

Clicks or Conversations: Do Investors Prefer FinTech Apps or Traditional Financial Advisory Services?

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Abstract

India's equity market has expanded rapidly, yet retail participation remains low by international standards. FinTech investment apps have lowered entry barriers through convenience, speed, and lower costs, but investors continue to route decisions through human advisors. This study compares investor preferences towards FinTech investment apps and traditional financial advisory services across fifteen service-related factors, including convenience, cost-effectiveness, speed, expertise, trustworthiness, personalization, customer support, security, transparency, and innovation, and classifies investors into distinct segments based on their perceptions of these factors. A quantitative design was adopted, drawing primary data from 303 users of Indian FinTech platforms such as Groww, Zerodha, Angel One, and Upstox, collected through a structured questionnaire between January and March 2025 using purposive and snowball sampling. Data were analysed in SPSS using paired-sample t-tests to compare preferences across the fifteen factors and K-means cluster analysis to identify investor segments, with one-way ANOVA used to test differences across the resulting clusters. The results reveal that FinTech apps are preferred for convenience, user-friendliness, speed, accessibility, and cost-effectiveness, whereas traditional advisory services retain clear advantages in expertise, trustworthiness, personalization, and customer support. Cluster analysis identified two segments, Conventional Investors and Tech-Savvy Investors, differing significantly in their evaluations. Notably, even Tech-Savvy Investors acknowledged the superior expertise of traditional advisors, indicating that digital and human advice function as complements rather than substitutes. The study offers a strong empirical basis for hybrid advisory models that combine digital efficiency with human expertise, and it underscores the need for structured financial-literacy and training programmes for the general public so that investors can engage confidently with both channels. Its findings inform FinTech firms, advisory practices, and regulators on segment-specific service design.

Keywords: *Stock Market, Fintech Investment, Investor, Groww, Financial Advisory*

Introduction

A stock market is often described as a barometer of an economy. When it grows, it does more than lift portfolio values: it capitalises companies that then hire, innovate, and expand; it generates revenue for governments through securities transaction taxes, stamp duties, and capital gains; and it converts household savings into productive investment. India's equity market has grown enormously on all

three counts. The BSE's market capitalisation crossed the ₹400 lakh crore mark for the first time in 2024, making India the fifth-largest equity market in the world by capitalisation (BSE, 2024; NSE, 2024). The number of registered investors on the NSE alone rose from about 4 crore in 2020 to over 10 crore by 2024 (NSE, 2024), and the number of demat accounts with CDSL and NSDL together crossed 14 crore during the same period (CDSL, 2024; NSDL, 2024). For the government, securities transaction tax collections have grown in step with turnover, and for companies, the market has become a far deeper source of equity capital than it was a decade ago (SEBI, 2024).

Yet this growth has not translated into broad-based participation. India is the world's most populous country, but its stock market participation remains strikingly low by international standards. In the United States, roughly 58% of households hold equity either directly or through retirement and mutual fund accounts (Federal Reserve, 2022, Survey of Consumer Finances). In the United Kingdom, around 33% of adults hold listed shares directly or through funds (FCA, 2023, Financial Lives Survey). India, by contrast, has a demat penetration of roughly 10–11% of the adult population, and the share of adults who hold equity directly is lower still (SEBI, 2024; CDSL, 2024). Even accounting for India's income level, its retail participation sits below what its market capitalisation would predict.

The reasons are well rehearsed: low financial literacy, an enduring preference for gold, real estate, and fixed deposits, and a cultural reliance on relationship-based advice. For decades, the primary entry point into equity for an Indian household was not a trading terminal but a person: a broker, a sub-broker, or a financial advisor who explained the market, recommended schemes, and held the investor's hand through volatility. That intermediary-led model is now being challenged. Self-paced, app-based investing has lowered entry barriers dramatically: accounts can be opened in minutes, trades executed for a fraction of traditional brokerage, and research, analytics, and automated advisory tools accessed that were once the preserve of wealth-management clients.

Yet the shift has not matched the scale of digital adoption. The gap between total demat accounts and active demat accounts remains large, and a substantial share of newly opened accounts see little or no trading activity (CDSL, 2024; NSDL, 2024). Millions of Indians have downloaded investment apps, but many still route their decisions through advisors, distributors, or informal networks. The question is therefore not whether Indians are moving online, but why they are not moving faster, and for whom the move actually happens.

This study takes up that question. It compares investor preferences towards FinTech investment apps and traditional financial advisory services across a set of service-related factors that capture everything from convenience, cost-effectiveness, and speed to expertise, trustworthiness, personalization, and customer support. It then goes beyond simple comparison by classifying investors into distinct segments based on their perceptions of selected service-related factors of FinTech investment apps and traditional financial advisory services. It offers evidence for FinTech firms, advisory practices, and regulators seeking to understand not just where investors are going, but why, and who they are leaving behind.

Literature Review

The financial landscape is undergoing a notable shift as investors increasingly weigh the “clicks” of FinTech platforms against the “conversations” of traditional advisory services. Existing research shows

that robo-advisors and digital investment platforms are valued for cost-effectiveness, accessibility, speed, and continuous service availability (Allen et al., 2020; Singh & Kaur, 2017; Waliszewski & Warchlewska, 2020). Digital systems also offer standardized, data-driven recommendations and can reduce barriers for investors who prefer convenient and technology-enabled financial management (Bhatia et al., 2021; Ramesh et al., 2023). However, traditional financial advisors continue to hold an important advantage in expertise, emotional reassurance, trust, and complex financial planning, particularly when investors face uncertainty or require individualized guidance (Zhang et al., 2021; Iannarone, 2018; Coffi & George, 2022). Thus, the literature presents digital advice and human advice not as complete substitutes, but as services whose strengths depend on the investor's needs and circumstances.

Previous studies have also attempted to explain why investors respond differently to these alternatives. Psychographic segmentation, latent-class analysis, and related person-centred approaches have identified groups distinguished by trust, financial capability, digital confidence, risk perceptions, and willingness to use automated advice (van Thiel & van Raaij, 2017; Bennetts & Ludwig, 2025; Ali et al., 2026). Younger and more technologically confident users generally show greater openness to digital investment technologies, whereas investors who prioritise human interaction and professional reassurance remain more cautious (Robillard, 2018; Roongruangsee & Patterson, 2023).

The present study advances this literature through its detailed comparison of fifteen service-related factors among 303 users of Indian platforms such as Groww and Zerodha. Its distinctive contribution lies in applying K-means clustering to the perceived difference between FinTech and traditional advisory services, thereby identifying "Conventional Investors" and "Tech-Savvy Investors." Importantly, it shows that even technology-oriented investors continue to recognise traditional advisors' superior expertise, offering a strong empirical basis for hybrid financial-advisory models.

Research Problem

Although FinTech applications have made investing more accessible and less expensive, they have not replaced financial advisors. Existing studies examine FinTech adoption, robo-advisor trust, or human-versus-digital advice separately, but rarely compare both services across dimensions (Zhang et al., 2021; Waliszewski & Warchlewska, 2020). Previous research rarely examines differences in investor evaluations of convenience, security, expertise, personalization, transparency, customer support, and innovation. In addition, few studies combine direct preference comparison with investor segmentation, while evidence from India's expanding retail investment market remains limited. Consequently, financial-service providers lack evidence about which investors prefer digital efficiency, which value human expertise, and where hybrid services are appropriate. The present study addresses these gaps by comparing FinTech apps with traditional advisory services across fifteen factors and classifying investors into meaningful segments using perceived service differences. It therefore provides a more integrated explanation of investor choice and service expectations within India's rapidly changing digital financial landscape.

Objectives of the Study

1. To compare investor preferences towards FinTech investment apps and traditional financial advisory services across selected service-related factors.
2. To classify investors into distinct segments based on their perceptions of selected service-related factors of FinTech investment apps and traditional financial advisory services.

Research Methodology

The present study adopts a quantitative research design to compare investor preferences towards FinTech investment applications and traditional financial advisory services. The study is based on primary data collected from 303 respondents who use FinTech investment applications such as Groww, Zerodha, Angel One, and Upstox. The data were collected using a structured questionnaire. Purposive sampling and snowball sampling techniques were employed to identify and reach eligible respondents. The survey was conducted from January 2025 to March 2025.

The collected data were analysed using the Statistical Package for the Social Sciences (SPSS). A paired-sample t-test was used to examine differences in investor preferences towards FinTech investment applications and traditional financial advisory services across selected service-related factors. K-means cluster analysis was employed to classify investors into distinct segments based on their perceptions of these factors. One-way Analysis of Variance (ANOVA) was subsequently used to examine differences across the identified investor clusters.

The study is guided by the following hypotheses:

H1: There is a significant difference in investor preferences towards FinTech investment apps and traditional financial advisory services across selected service-related factors.

H2: There is a significant difference between the identified investor clusters in their perceptions across selected service-related factors.

The following table shows the respondents profile chosen for the analysis ahead.

Table No. 1 Sample Distribution

Sr No.	Demographic Factor	Description	Frequency	Percentage (%)
1	Gender	Male	161	53.1
		Female	142	46.9
		Total	303	100
2	Marital Status	Married	85	28.1
		Unmarried	218	71.9
		Total	303	100
3	Age	Below 25 years	175	57.8
		25 years to 35 years	90	29.7
		35 years to 45 years	35	11.6
		45 years and above	3	1.0
		Total	303	100
4	Educational Qualification	SSC	13	4.3
		HSSC	22	7.3

		Graduation	151	49.8
		PG and higher	108	35.6
		Professional	9	3.0
		Total	303	100
5	Occupation	Student	131	43.2
		Government sector	26	8.6
		Sole proprietor	49	16.2
		Private sector	79	26.1
		Unemployed	15	5.0
		Housewife	3	1.0
		Total	303	100
6	Monthly Income	Non-Earner	129	42.6
		Less than 50000	86	28.4
		50000 to 1 lakh	61	20.1
		1 to 1.5 lakh	22	7.3
		1.5 to 2 lakh	2	0.7
		2 to 2.5 lakh	1	0.3
		2.5 to 3 lakh	1	0.3
		3 lakh to 3.5 lakh	1	0.3
		Total	303	100.0

Source: Primary Data

Out of the 303 selected retail investors, 53.1% are male and 46.9% are female, indicating a relatively balanced gender distribution. Additionally, 28.1% of the respondents are married, while 71.9% are unmarried. The demographic data further highlights that a significant portion of investors are young, with 57.8% below 25 years and 29.7% between 25-35 years. The senior investors, forming a smaller segment, may still rely on traditional financial advisors. Educational qualifications reinforce this trend, as 85.4% of respondents hold a graduate degree, highlighting a strong level of financial awareness. In terms of occupation, the largest segment comprises students (43.2%), followed by private sector employees (26.1%) and sole proprietors (16.2%).

Income levels also play a crucial role, with 42.6% of respondents being non-earners primarily students, who invest their pocket money, benefiting from financial awareness programs integrated into their educational institutions. SEBI and other regulatory bodies have also contributed to this trend by conducting financial literacy programs targeting young investors (SEBI, 2024).

Additionally, 28.4% of respondents earn below ₹50,000 per month. Higher-income investors, are fewer in numbers. Overall, the demographic trends indicate a strong preference for FinTech investment apps among younger, educated, and cost-conscious investors. The affordability, accessibility, and user-friendly nature of these platforms are key factors influencing their adoption. This data provides a foundational understanding of investor behaviour and sets the stage for further analysis.

Significance of the Study

This study is significant because it explains how investors evaluate FinTech investment applications and traditional financial advisory services within India's rapidly digitising retail-investment environment. Its contribution is threefold. First, it extends existing adoption research by comparing fifteen service-related factors within the same analytical framework. Second, it identifies investor segments from perceived differences between digital and human advice, offering a more behaviourally meaningful view than demographic description alone. Third, its findings can guide FinTech firms, advisory practices, regulators, and investors in designing hybrid services that combine convenience, security, innovation, and accessibility with professional expertise, trust, personalization, and human support more effectively.

Limitations of the Study

Purposive and snowball sampling was necessary to reach FinTech users, but it may limit generalisability beyond the surveyed Indian respondents. Moreover, the self-reported survey of the Investor captures perception at one point and cannot reflect changing preferences or investment behaviour. Additionally, the K-means clustering provides exploratory segments, although these groups should be validated through larger samples, longitudinal designs, and behavioural data in future research.

Discussion

This study addresses a critical gap in the literature by directly comparing investor perceptions of FinTech investment apps and traditional financial advisory services across fifteen service-related factors. Using paired sample t-tests and cluster analysis, this research identifies distinct investor segments and their underlying preferences, offering insights into how digital transformation is reshaping investor decision-making.

A comparative analysis of investor preferences with respect to choice between fintech investment apps and traditional financial advisories.

To examine the factors influencing Investor preference between FinTech investment apps and traditional financial advisory services, paired sample t-tests were conducted using below mentioned 15 factors.

Convenience: Convenience refers to how easily an investor can access and manage their investment activities. It includes the ability to perform financial tasks without unnecessary steps, delays, or physical presence. A convenient platform supports quicker decisions, reduces effort, and makes investing smoother and more manageable.

User-Friendliness: User-friendliness refers to how simple and intuitive the system or application is for investors to use. A user-friendly interface reduces confusion and helps individuals' complete tasks efficiently. It is especially important for investors with limited technical or financial knowledge.

Speed of Service: Speed of service measures how quickly investment-related transactions and activities are processed. This includes time taken for account updates, buying or selling assets, and receiving insights. A high-speed service allows investors to act promptly and benefit from market opportunities.

Accessibility: Accessibility refers to how easily investors can reach and use financial services at their convenience. This includes being able to invest, monitor, or modify portfolios regardless of location or time. Higher accessibility helps in maintaining control over investments consistently.

Cost-Effectiveness: Cost-effectiveness refers to the ability to access financial services at a reasonable or lower cost. It involves minimizing transaction fees, management charges, and other hidden expenses. A cost-effective system helps investors increase their net returns over time.

Personalization: Personalization refers to the customization of investment options and advice according to an individual's preferences, goals, and risk profile. This involves tailoring portfolio suggestions and financial strategies to match personal needs. Personalized services make investing more relevant and goal-oriented.

Transparency: Transparency refers to the clarity and openness with which information is shared with investors. It includes clear explanations of fees, transactions, and policies. A transparent system builds trust and allows investors to make informed decisions.

Trustworthiness: Trustworthiness is the degree to which an investor feels secure and confident in the reliability of the investment platform or service. It includes ethical handling of information and dependable performance. Trustworthiness encourages long-term engagement and reduces hesitation in investing.

Customer Support: Customer support refers to the help and assistance provided to investors for resolving queries or issues. This includes technical help, financial guidance, and general problem-solving. Good customer support improves user satisfaction and ensures smoother investing experiences.

Scalability: Scalability refers to the ability of an investment platform or service to support growth in investments over time. It allows investors to start with small amounts and gradually increase their portfolio. Scalable systems are flexible and accommodate changing financial goals.

Expertise: Expertise refers to the level of financial knowledge, strategy, and experience available to assist investors. This construct includes access to informed guidance for investment planning. Expertise ensures that decisions are backed by sound understanding of market conditions.

Flexibility: Flexibility refers to how easily an investor can make changes to their portfolio, strategies, or preferences. It involves the ability to adapt to market fluctuations and personal financial needs. Flexible systems help investors stay aligned with their evolving goals.

Innovation: Innovation refers to the use of advanced technology and modern tools to enhance investment services. This includes AI, machine learning, and other intelligent systems that improve performance and user experience. Innovation helps in delivering smarter and more efficient financial solutions.

Security: Security refers to the protection of investors personal and financial data from threats or unauthorized access. This involves use of encryption, authentication, and safe data practices. A secure environment assures investors that their information and money are well protected.

Range of Services: Range of services refers to the variety and diversity of investment-related features and tools offered to investors. This can include trading, analytics, financial planning, and portfolio management. A broader range enables users to fulfil multiple needs within a single system.

Above factors which are the parameters of comparison of the two investment platforms have been used and the test results using Paired Sample T test have been shown as under in Table No. 5.1.

Table No. 2: Factors Representing Investor Preference for FinTech Investment Apps and Traditional Financial Advisory Services

H1: There is a significant difference in investor preferences towards FinTech investment apps and traditional financial advisory services across selected service-related factors.							
Parameters		Mean	Std. dev	Difference		T	Sig.
				Mean	Std. dev		
Convenience	F	7.63	2.486	3.464	4.734	12.715	0.000
	T	4.16	2.886				
User-Friendliness	F	7.83	1.855	3.470	3.373	17.877	0.000
	T	4.36	2.470				
Speed of Service	F	8.05	1.822	4.187	2.944	24.631	0.000
	T	3.86	2.260				
Accessibility	F	7.86	1.926	4.046	3.099	22.688	0.000
	T	3.81	2.353				
Cost-Effectiveness	F	7.32	1.835	3.699	3.005	21.392	0.000
	T	3.62	2.312				
Personalization	F	7.51	1.745	3.467	3.041	19.746	0.000
	T	4.05	2.556				
Transparency	F	7.63	1.701	3.649	2.918	21.732	0.000
	T	3.98	2.434				
Trustworthiness	F	7.50	1.767	3.149	3.282	16.674	0.000
	T	4.35	2.686				
Customer Support	F	7.18	2.093	2.490	3.585	12.030	0.000
	T	4.69	2.838				
Scalability	F	7.65	1.879	3.606	3.212	19.507	0.000
	T	4.05	2.492				
Expertise	F	3.81	3.014	-4.373	4.422	-17.131	0.000
	T	8.19	2.205				
Flexibility	F	6.72	2.867	1.397	4.959	4.878	0.000
	T	5.32	2.980				
Innovation	F	7.91	1.676	3.887	3.049	22.157	0.000
	T	4.02	2.515				
Security	F	7.99	1.859	4.139	3.293	21.843	0.000

	T	3.85	2.745				
Range of Services	F	6.86	2.664	0.831	4.700	3.073	0.002
	T	6.03	3.163				

Source: Primary Data

***F – Fintech Investment Apps**

***T – Traditional Financial Advisory Services**

The comparative analysis between FinTech investment apps and traditional financial advisory services reveals a substantial shift in investor preferences towards digital platforms, particularly in aspects where efficiency, accessibility, and user experience are prioritized. Across multiple factors, the paired sample t-test results show statistically significant differences (Sig. = 0.000), validating that the variations in investor ratings are not incidental but rooted in actual user experiences and expectations. For example, FinTech apps score significantly higher in convenience, user-friendliness, speed of service, and accessibility. These factors are fundamental in today's fast-paced digital economy, where time efficiency and 24/7 access are increasingly valued. This aligns with reports by Deloitte (2023), which highlight that over 68% of young investors prefer platforms that allow real-time investment and mobile-based management over traditional advisory appointments that involve paperwork and delay.

The advantage of cost-effectiveness further underscores the appeal of FinTech apps. By eliminating intermediaries and reducing consultancy charges, these platforms allow investors especially small retail investors to minimize costs and potentially maximize returns. Similarly, transparency and scalability demonstrate that digital platforms offer transparent fee structures, access to reports, and flexibility to grow investments gradually. According to a PwC FinTech report (2022), transparency and low fees are among the top reasons why millennial and Gen Z investors choose robo-advisors over human consultants.

Interestingly, FinTech platforms also outperform traditional services in trustworthiness and customer support. This shift can be attributed to the rise of AI-driven tools, real-time chatbots, and data-driven recommendations, which are perceived as unbiased and efficient, based on which the investor makes investment decision. As reported by EY's Global Wealth Research (2022), more than 70% of tech-savvy investors feel confident in algorithm-based advice due to its consistency and lack of emotional bias, unlike human advisors who may be swayed by commissions or personal interests. The flexibility offered by FinTech apps (6.72 vs. 5.32) further adds to their appeal, as investors can modify portfolios and risk levels without rigid procedures or scheduled appointments.

Despite these advantages, traditional financial advisory services still hold a significant lead in expertise. The mean difference of -4.373 is the most notable among all factors, indicating a deep-rooted trust in human judgment when it comes to complex financial decisions, tax planning, or long-term investment strategy. While FinTech apps offer data-driven suggestions, they may not yet fully replace the nuanced insights and strategic foresight provided by expert advisors. This insight supports findings from the CFA Institute (2023), which found that 64% of high-net-worth individuals prefer to consult human advisors for complex or high-risk decisions.

Moreover, FinTech apps excel in security and innovation, areas that reflect modern digital advancements such as encryption, multi-factor authentication, blockchain technology, and predictive analytics. These tools not only safeguard investor data but also enable smarter and faster decision-making. The high ratings in these areas suggest growing investor confidence in the robustness of technological safeguards and the continuous evolution of app features. However, the range of services is one domain where both platforms are rated similarly. This indicates that while FinTech apps are expanding their offerings, traditional advisors still provide a more holistic approach in financial

planning, including insurance, estate planning, and retirement solutions, which may not yet be fully covered by most digital platforms.

Overall, the data clearly shows that investors overwhelmingly prefer FinTech investment apps for factors like speed, cost-efficiency, transparency, accessibility, and technological innovation. These platforms align well with the needs of digital-native investors who value autonomy, convenience, and instant decision-making tools. However, the enduring preference for traditional advisory services in the domain of expertise suggests that the human element remains crucial particularly for high-stakes, or emotionally driven financial decisions. Therefore, a hybrid model that integrates digital efficiency with human expertise may serve as the ideal solution, aligning with investor expectations in an increasingly digitized financial landscape.

Cluster Analysis of Investor Perception

The present study applies K-Means Cluster Analysis to identify distinct groups of investors based on their perceived differences between FinTech platforms and traditional financial advisory services. The difference values were calculated by subtracting each investor's score for conventional advisors from their score for FinTech platforms across 14 service-related factors such as convenience, accessibility, user-friendliness, and trustworthiness.

This method allows for a clear assessment of how much more or less investors value FinTech services compared to traditional methods. The resulting difference scores serve as a foundation to group similar respondents and understand patterns in investment preferences. Such segmentation is particularly useful in understanding digital adoption behaviour, which is a growing focus in financial service research (Gomber et al., 2017; Haddad & Hornuf, 2019). Clustering helps to develop targeted financial solutions by identifying the specific needs, expectations, and limitations of different investor categories.

Table No. 3: Final Cluster Centers

Factors	Conventional Investor (Cluster 1)	Tech-Savvy Investor (Cluster 2)
Convenience	0	7
User-Friendliness	1	6
Speed of Service	3	6
Accessibility	2	6
Cost-Effectiveness	2	6
Personalisation	2	5
Transparency	2	6
Trustworthiness	2	5
Customer Support	1	5
Scalability	2	6
Expertise	-5	-3
Flexibility	-1	5
Innovation	2	6
Security	2	7

Source: Primary Data

(These values are derived after computing the difference value = Fintech Ratings – Traditional Advisors ratings., further K-Means Cluster Analysis was Performed)

The cluster analysis produced two distinct investor segments: Cluster 1 ‘Conventional Investors’ and Cluster 2 ‘Tech-Savvy Investors’. These groupings reflect investor behaviour based on the magnitude of difference values. Cluster 2 shows higher positive values across most factors, suggesting a stronger preference for FinTech platforms, while Cluster 1 shows either low positive values or negative values, indicating preference or trust in traditional financial advisors.

Starting with Convenience, Tech-Savvy Investors report a high difference score of 7, whereas Conventional Investors report 0, indicating that the investor sees significant convenience advantages in using FinTech apps. Similar trends are observed in User-Friendliness, Speed of Service, and Accessibility, where FinTech platforms are clearly favoured by Tech-Savvy Investors. These findings align with previous research by Venkatesh et al. (2012), who emphasized that perceived ease of use and accessibility are strong predictors of technology acceptance.

With respect to Cost-Effectiveness, Tech-Savvy Investors rated FinTech as 6 points better than traditional advisors, while Conventional users rated it only 2 points higher, suggesting that although everyone recognizes the cost advantage of FinTech, tech-comfortable users benefit from it more efficiently. Personalisation, often believed to be stronger in traditional services, surprisingly scored higher for FinTech among both groups, with a score of 5 in Cluster 2 and 2 in Cluster 1. This indicates that customization of portfolio and financial strategies which match with personal needs makes investing more relevant and goal-oriented which are now appreciated more. Likewise, Transparency received high ratings in Cluster 2 (6), and moderate support in Cluster 1 (2), suggesting that app interfaces providing real-time updates and transparent reports.

When it comes to Trustworthiness, Tech-Savvy Investors again gave a favourable score of 5, while Conventional Investors remained cautious, with a lower score of 2, possibly reflecting hesitation in placing financial trust in digital systems. Customer Support followed a similar trend, with Cluster 2 rating it a 5 and Cluster 1 rating it a 1, indicating that tech users are more open to robo-advisor or AI-driven support systems, whereas traditional users still rely on face-to-face or voice support.

The factor of Scalability, representing the ability to handle a growing volume of investment needs, was rated 6 by Tech-Savvy users and 2 by Conventional Investors. This shows that Tech-Savvy users recognize the flexible, scalable nature of FinTech apps. Interestingly, Expertise yields a negative value in both clusters, with Conventional Investors showing -5 and Tech-Savvy Investors -3, indicating a perception that traditional advisors still hold an edge in professional competence. This supports the notion that while FinTech provides operational ease, many investors still value human expertise in complex decision-making (Baker & Dellaert, 2018). Flexibility, which includes adaptability to changing investment needs—received a score of 5 from Tech-Savvy users, but a surprising negative value (-1) from Conventional Investors, indicating a slight preference for traditional advisory services when it comes to flexibility. In contract Tech Savvy investor scored +5, showing a strong perception that fintech offers greater flexibility.

Innovation scored 6 in Cluster 2 and only 2 in Cluster 1, suggesting that while digital users appreciate constant updates, conventional users may find frequent changes confusing or unnecessary. Lastly, Security received a perfect 7 from Tech-Savvy Investors, indicating complete confidence in app-based protections, while Conventional Investors gave a modest 2, suggesting hesitation due to fear of data breaches or fraud.

These are typical characteristics associated with modern digital platforms, indicating that this segment is highly adaptive to technological improvements and innovations in financial services (PwC, 2017). In

contrast, the Conventional Investor group continues to display lower or neutral values across factors, suggesting a more conservative investment approach and possible digital resistance or lower tech exposure.

Table 4: ANOVA Results for Cluster Variable Differences

Factor	Mean Square (Between Clusters)	Mean Square (Within)	F Value	Significance
Convenience	3318.476	11.338	292.678	0.000
User-Friendliness	1590.765	6.093	261.090	0.000
Speed	794.988	6.222	127.770	0.000
Accessibility	1289.372	5.417	238.035	0.000
Cost-Effectiveness	1056.687	5.550	190.400	0.000
Personalisation	792.971	6.613	119.916	0.000
Transparency	1002.507	5.157	194.385	0.000
Trustworthiness	785.843	8.207	95.751	0.000
Customer Support	1090.060	9.088	119.949	0.000
Scalability	1344.095	5.927	226.758	0.000
Expertise	350.870	18.346	19.125	0.000
Flexibility	2666.910	15.086	176.780	0.000
Innovation	1034.243	5.812	177.953	0.000
Security	1853.780	4.715	393.183	0.000
H2: There is a significant difference between the identified investor clusters in their perceptions across selected service-related factors.				

Source: Primary Data

Note: all p value is significant at 1% significance level

To validate the statistical significance of the clustering solution derived through K-means analysis, an ANOVA (Analysis of Variance) test was performed on each of the 14 selected factors. These factors were identified based on the perceived differences between FinTech platforms and traditional advisory services, as captured through difference values. The results reveal that all 14 factors are statistically significant at the 1% level, with a p-value of 0.000 across all variables.

This confirms that the two investor segments Conventional Investors and Tech-Savvy Investors are meaningfully distinct in their perceptions and expectations, rather than being randomly formed groups. The clustering solution, therefore, holds empirical strength and real-world relevance.

Among the variables, Security emerged as the strongest discriminator with the highest F-value of 393.183, followed by Convenience (292.678) and User-Friendliness (261.090). These results align closely with FinTech adoption literature, which repeatedly emphasizes data privacy, ease of access, and intuitive platform design as decisive factors for technologically inclined investors (Chen et al., 2019; Lee & Shin, 2018). Investors who are more tech savvy tend to prioritize robust encryption, simplified interfaces, and 24/7 accessibility over traditional face-to-face consultations.

Other highly significant discriminators include Accessibility ($F = 238.035$), Scalability ($F = 226.758$), Transparency ($F = 194.385$), and Cost-Effectiveness ($F = 190.400$). These factors reflect core FinTech value propositions such as real-time data access, expansion of services, clear and upfront transparency, and minimal hidden fees, all of which are particularly attractive to Tech-Savvy investors (Gomber et al., 2017). Transparency and accessibility, in particular, are considered fundamental pillars of digital trust and user empowerment in the FinTech ecosystem (Puschmann, 2017).

The factors of Flexibility ($F = 176.780$), Innovation ($F = 177.953$), and Customer Support ($F = 119.949$) also show significant variation between the clusters. Tech-Savvy Investors placed far greater emphasis on these attributes, likely due to their preference for platforms that offer customizable features, AI-driven tools, and multi-mode customer service.

This matches trends in current FinTech studies which suggest that digital natives expect continuous innovation and support, particularly when making critical investment decisions (Zavolokina et al., 2016).

Even less prominent factors like Personalisation ($F = 119.916$) and Trustworthiness ($F = 95.751$) still demonstrate meaningful differences between clusters. While both groups value these elements, Conventional Investors tend to lean more heavily on human-centric advisory models, where personal rapport and trust are built over time.

These results resonate with findings from Arner et al. (2016), who argue that while FinTech excels in speed and automation, traditional investors often remain emotionally anchored to trust-based personal interactions.

The variable Expertise, although having a lower F-value of 19.125 still found as statistically significant. Interestingly, this factor showed negative mean scores in both clusters, more so in the Conventional group. A negative value here reflects the perception that FinTech lacks the deep domain knowledge or personalised advisory insight associated with traditional financial advisors.

Conventional Investors, in particular, appear to believe that FinTech platforms are not yet substitutes for human expertise because under the traditional advisory system the expert does trading on behalf of the investor. This supports literature noting a trust deficit in robo-advisory services, especially among risk-averse or older investor cohorts (Sironi, 2016).

Lastly, Speed of Service ($F = 127.770$) also stands out as an influential factor. Tech-Savvy Investors significantly preferred platforms that deliver instantaneous transactions, real-time updates, and automated processing. Speed is one of the most cited drivers of FinTech adoption, as highlighted in studies by Varga (2017), which underscore the impatience of digital-era investors who demand high-efficiency solutions with minimal processing delays.

In summary, the ANOVA results clearly demonstrate that each of the 14 factors significantly contributes to differentiating the two investor segments. Factors such as Security, Convenience, User-Friendliness, and Innovation dominate in defining Tech-Savvy Investors, while Trustworthiness, Expertise, and Customer Support continue to hold value for Conventional Investors.

These insights offer a robust theoretical and empirical foundation for understanding how traditional investor behaviour is evolving in response to technological advancements in financial services.

The cluster analysis successfully distinguishes between Tech-Savvy Investors, who strongly Favor FinTech platforms for their speed, convenience, and security, and Conventional Investors, who remain cautious and continue to trust in traditional financial advisory services.

These findings carry valuable implications for financial service providers. For instance, firms targeting Tech-Savvy Investors should focus on enhancing digital interface, security features, and innovative

service options. Meanwhile, those catering to Conventional Investors must continue building trust through personalized support and expert guidance.

Understanding these behavioural differences is crucial in today's evolving financial landscape where digital disruption and financial democratization are reshaping how individuals interact with financial products.

As digital transformation accelerates, segmentation analysis like this becomes an essential tool for product development, marketing, and customer engagement strategies (World Economic Forum, 2020).

Conclusion

The study reveals that investors generally prefer FinTech investment apps over traditional financial advisory services across most of the selected service-related factors. The paired-sample t-test indicates significant differences across all 15 factors, with FinTech apps receiving higher ratings for convenience, speed, accessibility, cost-effectiveness, security, and innovation. However, traditional financial advisory services received a higher rating for expertise, highlighting the continued importance of professional guidance in investment decisions.

The cluster analysis identified two investor segments: Conventional Investors and Tech-Savvy Investors. While Tech-Savvy Investors showed a stronger preference for FinTech apps across most factors, Conventional Investors demonstrated a comparatively lower preference for digital platforms. Both groups, however, favoured traditional advisory services in terms of expertise. The ANOVA results showed significant differences between the two clusters across all 14 factors used in the cluster analysis, with security, convenience, and user-friendliness emerging as key differentiating factors.

Overall, the findings suggest that FinTech apps offer advantages in convenience and technological efficiency, whereas traditional advisors retain an advantage in professional expertise. A combination of digital investment facilities and expert financial guidance may therefore help meet the diverse needs of investors. Therefore, the FinTech developers should build trust and personalised guidance into their platforms rather than competing on convenience alone, policymakers, regulators, and the government should promote hybrid advisory models that pair digital efficiency with human expertise and fund structured financial-literacy and training programmes for the general public, so that investors can use both channels with confidence.

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