Malaysia, 21-22 June 2023:
2nd International Conference on Business, Finance, Management and Economics (BIZFAME)

e-IPH e-International Publishing House Ltd., United Kingdom

Systematic Literature Review on Robo-Advisery Adoption towards Young People

Suhaily Maizan Abdul Manaf[1*], Md Khairu Amin Ismail[2], Shahsuzan Zakaria[3]
*Corresponding Author

[1*] Faculty of Business and Management, Universiti Teknologi MARA Cawangan Terengganu, Malaysia
[2] Faculty of Business and Management, Universiti Teknologi MARA Cawangan Kelantan, Malaysia
[3] Faculty of Business and Management, Universiti Teknologi MARA Cawangan Selangor, Malaysia

suhailymaizan@uitm.edu.my; mkai01@uitm.edu.my; shah81@uitm.edu.my
Tel: +60179402804

Abstract
In the past two decades, numerous studies have focused on robo-advisers in financial technology. Robo-advisers involve automated financial advice for investors, tailoring portfolios based on risk tolerance and objectives, and automatic portfolio-monitoring and rebalancing. While robo-advisers have seen progress in adoption, there are still untapped potentials. This abstract presents a systematic literature review summarising the current state-of-the-art in robo-advisery adoption. By following a detailed, systematic literature-review methodology, the review provides valuable insights for practitioners, potential investors, and researchers seeking to identify areas for further investigation in robo-advisery adoption.

Keywords: robo-advisers; SLR; adoption.

DOI: https://doi.org/10.21834/e-bpj.v8iSI15.5086

1.0 Introduction

Along with the current technological development in the field of finance and investment, the introduction of digital financial advisers is also leading the investment industry. Robo-advisers are a form of financial advisery service that manages investment portfolios and offers investment recommendations using automated algorithms and computer programmes. The services typically rely on algorithms to analyse client data, investment goals, risk tolerance, and other factors to create a customised investment portfolio for each client. These platforms often use exchange-traded funds (ETFs) or other passive investment strategies to build diversified portfolios at a lower cost than traditional human advisers. They often offer lower costs than human advisers, making them an appealing choice for investors seeking professional investing advice but are unable to commit to significant fee commitments. Robo-advisery services are accessible through online platforms, mobile apps, and other digital channels, and millennials are among the age group who actively invest using robo-advisers. The millennials are a generation with a strong focus on information-technology centralisation and possessing highly developed multitasking skills that are deeply ingrained in their lifestyles. They are always eager to explore new technologies and devices, making them a dynamic and adaptable group (Sani & Koesrindartoto, 2019), thus, driving them to prefer the convenience and efficiency of online platforms. However, there is a paucity of research that has focused on the millennials even though they are the most tech-savvy investors and could be the potential consumers of robo-advisery services soon (Chandani et al., 2021; Shanmuganathan, 2020).

This systematic review aims to investigate all the pertinent previous research to bridge a gap in the existing knowledge by investigating an increasing volume of material pertaining to the use of robo-advisers towards young working people. The current study is crucial because there is a dearth of prior research that has offered an exhaustive and comprehensive pattern of the state of technological advancement in portfolio financial advisers today, as well as detailed information on the review processes that have been applied in terms of the application of keyword identification, article-screening, article eligibility, and database use. In addition, this research is also significant because it sheds light on the breadth of the peer-review literature's attention to specific topics, which can

eISSN: 2398-4287 © 2023. The Authors. Published for AMER and cE-Bs by e-International Publishing House, Ltd., UK. This is an open-access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/). Peer–review under the responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), and cE-Bs (Centre for Environment-Behaviour Studies), College of Built Environment, Universiti Teknologi MARA, Malaysia
DOI: https://doi.org/10.21834/e-bpj.v8iSI15.5086

help the researchers to present their findings in a way that helps readers to better comprehend the areas of the robo-advisery services that will need further study in the future.

2.0 Literature Review

Despite the vast amount of research that has been conducted on robo-advisers or other forms of digital investment advice, there have been very few attempts made to comprehensively review these findings. According to Chandani et al. (2021), robo-advisers are widely recognised as a new technology within the financial-technology (FinTech) sector, and the existing body of literature on this topic is currently constrained in scope. Moreover, the field of the robo-advisery services is now in its early stages and continues to develop and progress. Hence, it is necessary to gather supplementary data about the topic to enhance investors' comprehension of their complete potentials in addressing diverse financial-technology concerns. Yeh et al. (2022) have also noted that the emergence of robo-advisers represents a relatively recent phenomenon, resulting in a limited body of research dedicated to exploring the associated concerns and challenges. Kraiwanit et al. (2022) have conducted a study examining the impact of robo-adviser designs and mechanics on individuals' economic decision-making. The findings have revealed that a limited number of people have possessed an understanding of how these factors can influence the development of economic-decision-making.

This study has attempted to bridge the knowledge gap on research patterns and trends that have been observed in the robo-advisery disciplines. To address the research topic, the construction of the current systematic review has been centered on the question: *How do young working people strategise the adoption of robo-advisers?* More importantly, the principal focus of the investigation has been on digital-adoption practices, emphasising the necessity of doing a systematic review of robo-advisers. The approach used to find the solution to the research issue posed by the current study is presented in a section that follows.

By helping to fill in the gaps in the empirical literature, the domains and variables that have been created for this study might provide new knowledge for subsequent scholarly work. This systematic review not only has highlighted the significant gaps in the literature but has also served as a guide for future research on any information provisions in digital-investment-advising fields. This review is essential because there are not enough studies on robo-advisery systems in general. Information providers may find it simpler to grasp the areas to focus on when offering information services because of this systematic review study. Meanwhile, this review also has relevance for policymakers and funders, such as accessibility, cost-effectiveness, data-driven decision-making, transparency, scalability, efficiency, and continuous monitoring, which can empower them to make more informed decisions, design-effective policies, and promote sustainable development in the financial sector.

3.0 Methodology

This systematic review has initiated the development of the problem statement by applying the Population or Problem, Interest, and Context (PICo). Based on these ideas, the authors of the review have included three primary features, which are (i) young people in Malaysia (Population); (ii) adoption (Interest); and (iii) digital financial advisers or robo-advisers (Context). This study has assigned the Reporting Standards for Systematic Evidence Syntheses (ROSES) adapted review protocol as a reference source of the SLR formulation. According to Haddaway et al. (2018), ROSES has been designed to remind researchers to provide appropriate information at the appropriate level of detail. Besides, it has also been used to support the diversity of review methods applied to a wide range of topic areas. Therefore, the instrument must reflect some of the complexity and interdisciplinarity of conservation and environmental management themes. In addition, ROSES has also included specific instructions and examples for all the phases of the review process, including planning, execution, and reporting. This study has begun the SLR process by developing pertinent research questions for the review. Besides, the study has also outlined the systematic searching techniques, which include identification, screening, and eligibility. Meanwhile, it has also evaluated the quality of the selected articles and explained the processes. Lastly, the study has explained how the data have been abstracted, analysed, and validated. This section describes the five key sub-sections used in the current research, which are PRISMA, resources, inclusion and exclusion criteria, systematic review procedure, and data abstraction and analysis.

3.1 PRISMA

To further explore, this review has been conducted by following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA). The purpose of the publication standards is to provide the authors with the tools they need to assess the thoroughness and quality of a review (Shaffril, Samah, & Samsuddin, 2019), by which it scans a sizable collection of scientific literature at a predetermined period, enabling a precise search of phrases related to the use of robo-advisers.

3.2 Resources

Three major databases, which are Scopus, Web of Science (WoS), and Science Direct, have been used to conduct the review techniques for this study, supported by Gusenbauer and Haddaway (2020). In recent years, those applications have progressively increased and are relevant to a wide range of sectors outside those where evidence synthesis has already been well-established, such as medicine, health sciences, or environmental studies (Gusenbauer & Haddaway, 2020). The literature search has included peer-reviewed articles published in English between 2018 and 2022 as there are matching records of articles for the three resources.

3.3 Identification

The three databases have been used in the key stages of the systematic review process to choose many pertinent publications for the current investigation. The essential keywords for the study, which are 'robo-advisory', 'digital financial advisory', and 'adoption', have been searched in the first step of the identification process, which entailed looking for any synonyms, related terms, and variations. The method of identifying acceptable keywords begins with using an online thesaurus, the keywords used in prior studies, keywords revealed by reading prior publications from Scopus, and keywords provided by professionals in the field. In the interim, the research-question-development technique has also been used, which allows the objective of the study to be more clearly defined.

To conduct the search process on the selected leading and supporting databases, the advanced search techniques, such as Boolean operators, phrase-searching, truncation, wild card, and field code functions, have been employed alone or in combination. The main and enhanced keywords have been used in the search. Additionally, manual-search methods like hand-picking, snowballing, and emailing the matching authors have also been used. However, the search for a theoretical framework has not been included because the search result has shown the elements of the theories related to those articles.

Accordingly, search strings on the Scopus, Web of Science (WoS), and Science Direct (SD) databases were developed in February 2023 (Refer Table 1) after all the relevant keywords had managed to be determined. Most importantly, from the searching in the leading and supporting databases, the current investigation has effectively yielded a total of 60 articles from Scopus, 59 articles from WoS, and 33 articles from SD. These articles have then been ready for the screening process.

Table 1. Full search strings used in the selected databases (Scopus, WoS, and Science Direct)

Database	Search string	Total
Scopus	TITLE-ABS-KEY ((‘digital financial advisory’ OR ‘digital financial advis*’ OR ‘digital financial service*’ OR ‘robo advis*’) AND (‘adoption’))	60
Web of Science	TS=((‘digital financial advisory’ OR ‘digital financial advis*’ OR ‘digital financial service*’ OR ‘robo advis*’) AND (‘adoption’))	59
Science Direct	‘digital financial advisory’ OR ‘robo advisory’ AND ‘adoption’	33

3.4 Screening

This study has examined all the 60, 59, and 33 selected articles by using the three automatic sorting tools accessible in the relevant databases to determine the criteria for the article selection. The same criteria have been applied to each of the selected databases, and the articles have been hand-picked for removal when the sorting functions of the databases have been inaccessible. Okoli (2015) has stated that the articles should be produced in a range of time intervals for the screening process because it is almost impossible for academics to review all the existing published papers. However, the timeline publication should be restricted only if the related studies could only be disclosed over a specified time. Concerning the timeline, source type, and English-language preferability (Table 2), this method has accepted 42 articles (Scopus), 39 articles (WoS), and 22 articles (SD).

Table 2. After screening process

Database	Search string	Total
Scopus	TITLE-ABS-KEY ((‘digital financial advisory’ OR ‘digital financial advis*’ OR ‘digital financial service*’ OR ‘robo advis*’) AND (‘adoption’)) AND (EXCLUDE (PUBYEAR,2017) OR EXCLUDE (PUBYEAR, 2016)) AND (EXCLUDE (SRCTYPE, ‘p’) OR EXCLUDE (SRCTYPE, ‘k’) OR EXCLUDE (SRCTYPE, ‘b’) OR EXCLUDE (SRCTYPE, ‘d’))	42
Web of Science	TS=((‘digital financial advisory’ OR ‘digital financial advis*’ OR ‘digital financial service*’ OR ‘robo advis*’) AND (‘adoption’)) and Early Access or Proceeding Paper or Review Article (Exclude – Document Types) and Enriched Cited References and 2016 (Exclude – Publication Years)	37
Science Direct	‘digital financial advisory’ OR ‘robo advisory’ AND ‘adoption’	22

3.5 Eligibility

Eligibility has involved manually inserting or deleting the articles based on the detailed requirements of the authors (Samsuddin, Shaffril, & Fauzi, 2020). This method has required reviewing the article titles and abstracts, and if it has still been unclear whether the chosen papers have been relevant to the study or the articles' contents have been assessed. The procedure of eligibility is an important one since it has enabled the researchers to improve upon the shortcomings caused by the databases. Therefore, a total of 101 articles, consisting of 42 articles (Scopus), 37 articles (WoS), and 22 articles (SD), have been identified. After thoroughly tracing the titles and abstracts containing the keywords of 'digital financial-advisory' and 'robo-advisory', the remaining 61 articles have been considered suitable for the next process. Finally, only 38 articles have been chosen for the quality-appraisal process. Figure 1 illustrates the steps involved in systematic searching, which has been adapted from Shaffril et al. (2019). Appendix 1 shows a list of the 38 articles that are suitable for the reviewing process in the quality-appraisal stage.

4.0 Findings

By adopting Cohen's Kappa analysis (two-article quality evaluators) or Fleiss' Kappa analysis (three- or more-article quality evaluators) as a method used in a quantitative-appraisal strategy (Petticrew & Roberts, 2006), based on findings from the article-quality appraisal, 38 articles have been selected from the eligibility stage as displayed in Table 3. The AXIS tools (cross-sectional survey) by Downes et al. (2016) have been adapted to evaluate the appraisal stage. Petticrew and Roberts (2006) have stated that only the articles with high- and medium-level qualities can be selected for review in the SLR, while the articles with a low-level quality should be removed.

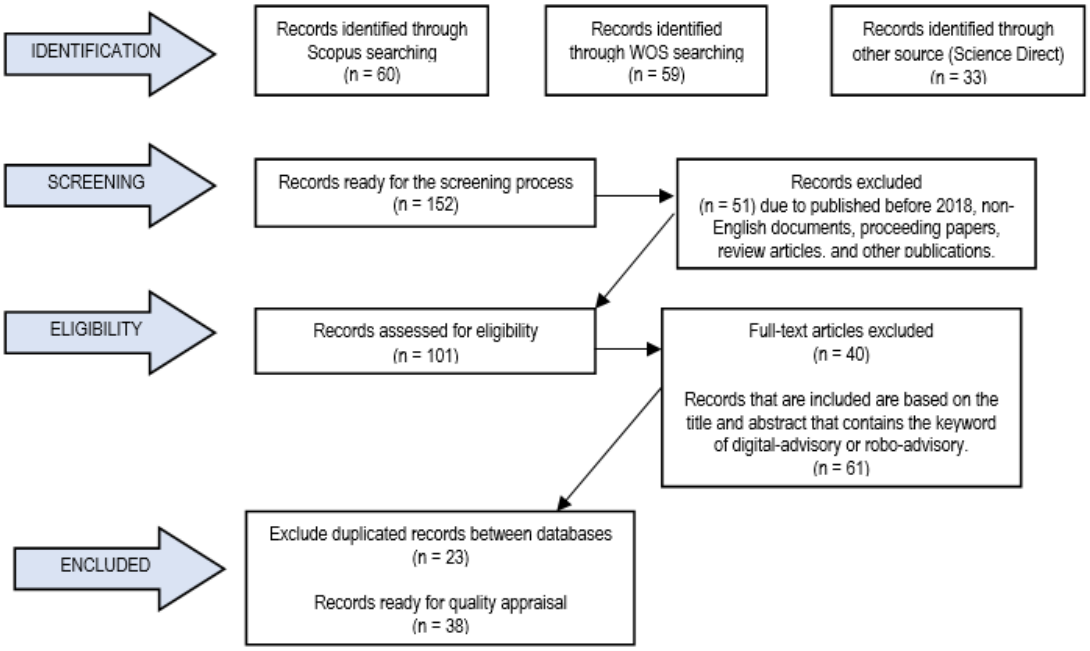

Fig. 1: Flow diagram of the study
(Source: Shaffril et al., 2019)

Table 3. Lists of the selected articles for quality appraisal

Authors	Article(s)	Database
Atwal & Bryson (2021)	Antecedents of intention to adopt artificial intelligence services by consumers in personal financial investing	Scopus
Au et al. (2021)	Business model of sustainable robo-advisors: Empirical insights for practical implementation	Scopus
Belanche et al. (2019)	Artificial Intelligence in FinTech: Understanding robo-advisors adoption among customers	Scopus
Chandani et al. (2021)	Robo-advisory services in India: A study to analyse awareness and perception of millennials	Scopus
Cheng (2022)	How can robo-advisors retain end-users? Identifying the formation of an integrated post-adoption model	Scopus
Deo & Sontakke (2021)	Usability, user comprehension, and perceptions of explanations for complex decision support systems in finance: A robo-advisory use case	Scopus
Fan & Chatterjee (2020)	The utilization of robo-advisors by individual investors: An analysis using diffusion of innovation and information search frameworks	Scopus
Figà -Talamanca et al. (2022)	Robo-advisor acceptance: Do gender and generation matter?	Scopus
Flavián et al. (2022)	Intention to use analytical artificial intelligence (AI) in services-The effect of technology readiness and awareness	Scopus
Gerlach & Lutz (2021)	Digital financial advice solutions-Evidence on factors affecting the future usage intention and the moderating effect of experience	Scopus
Jain & Raman (2022)	The interplay of perceived risk, perceive benefit and generation cohort in digital finance adoption	Scopus
Kumari & Devi (2022)	Blockchain technology acceptance by investment professionals: A decomposed TPB model	Scopus
Litterscheidt & Streich (2020)	Financial education and digital asset management: What's in the black box?	Scopus
Museba et al. (2021)	Customer perception of adoption and use of digital financial services and mobile money services in Uganda	Scopus
Seiler & Fanenbruck (2021)	Acceptance of digital investment solutions: The case of robo advisory in Germany	Scopus
Tubadji et al. (2021)	Cultural relativity in consumers' rates of adoption of artificial intelligence	Scopus
Van Niekerk & Phaladi (2021)	Digital financial services: Prospects and challenges	Scopus
Von Walter et al. (2022)	The impact of lay beliefs about AI on adoption of algorithmic advice	Scopus
Zhang et al. (2021)	Who do you choose? Comparing perceptions of human vs robo-advisor in the context of financial services	Scopus
Bhatia et al. (2021)	Artificial intelligence in financial services: A qualitative research to discover robo-advisory services	WoS
Cheng (2021)	Will robo-advisors continue? Roles of task-technology fit, network externalities, gratifications and flow experience in facilitating continuance intention	WoS
D'Acunto et al. (2019)	The promises and pitfalls of robo-advising	WoS
Dwivedi et al. (2021)	Artificial Intelligence (AI): Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice and policy	WoS
Ge et al. (2021)	Human-robot interaction: When investors adjust the usage of robo-advisors in peer-to-peer lending	WoS
Isaia & Oggero (2022)	The potential use of robo-advisors among the young generation: Evidence from Italy	WoS
Jung et al. (2018)	Designing a robo-advisor for risk-averse, low-budget consumers	WoS
Jünger & Mietzner (2020)	Banking goes digital: The adoption of FinTech services by German households	WoS
Ozili (2020)	Comparing digital finance in the UK, US, India and Nigeria	WoS
Rana et al. (2020)	Key challenges to digital financial services in emerging economies: The Indian context	WoS
Tiberius et al. (2022)	Forecasting the future of robo advisory: A three-stage Delphi study on economic, technological, and societal implications	WoS

Waliszewski & Warchlewska (2020)	Attitudes towards artificial intelligence in the area of personal financial planning: A case study of selected countries	WoS
Yeh et al. (2022)	Robo-advisor based on unified theory of acceptance and use of technology	WoS
Barroso & Laborda (2022)	Digital transformation and the emergence of the Fintech sector: Systematic literature review	SD
Bhatia et al. (2020)	Robo advisory and its potential in addressing the behavioral biases of investors-A qualitative study in Indian context	SD
Brunen & Laubach (2022)	Do sustainable consumers prefer socially responsible investments? A study among the users of robo advisors	SD
Bunnell et al. (2020)	FinPathlight: Framework for an multiagent recommender system designed to increase consumer financial capability	SD
Shanmuganathan (2020)	Behavioural finance in an era of artificial intelligence: Longitudinal case study of robo-advisors in investment decisions	SD
Tan (2020)	Robo-advisors and the financialization of lay investors	SD

Following consideration by two separate panels, 11 articles have been selected for further review (data abstraction), while the remaining 27 articles are not. The articles accepted (in Table 4 below) have been moved to the next stage of data abstraction and synthesis, which will be discussed further in the next section. The findings have highlighted the detailed procedures for discussions related to the robo-advisery topic as discussed by the previous researchers.

Table 4. Final accepted articles

Authors	Article(s)
Au et al. (2021)	Business model of sustainable robo-advisors: Empirical insights for practical implementation
Belanche et al. (2019)	Artificial Intelligence in FinTech: Understanding robo-advisors adoption among customers
Fan & Chatterjee (2020)	The utilization of robo-advisors by individual investors: An analysis using diffusion of innovation and information search frameworks
Figà -Talamanca et al. (2022)	Robo-advisor acceptance: Do gender and generation matter?
Flavián et al. (2022)	Intention to use analytical artificial intelligence (AI) in services-The effect of technology readiness and awareness
Jain & Raman (2022)	The interplay of perceived risk, perceive benefit and generation cohort in digital finance adoption
Kumari & Devi (2022)	Blockchain technology acceptance by investment professionals: A decomposed TPB model
Seiler & Fanenbruck (2021)	Acceptance of digital investment solutions: The case of robo advisory in Germany
Cheng (2021)	Will robo-advisors continue? Roles of task-technology fit, network externalities, gratifications and flow experience in facilitating continuance intention
Isaia & Oggero (2022)	The potential use of robo-advisors among the young generation: Evidence from Italy
Yeh et al. (2022)	Robo-advisor based on unified theory of acceptance and use of technology

5.0 Discussion

This research has made use of a method called thematic analysis, which has identified the themes based on the research patterns and trends pertaining to digital-financial-advising. In the first stage of the theme analysis, the authors have conducted an analysis on the remaining 10 articles to extract the statements and data from those articles that have provided responses to the research question. Table 5 illustrates the thematic analysis for the data extraction and data synthesis. This procedure has led to the development of the 25 sub-themes, which have then been subjected to the continual discussion and re-evaluation of the suitability of both the themes and the sub-themes. The 7 themes are attitude (6 sub-themes), demographic (5 sub-themes), subjective norms (2 sub-themes), perceived risk (3 sub-themes), perceived benefit (3 sub-themes), financial literacy (2 sub-themes), and technology readiness (4 sub-themes).

The results have produced a comprehensive analysis of the current patterns and trends in robo-advisers based on 11 research articles. Generally, regarding the year of publication, an article was published in 2019 and 2020 (Belanche et al., 2019; Fan & Chatterjee, 2020), two articles were published in 2021 (Au et al., 2021; Seiler & Fanenbruck, 2021; Cheng, 2021), and six articles were published in 2022 (Figà-Talamanca et al., 2022; Flavián et al., 2022; Isaia & Oggero, 2022; Jain & Raman, 2022; Kumari & Devi, 2022; Yeh et al., 2022).

The competition in the field of the robo-advisery services as a digital financial and investment alternative is a great opportunity for growth and innovation. The industry has embraced automated financial advisers as a complement to traditional human consultants. The revolution in financial technologies has brought exciting changes to the wealth-management industry. Providers who have offered innovative, value-added services will thrive in the medium-to-long-term period. Young investors or millennials are confident risk-takers who enjoy being in control of their investment decisions and prefer to select their own portfolios. Hence, it is great to see that these young investors are taking a thoughtful approach by prioritising the fundamental information of funds when selecting investment platforms. Therefore, technology can be utilised to offer clear and concise information to users, enabling them to make informed investment decisions. Meanwhile, the robo-adviser providers could also utilise financial technologies to create innovative business models and expand their product offerings through digitalisation. It is exciting to think about how digitisation can help these platforms to thrive in the age of Industry 4.0 and the artificial-intelligence landscape.

Adopting robo-advisers can be a great way for young working people to efficiently manage their finances. They must comprehend the idea of robo-advisers, which are automated financial-management services that build and manage investment portfolios using algorithms. The users should research and understand the basics of the robo-advisers to make informed decisions about using the services. There are several robo-advisery platforms available, each with its unique features and fees. The users should research and compare the different platforms to find one that suits their investment goals and budgets. Although the robo-advisery services are the automated services, regularly monitor is still needed to suit the portfolios. On top of that, they should also stay updated on the latest investment news and market trends to make informed decisions. Overall investments and successfully adapting to robo-advisers can be materialised by understanding the concept, determining their financial goals, researching available platforms, starting small, monitoring their investments, and seeking professional advice when necessary.

Table 5. Thematic analysis (data extraction and data synthesis)

Studies/Authors	Attitude							Demographic				Subjective Norms		Perceived Risk			Perceived Benefit			Financial Literacy		Technology Readiness			
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	Q	R	S	T	U	V	W	X	Y	Z
Au et al. (2021)							/	/	/		/														
Belanche et al. (2019)	/	/										/	/												
Cheng (2021)	/																								
Fan & Chatterjee (2020)		/					/	/	/	/										/	/				
Figà -Talamanca et al. (2022)	/	/																							
Flavián et al. (2022)																						/	/	/	/
Isaia & Oggero (2022)																				/	/				
Jain & Raman (2022)														/	/	/	/	/	/						
Kumari & Devi (2022)	/											/	/												
Seiler & Fanenbruck (2021)	/	/					/	/	/	/				/	/	/									
Yeh et al. (2022)			/	/	/	/																			
Total	5	4	1	1	1	1	2	2	2	2	1	2	2	2	2	2	1	1	1	2	2	1	1	1	1

Note:
A = Perceived usefulness
B = Perceived ease of use
C = Performance expectancy
D = Effort expectancy
E = Social influence
F = Facilitating conditions
G = Gender
H = Age
I = Education level
J = Income status
K = Experience
L = Interpersonal influence
M = External influence
N = Security Risk
P = Financial Risk
Q = Performance Risk
R = Convenience
S = Economic Benefit
T = Seamless Transaction
U = Basic financial literacy
V = Advanced financial literacy
W = Optimism
X = Innovativeness
Y = Discomfort
Z = Insecurity

5.0 Conclusion and Recommendations

Empirical investigations on robo-advisery adoption have identified several factors that affect the adoption and usage of the robo-advisery services. These factors can be classified into three categories, which are (i) individual-level factors; (ii) platform-related factors; and (iii) market-related factors. The individual-level factors refer to the personal characteristics of the investors, such as their age, income, education level, risk preferences, and investment experience. Studies have found that younger investors with the higher levels of education and income are more likely to use the robo-advisery services than the older ones with the lower levels of education and income. Likewise, investors with a higher risk tolerance are also more likely to adopt the robo-advisery services.

In the meantime, the platform-related factors include the perceived ease of use, usefulness, and trustworthiness of the robo-advisery platforms. Many studies have found that the perceived usefulness and ease of use of the robo-advisery platforms positively influence their adoption and usage. Trust in the platforms is also an essential factor that affects adoption and usage, and the platforms that provide more transparency and communication tend to be more trusted by the investors. Meanwhile, the market-related factors refer to the broader economic and market conditions that affect the adoption and usage of the robo-advisery services. Studies have found that market volatility, economic growth, and the availability of the alternative investment options can all influence the adoption and usage of the robo-advisery services.

Overall, the empirical studies have indicated that a combination of the individual-level, platform-related, and market-related factors affects the adoption of robo-advisers. Since the limitations have appeared that the robo-advisery adoption in Malaysia is still in its early stages and that there are less previous literature focusing on the robo-advisery-adoption factors among the young Malaysian investors, this research will help to identify the drivers that will shape its future growth. Therefore, it is recommended for future research to explore how these factors interact and change over time and across different market contexts to provide more comprehensive insights into the adoption and usage of the robo-advisery services. In addition, it is also suggested for future research to combine the SLR and a bibliometric analysis or theme generation to further enhance the analysis.

Acknowledgments

The authors would like to declare that there is no conflict of interest for this publication.

Paper Contribution to Related Field of Study

This study will contribute to the expanding literature on robo-advisery adoption, especially in the Malaysian market. Exploring the nuances of the robo-advisery adoption in Malaysia will contribute to a broader understanding of how technology-driven financial services are reshaping the investment landscape in the emerging economies.

References

Au, C.-D., Klingenberger, L., Svoboda, M., & Frère, E. (2021). Business Model of Sustainable Robo-advisors: Empirical Insights for Practical Implementation. *Sustainability, 13(*23), 1–12. https://doi.org/10.3390/su132313009

Belanche, D., Casaló, L. V., & Flavián, C. (2019). Artificial Intelligence in FinTech: Understanding Robo-advisors Adoption Among Customers. *Industrial Management and Data Systems, 119*(7), 1411–1430. https://doi.org/10.1108/IMDS-08-2018-0368

Chandani, A., Sriharshitha, S., Bhatia, A., Atiq, R., & Mehta, M. (2021). Robo-advisory Services in India: A Study to Analyse Awareness and Perception of Millennials. *International Journal of Cloud Applications and Computing, 11*(4), 152–173. https://doi.org/10.4018/IJCAC.2021100109

Cheng, Y. M. (2021). Will Robo-advisors Continue? Roles of Task-Technology Fit, Network Externalities, Gratifications and Flow Experience in Facilitating Continuance Intention. *Kybernetes, 50*(6), 1751–1783. https://doi.org/10.1108/K-03-2020-0185

Downes, M. J., Brennan, M. L., Williams, H. C., & Dean, R. S. (2016). Development of a Critical Appraisal Tool to Assess the Quality of Cross-sectional Studies (AXIS). *BMJ Open, 6*(12), 1–8. https://doi.org/10.1136/bmjopen-2016-011458

Fan, L., & Chatterjee, S. (2020). The utilization of robo-advisors by individual investors: An Analysis Using Diffusion of Innovation and Information Search Frameworks. *Journal of Financial Counseling and Planning, 31*(1), 130–145. https://doi.org/10.1891/JFCP-18-00078

Figà-Talamanca, G., Tanzi, P. M., & D'Urzo, E. (2022). Robo-advisor Acceptance: Do Gender and Generation Matter? *PLoS ONE, 17*(6), 1–13. https://doi.org/10.1371/journal.pone.0269454

Flavián, C., Pérez-Rueda, A., Belanche, D., & Casaló, L. V. (2022). Intention to Use Analytical Artificial Intelligence (AI) in Services-The Effect of Technology Readiness and Awareness. *Journal of Service Management, 33*(2), 293–320. https://doi.org/10.1108/JOSM-10-2020-0378

Gusenbauer, M., & Haddaway, N. R. (2020). Which Academic Search Systems Are Suitable for Systematic Reviews or Meta-analyses? Evaluating Retrieval Qualities of Google Scholar, PubMed, and 26 Other Resources. *Research Synthesis Methods, 11*, 181–217. https://doi.org/https://doi.org/10.1002/jrsm.1378

Haddaway, N. R., Macura, B., Whaley, P., & Pullin, A. S. (2018). ROSES RepOrting Standards for Systematic Evidence Syntheses: Pro Forma, Flow-diagram and Descriptive Summary of the Plan and Conduct of Environmental Systematic Reviews and Systematic Maps. *Environmental Evidence, 7*(1), 1–28. https://doi.org/10.1186/s13750-018-0121-7

Isaia, E., & Oggero, N. (2022). The Potential Use of Robo-advisors among the Young Generation: Evidence from Italy. *Finance Research Letters, 48*, 103046. https://doi.org/10.1016/j.frl.2022.103046

Jain, N., & Raman, T. V. (2022). The Interplay of Perceived Risk, Perceived Benefit and Generation Cohort in Digital Finance Adoption. *EuroMed Journal of Business*. https://doi.org/10.1108/EMJB-09-2021-0132

Kumari, A., & Devi, N. C. (2022). Blockchain Technology Acceptance by Investment Professionals: A Decomposed TPB Model. *Journal of Financial Reporting and Accounting*. https://doi.org/10.1108/JFRA-12-2021-0466

Okoli, C. (2015). A Guide to Conducting a Standalone Systematic Literature Review. *Communications of the Association for Information Systems, 37*(43), 879–910. https://doi.org/10.17705/1CAIS.03743

Petticrew, M., & Roberts, H. (2006). Systematic reviews in the social sciences: A Practical Guide. Blackwell Publishing Ltd. https://doi.org/10.1002/9780470754887

Samsuddin, S. F., Shaffril, H. A. M., & Fauzi, A. (2020). Heigh-ho, Heigh-ho, to the Rural Libraries We Go! A Systematic Literature Review. *Library and Information Science Research, 42*(1), 100997. https://doi.org/10.1016/j.lisr.2019.100997

Sani, I. A., & Koesrindartoto, D. P. (2019). The Empirical Study Towards the Acceptance of Robo-advisory for Digital Wealth Advisor: An Indonesian University Student Perspective. The 4th ICMEM 2019 and The 11th IICIES 2019, 112–117.

Seiler, V., & Fanenbruck, K. M. (2021). Acceptance of Digital Investment Solutions: The Case of Robo Advisory in Germany. *Research in International Business and Finance, 58*, 101490. https://doi.org/10.1016/j.ribaf.2021.101490

Shaffril, H. A. M., Samah, A. A., Samsuddin, S. F., & Ali, Z. (2019). Mirror-mirror on the Wall, What Climate Change Adaptation Strategies are Practiced by the Asian's Fishermen of All? *Journal of Cleaner Production, 232*, 104–117. https://doi.org/10.1016/j.jclepro.2019.05.262

Shanmuganathan, M. (2020). Behavioural Finance in an Era of Artificial Intelligence: Longitudinal Case Study of Robo-advisors in Investment Decisions. *Journal of Behavioral and Experimental Finance, 27*, 100297. https://doi.org/10.1016/j.jbef.2020.100297

Yeh, H.-C., Yu, M.-C., Liu, C.-H., & Huang, C.-I. (2022). Robo-advisor Based on Unified Theory of Acceptance and Use of Technology. *Asia Pacific Journal of Marketing and Logistics*. https://doi.org/10.1108/APJML-07-2021-0493