An Empirical Investigation of Factors Shaping Individual Investor Behavior

*Dr Sowmya Keethi Reddi, Assistant Professor, School of Management Studies, Chaitanya Bharati Institute of Technology, Hyderabad, Telangana State, India

** Dr T S Poornachandrika, Associate Professor, School of Management Studies, Chaitanya Bharati Institute of Technology, Hyderabad, Telangana State, India

ABSTRACT:
The paper analyses what motivates Hyderabad's individual investors to make certain investment decisions. Because investors are looking for new kinds of investments, understanding these factors is key. The data gathered was from a convenience sample of 182 respondents. Using Factor Analysis, the study reviews data to pinpoint the most essential behavioural aspects of investment choices. Tests for validity, reliability and sample size adequacy, as well as EFA, CFA, SEM and hypothesis testing using AMOS were included. Analysis of the data indicated that three major factors impact investor behaviour and each was statistically proven. As a result of the tests, these factors were confirmed as significant influences on investment decisions. The study offers useful advice for financial investors, policymakers and advice professionals interested in understanding behavioural influences in markets.

Keywords: Investor Behaviour, Behavioural Finance, Factor Analysis, Investment Decisions

1. INTRODUCTION

An investment refers to using your money to buy items like stocks, gold, fixed deposits and real estate in the hope of making a profit or achieving your future financial goals such as buying a home, securing pension when you retire or saving money for your future. Essentially, investment means choosing between accepting risk now and reward in the future.

Wealth and safety during and after retirement are the main reasons why individuals want to invest. As people start to plan their investments with part of their earnings, it is important to understand what influences them. Research points out that managing your money wisely today helps you better handle any upcoming financial troubles, suggesting that investors should take informed decisions.

This research looks into the principal psychological and economic reasons behind the actions of individual investors in Hyderabad. This research is divided into five parts, starting with a general explanation of investment basics (Section 1) and moving on to a study of related literature (Section 2). The third section explains the study's design and underlying viewpoint and the fourth section gives data analysis and key points for discussion. In Section 5, important tips and advice are shared for investors, policymakers and financial advisors. To improve decision making in finance and create sustainable plans for wealth accumulation, this research aims to explore what causes people to invest the way they do.

2. REVIEW OF LITERATURE:

Studies have found that multiple things affect investor decisions such as following certain numbers and environmental and mental aspects. The research presented here emphasizes some of the major factors that influence individual decisions about investing.

Many studies underline that financial performance and comparing risk and reward matter a lot in making investment decisions. Mutual fund investors, according to Dhar (2017), are mostly guided by a strong reputation for the fund manager, previous results and low-risk features, but they also care about a fund's nature and how much it pays out. Jagonga and Mutswenje (2014) reported that earnings per share, a company's profitability and the state of the market are main factors that change investor behaviour. Kumar (2011) proved this by showing that both the GDP growth rate and FDI affect stock prices, with many retail investors taking them into account.

Demographic factors, including education, age, and gender, play a pivotal role in shaping investment preferences. Shukla (2016) revealed that investors' educational backgrounds and long-term goals (e.g., homeownership) dictate their investment priorities. Veeramani et al. (2014) and Geetha and Vimala (2014) further confirmed that risk-return assessments vary across genders and age groups, with demographic variables significantly affecting decision-making. Kannadhasan (2006) extended this analysis, showing that marital status, income levels, and risk tolerance also influence retail investors' choices.

The part that information and advice from friends play has been carefully considered. In their study, Tabasum Sulthana and Pardhasaradhi found that accounting information was the main influence (42% of respondents), countered by personal financial reasons (37%). Hussain (2006) also found that cultural differences meant that traditional values mattered only little to investors in the UAE.
Understanding money and access to information have a big impact on investment choices. In 2014, Lodhi found that there is a close relationship between financial literacy, transparent accounting and wise decision-making in Pakistan. Following an analysis of surveys, Bennel et al. (2011) found that retail investors strongly emphasize market knowledge and using analysis-based strategies.

The research as a whole suggests that a person's investment actions are influenced by multiple things, including financial, demographic and outside factors. There are certain factors that impact all investors, but there are additional ones, especially cultural or religious aspects which can change from one region to another.

3. RESEARCH METHODOLOGY

To study what shapes investment habits in Hyderabad, Telangana - where investment culture is growing fast - this study applies an exploratory research design. One hundred eighty-two participants took part in the research, coming from various groups including crew members, government workers, professionals, business owners and housewives, age groups and income groups, all chosen using convenience sampling. Using a questionnaire

designed for the study, researchers collected information from investors by asking them questions on a five-point scale. An overview of collected responses was presented through MS Excel and SPSS was used to do elaborate statistical analysis involving factor analysis and reliability checks. By using this approach, we assure a comprehensive look at the factors that influence investment decisions in the region.

Objectives of the Study

- To assess the key factors affecting the investment behaviour of individual investors.
- To examine the reliability and consistency of the identified factors in influencing investor decisions.
- To evaluate the interrelationships among the factors shaping individual investor behaviour.

Hypothesis:

H_1: Fear of Risk (FOR) has a significant relationship with Cautious Investment Behaviour (CIB) among individual investors.
H_2: Knowledge and Environment of Investment (KEI) significantly influences Cautious Investment Behaviour (CIB) among individual investors.
H_3: There is a significant relationship between Fear of Risk (FOR) and Knowledge and Environment of Investment (KEI) in individual investors.

Theoretical framework of the study:

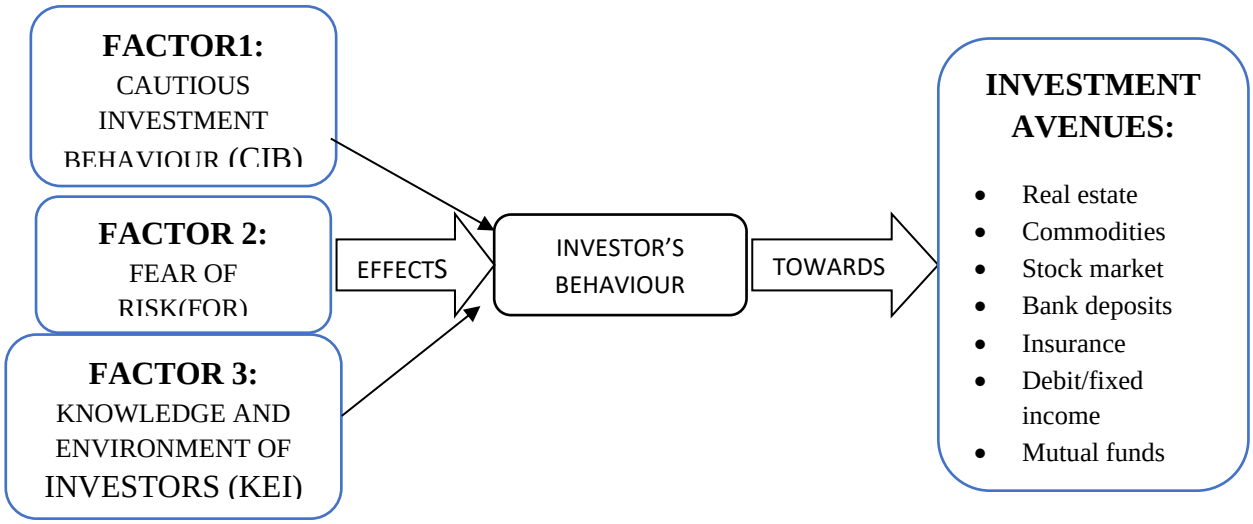


Figure 1: Theoretical framework of the study.

4. RESULTS ANALYSIS AND DISCUSSIONS

Table 1: Demographic variables of the respondents:

VARIABLES	DESCRIPTION	PERCENTAGE (%)
Gender	Female	49
	Male	51
Age	20-30	42
	31-40	25
	41-50	22
	51-60	11
Marital Status	Single	49
	Married	51
Income	Up to 2 Lakhs p.a	18
	2-5 Lakhs p.a	26
	5-10 Lakhs p.a	38
	10 Lakhs & Above	18
Educational status	Primary-Secondary	3
	High school	6
	Associates	8
	Undergraduate	45
	Postgraduates or Ph. D	38
Work Experience	0-5 Years	37
	5-10 Years	19
	10-15 Years	32
	15 Years & Above	12

The 182 participants in our study consisted of almost equal numbers of men and women. When it comes to age, the bulk of users are between 20 and 30 years old, with another 25% between 31 and 40, 23% between 41 and 50 and the rest between 51 and 60. Among the youngest adults, about half are married and half are single. When looking at annual earnings, 38.5% earn ₹5-10 lakhs each year (that's the highest group), 26% earn ₹2-5 lakhs, 18% earn less than ₹2 lakhs and 17.6% earn more than ₹10 lakhs. 45% of the data shows that respondents hold an undergraduate degree, while 38% have earned a master's or PhD, with smaller percentages holding associate degrees (8%), higher school diplomas (6%) or primary or secondary education (3%). It is shown that the largest group (37%) has less than 5 years of experience, the next largest group (32%) has between 10 and 15 years and 19% falls between 5 and 10 years, while 11% have more than 15 years under their belts. Most participants appear to be young, educated professionals who hold early-to-mid-career jobs and have moderate to high incomes.

Table 2: Validity Test.

	N	Percentage (%)
Valid	182	100
Excluded	0	0
Total	**182**	**100**

Table 2 reports the number of correct and useful replies obtained from the respondents. In order to have a valid response, all the variable values must be included in the data, otherwise analysis might be interrupted by missing data. In other words, we can tell from the table that none of the observations are missing from the set.

Table 3: Reliability test

Cronbach's Alpha	Cronbach's Alpha based on standardized	No. of Factors
0.93	0.93	17

Table 3 The system uses Cronbach's Alpha to check how reliable the collected data is by measuring the average relationships between the variables. The reliability coefficient measured 0.93 which is much better than the threshold of 0.60. Because of this value, we can be sure that the questionnaire's factors show consistency and acceptance is high.

Table 4: KMO and Bartlett's Test

KMO Measure of Sampling Adequacy		0.908
Bartlett's test of sphericity	**Approx. Chi Square**	1724.137
	Df	136
	Sig	0.000

Table 4 shows the results for the Kaiser-Meyer-Olkin (KMO) measure of sample quality and Bartlett's Test of Sphericity. The research used factor analysis and based on the KMO value of 0.908, it was appropriate to use the sample for this type of analysis. It was also determined that Bartlett's Test of Sphericity was needed to check the overall significance of the correlation matrix. It was confirmed that the Chi-Square is highly significant at the 0.000 level, indicating that the correlations are appropriate for factor analysis.

An analysis of factors was done to discover the reasons for the way individual investors behave. In the beginning, we made a correlation matrix to check how the variables relate to each other. Subsequently, PCA was applied to discover the primary factors influencing how investors act.

Table 5: TOTAL VARIANCE EXPLAINED.

Factor	Eigen-values			Extraction sum of squared loadings			Rotation sum of squared loadings		
	Total	Variance (%)	Cumulative (%)	Total	Variance (%)	Cumulative (%)	Total	Variance (%)	Cumulative (%)
1	8.18	48.15	48.15	8.18	48.15	48.15	5.25	30.88	30.88
2	1.18	6.92	55.07	1.18	6.92	55.07	2.95	17.33	48.22
3	1.09	6.42	61.49	1.09	6.42	61.49	2.26	13.28	61.49
4	0.83	4.86	66.35						
5	0.75	4.39	70.74						
6	0.72	4.26	75.00						
7	0.65	3.85	78.85						
8	0.57	3.33	82.19						
9	0.49	2.92	85.11						
10	0.47	2.74	87.85						
11	0.42	2.46	90.31						
12	0.39	2.33	92.64						
13	0.37	2.16	94.80						
14	0.29	1.75	96.56						
15	0.24	1.43	97.99						
16	0.19	1.14	99.13						
17	0.15	0.87	100.00						

Table 5 shows that 61.49 percentage of the variance can be explained by factors 1, 2 and 3. Factor loadings explain correlations between the variables and the factors.

Table 6: Results of communality.

	Initial	**Extractions**
VAR_09	1.00	.536
VAR_15	1.00	.585
VAR_18	1.00	.690
VAR_21	1.00	.627
VAR_23	1.00	.613
VAR_24	1.00	.595
VAR_25	1.00	.760
VAR_26	1.00	.618
VAR_27	1.00	.732
VAR_10	1.00	.641
VAR_13	1.00	.640
VAR_16	1.00	.538
VAR_22	1.00	.516
VAR_19	1.00	.563
VAR_11	1.00	.750
VAR_12	1.00	.599
VAR_14	1.00	.446

Results from the table 6 shows that all the variables have communalities more than 0.04. It represents that all variables are significantly loaded on the factor.

VARIABLES	FACTOR LOADINGS			% of total variance explained
	1	2	3	
Factor 1: Cautious investment behavior (CIB)	**5.250**			
VAR_18: Investors prefer less risky investment avenues	0.762			
VAR_15: Investors differentiate between various investments	0.744			
VAR_25: Investors past experience effects the future investments.	0.741			
VAR_26: Investors are influenced by others opinions.	0.734			**30.885**
VAR_27: Investor makes investments to meet the uncertainties in the future.	0.730			
VAR_23: Income effects their interest towards investments.	0.660			
VAR_24: Education Qualification effect on the investment decisions	0.657			
VAR_9: Investors choose low-risk investments when they get older.	0.639			
VAR_21: Financial steadiness effecting the investors to make investment decisions.	0.571			
Factor 2: Fear of Risk (FOR)		**2.946**		
VAR_10: Investors closely follow the performance of risk and return		0.759		
VAR_13: Investors maintain regularity in payments.		0.705		**17.312**
VAR_19: Investors prefer to optimize their risk through diversification.		0.632		
VAR_16: Mostly prefer long-term investments.		0.568		
VAR_22: Marital status influences the investment decisions.		0.524		
Factor 3: Knowledge and environment of investors (KEI)			**2.258**	
VAR_11: Investment decisions get effected by the external environment.			0.837	
VAR_12: Investors borrow the funds from different sources to make the investment			0.61	**13.277**
VAR_14: Investors have adequate information of invetsments.			0.51	

Table 7: Rotate Component Matrix.

Table 7: According to the rotated component matrix from EFA in Table 7, three major factors are recognized and only loadings of 0.5 or more on the variables are considered significant. The variable Cautious Investment Behavior (CIB) includes nine variables and explains 30.885% of the overall changes. Four of the strongest loadings in this factor are VAR18 (0.762), VAR15 (0.744), VAR25 (0.741) and VAR26 (0.734), with the others being VAR27 (0.730), VAR23 (0.660), VAR24 (0.657), VAR09 (0.639) and VAR21 (0.571). Within the Fear of Risk (FOR) factor, five variables were included and accounted for 17.312% of the variance, VAR10 having the strongest impact, followed by VAR13, VAR19, VAR16 and then VAR22.

The central value for this factor is found to be 2.946. Knowledge and Environment of Investment (KEI) which consists of three variables, accounted for 13.277% of the overall variance. Of all the variables studied, VAR11 (0.838) has the highest loading in KEI, followed by VAR12 (0.614) and VAR14 (0.512), with a combined factor value equal to its variance share of 13.277. To check if these findings were justified, the researchers performed CFA in AMOS after carefully defining both the factors and the variables. According to the analysis, the model showed strong accuracy, confirming the confidence in the found factors.

VALIDITY TESTS

You must first examine if your measurement model is valid before using SEM. Four major types of validity are explored: face validity, convergent validity and discriminant validity.

1. Face validity means that experts examine subjectively and systematically whether the items in the scale reflect the required construct. Though the questionnaire is not able to fully prove validity by itself, it was carefully designed to match the aims of the research and its title. As a result, the study qualifies as face valid.

2. We say that convergent validity exists when items intended to measure a single construct actually correlate with each other. Most often, it is judged using the Average Variance Extracted (AVE) and the Composite Reliability (CR).

AVE (Average Variance Extracted) – AVE greater than 0.5 demonstrates enough convergent validity. The results exceed 0.5 on all the AVE measures, proving convergent validity. A value for Composite Reliability (CR) that exceeds 0.7 means the scale is reliable. Most CR metrics are moderately positive, but KEI comes in just below the grading scale. Yet, the value is getting close to the acceptable level which points to sufficient reliability and reinforces convergent validity.

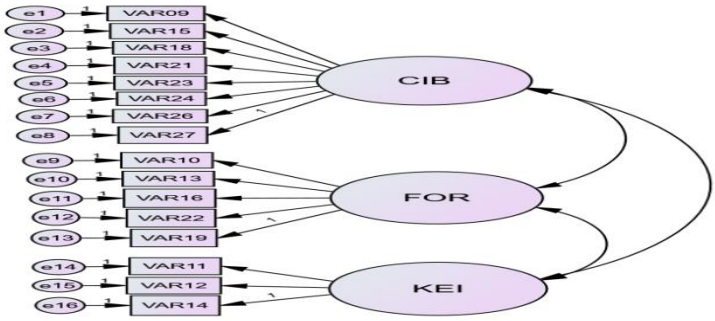
Factor	AVE	CR
CIB	0.69	0.89
FOR	0.64	0.77
KEI	0.65	0.70

3. Discriminant Validity is about measuring how much constructs differ from one another. AVE greater than the squared correlation of one construct with others is generally taken as the best evidence for confirming convergent validity.

Constructs	CIB	FOR	KEI
CIB	0.69	0.63	0.64
FOR	0.63	0.69	0.58
KEI	0.64	0.58	0.65

The AVE value for each construct is displayed along the diagonal, while the squared correlations between constructs are shown off the diagonal. Each construct's AVE is greater than the related inter-construct correlation squared, so discriminant validity is shown.

Figure 4.3: Analysis of moment structure measurement model.



VAR25 is excluded from the study as the standardized residual covariance value is high.

Table 8: Results of structural equation model (Incremental fit indices).

VALUATION CRITERIA	VALUES OBTAINED	STANDARD VALUES	ABBREVATIONS
DISCREPANCY ($\chi 2$)	207.713		CMIN
DEGREES OF FREEDOM	101		DF
DISCREPANCY/DEGREES OF FREEDOM	2.057	< 3.000	CMIN/DF
ROOT MEAN SQUARE OF APPROXIMATION	0.076	< 0.08	RMSEA
GOODNESS OF FIT	0.889	Close to 1	GIF
ADJUSTED GOODNESS OF FIT	0.850	Close to 1	AGIF
COMPARATIVE FIT INDEX	0.926	Close to 1	CIF
NORMED FIT INDEX	0.866	Close to 1	NFI
RELATIVE FIT INDEX	0.841	Close to 1	RFI
HOLTER 0.05 INDEX	110		HFIVE
HOLTER 0.01 INDEX	120		HONE

Table 8: Presents model fit indices that tell you how closely the proposed model mirrors the sample data. An important sign of how good a model is can be seen in the value χ^2/df which for a good model should be below 3. This study found a model-data fit of 2.057, since the ratio between the chi-square value and degrees of freedom is 207.713 divided by 101. The GFI index stands at 0.889, suggesting that the hypothesized model and real data go well together because values nearly equal to 1 are considered best. In addition, the RMR of 0.076 shows that remaining errors are deemed acceptable and remain low. Supporting the reliability of the model are the values of the Normed Fit Index (NFI), at 0.866 and the Comparative Fit Index (CFI)

which is 0.926, since both are nearing the expected value of 1. Moreover, the Hoelter 0.05 and Hoelter 0.01 indices confirm that the sample size we have is above both of their thresholds. The results demonstrate that the model meets statistical requirements and is appropriate for exploring additional areas.

Table 9: Regression coefficients of underlying variables.

			Estimate
CIB	<---	FOR	.413
CIB	<---	KEI	.527
VAR_09	<---	CIB	.666
VAR_15	<---	CIB	.649
VAR_18	<---	CIB	.794
VAR_21	<---	CIB	.786
VAR_23	<---	CIB	.721
VAR_24	<---	CIB	.766
VAR_26	<---	CIB	.764
VAR_27	<---	CIB	.865
VAR_19	<---	FOR	.721
VAR_22	<---	FOR	.695
VAR_16	<---	FOR	.710
VAR_13	<---	FOR	.600
VAR_10	<---	FOR	.517
VAR_14	<---	KEI	.589
VAR_12	<---	KEI	.740
VAR_11	<---	KEI	.592

Table 9: Presents the coefficients showing the connection strength between the main variables and their associated variables. All the coefficients, from 0.865 to 0.413, pass the 0.05 significance level test. Based on these findings, the indicator variables seem to be related to their latent constructs in a moderate to strong way, showing a good structure to the measurement model. The impact of these interrelationships affirms that the constructs in the model are both dependable and significant which supports the entire analysis.

Table 10: Correlations between the underlying variables.

			Estimate
CIB	<-->	FOR	.794
CIB	<-->	KEI	.802
FOR	<-->	KEI	.762

One can use correlation analysis to learn about the coalition between two or more variables. It tells us both how and how much strongly these variables influence one another. Shown in Table 10, there are notable relationships between the groups of variables, so changes in one group usually accompany changes in others. By fitting these correlations, we confirm the results found in the analysis.

Structural equation modelling-Analysis of moment structures

SEM is a way to study multiple linked relationships between constructs by connecting and testing them in a single model. In this way, researchers can analyze and evaluate the theory and the measurements all at once, using only one statistical technique. SEM shows how different constructs are linked, allowing us to learn about the main structure of the model. It is usual to draw the model as diagram to show how the constructs relate to one another.

Figure 4: Analysis of moment structure structural model.

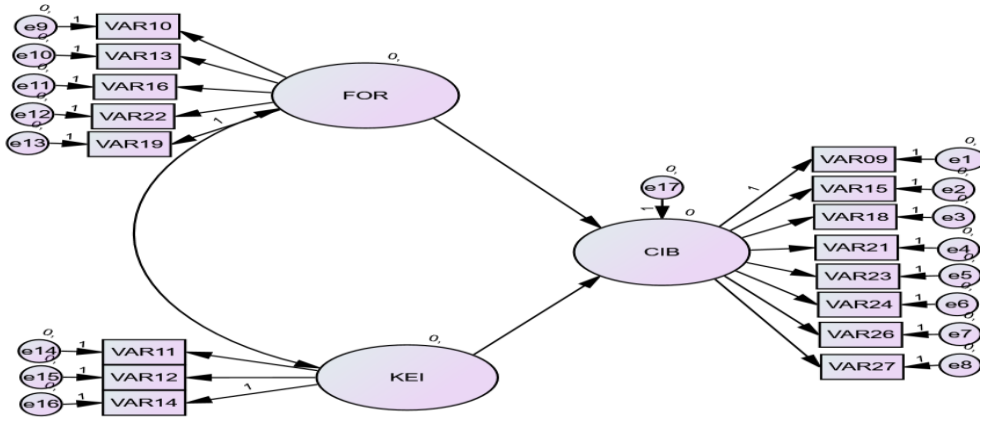


Figure 4 : presents the model that shows the connections between different study aspects, following the main theory. The model illustrates how variables are related with single-headed arrows and how they are correlated with double-headed arrows. Grounded in previous theories, the model reveals that investors' attitude toward risk can directly shape their cautious approach to investing and knowledge and investment environment can influence their behavior as well. In addition, the analysis points out a relationship between KEI and FOR, showing that these aspects of investment behavior are closely connected.

Table 11: Regression weights and covariance between the underlying variables and hypothesis tests.

			Estimate	S.E.	C.R.	P	Result
CIB	<---	FOR	.448	.143	3.123	.002	Accepted
CIB	<---	KEI	.667	.189	3.521	***	Accepted
FOR	<--->	KEI	.375	.073	5.127	***	Accepted

indicates the significance level is less than 0.001

The analysis revealed a positive and significant relationship between Fear of Risk (FOR) and Cautious Investment Behavior (CIB), with a p-value of 0.002, indicating a statistically significant association at the 0.05 significance level. Similarly, a positive and highly significant relationship was found between Knowledge and Environment of Investment (KEI**)** and Cautious Investment Behavior (CIB), with a p-value of less than 0.001, also confirming significance at the 0.05 level. Additionally, there was a significant correlation between KEI and FOR, as evidenced by a p-value of less than 0.001. Despite the significant p-value, the

interpretation incorrectly states that there is no correlation; however, the statistical result confirms that a significant correlation does exist between Knowledge and Environment of Investment and Fear of Risk at the 0.05 significance level.

CONCLUSION

Researchers tried to understand the reasons that lead investors to choose specific ways to invest. Of the 21 variables examined in the EFA using SPSS, VAR7, VAR8, VAR17 and VAR20 were removed because they did not pair with any factor during the rotation process. As a consequence, three components (factors) were taken from the data, each having 9, 5 and 3 variables, respectively. After running EFA, CFA was conducted in AMOS to test the validity of the structure found. The validation criteria were satisfied, confirming that the resultant factors were measured correctly and with reliability. After that, a Structural Equation Model (SEM) was constructed in AMOS to explore the links among the different factors. In the path diagram showing the structural model, we found that Cautious Investment Behaviour (CIB) was linked positively to Knowledge and Environment of Investment (KEI) and to Fear of Risk (FOR). A link was discovered between KEI and FOR. These results agree with the study's proposals, demonstrating how the important factors depend on each other.

RECOMMENDATION

Just examining Hyderabad for this research means that other cities or countries could be studied in the future to better observe what influences people's investing habits. Besides, because the current study didn't concentrate on any specific investment method, others could now investigate different investment types and identify what impacts investors' decisions in those settings.

Expanding the range of analysed variables can help us understand how investors make their decisions. In addition, analysing investment behaviours by age, income, education or experience can supply more accurate understanding of the factors involved. These more in-depth studies could improve our view of how investors think and choose.

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