

## Factors Influencing the Investment Behaviour of Rural Households in Coastal Districts of Andhra Pradesh, India

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**Abstract:** The emerging economies like India where more than 60% of the population lives in the rural areas, should ensure adequate access to the financial products and services to all the individuals in the country. The launch of the Prime Minister Jan Dhan Yojana (PMJDY) a revolutionary financial inclusion program in August 2014 to bring access to formal financial services to all the India's population has led to the opening of around 2.8 billion bank accounts till March 2017. The access to the financial products is expected to change the investment and savings behavior of the rural households. The present study focuses on understanding the factors influencing the investment behaviour of households in rural India, where majority of the population lives. In addition to the socio economic factors, the study also considers the impact of the level of financial literacy on the investment behaviour. The study was conducted in the coastal districts of Andhra Pradesh where the major occupation of the rural households is agriculture. Discriminant analysis is carried out to identify the factors influencing the investment behaviour of rural households. As Agriculture is the major occupation in rural India, the findings of the study will certainly help the government in encouraging the rural households for investing in financial products. The results of the study will also serve as a major input to the policy makers in channelizing the rural household savings into productive activities of corporate entities.

**Keywords:** Financial Inclusion, Financial Literacy, Rural Households, Discriminant Analysis, Investment Behavior.

## INTRODUCTION

Rural India where 73% of the households live, only 71% are literate and 74.5% earn a monthly income of less than Rs 5000 pose a great challenge to the Government of India to create a financially aware and empowered India. The lack of awareness of the new financial products force the rural households to still invest in traditional investment alternatives. The efforts taken by the Government of India in achieving 100 percent financial inclusion through Prime Minister Jan Dhan Yojana (PMJDY) are successfully providing the desired results through bringing the rural households under the umbrella of financial products and services. In this context, the present study focuses on identifying the factors influencing the investment behavior of rural households in coastal districts of Andhra Pradesh.

## REVIEW OF LITERATURE

An attempt is made to review some of the prominent studies on investment behaviour of the households.

Annamaria Lusardi [1] analyzed the effects of financial education on saving and investment Behaviour of African-Americans and Hispanics Households. The study revealed that seminars have some effect on

savings, particularly for those at the bottom of the wealth distribution, and those with low education.

C Thilakam [2] opined that the knowledge of rural households is limited to the traditionally known savings and investment avenues like bank saving, holding insurance policy, investment in gold or in land/building. The sample population's knowledge on the modern and market sophisticated investment avenues is very much limited.

SEBI – NCAER Survey [3] was carried out to prepare a comprehensive profile of savings and investment behaviour in the context of income and consumption patterns and to obtain the risk profile of the households and relate this to savings and investment behaviour. Some of the relevant findings of the study are:

- i) The percentage of investors is nearly 20 per cent in urban areas while it is much lower (6 per cent) in rural India.
- ii) There is a significant degree of non-investment by rural households because of: a) inadequate information, and b) lack of adequate skills.

iii) Only 6 per cent of all households, whose primary occupation is agriculture, allocate a part of their savings to pension plans.

SEBI – NCAER Survey [4] was carried out to estimate the number of households and the population of individual investors, their economic and demographic profile, portfolio size, investment preference for equity as well as other savings instruments. This is a unique and comprehensive study of Indian Investors, for, data was collected from 3,00,0000 geographically dispersed rural and urban households. Some of the relevant findings of the study are:

- Households' preferences for instruments match their risk perception.
- Bank Deposit has an appeal across all income class.
- 43% of the non-investor households equivalent to around 60 million households (estimated) apparently lack awareness about stock markets.
- Compared with low income groups, the higher income groups have higher share of investments in Mutual Funds (MFs) signifying that MFs have still not become truly the investment vehicle for small investors.

Sujit Sikidar and Amrit Pal Singh [5] carried out a survey with an objective to understand the behavioural aspects of the investors of the North Eastern region towards equity and mutual funds investment portfolio. The survey revealed that the salaried and self employed formed the major investors in mutual fund primarily due to tax concessions. UTI and SBI schemes were popular in that part of the country then and other funds had not proved to be a big hit during the time when survey was done.

Furqan Qamar [6] analyzed the savings behaviour and investment preferences among average urban middle class of Delhi. The following are the relevant findings of the study:

- Despite financial sector reforms and entry of private, domestic and foreign banks into the country, the nationalized commercial banks seem to be the favourite choice of an average household.
- Capital market imperfections and associated risk have not been a deterrent for many households as they were found investing in debentures and shares either directly or indirectly.
- The saving behaviour and investment preferences of average urban household seem to be significantly influenced by the level of educational attainments and income of the respondents.

Muraleedhran. D [7] analyzed the pattern of investment preference among the different income groups in physical and financial assets. The relevant findings of the study are as follows:

- The composition of savings reveals that savings in financial asset (63.47%) is higher than savings in physical assets.
- Among the savings in financial assets savings in chit funds is the highest (44.58%).
- In physical assets, consumer durables are the highest (28.33%).
- For around 23.62% of the households, the saving motive is the educational and marriage purposes of their children.
- The average propensity to save shows that the level of savings is related to the level of income.

Gaudecker H and Von M [8] analysed the impact of financial literacy and financial advice on the investment process of the households. The study revealed that almost all the households who scored high on financial literacy has achieved reasonable investment outcomes. Compared to the households having high score on financial literacy, households with below median financial literacy lose on an average 50bps on expected returns.

Lusardi A [9] studied the impact of financial literacy, information and financial education programs on the household savings behaviour. The study found that Low literacy and lack of information affect the ability to save and to secure a comfortable retirement. The low levels of financial literacy was identified as a major reason for lack of retirement planning and lack of wealth. Majority of the individuals irrespective of their levels of financial literacy, do not rely on the help of financial advisors for making savings and investment decisions.

Puneet Bhushan [10] examined the relationship between financial literacy of salaried individuals and their investment behaviour. The study found that financial literacy level of individuals affects the awareness as well as investment preferences of salaried individuals towards financial products.

Geetha N and Ramesh M [11] examined the factors influencing the investment behaviour of the people. The major findings of the study are:

- Investors in all the age groups preferred NSC, PPF, Insurance and Bank Deposits for investments.
- Income level of the respondents is also an important factor influencing the investment decision. Investors in high income group considered stock market instruments for investment.
- Most of the respondents considered safety as the major factor for taking investment decisions.

The present paper focuses on identifying the factors influencing the investment behavior of rural households in coastal districts of Andhra Pradesh.

**OBJECTIVES OF THE STUDY**

The main objective of the study is to identify the factors influencing the investment behaviour of households in rural India. The results of the study will provide the inputs in speeding up of financial deepening in rural India.

**METHODOLOGY OF THE STUDY**

The data needed for the study is collected from the select rural households in the nine Coastal Districts

of Andhra Pradesh. The stratified random sampling technique is used to collect information from the target respondents and the total sample size is 2025. The data was collected from a total of 55 mandals covering 124 villages across the nine coastal districts of Andhra Pradesh. Discriminant analysis is carried out to identify the factors influencing the investment behaviour of rural households. The basic profile of the study area is presented in Table 1

**Table-1: Profile of the Sample**

Age	Sample Size	Education	Sample Size	Income	Sample Size
30 Years and below	570 (28.1)	Post Graduation	31 (1.5)	Above Rs 15000	141 (7.0)
31-40 Years	633 (31.3)	Graduation	139 (6.9)	10001-15000	208 (10.3)
41-50 Years	480 (23.7)	Below Graduation / Others	938 (46.3)	5001-10000	809 (40.0)
Above 50 Years	342 (16.9)	Uneducated	917 (45.3)	Below or equal to Rs 5000	867 (42.8)
<b>TOTAL</b>	<b>2025</b>	<b>TOTAL</b>	<b>2025</b>	<b>TOTAL</b>	<b>2025</b>

Note: Figures in parenthesis are percentages to column total

**DISCRIMINANT ANALYSIS**

Discriminant analysis is a well-known statistical tool which helps to identify the factors behind identified groups which are homogeneous within themselves and heterogeneous with others. The rural households are classified into groups based on the extent of savings made by rural households into the financial products. They were are classified into two categories (group) i.e. rural households investing more in financial products and rural households investing less in financial products, in such a manner that each group is more or less homogeneous and quite distinct from the other group.

The grouping is based on the criteria of the number of financial products currently held by the rural household. A total of ten financial products namely Savings A/C, Fixed Deposit A/C, Micro Finance, Personal Loan, Post Office Saving Schemes, Secured Bank Loans, Insurance, Shares, Bonds/Debentures and Mutual Funds are taken into consideration. Households who currently hold less than four financial products are classified into the group “investing less in financial products” and the rural households who currently hold four or more financial products are classified into the Group “investing more in financial products”.

To carry out the discriminant analysis code 1 is given for households investing less in financial products and 2 is given for households investing more in financial products. It should be noted here that amount invested in the financial products is not considered but only the behaviour of the rural households is considered.

**Variables Used**

In this analysis the factors that are considered to discriminate rural households investing more in financial products and rural households investing less in financial products are age, education, income and level of financial literacy.

Age is classified into four groups as follows

Below 30 years -	4
Between 31-40 years	3
Between 41-50 years	2
Above 50 Years	1

It is assumed that lower the age, higher are the chances for investing into financial products. It is assumed age and investing into financial products are negatively associated.

Level of Education is classified as follows:

Post Graduation	4
Graduation	3
Below Graduation/others	2
Uneducated	1

It is assumed that higher the level of education higher are the chances for investing in financial products and lower the level of education, lower will be the awareness and chances of investing in financial products will be less. Therefore it is assumed that level of education and investments into financial products are positively associated.

Income is classified as follows:

Above Rs.15,000	4
Between 10001-15000	3
Between 5001-10000	2
Below or equal to Rs.5000	1

Similar to education, awareness to financial products increases as income increases; hence it is assumed income and probability to invest in financial products is positively associated.

**Level of Financial Literacy is classified as follows:**

The level of financial literacy is measured taking into consideration of the responses of the rural households to questions on holding of household budget, awareness of interest rates of deposits, awareness of interest rates on loans and awareness of ten financial products viz., Savings A/C, Fixed Deposit A/C, Micro Finance, Personal Loan, Post Office Saving Schemes, Secured Bank Loans, Insurance, Shares, Bonds/Debentures and Mutual Funds. The rural households were scored to 13 and the level of financial literacy is summarized as follows:

Score of 11-13	4
Score of 8-10	3
Score of 5-7	2
Score of Less than 5	1

It is assumed that higher the level of financial literacy, higher are the chances for investing in financial products. It is assumed level of financial literacy and

investing into financial products are negatively associated.

Using the investments made into financial products as measured by households investing less in financial products - 1 and households investing more in financial products - 2 as grouping variable and age, education, income and level of financial literacy as independent variables, Discriminant analysis is used to identify the characteristics of various categories of rural households.

**Dependent variable used in Grouping**

Dependent Variable: Y: Investments into financial Instrument.

Set of Independent Variables: X<sub>1</sub>: Age, X<sub>2</sub>: Education, X<sub>3</sub>: Income and X<sub>4</sub>: Level of Financial Literacy

The 1066 rural households who currently hold less than four financial products are assigned value 1 and 959 investors who currently hold four or more financial products are assigned value 2 to distinguish the groups. The total sample is 1066+959=2025.

**RESULTS OF DISCRIMINANT ANALYSIS**

The results obtained from Discriminant analysis using Statistic package are as follows:

Data relating to squared distance between the groups as defined by Mahalanobis and f-values are given in Tables-2 & 3.

**Table-2: Squared Mahalanobis Distances between Groups**

Squared Mahalanobis Distances	G_1:1	G_2:2
G_1:1	0.00	0.81
G_2:2	0.81	0.00

**Table-3: F-Values of the Groups**

F-values; df = 4,2020	G_1:1	G_2:2
G_1:1	--	101.5
G_2:2	101.5	--

From Table-2 & 3 it can be noted that the groups are distinctly different from each other as the f-value 101.5 is found to be statistically significant at 1% level of significance.

Data relating to classification of functions for Group 1 and Group 2 are given Table 4.

**Table-4: Classification of Functions for the Groups**

Classification Functions; Grouping: Investments in Financial Products	G_1:1	G_2:2
	p=.53	p=.47
Age	1.98	1.62
Education	-0.33	-0.22
Income	0.66	0.55
Level of Financial Literacy	5.02	6.35

It can be seen from Table 4 that the coefficients of education and level of financial literacy are relatively lower and that of age and income are relatively higher in Group 1 when compared to group 2.

As the coefficient of level of financial literacy is higher among all others, it can be interpreted that the level of financial literacy is the most important factor

influencing the rural households in investing their savings into financial products.

Proper extent of classification of functions can be judged by observed classification and predicted classifications. Data relating to classification matrix are given in Table-5.

**Table-5: Classification Matrix of the Groups**

Rows: Observed Classifications	Percentage Correct	Columns: Predicted classifications	
		G_1:1	G_2:2
		p=0.53	p=0.47
G_1:1	64.35	686	380
G_2:2	68.51	302	657
Total	66.32	988	1037

It can be seen from Table 5 that out of 1066 rural households classified in Group 1 as “Households investing less in financial products”, 686 (64%) are predicted to belong to the same group and the remaining 380 (36%) have more probability to belong to Group – 2 i.e. “Households investing more in financial products”. It is also observed that out of 959 rural households classified in group 2 as “Households investing more in financial products”, 657 (69%) are predicted to belong to the same group and the remaining 302 (31%) have more probability to belong to Group – 1 i.e. “Households investing less in financial products”.

**CONCLUSION**

The classification functions indicate that those who are investing more in financial products are of low age, high education, high income and with high level of financial literacy. This analysis will help the government to achieve not just 100% financial inclusion but making the rural households to save their investments to various financial products as per their investment objectives. With a suitable financial literacy programs, rural households can be educated about the benefits of investing in financial products.

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