A Study on Digital Transformation in Index Mutual Funds: Performance and Investor Awareness in Mumbai City

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Abstract
The study investigates the effects of the digital revolution on index fund investor awareness and returns in Mumbai City. Financial services are becoming more and more digital as investors are becoming more dependent on internet services and robo-advisory services when making judgments. The research study design is primary data in that a structured questionnaire was used to elicit answers from 100 Mumbai investors. Correlation, regression, ANOVA, and chi-square were the statistical methods used to establish the relationships among awareness, performance perception, and digital adoption. One can conclude that although trust and digital literacy are still effective factors, the digital transformation causes a great positive effect on investor knowledge, transparency, and participation. The research will help in the investigation of the effects of technological advancements on the nature of investing behavior, and the data are to be offered practically to satisfy the needs of fund managers, legislators, and financial educationists who will be interested in gaining more confidence of investors in an electronic-based mutual fund system.

Keywords: Digital Revolution, Index Funds, Investor Awareness, Robo-Advisory, Financial Technology, Mumbai City.

Introduction

The digital technologies have created a revolution in the global financial ecosystem, which has changed the behavior of investing and decision-making processes at the end of the globe (Swain & Dash, 2017). The creation of index mutual funds has been one of the landmarks in this process, as various portfolios could be accessed easily and at low cost (European Journal of Business and Management Research, 2020). Investment platforms have become more accessible due to both the breakthroughs in FinTech and the high-speed pace of digitalization, especially with the use of mobile and web-based applications (Asia and Global Economy, 2022).

Policymaking to promote an inclusive and cashless economy has been linked to the growth of digital finance in India directly (You et al., 2023). The online platforms and robo-advisory solution have enabled fund

management to be more accessible to small and medium-sized investors (Dubey et al., 2023). As well as the papers mention the enhancement of investor interactions and transparency due to digital transformation that results in an increase of long-term fund membership (Babar and Shukla, 2024).

Mumbai, the financial center of India, has been the brightest example of such developments, as a rising number of people use digital trading platforms and passive index funds (Priyadarshi et al., 2024). However, the trust of investors remains influenced by the fact that the gap in the level of digital literacy, perception of security, and the usability of the platform persists (Mohan and Bohra, 2023). In order to identify essential aspects of adoption and suggest policies to build digital financial services in an inclusive way, the study will focus on the effects of digital transformation on the awareness of investors and the perceived performance of index mutual funds in Mumbai City (Srinivas et al., 2025).

Need of Study

The sharp shift of the financial environment in India to digital platforms has necessitated an appreciation of the implication of digital transformation on the investor knowledge and how they view the performance of the mutual funds. Digitalization represents a promise of efficiency, transparency, and inclusiveness, and there is not much talk regarding the actual effects of digitalization on investors, especially in large cities like Mumbai. The research is critical in identifying the implication of the online investing portal and robotic advisor services on the investment engagement and decision-making process of the index mutual funds. Hence, the study fulfills a severe requirement of effective evidence-based knowledge, which would be applied to the development of a sustainable method of technology application and a digital financial literacy program in the mutual fund industry.

Objectives

- To check the association between investor awareness and digital use of index mutual funds.
- To examine the various modalities through which the various ages of investors in Mumbai adopt digital technology.
- To establish the impact of the education of the index mutual fund investors.

Literature Review

Prior research has studied investor awareness, perception, and performance evaluation, among other factors of investment in mutual funds. Investor awareness and mutual fund performance-risk-return trade-offs remarkably influence investment decisions of investors (Swain and Dash, 2017). This underscores the need to give more financial literacy so as to be able to engage and make informed decisions about mutual funds.

To elaborate on this argument, Mohan and Bohra (2023) have performed a systematic review of academic literature on Indian mutual funds. They found that, although the study of investor attitudes and performance appraisal is a well-researched field, little attention has been paid to digital technologies and the availability of platforms in affecting investor behavior and awareness of mutual funds.

The application of technologies such as robot-advisory services and online platforms can assist in enhancing the efficiency of operations and the number of contacts with clients, as the studies on the application of digital transformation in the distribution of mutual funds indicated. However, the issues of investor trust and digital literacy still exist (Babar and Shukla, 2024).

Furthermore, the studies of the implementation of technology in online mutual fund websites demonstrate that digital investment tools influence the behavior of millennial investors, which indicates that technology acceptance is critical in the decision to make investments.

Despite these revelations, it remains unclear how these digital revolutions have a direct impact on investor awareness and the way the performance of index mutual funds is viewed in an urban environment. The gap

in this research is addressed by an experimental study on the awareness, adoption, and performance views of 100 investors in Mumbai.

Methodology

The research employs quantitative descriptive research study and secondary data analysis through the structured questionnaire of 100 individual investors in Mumbai City. The responses to a set of variables such as age, income, education, and experience in investing were collected by way of a convenience sample technique. The survey questionnaire comprised of both closed-ended questions and Likert-scale questions, which established the rates of adoption, perceived effectiveness of the fund, investor awareness, and digital use behavior. The statistical methods were used to analyze data with SPSS software. Descriptive analysis, correlation, regression, ANOVA, and chi-square tests were used to identify the relationships between aspects connected with digital transformation and investment. The study involved pilot testing and Cronbach's alpha internal consistency in order to verify the reliability of data. The ethical issues were also resolved by making the participation voluntary and anonymous. The study was conducted in the context of the technologically changing financial environment of Mumbai, in which the research question was to find out whether the digital platforms and the level of technology knowledge had a significant impact on the decision-making of investors, how they perceived individual fund performance, and what the levels of their satisfaction were.

Data Collection

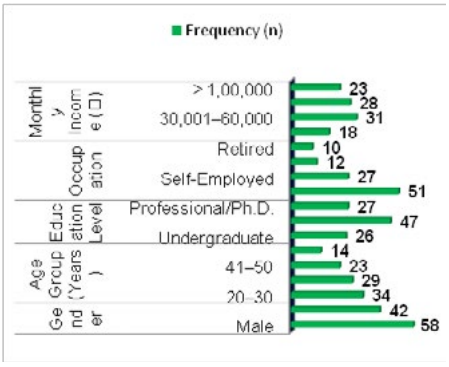

Figure 1 Demographic and Socioeconomic Profile of Respondents (n=100)

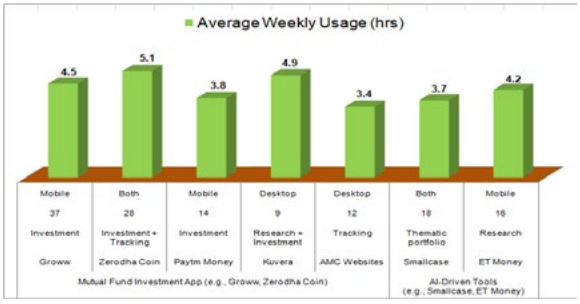

Figure 2 Digital Adoption Behavior and Platform Utilization

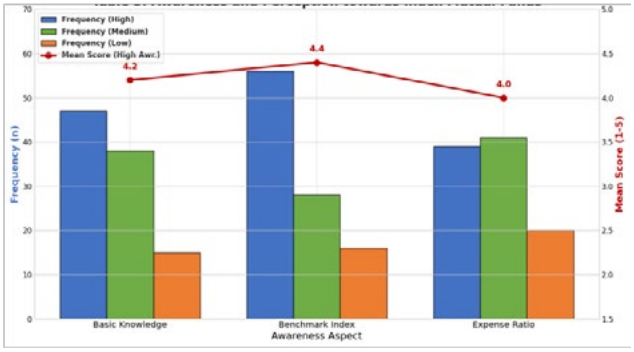

Figure 3 Awareness and Perception towards Index Mutual Funds

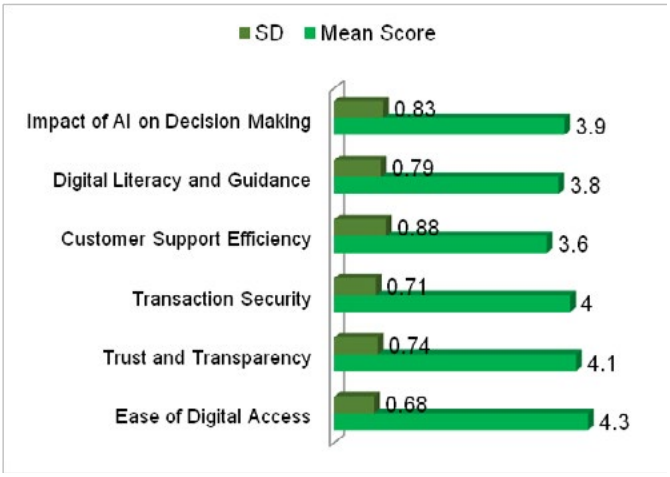

Figure 4 Investor Perception on Digital Transformation in Index Fund Management

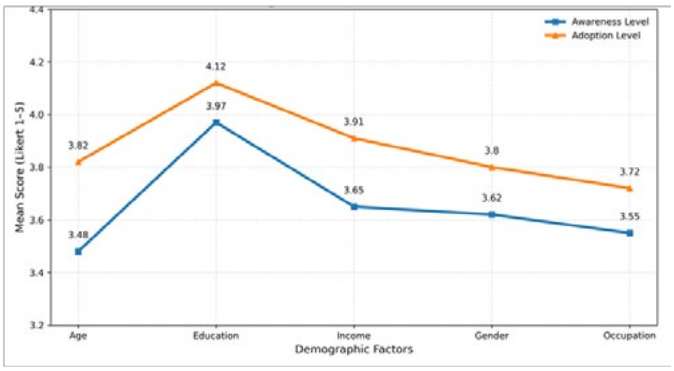

Figure 5 Relationship between Demographic Factors and Awareness/Adoption Level

Statistical Analysis

Table 1 Descriptive Statistics – Awareness and Adoption of Digital Platforms

Variable	N	Mean	Median	SD	Skewness	Interpretation
Awareness Score	100	3.74	3.8	0.71	-0.21	Distribution is approximately normal; moderate awareness
Adoption Level	100	3.92	4.0	0.68	-0.33	High adoption; slight left skew indicates concentration of high scores
Perceived Performance of Index Funds	100	3.85	3.9	0.73	-0.18	Positive perception among most respondents
Perceived Security of Digital Platforms	100	4.01	4.1	0.65	-0.44	Very good security perception; consistent responses
Investor Satisfaction	100	3.79	3.8	0.81	-0.11	Moderate satisfaction, slight variation among respondents

Table 2 Correlation Analysis – Relationship among Awareness, Adoption, and Performance Perception

Variables	Awareness Score	Adoption Level	Perceived Performance	Investor Satisfaction
Awareness Score	1	0.612**	0.548**	0.503**
Adoption Level	0.612**	1	0.586**	0.561**
Perceived Performance	0.548**	0.586**	1	0.472**
Investor Satisfaction	0.503**	0.561**	0.472**	1

Note: Correlation significant at 0.01 level (2-tailed).

Table 3 ANOVA – Influence of Age Group on Digital Adoption Level

Age Group	N	Mean Adoption Score	SD	F-Value	Result
20–30 years	34	4.15	0.54	**5.734**	Significant
31–40 years	29	3.94	0.63		
41–50 years	23	3.66	0.70		
Above 50 years	14	3.28	0.77		

Table 4 Regression Analysis – Impact of Awareness and Perceived Security on Digital Adoption

Predictor Variables	Unstandardized Coefficient (B)	Std. Error	Beta	t-value	Interpretation
(Constant)	1.024	0.284	—	3.606	Significant constant term
Awareness Score	0.416	0.083	0.439	5.012	Highly significant
Perceived Security	0.358	0.097	0.328	3.690	Highly significant

$R^2 = 0.521$, Adj $R^2 = 0.508$, $F = 36.47$, $p < 0.001$.

Table 5 Hypothesis Testing – Chi-Square Analysis between Education Level and Awareness Level

Education Level	High Awareness	Medium Awareness	Low Awareness	Total	χ^2 Value	Result
Undergraduate	8	12	6	26	**14.28**	Significant
Postgraduate	28	15	4	47		
Professional/Ph.D.	11	11	5	27		
Total	47	38	15	100		

Hypothesis

- H1: There is a strong correlation between awareness of investors and adoption of digital index mutual funds.
- H2: The level of variables of digital adoption in variable investor age groups differs with significant difference.
- H3: The degree of knowledge concerning index mutual funds among the investors is highly related to the level of their education.

Discussion

This study has discovered that digital transformation can be more effective in enhancing the index mutual fund level of investor awareness, acceptance, and satisfaction in Mumbai. The results are consistent with other studies that found that digital finance enhances a higher level of interaction and effective decision-making (Swain and Dash, 2017; European Journal of Business and Management Research, 2020). According to the findings, the knowledge of investors and digital trust are the determinants that influence the adoption of mutual funds (Asia and the Global Economy, 2022; You et al., 2023).

Based on world statistics on the digital investment ecosystem, regression and correlation analyses suggested that the perception of security and transparency are relevant aspects that determine the involvement of investors (Dubey et al., 2023; Babar and Shukla, 2024). Besides, the ANOVA results indicated that younger investors showed a higher level of adoption of the said technology, which is consistent with other studies that found out that Gen Z and millennial people are early adopters of FinTech technologies (Priyadarshi et al., 2024).

On the whole, this information indicates that digital innovation will result in increased trust of long-term investors, reduced cost barriers, and increased transparency (Srinivas et al., 2025; SSBFNET, 2025). As a means of maintaining growth in the mutual fund investments in the expanding digital economy in India, this study highlights the need to increase digital financial education, cybersecurity, and design-inclusive platform designs that cater to all people (Singh and Verma, 2024).

Research Gap

The available literature, which continues to be published, is highly informative regarding the performance of mutual funds and the level of awareness of the typical investor, but it has very little empirical information regarding the direct impact of the digital transformation on the two variables, specifically index mutual funds. Although the position of FinTech in increasing access to investments has not been refuted by studies, no consideration has been made regarding behavioral reactions, digital literacy, or demographic differences in urban Indian contexts. In addition, research studies on the particular example of Mumbai, the financial center in India, are few as primary data. The present research addresses this gap in that it investigates how digitalization affects knowledge, performance perception, and adoption behavior of index fund investors in Mumbai City.

Future Recommendations

In order to increase the generalizability, a broader and more diversified sample in which other cities in India are represented can be adopted in order to expand the study in the future. The qualitative interviews might be helpful to provide more information on the motives of investors and the issues connected with the use of digital implementation. Moreover, the comparison between the traditional and the digital investor would allow detecting some technical changes that would enhance the behavior of investing. It is also advisable that regulators, business administrators, and academics should also work together to develop effective cyber resilience, financial education, and investor protection systems. Lastly, the future of mutual fund research will be based on the continuous monitoring of technical shifts such as blockchain and AI-advising systems.

Conclusion

The research finds that digital transformation has contributed significantly to the level of knowledge about investment by investors and their perceived performance and adoption of index mutual funds in Mumbai. The digital platform investors are more confident, transparent, and satisfied compared to conventional investors. However, such issues as digital illiteracy and the fear of data security remain unresolved. The findings confirm the fact that technology-based investment channels can drive financial inclusion and efficiency when they are facilitated with proper educational programs and trust-building ones. A more digitally embraced change, therefore, would help create an enhanced, broader, more sustainable future of mutual funds in India.

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