

A Study on Sources of Information among Different Segment of Investors

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Abstract

The investment decision is important for every individual because it involves commitment of capital. It also produces return which will have impact on the standard of living of investors. To take a right decision, the investors collect information from various sources. There are many sources available to collect investment information. The different kind of people use different sources of information and the selection of particular source depend on characteristics of people. The outcome of the decision is based on quality of information which in turn depends on right source. Hence identifying right source of information is essential to get success in any investment activity. This necessitated present study which attempts to find out the characteristics of people using different sources and to identify the impact of source of information on the choice of securities and expected return.

I. Introduction

THE RATIONAL DECISION makers take decision based on quality information. The investment decision is important for every individual because it involves commitment of capital. It also produces return which will have impact on the standard of living of investors. To take right decision the investors collect information from various sources. The sources of information may be newspapers, magazines and journals, television, radio, brokers, agents, investment consultants, friends and relatives. The right decision should be based on quality information which in turn depends on right source. Hence, source of information is essential to get success in any investment activity. To assess the usefulness of each source, the opinion is collected from investors to know about which source is most suitable for

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them. For this purpose four-point usefulness scale is used. The purpose of this study is to segment the investors based on information source used and to find out the impact of source on other investment variables.

II. Review of Literature

Information search is a vital step for better decision, whether for purchasing of goods, or for saving/investment decisions. Where financial matters are concerned, previous studies have reported that information search paid off for consumers (Lee & Hogarth, 1999a; Lee & Hogarth, 1999b). Information search consists of internal search, whereby consumers draw on their memory of purchase experience as well as other existing knowledge, and external search, where consumers examine sources outside their personal knowledge. Outside sources include the media, retailers, word of mouth communication with other consumers (Beatty & Smith, 1987). Information about financial products is provided through various sources from television advertisements to financial planners, with different costs and quality. According to the 1998 Survey of Consumer Finances (SCF), at least half of US households consult multiple information sources for their saving/investment decision making. Furthermore, about 40% of total U.S. households use three or more information sources when saving or investing. Identifying who uses more sources will facilitate efficient supply of information.

Information sources have been categorized variously by researchers. Two dimensions are personal versus impersonal sources and marketer controlled versus non marketer controlled sources (Robertson, Zielinski and Ward, 1984; Assael, 1998; Blackwell, Miniard and Engel, 2001). Based on these two dimensions, information sources are classified into four groups, personal-market controlled, e.g., salespeople and telemarketer, personal-non-marketer controlled, e.g., professional advice, friends and family, impersonal-marketer controlled, e.g., advertising, sales promotion and packaging and impersonal-non-marketer controlled, e.g., news material. Out of various types of information sources, personal sources have received much attention due to the potential influence on decision making. Professional, friends, neighbours, relatives and work associates are classified as personal sources. In the purchase of services rather than goods, personal sources are likely to be very important (Nelson, 1974; Urbany and Weilbaker, 1987; Murray, 1991). In the information search for saving/investment decisions, personal-professional sources such as financial planners, bankers, accountants and brokers are weak tie sources, while friends and relatives are strong tie sources (Brown & Reingen, 1987). Soutar and McNeil's (1995) study on external search for financial planning services and identified four different groups of investors. They are 1) 'no searcher', who are more likely to be older males, widowed, not to own house, and to have few other investment 2) 'minimal searchers' who are more likely to be older people with children who have left home, to own insurance, bonds, equity and property trusts, to be home owners, to have lower education level, and to have fixed term deposits at banks 3) 'heavy searchers' who are more likely to use media sources to any great extent, to

favour collections and property trusts for investment purposes and 4) 'personal searchers', who are more likely to be younger investors, single, childless or married with children, with higher income, higher education, and to hold fixed term deposits at banks.

Westbrook and Fornell, (1979) suggested that age has an inverse effect on the consumer's need for information because of the increased opportunity for learning from previous ownership experience. Thus age reduces the value of search and leads to less search and less usage of high cost information sources. According to past studies (Assael, (1998); Robertson, Zielinski and Ward, (1984); Thorelli and Engledow, (1980)), information sensitive consumers or information seekers are characterized by high income and education. Education increases the consumer's demand for information, related to the purchase decision and likelihood the usage of even high cost sources (Westbrook & Fornell, (1979)).

A household in which the households are married and living together can engage in household information production in which there is a division of labour among household members (White-Means, (1989)). Bajtelsmit and Bernasek, (1996) explained that gender difference in investment, resulted from women's lower level of education, income, wealth and less involvement in financial matters than men. When compared to women, men have more resources to save or invest, more involved in investment, and will be more likely to search information.

The amount of search is negatively related to the cost of search in terms of the consumer's opportunity cost of time (Stigler, (1961)). The insufficient incentive for search may be caused by low level of financial resources such as income, financial assets, and net worth. Spending compared to income can indicate potential for saving/investment. When a household has more discretionary resources, a household will be more motivated to save/invest, and search for more information as a preliminary step.

Punj and Staelin, (1983) found that external search decreases when prior knowledge and experience with specific products increases. When comparing those who have a specific type of financial assets and those who do not, it is assumed that those who possess the type of financial assets have specific knowledge and experience than who do not. Selnes and Troye, (1989) found that experts tend to search more information than novices, while non experts can more easily be directed by marketing efforts.

Compared to people who do not have a saving goal, people with specific saving goal are thought to be more involved in and more motivated toward saving/investing. Studies about motivation and information acquisition (Petty and Cacioppo, (1979); Lee, Herr, Kardes and Kim, (1999)) stated that highly motivated examine more information than least motivated.

Risk taking people will do something so as to reduce their uncertainty. They will search more information in order to reduce the uncertainty level they face in their risky investment. Risk averting people may have less need

for more information search since they don't even try to invest in risky assets. Rather, they will tend to stick to safe and familiar investments (Cox, (1967); Hansen and Helgeson, (1996)). Grable and Joo, (2001) found that those who seek help from professional sources tend to have higher levels of financial risk tolerance.

III. Methodology

The primary data have been collected by conducting survey among teachers working in Government colleges and Universities in Tamil Nadu by using well structured questionnaire. The population size was 11,867 and the sample size of 614 was calculated by using formula $n = Z^2 * p * q * N / e^2 * (N-1) + Z^2 * p * q$ (Kothari, (2005)) where n is the minimum sample size required. The 614 sample respondents were selected by using multi stage random sampling. The questionnaires were distributed to all 614 selected respondents in person by the researcher. After careful and repeated persuasion only 586 filled in questionnaires were received and the remaining respondents did not respond. For the purpose of final analysis 552 questionnaires were used after rejecting some of the questionnaires which were not completed properly. The content validity of the questionnaire was verified by group of people comprising experts from the fields of statistics, psychology, management, commerce and investment consultancy. The reliability of the survey instrument was tested using Cronbach Alpha method.

3.1 Frequency Analysis

For the purpose of identifying the usefulness of the source of information for making investment decision, eight sources of information were taken for analysis. The opinions were collected from salaried class investors about usefulness of each source on a four point scale (i- Never useful, ii - Occasionally useful, iii - Generally useful, iv - Always useful). Table I gives average score of usefulness for each source of information. By consolidating the opinion of investors it is clear that newspaper is the most preferred source for the investment information. The mean values for the newspaper and TV are more than three which indicate that these two sources are always useful in getting investment information. As the mean values for brokers and relatives are less than 2.5, it can be inferred that the investors are not depending on information received from these two sources. People use information from friends generally but use information from relatives only occasionally in taking investment decision.

3.2 Factor Analysis on Sources of Information

People have expressed similar opinion for some of the sources regarding usefulness of such source for getting investment information. Based on the similarity of opinion, some of the sources can be grouped. To reduce the number of variables into minimum manageable variables, factor analysis is performed. The suitability for factor analysis is tested using two analysis namely KMO test and Bartlett's test of Sphericity. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy is a statistic

which indicates the proportion of variance in the variables which might be caused by new factors. High values generally indicate that a factor analysis may be useful with the data. If the value is less than 0.50, then results of the factor analysis probably won't be very useful. Here (Table II) the KMO value is 0.596 which indicates that the factor analysis can be used for the data. The chi-square value for Bartlett's test of Sphericity is 633.238 and its significant value is 0.000 which is significant at more than 99 percent level of confidence.

Table I
Preferred Source of Information

S.N.	Source of Information	Mean Value	Rank
1	Newspaper	3.41	I
2	TV/Radio	3.13	II
3	Expert Opinion	2.97	III
4	Friends/Colleagues	2.92	IV
5	Magazine	2.85	V
6	Investment Consultant	2.70	VI
7	Brokers and Agents	2.49	VII
8	Relatives	2.48	VIII

Table II
KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		00.596
Bartlett's Test of Sphericity	Approx. Chi-Square	633.238
	df	28
	Sig.	0.000

The next step in the process is to decide on the number of factors to be derived. The rule of thumb is applied to choose the number of factors for which 'Eigen values' with greater than unity is taken by using Principal Component Analysis method. The Component matrix so formed is further rotated orthogonally using Varimax rotation algorithm which is the standard rotation method (Kaiser,1958). From the factor analysis three factors are extracted from original eight variables. Three variables (sources) are grouped under first factor, another three variables are included in the second factor and the rest two variables are included under third factor. The Eigen value for the first factor (source) is 2.068 and its percentage of variance is 23. It means around 23 percent of total variance is due to the first factor. The Eigen values for other two sources are also high which signifies that all the three sources are used by investors frequently (Table III).

Table III
Variance Explained by Factors

Factors	Eigen Value	% of Variance	Cumulative %
1	2.068	23.495	23.495
2	1.608	20.116	43.611
3	1.233	17.747	61.358

The first factor can be named as expert source, second factor can be designated as media source and the third factor can be called as inner circle source based on the type of sources included under the factors. The sources which are included under each factor along with their loadings are given in the Tables (IV, V, VI, VII and VIII).

Table IV
Factor Loadings for Expert Source

S.N.	Factors	Loadings
1	Investment consultant	0.823
2	Brokers and agents	0.819
3	Expert opinion	0.545

Table V
Frequency for Expert Source

S.N.		Frequency	Percent
1	Never useful	29	5.3
2	Occasionally useful	146	26.4
3	Generally useful	335	60.7
4	Almost always useful	42	7.6
Total		552	100.0

Table VI
Factor Loadings for Media Source

S.N.	Factors	Loadings
1	Newspaper	0.784
2	TV/Radio	0.727
3	Magazine and Journals	0.633

Table VII
Frequency for Media Source

S.N.		Frequency	Percent
1	Never useful	9	1.6
2	Occasionally useful	49	8.9
3	Generally useful	352	63.8
4	Almost always useful	142	25.7
Total		552	100.0

3.2.1 Expert Source

The sources which are loaded under this factor component are investment consultant, brokers and agents and expert opinion. The main source included in this factor is investment consultant and the factor loading for that source is 0.823 and least significant source is expert opinion (Table IV). This means that the investors use investment consultants and brokers and agents significantly than general academic experts. The investment consultants and brokers are also specialist people in the area of investment. Hence, this factor can be commonly called as expert source.

Around 60 percent of the people feel that the expert source is generally useful to them. Only very little percentage of people have not at all used expert

source and only 7 percent of people feel that expert source is always useful (Table V). After the advent of on-line trading and scrip-less asset holding facilities, the brokers have started giving free investment consultancy to investors to make themselves different from others. As the advice from investment consultants are information based, the novice investors are also generally using such advises for taking investment decision.

3.2.2 Media Source

The sources included under this factor are print media such as newspaper, magazines and journals and electronic media such as TV and radio. Therefore, this factor can be called as media source. The main source included under this factor component is newspaper and its loading is 0.784 (Table VI), which means that the investors use newspaper more commonly than the other two sources of information. Around 63 percent of people use media source generally for taking investment decision and around 26 percent of people always use newspaper for collecting information. This means that approximately around 90 percent of people use newspaper to get investment related information (Table VII). The national level newspapers are giving adequate investment information which is necessary for investors. Though regional newspapers are not giving much needed information, the salaried class investors are not depending on regional newspapers for investment related information.

Table VIII
Factor Loadings for Inner Circle source

S. No	Factors	Loadings
1	Friends and Colleagues	0.820
2	Relatives	0.819

3.2.3 Inner Circle Source

This source is composed of friends, colleagues and relatives. All these sources are closely related to investors. Hence, this factor can be commonly called as inner circle source. The investors need not pay anything to get information from this source. The closely related people may share their experience with others. The usefulness of this source depends upon experience of the people who give information. Depending too much on this source might pose problem. The investors give much importance to friends rather than relatives within inner circle. Only around 48 percent of people feel that this source is generally useful and a very low percentage of people (6 percent) give more importance to this source (Table IX).

Table IX
Frequency for Inner Circle Source

S.No.		Frequency	Percent
1	Never useful	55	10.0
2	Occasionally useful	197	35.7
3	Generally useful	266	48.2
4	Almost always useful	34	6.2
	Total	552.0	100.0

The overall analysis of usefulness of sources indicates that only 68 percent of people consider that expert source is useful, but around 90 percent of people sense that media source is always useful and around 51 percent feel that inner circle source is useful. The Table X signifies that media source is the most commonly used source by the investors because its mean value of usefulness is more than the other two sources. The inner circle information is not commonly used for taking decision. By analyzing Table III it was stated that the factor 1, which is expert source, is the most important discriminating factor, but Table X indicates that media source is the widely used source. This signifies that, though media is widely used by people, usage rate of expert source is significantly different among people. Some people use expert information frequently and some do not use it. Hence, the investors differ significantly in the usage rate of expert source. The expert information sometimes involves cost, consequently, investor might be hesitant to use it.

Table X
Mean Values for Sources

S.N.	Source	Mean Value	Rank	Variance Explained	Rank
1	Media Source	3.14	I	20.116	II
2	Expert Source	2.71	II	23.495	I
3	Inner Circle Source	2.51	III	17.747	III

IV. Segmentation of Investors

The investors can be segmented on the basis of usage of different sources of information. By using cluster analysis the investors are classified into three categories namely media source users, all source users and inner circle source users. The expert source users use mainly information from expert source, likewise media source users use information from media source only. The Table XI depicts the mean values of three sources of information for all the three clusters. The brief explanation about the characteristics of each cluster is given below.

Table XI
Final Cluster Centers

S.N.	Source of Information	Clusters					
		1	2	3	1	2	3
1	Expert Source	2.63	II	3.10	I	1.80	III
2	Media Source	3.23	I	3.20	II	2.79	III
3	Inner Circle Source	1.88	III	3.11	I	2.73	II

4.1 Media source users

In the first cluster, media source occupies the first position in the usage rate. The mean values for the other two sources are less than three in this segment. This means that this segment of people use mainly media source. Hence, investors of this segment can be called as media source users.

4.2 All source users

In the second cluster the expert source and inner circle source are ranked number one in their usage rate and media is in second position. The mean

values for all the sources of information is more than three in this cluster which means that the investors of this segment generally use all the sources for collecting information. Thus, this segment of people can be called as all source users.

4.3 Inner circle source users

This segment is ranked third in the usage rate of media source and expert source and second in inner circle source, consequently this segment of investors can be called as inner circle source users.

Anova Table (Table XII) indicates that F value for all the sources are highly significant which means that all the three sources are useful in segmenting the investors into three categories.

Table XII
ANOVA

S.N.		Cluster		Error		F	Sig.
		Mean Square	df	Mean Square	df		
1	Expert source	65.650	2	0.177	549	369.894	0.000
2	Media source	7.475	2	0.268	549	27.887	0.000
3	Inner circle source	75.400	2	0.204	549	368.846	0.000

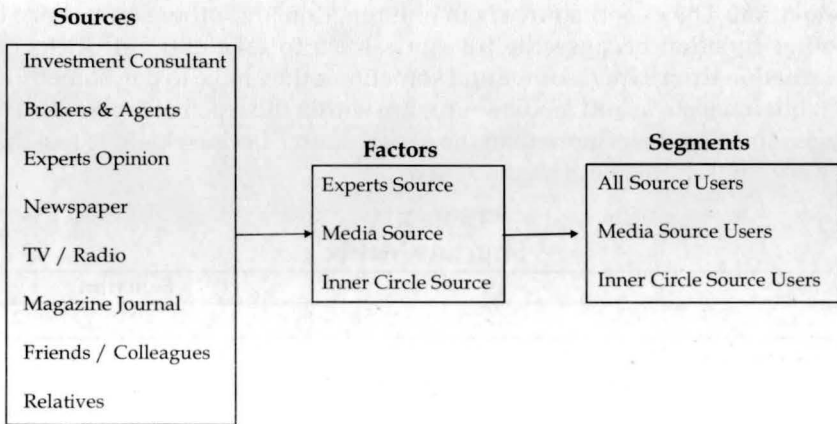


Figure 1
Segmentation Based on Sources of Information

Earlier it was stated that 68 percent people are expert source users and 90 percent people are media source users. It can be further concluded that some people use both media source and expert source. The Table XIII postulates that 27 percent of people are in cluster one which is the media source users segment. This means that only 27 percent people use only media for getting information. Around 54 percent people are in second cluster which is all source user category and 19 percent of people rely on inner circle source. Getting information from all possible sources are good not only to the individual to take right decision but also to the development of nation for

having right investment culture. Here, 54 percent of people use information from all source and only 19 percentage of people use inner circle source. This indicates that Indian investors are information seekers and have the habit of taking decision based on facts and figures.

Table XIII
Number of Cases in Each Cluster

Cluster			
	1	152.000	27%
	2	296.000	54%
	3	104.000	19%
Valid		552.000	

V. Discriminant Functions

Discriminant function is used to test whether these three clusters are significantly different segments. As there are three clusters, two discriminant functions can be formed. Those two linear functions are

$$Z1 = 0.723 \times \text{expert source} \quad (1)$$

$$Z2 = -0.682 \times \text{inner circle source} + 0.256 \times \text{media source}. \quad (2)$$

These two functions describe different characteristics of the same population. The expert source is in one function and other sources are in another function because the investors have to take extra effort to get information from expert source and sometimes they have to pay something for it but inner circle and media source are within the reach of investors. The usage rate of media is more than the expert source because people feel that they are comfortable with media source.

Table XIV
Structure Matrix

		Function	
		1	2
1	Expert Source	0.723*	0.548
2	Inner Circle Source	0.654	-0.682*
3	Media Source	0.123	0.256*

The Eigen value Table XV gives information about Eigen values of those two discriminant functions. The Eigen values are more than one for both functions. This means that both functions explain distinctively the different characteristics of population. The canonical correlation of variables with that of discriminant function is very high. This means that variables contribute significantly to find out the Z value.

Table XV
Eigen values

Function	Eigen value	% of Variance	Cumulative %	Canonical Correlation
1	1.944	63.8	63.8	0.813
2	1.103	36.2	100.0	0.724

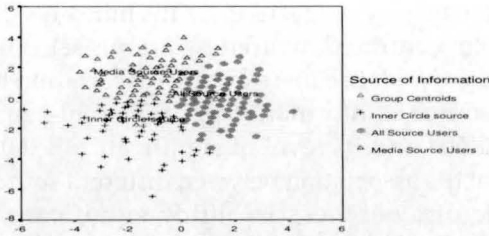


Figure 2
Discriminant Cluster

The Wilks lambda is very low for both functions. The chi-square value is also significant (Table XVI). This means that both the functions are distinctive functions. Both the functions can be used to describe the characteristics of population.

Table XVI
Wilks' Lambda

S.N.	Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	1 through 2	0.162	999.139	6	0.000
2	2	0.475	407.410	2	0.000

The above diagram (Figure 2) illustrates that the three groups are distinctive in the usage of the sources of information.

VI. Impact of Source

So far, the extent of usage of different sources of information by an investor before taking investment decision is analysed. Now, it is necessary to analyse as to what extent the usage of particular source of information affects the other investment behaviour of individual investors. Here, its impact on awareness, choice criteria, expected return and saving motives are studied in detail.

6.1 Awareness

To understand the possible kinds of association between range of awareness of investors and source of information used by the investors, cross tabulation and chi-square test are used. The cross tabulation (Table XVII) shows that diversified awareness of people in the total investors population is 43 percent whereas their population on media source users category, all-source-users category and inner circle source users are 43 percent, 47 percent and 36 percent respectively. This means that people with diversified awareness are heavily present in all-source-users category. The diversified people have gained knowledge on five to seven small savings schemes by utilizing information from all available sources. People who have knowledge on one or two small savings schemes are called concentrated awareness people and they account for 24 percent of the total population. Their population is 28 percent, 17 percent and 38

percent in media source users category, all source users category and inner circle users category respectively. This indicates that more number of people with concentrated awareness are present in the inner circle source users category. Hence there exist an association between range of awareness and source of information used. The chi-square value for this association is 21.604 and its level of significance is 0.001 (Table XVIII) which means that the association between different source of information used and range of awareness is highly significant. The identified associations indicate that people with concentrated awareness people are using only inner circle source of information and diversified people are using information from all the sources.

Table XVII
Range of Awareness and Source of Information Cross Tabulation

S.N.	Range of Awareness	Source of Information			Total
		Media Source Users	All Source Users	Inner Circle Source Users	
1	Un aware	14(9%)	45(15%)	12(11%)	71(13%)
2	Concentrated	42(28%)	50(17%)	39(38%)*	131(24%)
3	Extended	30(20%)	63(21%)	16(15%)	109(20%)
4	Diversified	66(43%)	138(47%)*	37(36%)	241(43%)
Total		152(100)(27)	296(100)(54)	104(100)(19)	552

Table XVIII
Chi-Square Tests

	Value	df	Sig. (2-sided)
Pearson Chi-Square	21.604	6	0.001

The analysis of variance (Table XIX) is used to find out the impact of the sources of information used on the level of awareness and the test result indicates that the users of different sources do not differ significantly on the awareness level of tax saving schemes and non tax saving schemes and on the overall level of awareness. This further implies that the different sources of information are not having any significant impact on the level of awareness but it is having effect on the range of awareness. This means that by using different sources of information the depth of knowledge is not raised but knowledge on the number of schemes is increased.

Table XIX
ANOVA

S.N.		F	Sig.
1	Non Tax Saving Schemes	2.197	0.112
2	Awareness Level of Tax Saving Schemes	0.616	0.541
3	Mean Awareness Level	0.828	0.437

6.2 Choice Criteria

The correlation analysis between choice criteria and different sources of information indicates that there is a correlation between only risk protection criterion and expert source. The significance of the correlation is

0.001 which means the correlation is highly significant. This further indicates that people who want to have risk protection to the capital invested would like to seek information from experts to ensure that there is no risk. One way Analysis of Variance is done to find out the effect of source of information used on criteria considered. The F statistics and its significance value derived from analysis of variance indicate that the users of different sources of information differ mainly on liquidity criteria (Table XX).

Table XX
ANOVA

S.N.	Criteria	F	Sig.
1	Convenience	1.736	0.177
2	Risk Protection	0.709	0.493
3	Return	2.761	0.064
4	Liquidity	4.222	0.015

There are two homogeneous sub sets formed, based on the mean values of return criteria for the three source based segments. The mean value of media source segment is available in both sub sets. The inner circle source segment is having lesser mean value in return criteria and is available in sub set one. The mean value for return criteria for all source users category is more and is available in the second set (Table XXI). This means that people who use all the sources of information expect more return than the inner circle source users. There exists a difference in mean values of all source user category and inner circle user category but the significant value in the anova table indicates that the difference noticed is not very significant.

Table XXI
Mean Values for Return Criteria

Source of Information	N	Subset for alpha = .05	
		1	2
1 Inner Circle Source Users	104	3.1563	-
2 Media Source Users	152	3.2829	3.2829
3 All Source Users	296	-	3.3193
4 Sig.	-	0.069	0.601

The mean of liquidity criteria in inner source user category is 2.94 which lies in the first sub set. The mean values of liquidity criteria for media source users segment and all source users category is 3.12 and 3.15 and both segments lie in the second homogeneous sub set. The difference in mean value in liquidity criteria among source based segment is significant as per Anova Table XXII. This means that all source users and media source users expect more liquidity than inner source users. Both in liquidity and in risk protection inner source users are expecting less than all source users and media source users. Inner circle source is not an effective source to provide sufficient information and the expectation of people who depend on inner circle source is less. Hence, the source of information used is having impact on choice criteria in general and liquidity criteria in particular.

Table XXII
Mean Values for Liquidity Criteria

	Source of Information	N	Subset for alpha = .05	
			1	2
1	Inner Circle source users	104	2.9471	-
2	Media Source Users	152	-	3.1266
3	All Source Users	296	-	3.1554
4	Sig.	-	1.000	0.692

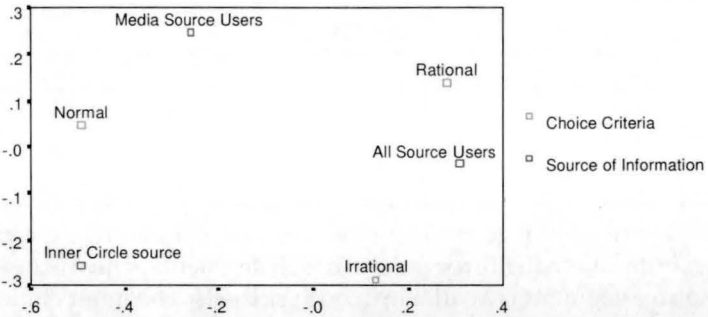


Figure 3

Association between Criteria Segments and Source user Segments

The investors can be classified into three categories namely rational, normal and irrational depending on the expectation of return and liquidity from investment instruments. The rational people consider all criteria to the maximum extent before taking investment decision. The irrational investors make investment decision without considering any criteria to the required extent. The cross tabulation is made to understand the association between the criteria based segments and different source of information users.

The correspondence diagram (Figure 3) illustrates that rational investors are all source users and media source users are normal investors. The inner circle information users have weak relationship with either normal or irrational segmentation. Therefore there exists a relationship between source based segments and criteria based segments

6.3 Expected Return

The correspondence diagram illustrates that media source users expect 10 to 15 percent rate of return and inner-circle-users want only less than 10 percent return from investment but all-source-users want 15 to 25 percent return (Figure 4). This means that inner circle users expect less and media users expect only medium return and all source users expect more return. Hence, there exists a meaningful association between source based segmentation and expected return.

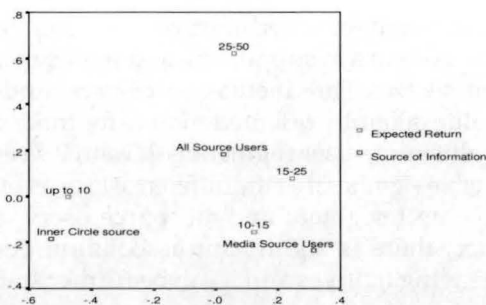


Figure 4

Association between Source user Segments and Expected Return

6.4 Saving Motives

The investors can be classified into three categories namely highly motivated, least motivated and self centered based on the level of motives they have, to save money for the future use. The chi-square value (21.897) and the significant value (0.000) in the chi-square test indicate that there is a significant association between source of information and saving motive segments. The important association identified is that highly motivated people are in all source users category. The self centered people use only media source for getting investment information. The least motivated people use only family source information for investment decision making. When one way analysis of variance test is carried out with source segmentation as a factor and motives as dependent variables, it is found that source based segments differ significantly on both self support motive and family oriented motives (Table XXIII).

**Table XXIII
ANOVA**

		F	Sig.
1	Self Support	5.179	0.006
2	Family Oriented	3.931	0.020

All the three source segments of people have high level of self support motives. Among the three source segments inner circle source users segment is in one sub set and other two source users namely all source users segment and media source user segment are in other sub set. The mean value of self support motive for inner circle source user segment is 3.35 and for media source user segment is 3.60 (Table XXIV). This means that the level of self support motive for media source users is more than that of the inner-circle-source users. The significant value in the anova table indicates that the difference noticed is highly significant.

**Table XXIV
Mean Values of Self Support Motives for Source Segments**

Source of Information	N	Subset for alpha = .05	
		1	2
1 Inner Circle source users	104	3.3519	-
2 All Source Users	296	-	3.5736
3 Media Source Users	152	-	3.6092
4 Sig.	-	1.000	0.646

With respect to family-oriented-motive, the inner circle source users and media source users are in sub set one and media source users and all source users in sub set two. Thus media-source-users find place in both sub sets. The mean value of family oriented motive for inner circle source user segment and for all-source-user segment is 2.5 and 2.7 respectively (Table XXV). The anova table signifies that the difference in level of motives between inner circle source user segment and all source users segment is highly significant. Hence, there is significant association between source of information and saving motives and it can be further stated that source of information is having significant impact on saving motives.

Table XXV
Mean Value of Family Oriented Motive for Source Segments

Source of Information	N	Subset for alpha = .05	
		1	2
1 Inner Circle source users	104	2.5385	-
2 Media Source Users	152	2.5746	2.5746
3 All Source Users	296	-	2.7534
4 Sig.	-	0.698	0.055

The Table XXVI gives consolidated information about the characteristics of different source users. From this, it is clear that sources of information used are having impact on investment behaviour of investors.

Table XXVI
Impact of Source

S.N	Particulars	Media source users	All source users	Inner circle source users
1	Range of Awareness	3 or 4 schemes	4 to 6 schemes	One or Two schemes
2	Choice criteria	Medium expectation	High liquidity expectation	Low expectation
3	Expected Return	-	10-25 percent	Less than 10 percent
4	Saving motives	Self centered	Highly Motivated	Least Motivated

VII. Source of Information Model

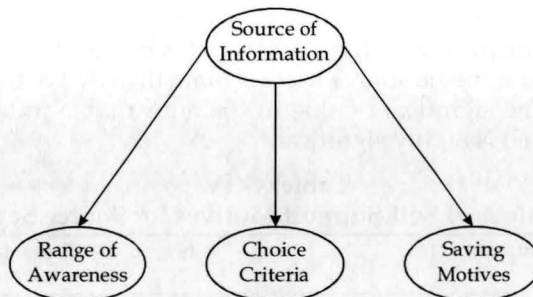


Figure 5
Impact of Source of Information

VIII. Conclusion

From the analysis it is found that the information source used is having impact on range of awareness, choice criteria, expected return and saving motives. It is also known that saving motives and range of awareness is having influence on size of saving. In the earlier analysis, it is also established that criteria used and expected return of an individual is having impact on choice of portfolio. Hence, the source of information used is having indirect effect on both size of saving and choice of securities. Therefore, it is very important to know about the source of information used by investors to understand their saving behaviour.

References

- Assael, H., (1998), "*Consumer Behaviour and Marketing Action*", Cincinnati, OH, South Western College Publication, 1988.
- Bajtelmsmit, V.L and A. Bernasek, (1996), "Why Do Women Invest Differently than Men?", *Financial Counseling and Planning*, Vol. 7, 1996, pp. 1-10.
- Beatty, S.E. and S.M. Smith, (1987), "External Search Effort: An Investigation Across Several Product Categories", *Journal of Consumer Research*, Vol. 14, 1987, pp. 83-95.
- Blackwell, R.D., P.W. Miniard and J.F. Engel, (2001), "*Consumer Behaviour*", 9th Ed., Harcourt College Publishers, New York, 2001.
- Brown, J.J. and P.H. Reingen, (1987), "Social Ties and Word of Mouth Referral Behaviour", *Journal of Consumer Research*, Vol. 14, 1987, pp. 350-362.
- Cole, C.A. and S.K. Balasubramanian, (1993), "Age Differences in Consumers Search for Information: Public Policy Implications", *Journal of Consumer Research*, Vol. 20, 1993, pp. 157-169.
- Cox. D.F., (1967), "*Risk Taking and Information handling in Consumer Behaviour*", Boston: Graduate School of Business Administration, Harvard University, 1967.
- Grable. J.E., and S. Joo, (2001), "A Further Examination of Financial Help Seeking Behaviour", *Financial Counseling and Planning*, Vol. 12, No. 1, 2001, pp. 55-66.
- Hansen, D.E. and J.G. Helgeson, (1996), "Choice Under Strict Uncertainty: Processes and Preferences", *Behaviour and Human Decision Processes*, Vol. 66, No. 2, 1996, pp. 153-164.
- Kaiser, H.F., (1958), "The Varimax Criterion for Analytic Rotation In Factor Analysis", *Psychometrical*, Vol. 23, 1958, pp. 197-200.
- Lee, J. and J.M. Hogarth, (1999a), "Returns to Information Search: Consumers Mortgage Shopping Decisions", *Financial Counseling and Planning*, Vol. 10, No. 1, 1999, pp. 49-66.
- Lee, J. and J.M. Hogarth, (1999 b), "Returns to Information Search: Consumer Credit Card Shopping Decisions", *Financial Counseling and Planning*, Vol. 18, No. 1, 1999, pp. 66-76.

Lee, H., P.M.Herr, F.R. Kardes and C. Kim, (1999), "Motivated Search: Effects of Choice Accountability", issue involvement, and prior Knowledge on Information Acquisition and Use, *Journal of Business Research*, Vol. 45, 1999, pp. 75-88.

Murray, K.B, (1991), "A Test of Services Marketing Theory: Consumer Information Acquisition Activities", *Journal of Marketing*, Vol. 55, 1991, pp. 10-25.

Nelson, P., (1974), "Advertising as Information", *Journal of Political Economy*, Vol. 81, 1974, pp. 729-754.

Petty,R.E. and J.T.Cacioppo, (1981), "*Attitudes and Persuasion: Classic and Contemporary Approaches*", Dubuque, IA, Wm.C.Brown, 1981.

Pun, G.N. and R. Staelin, (1983), "A Model of Consumer Information Search Behaviour for New Automobiles", *Journal of Consumer Research*, Vol. 9, 1983, pp. 366-380.

Robertson, Thomas S., John Zielinski and Scott Ward, (1984), "*Consumer Behaviour-Glnview*", IL, Scott, Foresman and Company, 1984.

Selnes, F. and S.V. Troye, (1989), "Buying Expertise, Information Search, and Problem Solving", *Journal of Economic Psychology*, Vol. 10, No. 3, 1989, pp. 411-428.

Soutar. G.N. and M.M. McNeil, (1995), "Information Search for a Professional Service", *Journal of Professional Services Marketing*, Vol. 11, No. 2, 1995, pp. 45-60.

Stigler, G.J, (1961), "The Economics of Information", *The Journal of Political Economy*, Vol. 69, 1961, pp. 213-225.

Thorelli, H.B and J.L. Engledow, (1980), "Information Seekers and Information System: A Policy Perspective", *Journal of Marketing*, Vol. 44, 1980, No. 9-27.

Urbany, J.E. and D.C.Weilbaker, (1987), "An Experimental Examination of the Economics of Information", *Journal of Consumer Research*, Vol. 13, 1987, pp. 257-271.

Westbrook, R.A. and C. Fornell, (1979), "Patterns of Information Sources Usage Among Durable Goods Buyers", *Journal of Marketing Research*, Vol. 16, 1979, pp. 303-312.

White-Means, S., (1989), "Consumer Information, Insurance, and Doctor Shopping: the Elderly Consumer's Perspective", *The Journal of Consumer Affairs*, Vol. 23, No. 1, 1989, pp. 45-64.