

THE ACCEPTANCE OF FINANCIAL ROBO-ADVISORS AMONG INVESTORS: THE EMERGING MARKET STUDY

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Abstract

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Robo-advisory services are a relatively new concept in the financial world. However, Epperson, Hedges, Singh, and Gabel (2015) report that many investors are extremely interested in employing robo-advisors to manage their finances. Nowadays, robo-advisors develop profiles of investors using very basic surveys to determine their investing preferences. The advantage of robo-advisory is that it charges far less than traditional private bankers (PB) since robo-advisors do not require additional labour (Cho, 2019). Having considered the utility of such services, this research aims to examine the acceptance of financial robo-advisors. The findings indicate that average monthly income, value invested in financial instruments, and investment knowledge affect an acceptance of financial robo-advisors as regards their effects on profits, careers in finance, and the overall economic system, and vice versa. The drawback of the study is that the results demonstrate the relationship between independent and dependent variables without delving into each variable in detail. Thus, qualitative research may be necessary for addition to quantitative one to go further into the details. The paper suggests that providing information about robo-advisors for investors can enhance the understanding of robo-advisors leading to the increasing use of robo-advisors in Thailand.

Keywords: Artificial Intelligence, Robo-Advisor, Financial Advisor, Financial Technology, Investment Plans

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1. INTRODUCTION

Robo-advisory services are described as those that utilise automated algorithms to provide investment advice to investors via online or mobile platforms (Seo, 2016). Robo-advisors examine volatile financial markets and then predict future markets using big data analysis powered by artificial intelligence (AI). In other words, it is a service that assists consumers in managing their assets by establishing a customised

portfolio of investors based on their specific investing preferences and periodically rebalancing this portfolio with new investments. The rise of information technology (IT) and the development of novel technologies like as big data, AI, machine learning, and deep learning all contributed to the emergence of robo-advisors. Such applications are employed in the investment management, sales, marketing, trading, and credit evaluation processes (Cho, 2019). As conventional human-to-human

interaction is displaced by digital services, financial service providers confront a new challenge: developing appropriate robo-advisors that are acceptable to potential investors (Park & Joung, 2017). However, few individuals are aware that the design of robo-advisors and mechanics can contribute to the development of economic decision-making. In online contexts, such as robo-advisory services, new techniques to further improve economic decision-making may be possible. Since robo-advisors are a relatively new use in finance, research on this system is inadequate (Cho, 2019). It is thus worthwhile to examine investors' attitudes toward the function of robo-advisors in Bangkok and its surrounding suburbs as well as how this influences the technology's acceptability. The purpose of this study is to determine the level of acceptability of financial robo-advisors among Thai investors, with a particular emphasis on those who already invest in financial products, by looking at four aspects: 1) profits — accepting that a financial robo-advisor will increase profits, 2) careers in finance — accepting that a financial robo-advisor will affect careers in finance, 3) risks in the system — accepting that a financial robo-advisor will increase system risks, and 4) overall economic system — accepting that a financial robo-advisor will have an impact on the overall economic system.

Some research studies have been conducted on the reliability and efficiency of robo-advisor. For example, Hodge, Mendoza, and Sinha (2020) examined the effects of human-like financial robo-advisors and discovered that investors' reliance on them decreases when the initial advice is flawed. Enabling the robot and investors to invest by trial and error results in the lowest level of dependence. However, allowing the robot to follow computer programmes created by humans or investors to follow patterns established by other people results in a higher level of reliance. Tillmans (2017) examined changes in the risks associated with robo-advisor-managed investment portfolios. His methodology comprised the collection of data, which included information on individual investors' investing objectives, the completion of survey forms by investors, and the display of results. According to the investors' comments, he determined that robot counselling could not change the risk level of an investment portfolio. The following research examines the factors influencing new financial technology acceptance. The study by Hohenberger, Lee, and Coughlin (2019) investigates whether self-assessed financial literacy, affective reactions, and the interaction of personal values influence individuals' desire to adopt a robo-advisor. The study concludes that a person's self-assessed financial literacy has an effect on their propensity to employ robo-advisors due to the various subjective reactions connected with their use. Additionally, anxiety mediating influence changes according to an individual's amount of a motivating element known to govern anxiety-related feelings, self-enhancement. Oehler, Horn, and Wendt (2021) explored investor demographics and how they influence the choice to adopt a robo-advisor. In univariate analyses, readiness to take risks, extraversion, and optimism are significant; however, in multivariate analyses, willingness to take risks and internal locus of control is significant.

Participants who use the robo-advisor make massive investments and are more likely to invest independently in equities and bonds. Even though robo-advisors have been examined by several academics globally, study on their adoption in countries that are not technological leaders is limited, particularly in Thailand, where such technology is relatively new to residents and investors.

In Thailand, AI has grown in popularity for corporate applications such as finance, banking, healthcare, and telecommunications. Numerous national banks have established online platforms such as mobile banking, focusing on AI applications in banking. The critical component of this service is AI-powered data analysis, which enables the bank to propose an appropriate loan to a person (Amnueysit, 2018). In Thailand's financial market, robo-advising services are still relatively new. However, Epperson et al. (2015) discovered that 48% of respondents are extremely interested in employing robo-advisors to manage their investments. Nowadays, robo-advisors develop profiles of investors using very basic surveys to ascertain their investing preferences. However, some pieces of research on robo-advisory indicate that the independent financial advice provided by a human advisor remains irreplaceable. One of the benefits of the client-financial adviser connection is that it provides confidence through tough situations. Hence, this study may be beneficial to financial institutions and the financial industry in Thailand in terms of increasing the usage of robo-advisors among their clients, as it examines the factors impacting robo-advisor acceptability. The elements that may influence investor adoption of robo-advisors should be highlighted and may be utilised to develop guidelines or policies that encourage investors to use such services. When robo-advisors can service a broad spectrum of clients, investments may be completed more quickly, resulting in increased money circulation in the country's monetary system; therefore, the nation's economy can flourish sustainably. As a result, foreign investors may be enticed to invest in Thailand. Additionally, Thailand's widespread use of FinTech will accelerate the country's transition to a fully digital economy.

The remainder of this paper is structured as follows. Section 2 conducts a literature review on the particular topic. Section 3 analyses the methods employed to perform the empirical research. The results are summarised in Section 4. The results are analysed and discussed in Section 5. Section 6 concludes, addresses the study's limitations as well as possible future research approaches.

2. LITERATURE REVIEW

Numerous service businesses have been affected by digitalisation, as shown by Uber and Airbnb in the transportation and hotel industries, respectively. Financial services are no exception, having recently adopted potential breakthrough innovations ranging from ATMs to robo-advisors. Following the 2008 financial crisis, robo-advisors emerged as the latest FinTech, as faith in traditional financial institutions eroded (Gold & Kursh, 2017; Salo, 2017). Robo-advisors are mostly represented by digital platforms that offer automated, algorithm-based financial services in the absence of human oversight (Dyba &

Gernego, 2019). Hence, robo-advisors play a critical role in a fully automated online investment management service. According to Hohenberger et al. (2019), robo-advisors represent an emerging form of a financial advisor as they leverage superior analytical skills enabled by breakthroughs in data science and artificial intelligence in the financial industry. By inquiring about their goals and preferences as well as their financial circumstances, technology helps users with saving, asset management, and investing choices. Customers can choose how much money they want to save and for how long they want to save, and the robo-advisor will make investments in a variety of financial instruments in the background. These include exchange-traded funds (ETFs), mutual funds, individual stocks, bonds, and commodities (Schwab, n.d., <https://intelligent.schwab.com/>). One of the primary contrasts between robo-advisors and traditional financial advisors is the ability to manage portfolios using software rather than human personnel; hence, a business can operate a robo-advisory service with the bare minimum of people (Cho, 2019). Consequently, the robo-advisors' service prices are reduced since they do not require additional labour. The second possible benefit that robo-advisors may have over more traditional investing assistance is their availability 24 hours a day, 7 days a week. This enhanced time flexibility results in cheaper consultation charges, which attracts low-net-worth individuals to robo-advisors (D'Acunto & Rossi, 2020). Additionally, robo-advisors can assist investors who lack access to private information in developing well-diversified portfolios with few of the behavioural biases associated with human advisers (Linnainmaa, Melzer, & Previtro, 2020). Due to their predefined rules, robo-advisors can minimise biases (D'Acunto, Prabhala, & Rossi, 2019). Moreover, robo-advisors are capable of providing investors with superior long-term returns. According to Dyba and Gernego (2019), worldwide consultants project that the digital advising industry will reach a value of 500 billion USD by the end of 2020, owing to the advantages of robo-advisors and present digitalisation trends prevalent in the modern era. Additionally, the value of robo-advisor-controlled assets is projected to reach 2.2 trillion USD in 2020. Growth is around 68% when both existing and newly invested assets are included. Therefore, robo-advisors play a significant role in the worldwide financial sector. They are not only financial advisors or intermediaries. Robo-advisors are already full-stack players in the FinTech space. Additionally, robo-advising is gaining popularity and has a good prospect in a variety of nations globally, impacting economic and social growth at both the national and global levels.

Since robo-advisors are new and may be unfamiliar to investors, persons seeking to invest in financial instruments and other assets may have doubts about adopting them instead of traditional human advisers. Therefore, this study explored the factors influencing robo-advisor acceptability. The independent variables were 1) *average monthly income*, 2) *average monthly savings*, 3) *value invested in financial instruments*, and 4) *investment knowledge*, while the dependent variables were the perceptions of investors (the study sample) regarding the influence of robo-advisors on four dimensions: 1) *robo-advisors increase profits*,

2) *robo-advisors affect careers in finance*, 3) *robo-advisors increase system risks*, and 4) *robo-advisors have an effect on the overall economic system*. After considering the independent variables of the study, it can be concluded that factors influencing acceptance of robo-advisors include an investor's financial situation (average monthly income and average monthly savings), the level of risk an investor is willing to take (value invested in financial instruments), and investment literacy (investment knowledge).

Numerous studies demonstrate that income and saving have a positive correlation with investment and financial technology adoption. Monthly savings, according to Cedrell and Issa (2018), have a major influence on whether an individual invests in securities or not, and those who intend to invest in securities are more likely to accept robo-advisors. According to Kaya (2017), robotic financial planning may also appeal to older individuals in their forties who have a greater household income and more investing capacity.

The level of risk an investor is willing to take (value invested in financial instruments) is one factor affecting the acceptance of robo-advisors. Several studies suggest that persons who are willing to accept a robo-advisor are more risk-averse, more extraverted, more optimistic, and less pessimistic than those who are not willing to accept it (Kaustia, Conlin, & Luotonen, 2019; Oehler, Horn, & Wedlich, 2018; Oehler et al., 2021). Additionally, participants who are willing to use the robo-advisor invest more in stocks and bonds than participants who are not willing to use the robo-advisor, which is consistent with the notion that participants who are willing to utilise the robo-advisor are more willing to take financial risks (Oehler et al., 2021).

Another factor impacting the acceptability of various FinTech is investment literacy (knowledge in investing). Rossi and Utkus (2020) assert that financial literacy is a crucial determinant of technology adoption. Generally, more conscientious, less neurotic individuals with a greater level of technical experience, confidence, and belief in technology are often more likely to adopt new technology (Lee, Ward, Raue, D'Ambrosio, & Coughlin, 2017). According to Oehler et al. (2021), investors who employ a robo-advisor and invest in risky assets independently have a higher level of financial education and expertise. As a result, these investors may be either highly confident in their ability to identify assets or may genuinely possess superior investment abilities as a result of their expertise.

3. METHODS

3.1. Population and sample

The primary data collection population for this study is Thai investors that are experienced with trading financial instruments via robo-advisors. A sample group for this study, selected by convenience sampling, consists of 689 people who presently invest in financial products such as bonds, stocks, and mutual funds.

To have a better understanding of Thailand's financial investors, the samples of this research are some snapshots of the Thai financial industry as provided by the International Monetary Fund

(IMF, 2019). Thailand has been hit by a number of shocks over the previous decade, including flooding in 2011, supply shocks in worldwide commodities markets, and political turmoil in 2013–2014, all of which have resulted in sluggish economic growth. The economy, on the other hand, has remained resilient due to significant international reserves, a flexible currency rate, and a conservative fiscal stance. While other deposit-taking institutions and non-bank financial institutions (NBFIs) have expanded in importance over the previous decade, commercial banks continue to account for about half of the financial industry. Thailand's capital markets are broadly comparable to those of its regional counterparts. At the end of 2018, equity market capitalisation exceeded 99% of GDP. The domestic bond market is dominated by government and central bank debt, with corporate bonds accounting for about a quarter of outstanding debt securities. The majority of outstanding debt securities are investment-grade, denominated in baht, and held by domestic retail and institutional investors. Retail investors account for the largest share of mutual fund investors. Around half of the funds are fixed-income, although equity and infrastructure funds have grown in popularity in recent years. About one-fifth of total assets under management (AUM) are held by foreign investment funds. Financial vulnerabilities appear to be managed, although household debt is rather high, and there are signals of weakness in a number of large corporations and small and medium-sized businesses (SMEs).

In the last year, a dynamic FinTech ecosystem has created possibilities for providers and customers as well as regulatory and supervisory obstacles. The authorities are making significant advances in creating an enabling environment for the digital economy, as seen by the growth of new payment businesses, such as e-money wallet and card programme providers as well as instruments such as PromptPay QR payments. While FinTech does not now pose a threat to financial stability, it requires close supervision.

3.2. Study tool

The survey used in this study is divided into three sections: 1) general information, 2) investing habits, and 3) ten investment-related knowledge questions based on Certified Investment & Securities Analyst Program (CISA, level 1, section 3 (asset valuation)). Cronbach's alpha was used to determine the reliability of the questionnaire. This collection of surveys has a Cronbach's alpha value of 0.727, which is more than 0.6, which means they are reliable.

3.3. Data analysis and interpretation

Table 1 indicates that average monthly savings and investment knowledge are positively correlated at the significance level of 0.05, whereas all other associations are positively correlated at the significance level of 0.01.

Table 1. Correlation of independent variables

<i>Independent variables</i>	<i>Investment knowledge</i>	<i>Average monthly savings</i>	<i>Average monthly income</i>
<i>Value invested in financial instruments</i>	($r = 0.619$)	($r = 0.311$)	($r = 0.606$)
<i>Average monthly income</i>	($r = 0.479$)	($r = 0.569$)	
<i>Average monthly savings</i>	($r = 0.081$)		

When the correlations between independent variables are considered, the value invested in financial instruments has a strong relationship with investment knowledge ($r = 0.619$), whilst the average monthly income has a moderate relationship with average monthly savings, the value invested in financial instruments, and investment knowledge

($r = 0.569$, 0.606 , and 0.479 , respectively). Average monthly savings have a poor correlation with the value invested in financial instruments ($r = 0.311$) and a negligible correlation with investment knowledge ($r = 0.081$). As a result, it may be stated that independent variables exhibit multicollinearity.

Table 2. Correlation of dependent variables

<i>Dependent variables</i>	<i>Lead to higher profits</i>	<i>Affect careers in finance</i>	<i>Effect on the overall economic system</i>
<i>Affect careers in finance</i>	($r = 0.800$)		($r = 0.845$)
<i>Effect on the overall economic system</i>	($r = 0.786$)		
<i>Increase system risks</i>	($r = 0.313$)	($r = 0.242$)	($r = 0.187$)

From Table 2, correlations between the dependent variables suggest that they are positive at the 0.05 level of statistical significance.

Considering the correlations between each pair of dependent variables, additionally, acceptance that financial robo-advisors affect careers in finance has a strong relationship with acceptance that they lead to higher profits ($r = 0.800$) and acceptance that they have an effect on the overall economic system ($r = 0.845$); additionally, acceptance that financial robo-advisors have an effect on the overall economic system has a strong relationship with acceptance that financial robo-advisors lead to higher profits ($r = 0.786$). Acceptance of financial robo-advisors increasing system risks has a weak relationship with acceptance of robo-advisors increasing profits and

affecting careers in finance ($r = 0.313$ and 0.242 , respectively), and acceptance of financial robo-advisors increasing system risks has a weak relationship with acceptance that they have an effect on the overall economic system ($r = 0.187$). As a result, it can be concluded that the dependent variables are multicollinear.

To summarise, a canonical correlation was employed to determine the correlations between variables since certain variables have a strong relationship with one another, which can be seen in both dependent and independent variables, and thus Pearson correlation could not be performed in this study. Canonical correlation analysis, then, was used to determine if the two sets of data were linear (NCSS, n.d.).

Regarding the multicollinearity test for the canonical correlation analysis, the class interval is shown below (Wanitdumrongsak, 2012):

- 0.81-1.00 — highest;
- 0.61-0.80 — high;
- 0.41-0.60 — moderate;
- 0.21-0.40 — low;
- 0.01-0.20 — lowest.

4. RESULTS

The canonical correlation analysis was used to test the linearity between the set of independent and dependent variables. In the analysis in Table 3, a set of independent variables includes 1) *average monthly income*, 2) *average monthly savings*, 3) *value invested in financial instruments*, and 4) *investment knowledge*, while a set of dependent

variables consists of acceptance that 1) *robo-advisors affect careers in finance*, 2) *robo-advisors increase system risks*, and 3) *robo-advisors have an effect on the overall economic system*.

The canonical correlations between these sets of variables are 0.748, 0.337, and 0.218, respectively, and the significance level within the set of dependent variables is 0.05.

Table 3 indicates that average monthly income, average monthly savings, value invested in financial instruments, and investment knowledge are all associated with acceptance that financial robo-advisors affect careers in finance, acceptance that they increase system risks, and acceptance that they have an effect on the overall economic system, with the percentages of variance accounted for being as follows: 74.8%, 33.7%, and 21.8%, respectively.

Table 3. Canonical correlations between a set of four independent variables and a set of three dependent variables (eliminating the variable regarding robo-advisors leading to higher profits)

	<i>Correlation</i>	<i>Eigenvalue</i>	<i>Wilks statistic</i>	<i>F</i>	<i>Num. D.F.</i>	<i>Denom. D.F.</i>	<i>Sig.</i>
1	0.748	1.273	0.371	67.749	12.000	1791.470	0.000
2	0.337	0.128	0.845	19.908	6.000	1356.000	0.000
3	0.218	0.050	0.952	16.918	2.000	679.000	0.000

Note: The null hypothesis (H_0) for the Wilks test is that the correlations in the current and following rows are zero having a significance level of 0.05.

In Table 4, a set of independent variables consists of 1) *average monthly income*, 2) *average monthly savings*, 3) *value invested in financial instruments*, and 4) *investment knowledge*, while a set of dependent variables is acceptance that 1) *robo-advisors increase profits*, 2) *robo-advisors increase system risks*, and 3) *robo-advisors have an effect on the overall economic system*.

The canonical correlations between these sets of variables are 0.738, 0.363, and 0.138, respectively,

and the significance level within the set of dependent variables is 0.05.

The analysis in Table 4 reveals that average monthly income, average monthly savings, value invested in financial instruments, and investment knowledge are associated with acceptance that financial robo-advisors increase profits, acceptance that they increase system risks, and acceptance that they have an effect on the overall economic system, accounting for 73.8%, 36.3%, and 13.8% of the variance, respectively.

Table 4. Canonical correlations between a set of four independent variables and a set of three dependent variables (eliminating the variable regarding the effect on careers in finance)

	<i>Correlation</i>	<i>Eigenvalue</i>	<i>Wilks statistic</i>	<i>F</i>	<i>Num. D.F.</i>	<i>Denom. D.F.</i>	<i>Sig.</i>
1	0.738	1.196	0.388	64.248	12.000	1791.47	0.000
2	0.363	0.152	0.852	18.887	6.000	1356.00	0.000
3	0.138	0.019	0.981	6.564	2.000	679.00	0.002

Note: The null hypothesis (H_0) for the Wilks test is that the correlations in the current and following rows are zero having a significance level of 0.05.

In the analysis in Table 5, a set of independent variables is 1) *average monthly income*, 2) *average monthly savings*, 3) *value invested in financial instruments*, and 4) *investment knowledge*, while a set of dependent variables is 1) *robo-advisors increase profits*, 2) *robo-advisors affect careers in finance*, and 3) *robo-advisors increase system risks*.

The canonical correlations between these sets of variables are 0.703, 0.372, and 0.076, respectively

and the significance level within the set of dependent variables is 0.05.

The analysis in Table 5 reveals that average monthly income, average monthly savings, value invested in financial instruments, and investment knowledge are associated with acceptance that financial robo-advisors increase profits, acceptance that they affect careers in finance, and acceptance that they increase system risks, accounting for 70.3%, 37.2%, and 7.6% of the variance, respectively.

Table 5. Canonical correlations between a set of four independent variables and a set of three dependent variables (eliminating the variable regarding the overall economic system)

	<i>Correlation</i>	<i>Eigenvalue</i>	<i>Wilks statistic</i>	<i>F</i>	<i>Num D.F.</i>	<i>Denom D.F.</i>	<i>Sig.</i>
1	0.703	0.977	0.433	55.519	12.000	1791.47	0.000
2	0.372	0.161	0.856	18.215	6.000	1356.00	0.000
3	0.076	0.006	0.994	1.952	2.000	679.00	0.143

Note: The null hypothesis (H_0) for the Wilks test is that the correlations in the current and following rows are zero having a significance level of 0.05.

In the analysis in Table 6, a set of independent variables includes 1) *average monthly income*, 2) *average monthly savings*, 3) *value invested in financial instruments*, and 4) *investment knowledge*, while a set of dependent variables is 1) *robo-advisors increase profits*, 2) *robo-advisors affect careers in finance*, 3) *robo-advisors increase system risks*, and 4) *robo-advisors have an effect on the overall economic system*.

The canonical correlations between these sets of variables are 0.749, 0.372, 0.227, and 0.067,

respectively, and the significance level within the set of dependent variables is 0.05.

The analysis in Table 6 indicates that average monthly income, average monthly savings, value invested in financial instruments, and investment knowledge are associated with acceptance of the impact of financial robo-advisors on profits, careers in finance, system risks, and the overall economic system, accounting for 74.9%, 37.2%, 22.7%, and 6.7%, respectively.

Table 6. Canonical correlations between a set of four independent variables and a set of four dependent variables (all factors)

	Correlation	Eigenvalue	Wilks statistic	F	Num D.F	Denom D.F.	Sig.
1	0.749	1.275	0.357	51.699	16.000	2065.85	0.000
2	0.372	0.161	0.813	16.230	9.000	1647.79	0.000
3	0.227	0.054	0.944	9.867	4.000	1356.00	0.000
4	0.067	0.005	0.995	3.093	1.000	679.00	0.079

Note: The null hypothesis (H_0) for the Wilks test is that the correlations in the current and following rows are zero having a significance level of 0.05.

Table 7 shows the comparison of the variances for canonical correlations in Tables 3, 4, 5, and 6. It is found that all independent variables (*average monthly income*, *average monthly savings*, *value invested in financial instruments*, and *investment knowledge*) have the highest association with the set of four dependent variables (*acceptance that robo-advisors increase profits*, *affect careers in finance*, *increase system risks*, and *have an effect on the overall economic system*), the total variability accounting for 134.8% (Table 6). In other words, the analysis of

the canonical weights between the independent variables and the four dependent variables as shown in Table 6 offers the best explanation for the dependent variables. Among three functions in Table 6 (Function 4 was eliminated as its significant level exceeds 0.05), Function 1 shows the highest canonical correlation of 0.749; hence, this function was considered as the best model. The details of the canonical weights of Function 1 are shown in Figure 1.

Table 7. Comparison of R_c square ($R_c \times 100$)

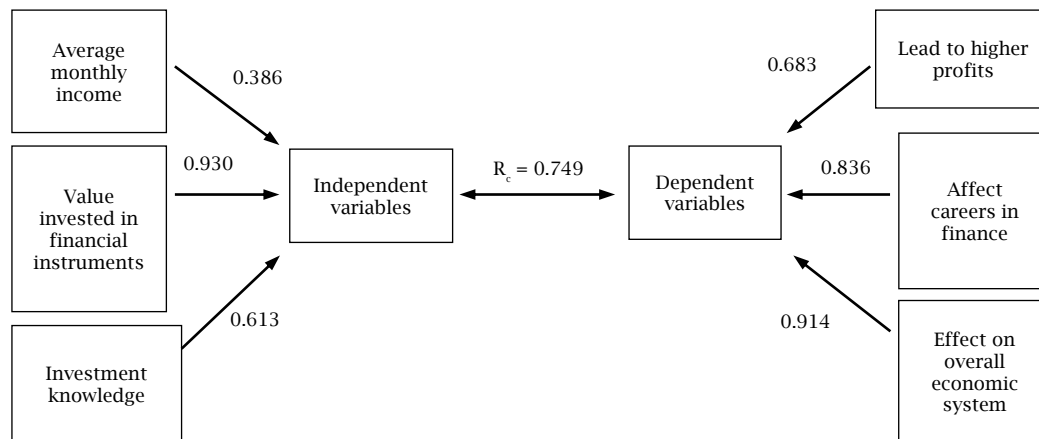
Table 3 (R. square)	Table 4 (R. square)	Table 5 (R. square)	Table 6 (R. square)
0.748 = 74.8	0.738 = 73.8	0.703 = 70.3	0.749 = 74.9
0.337 = 33.7	0.363 = 36.3	0.372 = 37.2	0.372 = 37.2
0.218 = 21.8	0.138 = 13.8		0.227 = 22.7
Total 130.3	Total 123.9	Total 107.5	Total 134.8

Figure 1 explains that average monthly income, value invested in financial instruments, and investment knowledge affect the acceptance that financial robo-advisors increase profits, affect careers in finance, and have an effect on the overall economic system and vice versa.

The analysis shows that each independent variable (*average monthly income*, *average monthly*

savings, and *investment knowledge*) has an effect on each of the dependent variables (*robo-advisors increase profits*, *robo-advisors affect careers in finance*, *robo-advisors increase system risks*, and *robo-advisors have an effect on the overall economic system*) when considering canonical weights of greater than or equal to 0.30 as being statistically significant.

Figure 1. Diagram showing canonical weights between independent variables and dependent variables of Function 1



Note: R_c = Canonical correlation

5. DISCUSSION

According to the findings, Function 1 is the optimal model for testing correlations between dependent and independent variables since it has the highest canonical correlation ($R = 0.749$). After running the sets of variables with Function 1, the results show that average monthly income, value invested in financial instruments, and investment knowledge affect all dependent variables (acceptance that financial robo-advisors increase profits, affect careers in finance, and have an effect on the overall economic system) and vice versa.

Income is a crucial element in determining whether a robo-advisor is accepted. This finding is in line with many studies. Milani (2019) indicates that individuals with a greater income, or those with more accessible funds, may be less eager to invest in robo-advisors. This is consistent with the nature of robo-advisors, which are developed specifically for small retail investors, who may profit more from their cheaper expenses because of their smaller available income. According to Cedrell and Issa (2018), income has an effect on the adoption of other FinTechs such as online banking. In contrast to the trends in robo-advisor adoption, Lassar, Manolis, and Lassar (2005) assert that higher-income correlates with increased usage of internet banking and also with the capacity to utilise it early.

Value invested in financial instruments indicates investors' risk-averse and it has an impact on the adoption of robo-advisors. This is consistent with Oehler et al.'s (2021) study, which discovered that less risk-averse retail investors are more inclined to utilise a robo-advisor. Moreover, participants were more interested in using the robo-advisor to invest more in stocks and bonds than participants who are not willing to use the robo-advisor, which supports the view that participants eager to use the robo-advisor are more willing to take financial risks.

Another key aspect determining robo-advisor acceptability is investment knowledge, which may be tied to the understanding of FinTech goods and services. According to Grote (2020), the primary impediment to financial technology adoption across all demographics is a lack of awareness, with some non-users admitting they were either ignorant of or had a limited understanding of the FinTech product. Previous research has established that individuals with greater financial literacy are more likely to make superior financial judgements and engage in safer financial behaviours across a variety of life domains (Stolper & Walter, 2017).

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6. CONCLUSION

Robo-advisory services are described as those that utilise automated algorithms to provide investment advice to investors via online or mobile platforms. Robo-advisory differentiates itself from traditional private bankers with its inexpensive fees and ability to invest small sums of money. However, drawbacks such as incomplete sales and security concerns must be considered. According to the findings, average monthly income, financial instrument value, and investing expertise all affect dependent variables, as does the recognition that financial robo-advisors boost profits, impact finance jobs, and have an effect on the wider economic system, and vice versa. In order to increase investor acceptance of financial robo-advisors and foster the growth of such FinTech applications, information about financial robo-advisors, including their benefits, drawbacks, and risks, should be made available to anyone interested in using a robo-advisor for financial instrument investments, so that investors can comprehend these details and use them to make investment decisions. As a result, the adoption of robo-advisors in Thailand will continue to grow.

The limitation of this study is that the results illustrate the association between independent and dependent factors but do not go into depth about each variable. As a result, qualitative research, such as an in-depth interview, may be required in conjunction with quantitative research to go further into the specifics. Qualitative research may clarify a subject in greater detail, allowing the qualitative findings to explain the quantitative findings.

For further studies, additional research on the acceptance of financial robo-advisors should be undertaken involving samples from diverse groups, such as independent investors, bank officials, students, and people in other industries, because the results may vary and may offer a more complete picture of those FinTech trends. Additionally, it would be worthwhile to investigate additional aspects that impact investing in financial instruments via robo-advisors; for example, individuals may react differently to information received via various channels. Additionally, experiments on financial robo-advisors for trading financial products should be conducted to help users have a better grasp of these applications.

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