A STUDY ON BEHAVIORAL FINANCIAL DECISIONS IN MANAGING EVERYDAY PERSONAL FINANCE
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ABSTRACT

*Background & objectives***:** Behavioral finance considers the impact of individual's attitude on their financial decisions. The present paper empirically assesses the factors that influences the individual behavior regarding everyday financial decisions and further examine the relative significance of these factors on overall satisfaction among respondents regarding routine financial decisions.

*Methods***:** The study is mainly primary data based with a sample of 250 respondents from Hisar district of Haryana state and applied statistical tools of factor analysis and discriminant analysis to achieve the objective of the study.

*Results***:** The factor analysis reveals nine factors which are named as compulsive shopper, financial awareness, financial botheration, financial advice, concern for future, saving schemes, composed decision, believes in savings and income. Discriminant analysis discloses that out of nine factors, the respondents feel highly satisfied in relation to financial awareness, financial botheration and believes in saving factors.

Key Words: Financial behavior, Factor analysis, Discriminant analysis.

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Humans are social creatures with unique values that have a propensity to make decisions in accordance with their demeanor and emotions. It cannot be expected from humans to reach at a decision entirely on the basis of objective factors, rather the issues such as their behavior and mood are the major predictors in shaping their decisions (Kıyılar and Acar, 2009). According to Skinner (2005), human behavior is extremely tricky to examine because of its multifaceted nature. The actions taken by individuals are based on the complex persuasion of both internal and external stimulants. In psychology, this interaction of stimulants is called behavior. Thus, the term behavior is defined as the mode of action, or the way humans react.

Behavioral finance approach investigates the influence of emotions on financial decisions. In other words, behavioral finance is nothing but interpretation of individual's knowledge based on identified information to generate a financial decision. Barberis (2003) observed that the individuals show substantial variation in decision making process when compared to expectations of rational behavior, as suggested in financial models. The literature available on individual financial behavior is mainly focused on specific areas such as risk attached to financial decisions (Wood and Zaichkowsky, 2004), provision for retirement (Gough and Sozou, 2005), consideration for savings (Thaler and Banartzi, 2004) and investment in stock market (Barber and Odean, 2001; Brennan, 1995; Keller and Siegrist, 2006).

Therefore, an effort has been made to examine the selected aspects of decisions taken by individuals regarding every-day financial affairs. The intention behind the study is to find the behavioral pattern among individuals in deciding about routine financial

affairs of their life. This is for the reason that, humans behave in their own ways in deciding about their personal finance necessities, for instance, some tend to save more, some like to collect information before spending their money, some are shopping addict, some don't mind in borrowing money from known's to meet their desires etc.

REVIEW OF LITERATURE:

The paper takes into account various researches conducted on individual's attitude and behavior towards financial decisions. According to Barber and Odean (2001), most people believed that they are more skilful or knowledgeable on financial aspects of their life than they really are. The study conducted by Racciardi (2007) disclosed the impact of demographic factors on risk taking behavior in financial decisions of individuals and revealed that males are more risk-takers compared to women, singles are more risk-takers compared to married people, young people have a tendency to take more risks compared to elderly, more educated people tend to take more risks compared to those with less education and the people with more financial information take more risks compared to those with less financial information. Similarly, Brown, Ivkovic, Smith, and Weisbenner (2008) found in their study that Individual's financial investment decisions might be stimulated by approval from peers and family and they found it easier to learn about taking financial decisions by discussing with their friends than by using other mechanism. Even without verbal commendation or suggestion, people observed the behavior of others and learned in the course of interaction with them. Funfgeld and Wang (2009) conducted a study on the financial attitude and behavior of German-speaking part of Switzerland on daily financial affairs. The paper revealed five underlying dimensions on financial attitudes and behavior, i.e. anxiety, interests in financial issues, decision

styles, need for precautionary savings and spending tendency. Moreover, gender, age, and education were found to have significant impacts. Graham et al. (2009) have recognized that perceived expertise leads to overconfidence among investors regarding investing their hard earned money. Panahian, Mojgan and Panahian (2011) analyzed the influence of investors' attitude towards the different aspects of transparency of financial information on their performance in Tehran Stock Exchange by employing descriptive correlation matrix analysis. The results showed that investors' attitude towards transparency and disclosure of financial information, had the greatest influence in explaining the investor's behavior in Tehran Stock Exchange.

Hence, it is observed that individuals' behavior focusing toward everyday financial decision making has not been sufficiently examined in financial and economic behavioral studies (Loix etal, 2005). Therefore, the present paper is an attempt to assess the extent to which behavior persuade financial choices of individuals.

Objectives of the Study:

- To investigate the factors that influences the individual behavior regarding everyday financial decisions.

- To assess the relative significance of factors on overall satisfaction on the routine financial decisions.

- To develop a model framework for effective financial decision.

RESEARCH METHODOLOGY:

Present study is an empirical research to examine the financial behavior in decision making of individuals. The study is based on the sample of 250 respondents from Hisar district of Haryana state. Convenient sampling method is adopted for

collecting the sample. The questionnaire is designed with two sections: section 1 captures demographic information for the purpose of describing the sample and it consist of questions pertaining to age, gender, marital status, educational qualification, employment status, monthly saving and monthly income. Section 2 has questions relating to variables that measure the financial decision making behavior of individuals. All the 22 questions from section 2 of the questionnaire used a Likert scale ranging from 1 = Strongly Disagree to 5 = Strongly Agree. The data is analyzed using SPSS version 13.0. The study employs factor analysis to determine the factors that are considered important while taking financial decisions. Factor analysis is a set of technique to identify underlying factors from the collection of seemingly important variables. It trims down the total number of variables into fewer factors and also shows the correlation between the factors (Nargundkar, 2005). Further, the paper also employs Discriminant Function to identify the scores of various labeled factors with regard to satisfaction level of customers. Secondary data is collected through research papers, journals, websites and books.

The demographic characteristics of the respondents are summarized in Table 1. It is evident from the Table that the respondents have a relatively equal proportion of males (56 %) and females (44 %). The sample customers are mostly in the age group of 45-55 years (30%) followed by age group of more than 50 years (21%). Further, a majority of the respondents (72%) were married. The respondents were predominantly post-graduates (59.2%) followed by graduates (26.8%) implying that sample comprises of high literate respondents. With regard to the employment status, service and professionals have (78%) share implying that respondents are well placed in their career. The table also depicts that

28% of respondents save up to Rs15000-25000. The sample had a majority of respondents (28.4%) earning between Rs 55,000-75000 followed by 15000-25000 (28%).

TABLE 1: DEMOGRAPHIC PROFILE OF THE RESPONDENTS

S. No.	Demographic Profile	Frequency	Percent
Sex	Male	140	56.0
	Female	110	44.0
Age	Below 25	31	12.4
	25 -35	40	16.0
	35-45	49	19.6
	45-55	77	30.8
	More than 55	53	21.2
Marital Status	Married	182	72.8
	Unmarried	68	27.2
Education Level	Diploma	12	4.8
	U.G.	23	9.2
	Graduate	67	26.8
	P.G.	148	59.2
Employment Status	Self Employed/Business	37	14.8
	Professional	78	31.2
	Service	117	46.8
	Others	18	7.2
Monthly Saving	Below 5000	19	7.6
	5001-15000	74	29.6
	15001-25000	95	38.0
	25001-35000	50	20.0
	More than 35000	12	4.8
Monthly Income	Below 15000	16	6.4
	15001-35000	70	28.0
	35001-55000	49	19.6
	55001-75000	71	28.4
	More than 75000	44	17.6

RESULT AND DISCUSSIONS:

In the present study, the researcher applied Kaiser-Meyer-Olkin (KMO) test and Bartlett's Test of Sphericity as pre-analysis verification for judging the suitability of the entire sample which is a pre-requisite of factor analysis. Table 2 shows the value of Kaiser-Meyer-Olkin (KMO) and the Bartlett's Test of Sphericity as 0.532 and 1225.729 respectively, which are statistically significant at 1% level of significance. Thus, it indicates that the sample is suitable for factor analytic procedures (Hair et al., 2006). In addition, the significant value of chi-square test statistic (1225.729), depicts that there is

exceptionally low probability of obtaining this result (a value greater than or equal to the obtained value) if the null hypothesis (H0) was true. Hence, the null hypothesis that the population correlation matrix of the measures is an identity matrix has been rejected as the variables were found to be correlated with each other. Table 3 presents the overall reliability of this construct with Cronbach's coefficient alpha having the value of 0.629, which is highly significant.

Table 2: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.532
Bartlett's Test of Sphericity	Approx. Chi-Square	1225.729
	df	231
	Sig.	0.000

Table 3: RELIABILITY STATISTICS

Cronbach's Alpha	0.629
No. of Items	22

FACTOR ANALYSIS:

The survey data from the questionnaire is analyzed using factor analysis in order to summarize the 22 statements related to financial behavior into smaller sets. First of all, the data is subjected to principal component analysis, where these 22 statements are reduced to nine principal components through varimax rotation (Table 4). The statements with factor loading of 0.40 or higher are clustered together to form separate constructs, as recommended by (Hair et al., 2006). Here, the researcher has considered only those factors as significant, whose eigen-values is more than one. Five statements are dropped due to factor loading of less than 0.40 which also reduces factors from nine to eight.

The reliability coefficients for seven factors ranged from 0.562 to 0.841 (Table 4) indicating a fair to good internal consistency among the items of each dimensions. The result of Varimax-rotated matrix is presented in Table 4. Nine factors have been extracted which accounts for 68.030 percent of variance. The percentages of variance explained by factor 1 to 9 are 14.227, 9.679, 8.158, 7.510, 6.773, 6.275, 5.521, 4.966 and 4.923 percent respectively. The communalities shown in the Table explains the amount of variance in the variable that is accounted by the factors taken together. Large communalities indicate that a large amount of variance has been extracted in a variable by the factor solution.

Table 4: Total Variance Explained

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9
Eigen Values	3.130	2.129	1.795	1.652	1.490	1.380	1.215	1.093	1.083
% of Variance	14.227	9.679	8.158	7.510	6.773	6.275	5.521	4.966	4.923
Total	14.227	23.906	32.064	39.573	46.346	52.621	58.141	63.107	68.030

The names of the factor statements and factor loadings have been summarized in Table 5. A factor loading represents a correlation between an original variable and its factors. Factor loading is nothing but coefficient of correlation. Further, the nine factors that defined these characteristics have been assigned suitable names according to the nature of variables loaded on each factor. The nine factors are: compulsive shopper, financial awareness, financial botheration, financial advice, concern for future, saving schemes, composed decision, believes in savings and lastly Income. Five statements have been dropped due to factor loading of less than 0.40, and one factor i.e. income has also been dropped because of single statement with low factor loading. As shown in Table 5,

the derived factors represent the different elements of financial behavior which form the

underlying factors from the original 5 point scale of 22 statements.

TABLE 5: FACTOR NAMES AND THEIR LOADINGS

S.No.	Name of Factor	Statements	Factor Loading	Cronbach Alpha
1.	**Compulsive Shopper (F1)**	A12: I am not able to keep some money away for a rainy day	0.795	0.679
2.		A15: My expenses exceed my income some time	0.736	
3.		A13: I spend most of the part of my income	0.578	
4.		A14: I believe in taking loans to meet my requirements	0.562	
5.		A4: I love to handle financial and money affairs	0.321 *	
6.	**Financial Awareness (F2)**	A9: I like to join conversations about financial matters	0.718	0.670
7.		A6: I compare and calculate risk in different investment proposals	0.695	
8.		A8: I read the business newspaper or listen to business news regularly	0.647	
9.	**Financial Botheration (F3)**	A3: I tend to postpone my financial decisions	0.727	0.555
10.		A1: I think financial decisions are botheration to me	0.724	
11.		A10: Even on large purchases, I tend to spend spontaneously	0.386*	
12.	**Financial Advice (F4)**	A21: I believe in the advice of my family	0.734	0.352
13.		A2: I like to have the advise of financial experts in managing my financial affairs	0.715	
14.		A5: After making a decision, I am anxious whether I was right or wrong	0.055*	
15.	**Concern For Future (F5)**	A18: To care for future is essential for me	0.809	0.345
16.		A11: I do not complain very often, if I have taken a wrong financial decision	0.589	
17.	**Saving schemes (F6)**	A19: I have invested in variety of saving schemes for future uncertainties	0.841	0.355
18.		A22: I will postpone the purchase decision if I do not have sufficient money to buy it.	0.331*	
19.	**Composed Decision (F7)**	A7: At the end of the day, I decide peacefully on financial affairs	0.775	
20.	**Believe in Savings (F8)**	A16: I believe in saving a part of my income	0.725	0.306
21.		A17: Special offers like sales can entice me into buying	0.662	
22.	**Income (F9)**	A20: My family advises me to save a part of my income	0.251*	

* represents the statements dropped due to factor loading less than 0.40
Five statements i.e. A4, A10, A5, A22, A20 have been deleted due to factor loading less than 0.4.

Factor-1: Compulsive Shopper: The rotated matrix has revealed that respondents have perceived this factor to be most important with highest explained variance of 14.227 %. Five out of twenty two statements related to compulsive shoppers are loaded on significantly to this factor. This factor has been named as compulsive shopper as, it consists of statements like: not able to keep some money away for a rainy day, my expenses exceed my income some time, spend most of the part of my income and believe in taking loans to meet my requirements. Thus, the loaded statements to this factor directs us to conclude that the sample respondents are spendthrift and do not care for future requirements of their life. They tend to live in present and spend most of the part of their income on present needs.

Factor 2: Financial Awareness: The second most important factor accounts for 9.679% of the variance. Three statements load high on to this factor. The factor includes statements such as, like to join conversations about financial matters, compare and calculate risk in different investment proposals and read the business newspaper or listen to business news regularly. The factor has been named as financial awareness, as the statements belonging to this factor reveal the taste for financial conversations and business news among respondents. Thus, it can be concluded that the sample respondents are calculative in managing the risk-return profile of their investments as they believe in having the financial knowledge, before taking financial decision, by listening regularly to the business news and discussing the financial matters.

Factor 3: Financial Botheration: The third noteworthy factor accounts for 8.158% of the variance, with high loading of two features, has been named as financial botheration. The factor incorporates the statements such as, tend to postpone my financial decisions

and financial decisions are botheration to me. The statements reveals that the decisions on financial matters bothers the respondents since it involves spending of hard earned money and a wrong decision can have its repercussions.

Factor 4: Financial Advice: Two type of features load on to this factor and they together account for 7.510% of variance. This factor includes statements such as, believe in the advice of my family and like to have the advice of financial experts in managing the financial affairs. The factor has been named as financial advice for the reason that the respondents believe in taking expert advice either from their family or from some financial expert as there is lot of risk involved in taking financial decisions and once decided the decision cannot be reverted back. Even if one wants to revert back, he has to pay the cost of wrong decision taken by him.

Factor 5: Concern for Future: This is a very significant factor, which accounts for 6.773% of variance. Two features have been loaded on to this factor i.e. care for future is essential for me and I do not complain very often, if I have taken a wrong financial decision. The factor has been named as concern for future since it carries the variables which are related to apprehensions regarding uncertainties as regards to the future. The unforeseen future demands certain decisions in life, which can build up fortification in the upcoming times of crisis.

Factor 6: Saving Schemes: The sixth factor that surfaced from the factor analysis accounts for 6.275% of the variations and has been designated as saving schemes. The Eigen value of 1.38 denotes that the factor is of moderate significance to the respondents. The single statement incorporated on this factor is related to investment in variety of saving schemes for future uncertainties. This shows that the sample respondents mull

over the option of investing in saving schemes, for they give due consideration to future needs of their family.

 Factor 7: Composed Decisions: This factor, which accounts for more than 5.521% of variations, is named as composed decisions and only one out of twenty two variables have been loaded on this factor. The Eigen value of 1.21 substantiates to confirm that the factor is of modest importance with regard to financial decision aspects of the respondents. The statement included in this factor i.e. at the end of the day, I decide peacefully on the financial affairs reveals that the sample respondents believe in thinking twice before finally making up their mind on financial matters.

Factor 8: Believe in Savings: The last factor, accounts for 4.966 % of variance with a load of two statements. The two integrated statements of this factor incorporates, believe in saving a part of my income and special offers like sales can tempt me into buying. Consequently, it is named as believe in savings, because the respondents would not like to spend their income in dribs and drabs rather, strive to set aside a part of their income as savings. Moreover, they like to make purchases from sales at a lesser price to gratify their needs and desires.

DISCRIMINANT ANALYSIS:

In order to study the contentment among respondents regarding decision making on daily financial matters, the present study makes an attempt to develop a model framework where, customer satisfaction related to financial decisions making has been taken as dependent variable and the nine factors i.e. compulsive shopper, financial awareness, financial botheration, financial advice, concern for future, saving schemes, composed decision, believe in savings and income are taken as independent variables.

Responses have been taken on 5 point scale (where strongly disagree =1, disagree =2, uncertain =3, agree =4, strongly agree =5). The result of higher the mean score indicates the higher agreement towards that statement.

Canonical Discriminant Function coefficients from Table 6 yield coefficients of various factors. The Discriminant equation is as follows:

Discriminant Score = 0.231(Compulsive-shopper) +0.491(Financial awareness) +0.477(Financial botheration) +0.231(Financial advice) -0.227(Concern for future) +0.180(Saving schemes) +0.179(Composed decisions) +0.382(Believe in savings) - 0.460(Income) + 0.000(Constant).

Table 6: Result of Discriminant Equation

Sr. No.	Factors	Function
1	Compulsive Shopper	0.231
2	Financial Awareness	0.491
3	Financial Botheration	0.477
4	Financial Advice	0.231
5	Concern For Future	-0.227
6	Saving Schemes	0.180
7	Composed Decision	0.179
8	Believes in Savings	0.382
9	Income	-0.460
	Constant	0.000

Actually constant is 0.000 that is why we do not mention, but if it requires, then we are adding it for your concern. These are unstandardized coefficients. We have used enter method instead of step method.

The results of Discriminant Equation presented in Table 6 explains that, the respondents are more satisfied with the financial awareness followed by financial botheration, believes in savings, compulsive shopper, financial advice, saving schemes and composed decision. Further, to validate the results of Discriminant Equation, the Group centroid

values (Table 7) are used to compare the score of Discriminant equation. The table explains that, if the score of the equation is less than zero or negative then the respondents are expected to be satisfied and if score is more than zero or then they are not expected to be satisfied. Hence it can be concluded that respondents would be satisfied if score lies between -0.280 to 0.209. Here group centroids represent the mean scores of the group rather than individual values for each group are entered into the discriminant equation. Note that two scores are not equal in absolute value, moreover having opposite signs. The dividing line between group memberships is zero. Correct classification is a measure of validity of discriminant function. The validity of this function is 61.6%.

Table 7: Functions at Group Centroids

Are you satisfied with the decisions related to Financial matters?	Function
Yes	-0.280
No	0.209

Unstandardized Canonical Discriminant functions evaluated at group means

Table 8: Classification Results

Classification Results(a)			
Are You Satisfied with the decisions related to Financial matters?	Predicted Group Membership		Total
	Yes	No	
Original Count Yes	63	44	107
No	52	91	143
% Yes	58.9	41.1	100.0
NO	36.4	63.6	100.0

61.6% of original grouped cases correctly classified.

The Classification results presented in Table 8 provide the strength to Discriminant equation. Here, the respondents are divided into two groups using Bernoulli function and 70% of the cases are selected for predicting Discriminant equation. The rest 30% cases are used for checking the strength of the Discriminant equation. The result confirms that 61.6% of the selected cases are correctly classified and 36.4% of the

unselected cases are correctly classified. Discriminant equation with correctly classifying more than 60% of cases is judged as of good quality. As a result, it can be concluded that financial awareness, financial botheration and believes in savings, compulsive shopper, financial advice and concern for future are almost up to the mark and respondents are also contented with factors i.e. saving schemes, composed decision, and income.

CONCLUSION AND DISCUSSIONS:

The present research study is an endeavor to analyze the decisions taken by individuals regarding every-day financial affairs. The purpose behind this research paper is to explore the behavioral pattern among individuals in deciding about everyday financial affairs of their life. The study uses the analytical tools of Factor analysis and Discriminant analysis to achieve the objective of the study. The results revealed through Factor analysis explains that the twenty two statements that were used to measure the financial decision making behavior of individuals were reduced to eight factors i.e. compulsive shopper, financial awareness, financial botheration, financial advice, concern for future, saving schemes, composed decision and believes in savings. The general disclosure about the financial behavior of sample respondents through the factor analysis explains that the respondents have financial awareness on financial matters and they do not hesitate in taking opinion from financial experts or from member of their family. The respondents also believe in saving and for that they have a propensity to invest in various saving schemes. This also confers their apprehensions for future. However, the respondents regard the financial decision making as getting on to their nerves and for that reason, they mull over these decisions with a composed mind. Further, the Discriminant analysis discloses that out of eight factors, the respondents feel highly satisfied in relation

to financial awareness, financial botheration and believes in saving factors. Thus, the study highlights the significant factors which need to be emphasized concerning the behavioral decision pattern as regards to financial matters. Moreover, it becomes pertinent to give due weightage to all the factors while studying the financial behavioral aspect of individuals.

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