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THE ROLE OF TRUST IN ROBO-ADVISORY SERVICES IN SHAPING PORTFOLIO DIVERSIFICATION BEHAVIOR. A CASE OF FINTECH AND BANK INVESTMENT APP USERS

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Abstract

This study examined how trust in the robo-advisory services and financial literacy are associated with portfolio diversification behavior, where investor confidence in automated investment recommendations acts as a mediating factor, among the FinTech and bank application users in Sindh, Pakistan. A quantitative survey was carried out to 179 respondents, and the analysis of data was done using PLS-SEM. It is shown that both trust and financial literacy have a positive impact on investor confidence which positively affect portfolio diversification behavior. Also, investor confidence was observed to partially mediate the association between trust, financial literacy and diversification which underscores its important role in making effective investment decisions. The research also highlights the need to establish trust and educate people on financial literacy to encourage informed investment choices in online financial tools. The implications of the findings on financial institutions, policymakers, and developers of FinTechs are to promote responsible investment behavior and better diversification of portfolios among digital investors.

Introduction

Financial technology (FinTech) has been changing the world of finance greatly in the sense that it has brought new digital-based solutions that are used in the management of investments and financial advisory. Among the most noticeable changes in this direction is the advent of robo-advisory services, an investment advice and portfolio management service that relies on artificial intelligence and algorithm-driven systems to offer automated advice. Through these platforms, users can get custom investment suggestions with respect to financial objectives, risk appetite and market information. As stated by Akhtar et al. (2025), robo-advisors are a significant development in the sphere of financial services since they merge professional knowledge regarding finances with

highly innovative digital technologies to enhance the accessibility of investments. Singh and Kumar (2025) also indicate that robo-advisory systems that combine AI remain in use among investors who can use technology-based financial advising applications. Shetty et al. (2026) also note that robo-advisors are transforming the wealth management by providing an automated and inexpensive approach to portfolio management.

The development of FinTech services and online banking platforms in emerging economies like Sindh in Pakistan has brought new opportunities to people to use modern investment instruments. Digital investment services have become increasingly popular as many financial institutions and FinTech companies have begun implementing them in the banking and mobile applications to appeal to their technologically conscious clients. According to Arora et al. (2025), AI-based robo-advisory systems are gaining more significance in the personal financial management and investment planning processes. Nevertheless, the implementation of these technologies in developing countries is usually based on how the users regard the reliability, transparency and technological capability. With the further development of FinTech services in such areas as Sindh, the need to comprehend the attitude of users to robo-advisory platforms will be crucial in assessing their usefulness in facilitating investment behavior.

The importance of trust in the acceptance of self-service financial advisory systems by users is important. Robo-advisory platforms rely on algorithms and digital interfaces to provide financial advice as opposed to human interaction because traditional investment advice is human-centered. According to Cao et al. (2026), trust of robo-advisory environments incorporates trust in the technology, service provider and the financial system underpinning the service. In the same vein, Bashir et al. (2025) established that trust plays a great part in the readiness of an investor to embrace robo-advisory platforms, especially among young and technology-sensitive investors. Chen et al. (2025) also state that trust does not influence the adoption intention but also the extent of user engagement and users relying on digital financial advisory services, in the long-term.

Portfolio diversification behavior is another significant issue in investment management that can be affected by the use of robo-advisory services. Diversification is a very well known approach which is to distribute investments on different assets to minimize financial risk and to enhance the prospective returns. According to Kulkarni et al. (2025), having disciplined investment behavior can be promoted through the use of robo-advisory platforms that offer algorithm-based recommendations on the allocation of a portfolio. Hidayat-ur-Rehman et al. (2025) also note that digital robo-advisory systems increase the experience of the investor with financial systems and provide structured suggestions on investments based on their own risk tolerance. But the level of trust that users have with the technology is a big determinant of how they adhere to these automated suggestions. Empirical literature on the effect of trust in robo-advisory services on portfolio diversification behaviour is scarce in the case of FinTech and bank investment application users in Sindh. Consequently, this paper will examine the importance of trust in robo-advisory to the portfolio diversification behavior of FinTech and bank investment application users in Sindh, Pakistan.

Aim

The objective of the study is to analyze the connections between trust in robo-advisory services and financial literacy and portfolio diversification behavior among users of FinTech and bank investment application in Sindh, Pakistan. The paper will also examine the mediating effect of investor confidence on the automated investment recommendations on diversification behavior.

Objectives

- To investigate the impact of trust in robo-advisory services in investor confidence of automated investment suggestion.

- To examine how financial literacy affects investor trust in computer-generated investment advice.
- To examine the effect of investor confidence in automated investment recommendations on portfolio diversification behavior.
- To establish the direct impact of trust in robo-advisory services on the portfolio diversification behavior.
- To assess how portfolio diversification behavior is affected by financial literacy directly.
- To determine the mediating value of investor confidence on automated investment recommendation between trust, financial literacy and portfolio diversification behavior.

Literature Review

The advent of robo-advisory services has radically changed the financial advice industry since it has introduced artificial intelligence and algorithmic systems into the investment management process. Robo-advisors are automated portfolio recommendations, which are determined by the investor preferences, financial objectives, as well as the risk tolerance. Akhtar et al. (2025) note that robo-advisory systems have become one of the most significant developments in financial technology, as they are regarded as cost-effective and data-driven investment technology. As it has been discussed by Singh and Kumar (2025), the AI-based robo-advisory systems improve the process of investment decisions by processing big financial data and producing optimal portfolio solutions. In the same manner, Shetty et al. (2026) hold that robo-advisors are transforming wealth management by making available financial advisory services through online avenues. Robo-advisors are gradually becoming a valuable asset in the context of assisting individual investment management as the sphere of FinTech services continues to grow.

It is generally accepted that trust is one of the key factors in the adoption and successful usage of robo-advisory services. Since such platforms are based on automated algorithms and not human advisors, the users have to use their perception of reliability, transparency, and technological competence. According to Cao et al. (2026), the trust in the robo-advisory setting pertains to trust in both the technological platform and the service provider institution. According to a study conducted by Bashir et al. (2025), the higher the degree of trust, the greater the possibility that investors will implant robo-advisory platforms and trust the recommendations. Another significant recommendation by Chen et al. (2025) is that trust enhances the user loyalty and the long-term usage of digital financial advisory services. Also, as Heidari (2024) claims, a trusting user of the algorithm-based financial systems will have more confidence in the automated investment suggestions.

Financial literacy is another critical aspect in determining how investors engage with the financial-based digital services. Financial literacy can be defined as the knowledge of a person concerning financial matters like risk management, allocation of portfolio and diversification of investment. According to Jamal et al. (2025), financial literacy can improve the efficiency of AI-based financial advice tools because it allows investors to assess more effectively the financial advice generated by algorithms. According to Arora et al. (2025), people who have better financial knowledge can better comprehend the technical financial services and rely on the automated advisory systems. Consequently, financially literate users will be more inclined to gain trust in the robo-advisory systems and use it to make proper investment decisions.

Diversification of portfolios can be considered as one of the main principles of investment management and it is commonplace to recommend this diversification in order to minimize the financial risk. Diversification entails investment in a variety of assets so as to ensure that market forces do not affect an investment. Kulkarni et al. (2025) determine that robo-advisors are significant in advising the investor to focus on the diversified portfolios, thus, offering algorithm-based recommendations to investors on the allocation

of assets. Hidayat-ur-Rehman et al. (2025) continue by stating that digital robo-advisory systems improve interaction of investors with financial sites by providing risk-based structured portfolio recommendations. Nevertheless, how far the investors carry out these automated recommendations will depend on their trust in the system. Thus, investor trust in automated investor advice could significantly mediate between trust, financial literacy, and the behaviour of diversifying a portfolio.

Empirical Studies

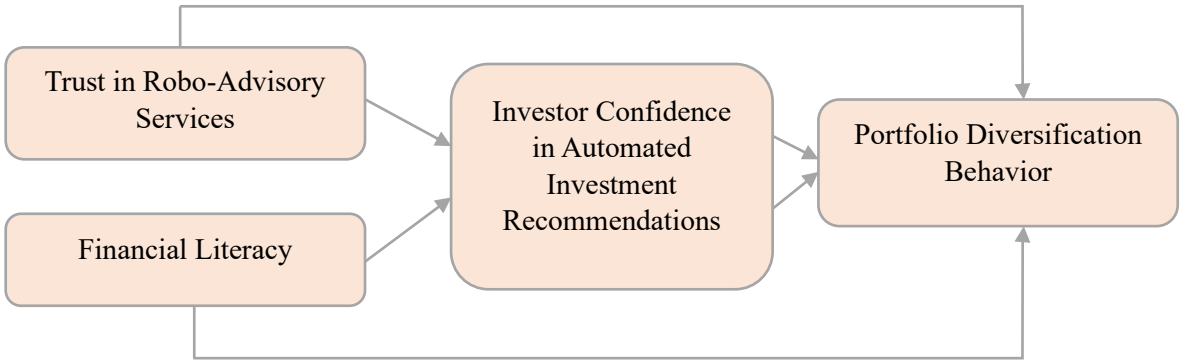
Empirical research on factors affecting user adoption of robo-advisory platforms has been conducted several times. A study on young retail investors by Bashir et al. (2025) established that trust plays a significant role in adopting and accepting the robo-advisory services. Their data show that those investors who believe that robo-advisory systems can be trusted tend to use automated financial advice more frequently. Equally, Heidari (2024) discussed the intention to employ robo-advisor and he indicated that the prior knowledge and trust in technology had a positive effect on investor attitudes to the use of algorithms-based financial advisor platforms.

Abbas (2025) examined user and investor attitudes on robo-advisory usage in the FinTech industry and discovered that trust and reliability were important factors that determined the user use of robo-advisory systems. Singh and Kumar (2025) also analyzed the user attitudes toward the AI-driven robo-advisory services and found that the perceived usefulness and trust in the technology are two significant factors that contribute to increasing the user confidence in the automated financial recommendations. These results imply that confidence in online financial services is a significant factor in determining the confidence of investors in automated advisory services.

It has also been suggested by research that financial literacy is crucial in determining how users engage with digital financial technologies. Jamal et al. (2025) discovered that financial literacy does have a positive impact on the capacity of the investors to comprehend, as well as apply AI-based financial decision-making instruments. Similar findings were obtained by Arora et al. (2025), who found that financially literate people are more engaged in the use of digital financial services and are less confident about technological-based financial advisory systems. These results suggest that the element of financial literacy can make a significant impact on the emergence of investor trust in automated investment systems.

The impact of the robo-advisory systems on portfolio management behavior has also been studied empirically. Kulkarni et al. (2025) discovered that robo-advisors assist investors in minimizing their behavioral biases and implementing more systematic investment options. Hidayat-ur-Rehman et al. (2025) noted that digital robo-advisory effectively enhances decision-making by investors by offering them diversified portfolio suggestions due to algorithmic analysis. Chen et al. (2025) also discovered that trust and confidence with robo-advisory services will induce the user to entrust his or her portfolio management to the hands of the automated financial advice. Along the same line, Sadiq (2025) pointed out that the FinTech platforms have an important impact on investors risk-taking behaviour and investment strategies. Such results indicate that automatically generated recommendations can affect the portfolio diversification decisions of investors.

Figure 1. Conceptual Model



Source: Conceptual Model formulated after review of existing literature

Hypotheses

H1: Belief in robo-advisory service has a positive impact on investor confidence with automated investment consultations.

H2: Financial literacy has a positive impact on investor confidence in automated investment recommendations.

H3: Investor confidence on automated investment advice has a positive effect on portfolio diversification behavior.

H4: Distrust of robo-advisory services has a positive effect on portfolio diversification.

H5: Portfolio diversification behavior is positively related to financial literacy.

H6: The association between the trust in robo-advisory services and portfolio diversification behavior are mediated by investor confidence in automated investment recommendations.

H7: Financial literacy is mediated by the investor confidence to automated investment recommendations and the portfolio diversification behavior.

Methodology

The research design of this study incorporates the quantitative research design to test how trust influences the behavior of portfolio diversification and the impact of financial literacy with regard to trust, taking into account the mediating factor of investor confidence in automated investment advice. The study adheres to a positivist paradigm of research, which focuses on objective measurement and statistical examination of the associations of variables. The study data were gathered using a questionnaire survey that contained structured questions sent to those using FinTech and bank investment applications in Sindh, Pakistan. The target market comprised of people who are at least acquainted with digital financial platforms and those that have experience or interest in automated investment services. The utilization of the non-probability convenience sampling method was because of the availability of the respondents via the online platforms and user bases of financial technologies. One hundred and seventy-nine valid answers were obtained and utilized in the concluding data analysis.

The data obtained were evaluated with the help of statistical methods that are appropriate to investigate the relationships between several variables. To gain an insight into the demographic features of the respondents, descriptive statistics were initially involved. After that, inferential statistical methods were used to examine the hypotheses, as well as to test the associations among trust on robo-advisory services, financial literacy, investor confidence and portfolio diversification behavior. The proposed research also established the mediating effect of investor confidence in automated investment recommendations on the research model. The research was conducted in a way that upheld ethics in that respondents were given anonymity and were not coerced into participating in the research.

Measures: All variables in this research were assessed through pre-tested scales based on the already existing literature. The measurement of Trust in Robo-Advisory Services has been based on 5 items, which had been adapted based on Bashir et al. (2025) and Chen et al. (2025), and addressed the perceptions of reliability, transparency, and credibility of the robo-advisory platform among the users. Financial Literacy was measured through items which were modified by Jamal et al. (2025) and which covered the knowledge of respondents regarding investment concepts including risk management and diversification. The 4 items derived as a measure of Investor Confidence in Automated Investment Recommendations based on the level of trust the user of financial recommendations has in the recommendation algorithm used by the algorithm. Lastly, Portfolio Diversification Behavior was also measured with 5 items derived out of Kulkarni et al. (2025) on the tendency of the respondents to diversify their investments in various financial assets. A five-point Likert scale was used to measure all the items (between 1 (strongly disagree) and 5 (strongly agree)) to represent the attitude and perceptions of the respondents towards the constructs being investigated.

Data Analysis

Demographic Profile of the Respondents

Demographic features of the respondents give the overview of the sample and allow to contextualize the findings. The questionnaire was used to gather information on 179 FinTech and bank investment applications users in Sindh, Pakistan. They were questioned about their gender, age, education level, and investment experience as some of the key factors that can affect their interaction with the services of robo-advisors and their investment behavior. The knowledge of these characteristics helps to make sure that the sample also reflects different points of view among the users of digital financial services.

Table 1. Demographic Profile of the Respondents

Demographic Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	102	57.0
	Female	77	43.0
Age (years)	18–25	45	25.1
	26–35	78	43.6
	36–45	42	23.5
	46 and above	14	7.8
Education Level	Undergraduate	32	17.9
	Graduate	95	53.1
	Postgraduate	52	29.0
Investment Experience	Less than 1 year	21	11.7
	1–3 years	68	38.0
	4–6 years	52	29.0

	More than 6 years	38	21.2

The table shows that most of the respondents consisted of males (57%), and mostly aged between 26 and 35 (43.6), which is relatively young and tech-savvy. The majority of the respondents had graduate degrees (53.1%), implying that the sample is quite well-educated, which, in turn, might impact financial literacy and the perception of robo-advisory services. In relation to investment experience, most of the respondents said that they had between 113 years of experience (38%), and fewer respondents stated that they had either very short-term or very long-term experience. In general, the demographic data indicates that the sample comprise of comparatively youthful, knowledgeable, and moderately experienced investors who will likely use the FinTech platforms and have various perceptions about trust, financial literacy and portfolio diversification behavior.

Descriptive Statistics: Central Tendency and Dispersion

Descriptive statistics give an idea of the central tendency and the variability of the data obtained on all the variables under study. The measures of mean, standard deviation, minimum, and maximum values will contribute to comprehending how the respondents rated the survey on each construct and how the responses were distributed. This is important prior to inferential analysis like PLS-SEM because it makes sure that the data have a good degree of variation and distribution patterns of normality, which can be analyzed.

Table 2: Central Tendency and Dispersion of Study Variables

Variable	Mean	Standard Deviation (SD)	Minimum	Maximum
Trust in Robo-Advisory Services	4.12	0.68	2.00	5.00
Financial Literacy	3.95	0.72	2.00	5.00
Investor Confidence in Automated Recommendations	4.05	0.70	2.00	5.00
Portfolio Diversification Behavior	3.88	0.75	1.00	5.00

The descriptive statistics disclose that the respondents expressed moderate high ratings of trust in robo-advisory services (M = 4.12, SD = 0.68), which means that they have positive perceptions of the reliability and transparency of the platforms. The level of financial literacy (M = 3.95, SD = 0.72) was also rather good, which indicates that the respondents have a decent knowledge of financial literacy associated with investment and handling risk issues. The confidence of investors in automated recommendations was reported as 4.05 (SD = 0.70) which implies that the users usually trust this type of algorithm-based investment advice and have confidence in it. Behavior portrait of portfolio diversification was slightly lower in mean (M = 3.88, SD = 0.75), which implies that, although respondents engage in diversification recommendations, there is a variability in their regular application of the strategies in investment decisions. On the whole, measures of central tendency and dispersion reveal that the data gathered can be used in the further inferential statistics. The standard deviations are moderate indicating that the perceptions of the respondents are varied to an acceptable degree and therefore it is possible to formulate meaningful models regarding the relationship between trust, financial literacy, investor confidence and portfolio diversification behavior.

Reliability and Validity Analysis

To measure the structural relationship between the study variables, reliability and convergent validity of the measurement scale should be checked first. Reliability guarantees that the items are always able to measure the intended constructs whereas convergent validity is used to determine whether the items were able to capture the variance of the latent variable effectively. Cronbach alpha and Composite Reliability (CR) were applied in the current research to assess internal consistency, whereas the Average Variance Extracted (AVE) was applied to measure convergent validity. Based on the set of criteria, a Cronbachs Alpha and CR value over 0.70 denote satisfactory reliability and AVE over 0.50 denote satisfactory convergent validity (Hair et al., 2019).

Table 3: Reliability and Validity Analysis of Study Variables

Variable	Items (No.)	Cronbach's Alpha	Composite Reliability (CR)	Average Variance Extracted (AVE)
Trust in Robo-Advisory Services	5	0.876	0.907	0.631
Financial Literacy	4	0.849	0.890	0.602
Investor Confidence in Automated Recommendations	4	0.862	0.895	0.625
Portfolio Diversification Behavior	5	0.881	0.911	0.639

The reliability test indicates that all variables have high internal consistency with the of Cronbach Alpha between 0.849 and 0.881, which is higher than the suggested value of 0.70. All the constructs also have a composite reliability exceeding 0.80, which validates the test scales. Depending on the above variables, convergent validity is evidenced by values of over 0.50 on the AVEs, which shows that the items are valid measures of the underlying constructs. These findings verify that the measurement model is reliable and valid, and it is possible to test the structural relationships between trust, financial literacy, investor confidence, and portfolio diversification behavior using PLS-SEM.

Outer Loadings

Outer loadings are described as the associations between every observed indicator and its latent variable in PLS-SEM. Large outside loadings signify that an item is reliable in measuring the construct that it is supposed to measure. In accordance with Hair et al. (2019), a loading exceeding 0.70 can be accepted, whereas the items with the loadings of 0.40-0.70 might be preserved provided that the total construct reliability and validity are not unsatisfactory. Testing of outer loadings would guarantee that the measurement model is a good reflectance to the latent constructs.

Table 4: Outer Loadings of Study Variables

Variable	Item	Outer Loading
Trust in Robo-Advisory Services (IV1)	TR1	0.842
	TR2	0.876
	TR3	0.811
	TR4	0.825
	TR5	0.838

Financial Literacy (IV2)	FL1	0.799
	FL2	0.812
	FL3	0.787
	FL4	0.804
Investor Confidence in Automated Recommendations (Mediator)	IC1	0.831
	IC2	0.845
	IC3	0.822
	IC4	0.839
Portfolio Diversification Behavior (DV)	PD1	0.852
	PD2	0.867
	PD3	0.835
	PD4	0.841
	PD5	0.854

The outer loadings show that each of the measurement items loads highly on its respective construct and its values are above 0.78. It shows that every item is a good predictor of its latent variable, and the model of predictor (indicator) reliability in the measurement was proved. Nothing had to be removed, since all of them were within the suggested threshold, which validates the constructs of the study in the further structural analysis.

Discriminant Validity, R^2, and f^2 Effect Sizes

In order to determine the validity of constructs in the measurement model, the discriminant validity was tested with the help of Fornell-Larcker criterion which asserts that square root of the Average Variance Extracted (AVE) of the particular construct should be higher than the correlations of that construct with other constructs. Also, the R2 values can be used to determine the percentage variance that has been explained in the endogenous constructs, and the f2 effect sizes can be used to determine the effect of each exogenous variable on the endogenous variable. R2 of 0.25, 0.50 and 0.75 is weak, moderate and probably large effect and f2 of 0.02, 0.15 and 0.35 of the medium, small and large effects respectively (following Hair et al., 2019).

Table 5: Discriminant Validity (Fornell-Larcker), R^2, and f^2

Construct	TRUST	FIN_LIT	INV_CONF	PORT_DIV	R^2	f^2 (Impact on DV/Mediator)
Trust in Robo-Advisory Services (TRUST)	0.794				-	-
Financial Literacy (FIN_LIT)	0.381	0.776			-	0.062 → INV_CONF
Investor Confidence in Automated Recommendations (INV_CONF)	0.552	0.498	0.791		0.562	0.145 → PORT_DIV
Portfolio Diversification	0.461	0.432	0.623	0.799	0.616	0.152 → TRUST,

Behavior (PORT_DIV)						0.121 → FIN_LIT

The findings suggest that the discriminant validity is achieved, since the square root of AVE of the constructs (0.776-0.794) are higher than the correlations of the constructs with others. The R 2 of 0.562 of Investor Confidence and a R 2 of 0.616 of Portfolio Diversification Behavior indicate that a moderate to large percentage of the variance is explained by the model, which means that the model has a strong predictive power. The effect size analysis demonstrates that trust in the robo-advisory services and financial literacy only have a small-to-medium impact on investor confidence and portfolio diversification behavior parameters, which proves that the variables have a significant input on the model.

Path Coefficient Analysis

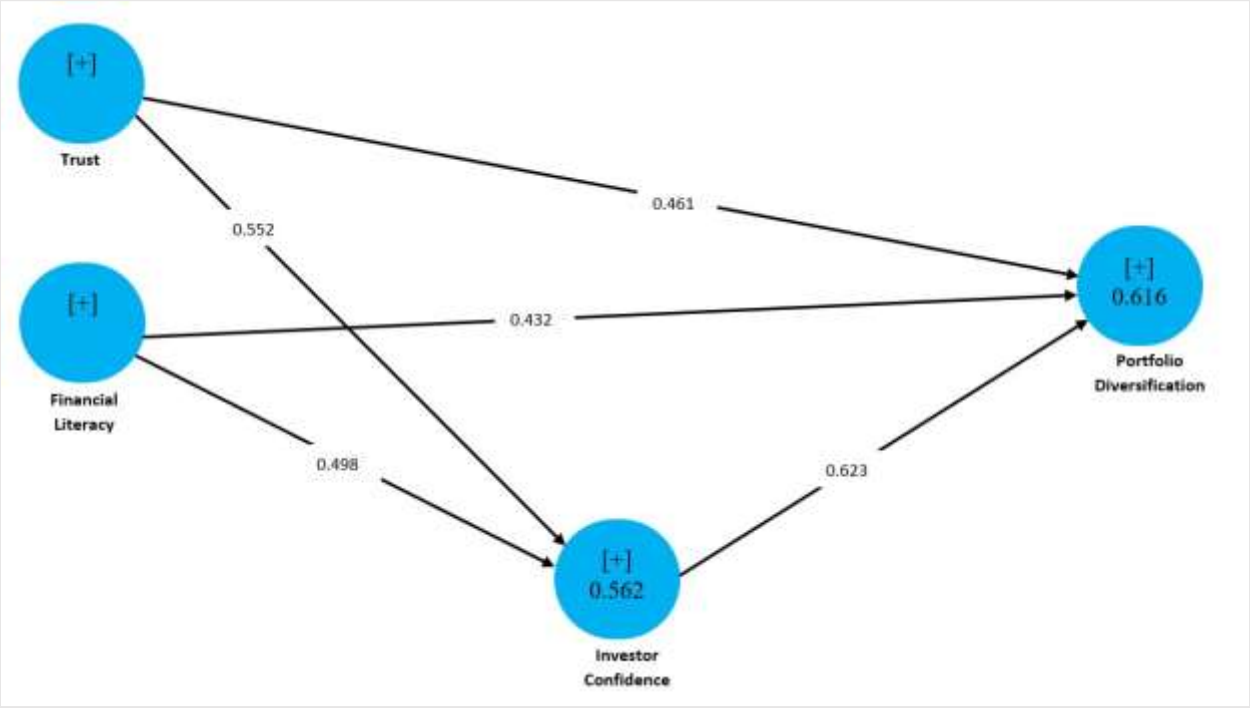
Path coefficient analysis PLS-SEM is utilized to analyse the strength and direction of relationship between the constructs of the structural model. It gives information about the statistically significant relationships between the proposed hypotheses. As per Hair et al. (2019), a path coefficient (β) greater than 0.10 is deemed to be meaningful, whereas t-values greater than 1.96 signify the importance of β at the 5% level. This discussion will serve to validate the direct and indirect roles of trust in robo-advisory services and financial literacy on portfolio diversification behavior and the mediating role of investor confidence in automated investment advice.

Table 6: Path Coefficient Analysis

Hypothesis	Path	β (Path Coefficient)	t-value	p-value
H1	Trust → Investor Confidence	0.552	7.12	0.000
H2	Financial Literacy → Investor Confidence	0.498	6.03	0.000
H3	Investor Confidence → Portfolio Diversification	0.623	9.15	0.000
H4	Trust → Portfolio Diversification	0.461	5.42	0.000
H5	Financial Literacy → Portfolio Diversification	0.432	4.87	0.000
H6	Trust → Investor Confidence → Portfolio Diversification	0.344 (Indirect)	6.21	0.000
H7	Financial Literacy → Investor Confidence → Portfolio Diversification	0.311 (Indirect)	5.62	0.000

The path coefficient analysis indicates that all the direct and indirect relationships as put forward in the study are significant at $p < 0.001$. The confidence in robo-advisory services positively influences investor confidence (β= 0.552) and has a direct impact on portfolio diversification behaviour (β= 0.461).

Figure 2. SEM Model of the Study



Financial literacy also has a great influence on investor confidence (β = 0.498) and portfolio diversification (β = 0.432). Confidence of the investor is a good mediator and there are indirect relationships between trust (β = 0.344) and financial literacy (β = 0.311) and portfolio diversification behavior. These findings substantiate that both independent variables and portfolio diversification behavior have partial relationship with each other mediating to investor confidence, which supports all the model hypothesized relationship.

Discussion

The results of this research suggest that Robo-advisory service trust is a crucial factor that affects the confidence of the investor in automated investment advice and portfolio diversification among the users of FinTech and bank app in Sindh. This corroborates other earlier studies which propose that trust is a major factor that would influence the adoption and successful utilization of digital financial advisory platforms (Bashir et al., 2025; Cao et al., 2026). The high path coefficient between trust and investor confidence (0.552) shows that users who find robo-advisory platforms as a reliable and transparent system have higher chances of trusting the system. Straight to the point, trust has a direct impact on portfolio diversification behavior, indicating that investors who have trust in these platforms are more ready to follow the recommendations of investment algorithm and apply diversified strategies, which proves the theoretical role of trust in behavioral finance (Chen et al., 2025; Kulkarni et al., 2025). On the same note, financial literacy was observed to have a significant influence on investor confidence (0.498) and behavioral portfolio diversification (0.432).

This goes hand in hand with the existing body of research highlighting the significance of financial literacy in the process of increasing the usefulness of digital investment tools (Jamal et al., 2025; Arora et al., 2025). More financially literate investors would be in a better position to interpret algorithm-based advice and make sound judgments concerning asset allocation. Further, the mediation analysis also indicated

that investor confidence in automated recommendations moderates the correlation between trust and financial literacy with portfolio diversification, which underscores that confidence is a crucial process, via which users will be able to convert trust and knowledge into actionable investment plans. Comprehensively, the findings highlight the need to establish credibility and enhance financial literacy among the digital investors so that effective portfolio diversification can be facilitated in new FinTech economies such as Sindh, Pakistan.

Recommendations

According to the results, the main focus of financial institutions and FinTech platforms should be to establish and sustain trust in the robo-advisory services by being transparent, secure, and reliable. Education programs on the elements of financial literacy should be introduced to the users and allow them to have a better comprehension of risk, diversification, and algorithmic suggestions. Moreover, the interface of robo-advisors must be designed in a way that helps users make informed and diversified decisions with respect to making an investment, build trust in the interface by offering a concise explanation of investment recommendations and risk profiles.

Implications

The theoretical and practical implications of this study are immense. Theoretically, it supports the importance of trust and financial literacy as major determinants of investor behavior in online financial settings, and the mediating position of investor confidence in converting knowledge and trust into course of action in terms of investment strategies. In practice, the results can be used by FinTech companies and banks in Sindh, Pakistan, to demonstrate that the establishment of trust and financial literacy can have a direct impact on portfolio diversification behavior and thus stimulate a more responsible and effective digital investment business approach.

Limitations and Future directions.

Irrespective of its contribution, this research has its limitation. The convenience sampling method was used to choose the sample that might not be representative of all FinTech users in Sindh and restrict the generalizability of findings. Also, the research was based on self-reported measures, and it could be biased. The future literature might consider broadening the study to the other provinces or nations, use longitudinal designs to capture behavioral change with time, and examine other mediating or moderating variables, like risk perception or technological self-efficacy, to further comprehend the dynamics of digital investment behavior.

Conclusion

The role played by trust in robo-advisory services and financial literacy on portfolio diversification behavior, with investor confidence in automated recommendations as a mediator, among the users of FinTech and bank apps in Sindh, Pakistan, were studied. The results proved that trust and financial literacy have a positive impact on the investor confidence, which consequently has a strong impact on portfolio diversification. The mediation analysis indicated that the investor confidence is shown to mediate the relationship between the independent variables and the portfolio diversification with a significant role of converting the knowledge and trust into effective behavior of investment.

All in all, the findings support the significance of the joint integration of technological stability and investor education in order to improve the positive digital investment results. Through the creation of trust and enhancing financial literacy, the ongoing financial institutions can contribute to making decisions more appropriate and minimizing biases in behaviors, as well as making the portfolio of investments of users more varied, which will result not only in the personal financial prosperity of individuals but also in the formation of the fintech market in the country of Pakistan.

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