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The Impact of Behavioral Factors on Propensity Toward Indebtedness

Case Study: Indebted customers of Maskan Bank, Tehran province (Geographic regions: East)

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Abstract - **This paper aims to study the impact of behavioral factors on propensity toward indebtedness. Measurement instrument in this study which was administered to the sample was a questionnaire comprising 41 questions.**

Results show that financial literacy, risk behavior, money value and materialism have positive impact on propensity toward indebtedness. Risk perception has a negative impact on propensity toward indebtedness. The relationship between negative emotions caused by indebtedness has negative impact on risk perception but positive impact on risk behavioral. Money values have positive impact on materialism and finally, indebtedness shows negative impact on emotions. The tests reveal a significant difference in the level of debt according to demographic factors.

Key Words: **Financial Behavior, Financial Literacy, Propensity to Indebtedness, Risk Behavior, Materialism**

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1. Introduction

Investors approaches based on the willingness to invest according to market conditions will be influenced by their behavior and reactions. Differences in Behavioral biases and personality traits will determine investors' propensity to indebtedness or their preferences to buy and sell in cash. People leaning effects this selection and it is to be justified according to the theories of behavioral finance. Since the markets and financial investments are formed by people and borrowing and therefore to be indebted is one of the finance tool for investment, treatment of investors is very effective in this case, so the impact of behavioral factors on propensity toward indebtedness is studied in this paper. To select sample firs the city of Tehran divided in three zones of East, Central and West. Among those listed East zone was selected as operational zone for analyzing data's. This sampling is two steps cluster-sampling type. Thus the statistical society this study, are indebted customers of Maskan bank of Tehran, East province. Through Cochran's formula for an unknown and unlimited number of populations, the sample size was calculated:

$$n = \frac{Z^2\, p(1-p)}{d^2}$$

In the above formula by taking into account the unknown number of customers owed the Maskan bank in Tehran (East geographical region), as a population, the probability (P = 0.5) and (p-1) values which is equal to q will consider as 0.5. And taking into account the 95% confidence level and margin of error of 5% of the sample size will be equal to: n=384

Of the 470 questionnaires distributed, 412 were returned (rate of return of 88%) and 384 numbers of the most completed were analyzed.

2. Theoretical basis

During recent decades, the financial sector has entered the era of new thought that some of the assumptions of modern financial economics are criticized. One of these assumptions is investors' rationality that is seriously challenged and numerous studies have been devoted to the study of this issue. New theories are as new tools to deal with issues and problems that the old theories were unable to respond to them. In this regard, behavioral finance theories were responsible for some of the crises that were not justified by traditional financial theories.

Flores and Vieira (2014), argue that societies are experiencing a period of compulsory materialism that contribute significantly to the social and the personal liability. Dynan and Cohen (2007), argue that in a world without financial constraints, families have the freedom to use their desired based on the expected useful life resources, interest and personal needs and preferences of their choice. However, the consequences of the attitudes and choices of new model of "consumer extremism" should be examined that could create a scenario of default (non-payment of debt) and debt. Research notes into unemployment, uncontrolled spending and purchases on installment as the causes of default and non-payment of debt. Dynan and Kohn (2007) state that using credit cards instead of cash can increase family debt due to the commitment established, which in most cases, is a long-term one. Since all financial investments are needed financing, as a result the method and source of funds required for capital investments is important. At the organizational level, financing is done in two ways: shareholders Cash provided and borrowing and debt. It is important that the rate of return on loans resulting from use of loans should be higher than the cost of capital financing till borrowing be justified; Otherwise borrowing can lead to inability to pay debts and bankruptcy as a result. As previously mentioned since either at enterprise level or at the individual level it is ultimately people who make financial decisions, so in this study propensity toward indebtedness investigated on individual level. As is clear different people have different personality characteristics and behavior, this differences are effective in the types of their decisions, including financial decisions. Considering this scenario, understanding behavioral factors linked with the issue of personal liability. In this study six behavioral factors are considered as affecting factors on debt, therefore, research conceptual model is presented, using the research model of Flores and Vieira (2014). In this model, behavioral factors are divided into the following categories: Emotion, financial literacy, materialism, valuing the money, risk perception and risk behavior; and The impact of financial literacy, risk perception, risk behavior, materialism, money value on the tendency to indebtedness, the influence of emotions on risk perception and risk behavior, the impact of valuing money on materialism and the impact of indebtedness on Emotion also been investigated. Indebtedness In this study is not considered clearly positive nor clearly negative factor, because if people can afford to pay the debit and if using it in investments if the Return on investment is higher than the interest rate, In this case being in debt can be considered a positive factor and otherwise negative factor.

3. Hypothesis

1) Financial literacy has a significant impact on propensity to indebtedness.
2) Risk perception has a significant impact on propensity to indebtedness.
3) Risk behavior has a significant impact on propensity to indebtedness.
4) Debt has a significant impact on emotions.
Materialism has a significant impact on propensity to indebtedness.
5) Value for money has a significant impact on propensity to indebtedness.
6) Emotion has significant impact on risk perception.
7) Emotion has significant impact on risk behavior.
8) Value for money has significant impact on materialism.

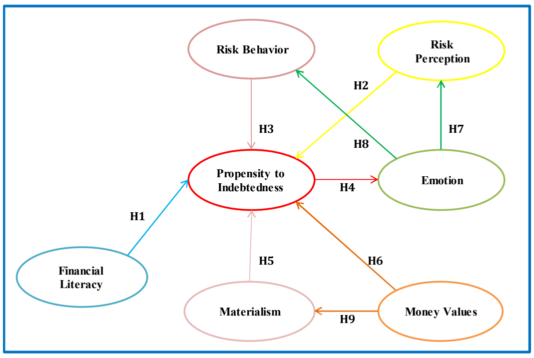

Figure1. The conceptual model derived from flora and Vieira, 2014

4. Definition of terms and variables

4.1. Debt

Debt occurs when you're borrowed money or checks that have not yet been paid. When you're borrowing money from a lender, you are the person or company that owe. This is money that you must repay it with an additional charge as a benefit. Debit may be for services received but not yet paid for it, Such as bills of services including gas, electricity, telephone and internet, etc. Ferreira (2006) shows that, depending on the level of debt, individuals may commit a significant portion of their income. Gathergood (2011) stresses that studies should examine the factors that influence the increase in debt and, consequently, that cause individual indebtedness. According to Davies and Lea (1995), the research on aspects that drive indebtedness is highlighted in Katona (1975). For this author, there are three reasons that explain why individuals spend more than they earn: (i) low in- come, such that they cannot even cover essential expenses; (ii) high income, combined with a strong desire to spend; and (iii) a lack of desire to save (regardless of income). The importance of the Katonah study lies in its discussion of the origin of credit problems, evaluating not only economic factors but also psychological and behavioral ones. Following this perspective, Vitt (2004) notes that consumer financial decisions involve a number of psychological, physical, and social values, often rooted in emotion.

4.2. Money values

Valuing the money, the importance that people pay to have it interpreted it as a positive or negative factor. Two broad dimensions to the concept of money have been identified: positive dimension with classifications such as social development, prestige and credibility, utilitarianism, Stability and pleasure. Negative dimension that including social inequality, domination, segregation and separation, conflict and fear and anxiety.

4.3. Materialism

Materialism associated with consumption, and it can be defined as follows: "The importance of having or obtaining material goods to achieve life goals and desired state". People relate extreme materialism to quest for dignity and social status.

4.4. Risk

The overall concept of risk is the possibility of deviation from the desired result or state. The general definition of risk perception is subjective judgment about the characteristics and severity of risk. Risk perception is an essential component of financial and other decisions associated with risk behaviors. Risk behavior is willing to take risks. Risk behavior is effective on decision making.

4.5. Financial Literacy

Financial literacy is a set of information that helps people with money management, financial grants and loans, short-term and long-term savings and investments to afford their bills and be able to manage their income. In total, the importance of financial literacy is providing protection for investors, because people in general are influenced by their financial decisions, so financial literacy seeks to improve the capacity of individuals to understand the risk of financial matters.

4.6. Emotion

Emotion depends on a person's ability to express emotions (positive and negative) when handling financial decisions. Emotions can be classified into three groups: the underlying emotions, primary emotions and social emotions. Underlying feelings might be sustainable and affect how to express basic emotions, such as coolness and incuriosity. Primary emotions are those which are easily identifiable, such as anger and fear. Secondary or social emotions, are the ones which affected socially and by culture; such as jealousy, embarrassment and pride.

5. Research methodology

Research methods are the means of achieving the reality. In each study, the researcher attempts to select the most appropriate method which is more accurate than other methods, to discover rules, and facts. Therefore, understanding the facts and determine the relations between them requires the selection of appropriate research method. Scientific research based on objective divided into two categories: basic and applied. The research method of this paper is objectively applied and from data collection point of view is descriptive survey traversal approach. In this study, to collect information and data, the library and field method are used. In the library method section, the theoretical basis and literature mostly taken of numerous articles and have been collected from the Internet, as well as Persian and Latin books and journals. In the field method section, in order to collect the required data, the questionnaire is used. Standard questionnaire is used in this study, and with the closed questions derived from research conducted by Flores and Vieira (2014). In the present study descriptive and inferential statistics were used to analyze the data by using SPSS and LISREL software. For descriptive statistics, by using the features such as frequency and percentage for data analyzing, diagrams were draw. For Inferential statistics, Cronbach's alpha used for testing reliability of the questionnaire, the Kolmogorov-Smirnov used for testing normality of the distribution of research data, the path analysis model used to confirm or reject hypotheses, to assess the validity of construct confirmatory factor analysis was used, and to investigate the role of demographic variables in the main variables according to the normal distribution of research data, independent T-test and analysis of variance (ANOVA) was used.

A five-point Likert scale for seven factors of the questionnaire is used- strongly disagree to strongly agree such as table 1 below:

Table1. Five-point Likert scale

strongly disagree	disagree	No idea	agree	strongly agree
1	2	3	4	5

The questionnaire consists of two main sections that include:

A) General Questions: This section of the questionnaire is about demographic characteristics of respondents including gender, age, education, occupation and income levels

B) Questions related to the variables: In general, the questionnaire is divided in seven sections and each section is used to measure one of the attributes (variables). According to the studied variables 41 five-point questions point include seven sub-questions have been developed. Variables and relevant questions are presented in Table 2.

Table 2: Questionnaire composition

Factor	Number of questions	Variables	Cronbach's alpha
Financial literacy	6	1-6	0.877
Risk perception	5	7-11	0.824
Risk behavior	6	12-17	0.897
emotion	6	18-23	0.892
materialism	6	24-29	0.868
indebtedness	7	30-36	0.874
Money values	5	37-41	0.860

6. Conclusion

In descriptive statistics, statistical data on the distribution of demographic and other characteristics of respondents to the questionnaire are investigated. In this section, frequency tables and statistical graphs are used to describe the demographic characteristics of respondents. In inferential statistics, confirmatory factor analysis and path analysis was conducted by LISREL and in this way hypotheses have been examined. In the following fist descriptive statistics and then statistical results will be studied:

6.1. General characteristics of respondents

According to the results 68.5% of the respondents were male and 31 percent were female. 8% of respondents aged less than 25 years, 18.5 percent were between 25 to 30 years, 14.6 percent were between 30 to 35 years, 27.9 percent were 35 to 40 years and 29.4 percent were 40 and over. 18.8% of respondents had associate's degrees and lower, 57.8 percent were bachelors, 20.3 percent had master's, and

2.3 percent of them had Ph.Ds. 11.5 percent of respondents had incomes of less than 3000 USD per month, 33.6 percent had 3000 to 7000 USD, 34.1% had 7000 to 1million USD and 20.8% of them had earning more than 1 million USD per month. 24% of respondents worked in the public sector, 33.6 percent worked in private sector, and 41.1 percent sector were active in the free section.

6.2. The results of the hypothesis tests

Hypothesis1: Financial literacy has a significant impact on propensity to indebtedness.

According to table 3 Standardized coefficient between the two variables was 0.49. Significance coefficient of 6.30 between these two variables (greater than 1.96) showed that this relationship is significant. Therefore, the null hypothesis is rejected and hypothesis 1 was confirmed. It means that financial literacy has significant positive effect on propensity toward indebtedness. Factors contained in the questionnaire in this study to measure financial literacy, such as note-taking and controlling personal expenses, setting financial goals affecting financial management, following a weekly or monthly budget or spending plan and manage the timely payment of bills will increase the propensity to indebtedness.

Hypothesis2: Risk perception has a significant impact on propensity to indebtedness.

According to table 3 Standardized coefficient between the two variables was -0.62. Significance coefficient of -6.02 between these two variables (less than -1.96) showed that this relationship is significant. Therefore, the null hypothesis is rejected and hypothesis 1 was confirmed. This means that risk perception has significant negative impact on tendency to indebtedness. Since in this study propensity toward indebtedness is considered as a risky behavior, and risk perception is inversely related with risk-taking, so the relationship between these two variables is negative.

Hypothesis3: Risk behavior has a significant impact on propensity to indebtedness.

According to table 3 Standardized coefficient between the two variables was 0.54. Significance coefficient of 3.53 between these two variables (greater than 1.96) showed that this relationship is significant. Therefore, the null hypothesis is rejected and hypothesis 1 was confirmed. This means that risk behavior has significant positive impact on tendency to indebtedness. Since, in this study propensity toward indebtedness is considered as a risky behavior, so there is a direct relationship between two variables.

Hypothesis4: Debt has a significant impact on emotions.

According to table 3 Standardized coefficient between the two variables was -0.33. Significance coefficient of -16.89 between these two variables (less than -1.96) showed that this relationship is significant. Therefore, the null hypothesis is rejected and hypothesis 1 was confirmed. This means that indebtedness has significant negative impact on emotions. Hence people who have negative emotions about debts reduce their debts to feel better. So more negative emotions experience about debt makes people pay more attention to reduce their indebtedness, so there is an inverse relationship between emotions and indebtedness.

Hypothesis5: Materialism has a significant impact on propensity to indebtedness.

According to table 3 Standardized coefficient between the two variables was 0.47. Significance coefficient of 2.66 between these two variables (greater than 1.96) showed that this relationship is significant. Therefore, the null hypothesis is rejected and hypothesis 1 was confirmed. This means that materialism has significant positive impact on tendency to indebtedness. In general, the addiction to material goods (high materialism), brings sense of wealth and quality of life, so people come to the conclusion that the more assets to obtain brings a higher quality of life and satisfaction and thus tends to have higher debt.

Hypothesis6: Value for money has a significant impact on propensity to indebtedness.

According to table 3 Standardized coefficient between the two variables was 0.47. Significance coefficient of 2.37 between these two variables (greater than 1.96) showed that this relationship is significant. Therefore, the null hypothesis is rejected and hypothesis 1 was confirmed. This means that money value has significant positive impact on tendency to indebtedness. Therefore people who care about money, and seek social recognition through higher consumption levels, showed more tendency to being in debt.

Hypothesis7: Emotion has significant impact on risk perception.

According to table 3 Standardized coefficient between the two variables was 0.40. Significance coefficient of 16.09 between these two variables (greater than 1.96) showed that this relationship is significant. Therefore, the null hypothesis is rejected and hypothesis 1 was confirmed. This means that emotion has significant positive impact on risk perception. Hence people who feel bad by indebtedness, have lower tendency to it.

Hypothesis8: Emotion has significant impact on risk behavior.

According to table 3 Standardized coefficient between the two variables was -0.57. Significance coefficient of -13.04 between these two variables (less than -1.96) showed that this relationship is significant. Therefore, the null hypothesis is rejected and hypothesis 1 was confirmed. This means that emotion has significant negative impact on risk behavior. Namely when people as a result of indebtedness have negative feelings such as getting angry or embarrassed, and whose sleep, diet or relationships with friends and family are affected, have less tendency to debts which required having risk behavior.

Hypothesis9: Value for money has significant impact on materialism.

According to table 3 Standardized coefficient between the two variables was 0.70. Significance coefficient of 18.93 between these two variables (greater than 1.96) showed that this relationship is significant. Therefore, the null hypothesis is rejected and hypothesis 1 was confirmed. This means that valuing money has significant positive impact on materialism.

Table3: Standard coefficients and significant numbers results

independent variable	dependent variable	Standard coefficient	Significance coefficient	Hypothesis result
Financial literacy	Propensity to indebtedness	0.49	**6.30**	confirmed
Risk perception	Propensity to indebtedness	-0.62	**-6.02**	confirmed
Risk behavior	Propensity to indebtedness	0.54	**3.53**	confirmed
debt	emotion	-0.33	**-16.89**	confirmed
materialism	Propensity to indebtedness	0.47	**2.66**	confirmed
Money value	Propensity to indebtedness	0.47	**2.37**	confirmed
emotion	Risk perception	0.40	**16.09**	confirmed
emotion	Risk behavior	-0.57	**-13.04**	confirmed
Money value	materialism	0.70	**18.93**	confirmed

7. Final Considerations

It is recommended that people enjoy the benefits of debt more efficiently by enhancing financial literacy and by control and better management of expenses and their spending and by following a weekly or monthly spending plan pay their debts on time. Since the richness is important for some people, because they think money is associated with higher social status for them, so show willingness to materialism and consumption and this makes them indebted, To improve their understanding of spiritual values, be less inclined to materialism and thus buy less goods and commodities, and being less indebted. People can create peace margin for their emotions by better costs management, commensurate with their income. Negative emotions arising from the debts improve risk perception and risk behavior and tendency to indebtedness will be reduced as a result, so it is recommended that people by control over their emotions in different situations depending on their financial situation, make better decisions about their being in debt or not. And if it is necessary to debt with respect to the appropriate payment schedule avoid negative emotion that caused by non-payment of debt.

Finally, it is important to understand individual behavior, which could lead to the development of actions to prevent indebtedness and assist defaulters. From an organizational viewpoint, companies can identify behavioral characteristics of executive managers and decision-makers in finance and investment affairs of company so benefit from the participation of managers who can make benefit from the advantages of debt and borrowing arrangements.

Table 4: Questionnaire

Row	Phrases	strongly agree	agree	No idea	disagree	strongly disagree	Mean
Financial literacy							
1	I take notes and control all personal expenses (e.g., worksheet of income and monthly expenses, financial notebook)						3.81
2	I set financial goals that influence financial management (e.g., save a specific amount in a year, avoid overdrafts)						
3	I follow a budget or a weekly or monthly expense plan						
4	I am satisfied of my method to control finances						
5	I pay my bills without any delay						
6	In order to avoid finance charges, I pay installments on time						
Risk perception							
7	I save money every month						3.27
8	I save to buy more expensive products						
9	I have saving for unexpected events Such as illness or unemployment						
10	I compare prices when buying something.						
11	I analyze personal finances in depth before making any major purchase						
Risk behavior							
12	I spend a great amount of money on the lottery						1.72
13	I accept being a guarantor for someone						
14	I spend money impulsively, without thinking of the consequences						
15	I invest in businesses that have great chances of not working well						
16	I lend a great proportion of personal income to a friend or relative						
17	I prefer installment purchase rather than saving and buying in cash						

Table 4: (Continued)

Row	Phrases	strongly agree	agree	No idea	disagree	strongly disagree	Mean
Emotion: When I owe…							
18	I would feel ashamed						3.41
19	I would feel nervous						
20	I would feel depressed						
21	My sleep would be affected						
22	My dietary habits would be affected						
23	My relations with my family and friends would be harmed						
Materialism							
24	I admire people who possess expensive houses, cars, and clothes						3.48
25	I like to spend money on expensive things						
26	Buying gives me pleasure						
27	I like to possess things to impress other people						
28	I like to have a lot of luxury in my life						
29	It bothers me when I cannot buy everything I want						
Debt							
30	It is not correct to spend more money than I make						3.88
31	I know exactly how much I owe in stores, or to the bank						
32	I think it is normal for people to be in debt to pay their bills						
33	I would rather buy in installments than to wait to gather money to buy in cash						
34	It is important to know how to control the expenses in my house						
35	I would rather pay in installments even if the total is more expensive						
36	There is no problem to have a debt if I know I can pay it						
Money values							
37	Money helps me to be happy						3.37
38	The one who has money also has authority over others						
39	Spiritual rewards are more important than money						
40	Money builds a better place						
41	I will be completely realized when I reach the situation I set for myself						

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