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Determinants of Mutual Fund Adoption in Tier-2 and Tier-3 Cities of India: A Study Using Chi-Square and Cronbach Alpha Analysis.

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Abstract: The Indian mutual fund industry has witnessed a remarkable expansion over past decade due to increasing financial awareness, rising disposable income, technological advancements and the rapid growth of digital financial platforms. Despite this growth, mutual fund penetration in non-metro cities remains comparatively low than metro cities. This study examines the determinants influencing mutual fund penetration in smaller Indian cities from a FinTech-led financial inclusion perspective. The study evaluates the impact of financial literacy, investor trust, behavioural factors, and digital adoption on mutual fund investment participation. A Quantitative research methodology was adopted using structured questionnaires distributed among 130 respondents from tier 2, Tier 3 and Tier 4 cities. Statistical tools such as frequency analysis, Chi-Square test, and Cronbach Alpha reliability analysis were used for empirical evaluation. The findings reveal that city type significantly influences mutual fund participation and that the questionnaire demonstrates excellent internal consistency with a Cronbach Alpha value of 0.937. This study contributes to the growing literature on financial inclusion and digital investment behaviour while providing insights for policymakers, asset management companies and Fintech platforms.

Keywords: Mutual Funds, Fintech, Financial Inclusion, Financial Literacy, Investment Behaviour, Tier 2 Cities, Tier 3 Cities, SIP, Digital Finance.

1. Introduction

India's financial sector has undergone substantial change over the last decade due to technological advancements, increasing digitalization and the expansion of financial services across semi-urban and rural regions. The mutual fund industry has emerged as one of the fastest -growing segments of the Indian financial market, supported by rising investor awareness, Systematic investment plans (SIPs), mobile investment platforms and regulatory reforms

Although the Indian mutual fund industry has achieved significant growth in assets under management (AUM), the majority of investment continue to originate from metropolitan and Tier-I cities. Tier 2 and Tier 3 cities still face several barriers such as low financial literacy, lack of awareness, dependence on traditional saving instruments, inadequate financial advisory services and limited confidence in market-linked products.

The emergence of digital investment platforms and FinTech companies has started transforming the investment ecosystem by making mutual fund investments more accessible, affordable, and user-friendly. Platforms such as Grow, PhonePe, Angel One, and Paytm Money have contributed significantly to increasing SIP registrations and encouraging retail participation. FinTech integration has enhanced convenience through online KYC, mobile investment applications, real-time portfolio tracking, and simplified onboarding processes.

This research paper examines the determinants of mutual fund penetration in Tier-2 and Tier -3 Cities in India with special focus on financial literacy investor trust, behavioural finance and Fintech-Led inclusion.

2. Review of Literature:

1) Mangawa, pooja (1991)-Performance and evaluation of mutual funds in India: Comparative Study of Close -End and Open-End Mutual Fund Schemes. A study conducted by Pooja Mangawa at the university of Rajasthan examined the performance of the close-ended and Open -Ended Mutual fund schemes in India. This research compared returns, risk, liquidity and fund management efficiency across different schemes. It also emphasized the importance of diversification and also professional management for improving investor returns. The study found that Open-end schemes provided better liquidity while close-end schemes offered stability in fund operations. However, it mainly focused on financial performance and did not address investor behavious, financial literacy, digital investment platforms or mutual fund adoption in Non-Metro cities. Further, research is therefore necessary to explore different factors influencing the mutual fund adoption and investor perception in these emerging regions.

2) Sampath Kumar, K (2008)- A Study on the preferences of Mutual Fund investors and investment performance of selected Mutual Fund Schemes. The investigator in this study examined

the investors preferences and also investment performance of selected mutual fund schemes, The research analysed factors that influence investors decisions, including risk, return, safety, liquidity and professional fund management. It also evaluated the performance of the selected schemes using financial indicators and comparative analysis. The findings revealed that investors preferred schemes with stable returns and lower risk. However, this study mainly focused on traditional investment behaviour and performance evaluation, without considering digital investment platforms, fintech influences or mutual fund adoption in Non-Metro cities.

3) Kumar, Sushil (2017) In his research named Marketing of mutual fund schemes: A Study with special reference to retail investors at Devi Lal University examined various marketing strategies of mutual fund schemes with main focus on retail investors. The research analyzed investor awareness, promotional strategies, risk perception and factors influencing retail investors decisions.it also highlighted the significance of advertising, financial advisors and investor education in boosting mutual fund participation. The finding indicated that effective marketing and awareness programs positively influence retail investors behaviour. However, the study mainly addressed traditional marketing aspects and retail investors without deeply analyzing digital investment behaviour or adoption patterns in Non-Metro cities.

4) Rathore, Shubh Kamna (2016)-A n analytical approach to mutual funds in India, A Study conducted at Punjab Technical University analyzed the performance and growth of mutual funds in India using and analytical approach, The research evaluated mutual funds in India using an analytical approach. The research evaluated mutual fund schemes based on risk, return, diversification, liquidity and investment objectives. It discussed how mutual funds help channel household savings into capital markets and the importance of professional fund management for improving investment performance. The study also highlighted the growth of the Indian mutual fund industry and the need for investment awareness among retail investors. various analytical tools and financial parameters were used to compare mutual fund performance and assess investor benefits. The findings showed that mutual funds offer diversified investment opportunities and help investors achieve better financial returns while managing risk.

5) Rao, Maddala Papa (2015) -A study on Investment Behaviour and Attitude of Women investors on shares and Mutual Funds in India.

A Study by Maddala papa Rao at Acharya Nagarjuna University explored the investment behaviour and attitudes of women investors towards shares and mutual funds in India, The research examined investment preferences, risk perception, savings habits and decisions making behaviour. It anal zed factor like income level, financial awareness, safety, return expectations and investment goals influencing women's participation in financial markets. The findings highlighted that women generally preferred safer investment options and showed a growing interest in mutual funds due to professional management and reduced risk. The study also stressed the importance of financial literacy and awareness for improving women's investment participation.

6) Roy, Subrata (2013)-Performance Appraisal of mutual funds in India: An Empirical study conducted by Subrata Roy at the University of Burdwan examined the performance appraisal of mutual funds in India through empirical analysis. The research evaluated mutual fund schemes using parameters like risk, return, diversification, portfolio management and market performance. Various statistical and financial tools assessed the efficiency and consistency of mutual fund schemes in generating returns. The findings indicated that professionally managed mutual funds provide diversified investment opportunities and help investors mitigate the market risk also. The study analyzed the growth and development of the Indian mutual fund industry and the effectiveness of fund management strategies in meeting investment goals. Findings also showed that the mutual funds have become a key financial instrument for retail investors seeking long term wealth creation and portfolio diversification.

7) Agarwal, Ashima (2016) A study named Insights into Mutual Fund Industry: Performance and Evaluation Strategies conducted at Aligarh Muslim University examined the performance and evaluation strategies within the Indian mutual fund industry. The research focused on analyzing the growth, structure and performance of mutual fund schemes through various financial and statistical measures. It evaluated Risk-Return relationships, portfolio diversification and fund management efficiency among selected mutual funds. The findings highlighted the importance of professional management, transparency and strategic investment planning for improving mutual fund performance. The study discussed the role of mutual funds in attracting retail investors and fostering an investment culture in India.

08) Gomathy and Shitole (2009) studied the performance of history of mutual fund industry from 2002 to 2007, focusing on Franklin Templeton, HDFC and ICICI Prudential mutual funds. They examined the growth, risk, return and comparative performance of selected mutual fund schemes in India. Using various indicators of financial performance and risk adjusted evaluation techniques, they found that private sector mutual funds showed significant growth and competitive returns during this period. The study also noted the rising preference

among investors for professionally managed mutual funds and stressed the importance of portfolio diversification and fund management strategies for improving investment performance.

09) K. Uday Gowri Shankar and M. Sreenivasa Reddy conducted a comparative study on the growth of selected mutual fund companies in India. They analyzed the performance, growth, trends and return patterns of various growth-oriented mutual fund schemes. They evaluated how effective mutual fund investment strategies were and also assessed fund manager's abilities to generate returns for investors under different market conditions. Their research compared mutual fund companies based on portfolio management efficiency, risk, diversification and consistency in returns over time. The study also looked at the role of growth funds in long term wealth creation and investment planning for individuals. Moreover, it highlighted how professional fund management practices, also strategic asset allocation and how market performance strengthens the Indian mutual fund industry. The findings also showed the well managed growth funds could deliver stable returns and attract investors seeking long term capital appreciation.

10) R. Manimurugan and Dr. P. Chellasamy studied investors perceptions and attitudes towards mutual fund investments in Namakkal District. They examined the awareness level, investment preference, risk perception and satisfaction of investors regarding mutual fund schemes. The study analyzed factors influencing investors decisions such as return expectations safety, liquidity, tax benefits and professional fund management. It also explored how demographic variables like age, income, occupation and education impact investment behaviour and attitude towards mutual funds. The findings revealed that investors prefer mutual funds as a relatively safe and professionally managed investment option that offers diversification and long term financial benefits. The study emphasized the importance of investor education and awareness in encouraging the participation in mutual fun investments.

3. Research Problem:

Despite the rapid growth of the Indian mutual fund industry, participation from Tier-2 and Tier-3 cities remains relatively low. Many individuals still opt for traditional investment options such as fixed deposits, gold, insurance, and real estate. Factors such as \low financial literacy, lack of awareness, fear of market risk, limited trust in financial institutions, technological barriers, and inadequate financial guidance continue to affect mutual fund penetration. Although FinTech platforms are improving accessibility and convenience, their role in influencing investment behavior in smaller cities requires further examination.

4. Research Objectives: The major aims of the study are:

1. To examine the impact of the financial literacy on mutual fund investment participation in Non-Metro cities.
2. To analyze the role of FinTech adoption in increasing the mutual fund penetration among investors in non-metro regions.
3. To evaluate the influence of investor trust on mutual fund investment decisions.
4. To study the effect of behavioural factors such as risk perception on investment participation.
5. To assess the relationship between city type and mutual fund investment participation.

5. Research Hypotheses

The study formulates the following hypotheses:

H1: Financial literacy and FinTech adoption significantly influence mutual fund participation in Non metro cities.

H2: There is significant relationship between city type and mutual fund investment participation.

6. Research Methodology

Research Design

The study adopted a descriptive design to examine mutual fund penetration, investor awareness, FinTech adoption, trust factors, accessibility, and investment behaviour in Tier-2, Tier-3, and Tier-4 cities and towns of Maharashtra.

Data:

This study is based on both primary and secondary data.

Primary Data

Primary data has been collected through questionnaire circulated through google forms from respondents in selected Tier-2, Tier-3, and Tier-4 cities and towns of Maharashtra including Ahilyanagar, Baramati, Talegaon, Narayangaon, Khed, Satara, Pathardi, Jamkhed, Nashik, Sambhaji Nagar, Sangli, Latur, Kashti, Shirur, Sakri, Pimpalner, and Dhule.

The questionnaire focused on:

- Mutual fund awareness
- Investment behaviour
- FinTech adoption
- Trust factors
- Accessibility issues

A total of 130 valid responses were collected for analysis.

Secondary data:

The Secondary data has been collected from SEBI, RBI, Association of Mutual funds in India reports, academic journals, Scopus database, Google Scholar, Value Research, and Morningstar India.

Sampling Technique

Convenience and purposive sampling techniques were used. Sample Size

The study consisted of 130 respondents from selected cities and towns of Maharashtra.

6.8 Statistical Tools Used

The study used:

- Frequency Analysis
- Percentage Analysis
- Chi-Square Test
- Cronbach Alpha Reliability Test. Software used:
- MS Excel
- SPSS

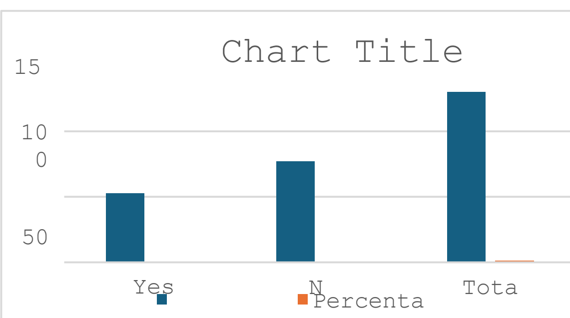
7. Data Analysis and Statistical Testing

7.1 Frequency Analysis

Frequency analysis was conducted to understand the number of respondents who have invested in mutual funds.

Table 1: Mutual Fund Investment Participation

Response	Frequency	Percentage
Yes	53	40.77%
No	77	59.23%
Total	130	100%



Interpretation

The findings indicate that only 40.77% respondents had invested in mutual funds, while 59.23% had never invested. This suggested that mutual fund penetration in non metro cities remains relatively low despite increasing digital accessibility.

7.2 Chi-Square Test:

The Chi-Square test was conducted to examine if the type of city significantly influences mutual fund investment participation.

Hypothesis:

Null Hypothesis (H0)

There is no significant relationship between city type and mutual fund investment participation.

Alternative Hypothesis (H1):

There is significant relationship between city type and mutual fund investment participation.

Formula Used

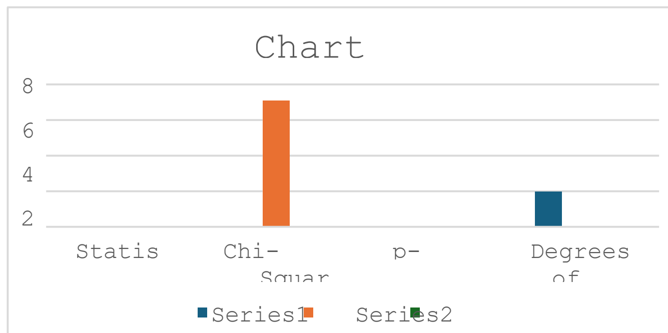
$\chi^2 = \Sigma (O - E)^2 / E$ Where:

- O = Observed frequency.
- E = Expected frequency.

Table 2: Chi-Square Test Result

Statistic	Value
Chi-Square Value	7.106
p-value	0.0286

Degrees of Freedom 2



Interpretation

Since the p-value (0.0286) is less than 0.05, the null hypothesis, the null hypothesis is rejected.

Therefore, there is statistically significant relationship between city type and mutual fund investment participation.

This indicates that geographical location influences investor behaviour and mutual fund adoption. Tier 2 cities may demonstrate relatively higher participation due to better financial awareness, improved digital infrastructure, and greater exposure to investment products compared to Tier 3 and Tier 4 cities.

7.3 Cronbach Alpha Reliability Test:

This test was used to measure the internal consistency and reliability of the questionnaire.

Variables Included

The reliability analysis included:

- Understanding of mutual funds
- Knowledge of risk and return
- Awareness of SIPs
- Understanding diversification
- Knowledge of equity and debt funds.

Cronbach Alpha Formula

$\alpha = [k / (k-1)]\ [1 - (\Sigma\sigma^2 i / \sigma^2 t)]$ Where:

- k = Number of items
- $\sigma^2 i$ = Variance of individual items
- $\sigma^2 t$ = Total variance

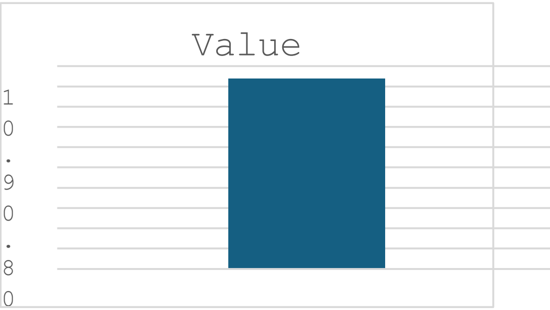


Table 3: Reliability Test Result

Statistic	Value
Cronbach Alpha	0.937

Interpretation

The Cronbach Alpha value of 0.937 indicates excellent reliability and strong internal consistency.

This suggests that the questionnaire items are highly dependable and effectively measure financial literacy and investment awareness.

According to standard reliability interpermeating.

Suggestions

1. The AMC should increase investor's awarenes programs in Non metro cities to improve understanding of mutual funds, SIPs, diversification and long term wealth creation.
2. Financial literacy initiatives should be strengthened through collaboration between SEBI, AMFI, Educational institutions and financial intermediaries.
3. FinTech platforms such as Groww, PhonePe, and Paytm Money should focus on simplifying investment processes through regional language support, user-friendly interfaces, and financial education content.
4. Financial advisors and mutual fund distributors should improve investor trust by providing transparent information regarding risk, return, and portfolio performance.
5. Awareness regarding SIP investments and diversification benefits should be increased to reduce dependence on traditional investment avenues such as fixed deposits, gold, and real estate.
6. Government and regulatory authorities should improve digital financial infrastructure in semi-urban and rural areas to support broader participation in digital investment platforms.
7. Behavioural barriers such as fear of market volatility and risk perception should be addressed through investor counselling and long-term investment education programs.
8. Future studies should include larger sample sizes, additional states, and advanced statistical techniques such as regression analysis and factor analysis for deeper understanding of investor behaviour.

Conclusion:

The study concludes that mutual fund penetration in Non Metro cities of India remains relatively low despite rapid growth in the Indian mutual fund industry and increasing digital financial accessibility. Financial literacy, investor trust, behavioural factors, and FinTech adoption play a significant role in influencing mutual fund investment participation among investors in semi-urban regions. The findings of the Chi-square test indicate a statistically significant relationship between city type and mutual fund participation, suggesting that geographical location affects investor awareness, accessibility, and investment behaviour. Further, the Cronbach Alpha value of 0.937 confirms excellent reliability and internal consistency of the questionnaire, indicating that the selected variables effectively measure financial literacy and investment awareness.

The study also highlights the growing contribution of FinTech platforms in improving financial inclusion by simplifying investment procedures, enhancing accessibility, and encouraging retail participation through digital investment services. However, barriers such as low awareness, risk perception, trust deficit, and preference for traditional investment avenues continue to restrict broader mutual fund adoption in smaller cities. Overall, the study stresses that the need for stronger financial education initiatives, improved digital infrastructure, investor-focused awareness programs, Financial advisory services to enhance mutual fund penetration and strengthen financial inclusion in emerging Indian cities.

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