IS THERE A RELATIONSHIP BETWEEN FINANCIAL BEHAVIOUR AND FINANCIAL POSITION? EVIDENCE FROM BOSNIA AND HERZEGOVINA

Jasmina OKIČIĆ
Faculty of Economics, University of Tuzla, Univerzitetska 8, 75000 Tuzla, BiH
jasmina.okicic@untz.ba
Nahid UNKIĆ
Herceg d.o.o., ul. Industrijska bb,75350 Srebrenik, BiH
nahidunkic@live.com

Abstract
The main goal of this paper is to empirically analyse the relationship between financial behavior and financial position of individuals. To gain a better understanding of that relationship we primarily use structural equation modeling. The research findings have revealed a statistically - significant impact of savings habits and responsible financial behaviour on financial position of an individual. Therefore, and for policy purposes, these results may produce useful pieces of information which might be helpful in the creation of tailored-made training programs which would promote good practises of financial behavior and savings habits.

Key words: *financial behavior, financial position, structural equation modeling.*

JEL Classification: *C3, C83, D14*

I. INTRODUCTION

Each individual makes different financial decisions every day. Regardless of age, income and family situation, we all use certain goods and services. These decisions involve choosing between current spending and saving for the future. As a result of financial decisions, people find themselves in a financial position that can be good (have no credit or have an acceptable level of credit, for their amount of income) or bad (have credit beyond their ability to pay, or who are indebted). Individuals who are prone to intuitive or emotional decision-making have a higher risk of making the wrong decisions, as opposed to rational decision-makers. Indebtedness is one of the major problems affecting both debtors and financial institutions and even the entire society. It can also be a major contributing factor to poverty, especially in low-income or retirement households, as well as single parents with children.

To date, a considerable body of research has sought to understand the concept of financial position in general (Zakaria, Jaafar & Marican, 2012; Gerrans, Speelman & Campitelli, 2013; DeVaney & Lytton, 1995; D'Alessio i Iezzi, 2013; Dwyer, 2011; etc). However, when it comes to examining the relationship between financial position and financial behavior of individuals from transitional countries such as Bosnia and Herzegovina (BiH), there is a certain research gap. In that respect, this study should result in responses to the following question: Is there a relationship between financial position and financial behavior of individuals? The main goal of this paper is to empirically analyse the relationship between financial behavior and financial position of individuals from Bosnia and Herzegovina (BiH). Having in mind the above said, the central research hypothesis shall be as follows: Financial position may be driven by financial behavior.

A possible limitation of this study is the small sample that limits the generalization of the findings. Furthermore, there are many other variables that affect financial position, not only financial behavior, and therefore another limitation refers to the problem of omitted variables.

The paper is expected to produce useful pieces of information which might be helpful for decision-makers in the process of creating specific financial education programs tailored for young people and aimed at preventing their potential over-indebtedness. The paper is organized as follows. After the introduction, part two gives a short overview of the theoretical framework that is relevant to the main objective of the paper. Part three outlines the data and research methodology. Part four is the centre of the paper and contains analysis and discussion of the original empirical results. The last part contains some final remarks and conclusions.

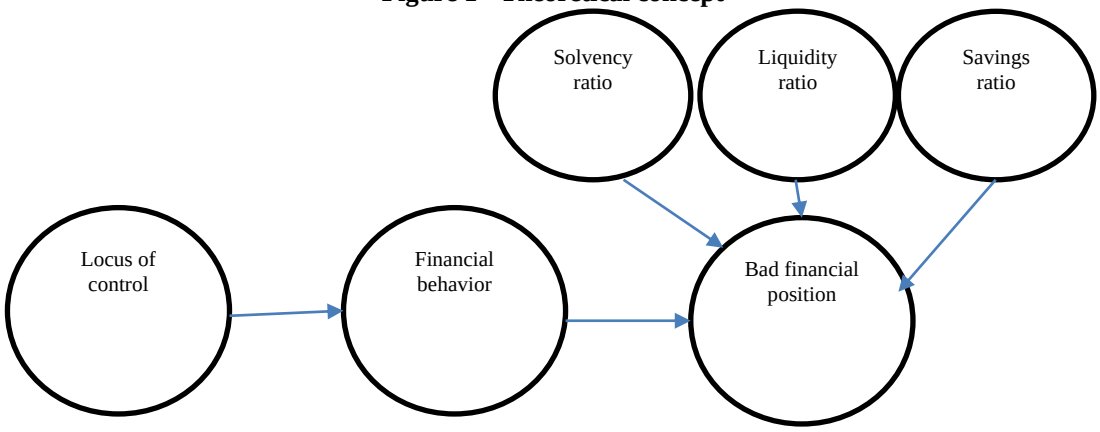
II. THEORETICAL FRAMEWORK

So far, the financial position of users of financial services has been addressed by many authors from various aspects. Thus, Zakaria, Jaafar, and Marican (2012) found that the most dominant determinant of good financial position was related to responsible financial behavior, not to income. Gerrans, Speelman, and Campitelli (2013) found that financial knowledge influences, more than financial position, men's satisfaction with their finances, while women's financial position provides a greater degree of satisfaction with their finances. Based on review of the relevant literature we can see that the focus of most authors' research was generally poor financial position, that is, indebted individuals. Thus, DeVaney and Lytton (1995) dealt with defining and measuring household insolvency. They gave an overview of insolvency forecasting models as well as financial

ratios to identify debt. Also, D'Alessio and Iezzi (2013) have been concerned with defining debt and how it is measured. They tried to apply the existing debt indicators to household data from Italy, concluding that there was a small degree of overlap between the debt indicators. The best indicator of debt is the one that says that a household is over indebted if debt repayments bring household income below the poverty line. Dwyer (2011) observed the relationship between independence, self-esteem, and over-indebtedness in youth. The results of this indicate that younger people are more prone to debt. Dwyer points out that young people use debt as superiority, to strengthen their self-esteem and to help them face the future. While growing up, they consider debt as an investment rather than a burden. On the other hand, Mann (2011) investigated the impact of debt on elders and their retirement decisions. As it could been expected, the survey results indicate that debt has a negative effect on retirement opportunities. In his paper, Guerin (2012) reviewed research on the impact of financial literacy on debt. He came to the conclusion that indebted persons have their own methods for risk assessment, debt and savings hierarchy, planning and calculations, using logical standards. In other words, indebted persons are not financially illiterate, but have a different approach to decision making.

The central issue in our study is the relationship between locus of control, financial behavior and financial position. Besides the effect of financial behavior, we will also estimate the effect of solvency, liquidity and savings on individual financial position. The theoretical concept is presented in Figure 1.

Figure 1 - Theoretical concept



Source: Authors' own work

Locus of control is the degree to which people believe that they, as opposed to external forces (beyond their control), have control over the outcome of events in their lives. The concept was developed by Rotter (1966), and has since become an aspect of personality studies. According to Carlson (2007), individuals with a strong internal locus of control believe events in their life derive primarily from their own actions: for example, when receiving exam results, people with an internal locus of control tend to praise or blame themselves and their abilities. People with a strong external locus of control tend to praise or blame external factors.

Financial behaviour can be seen as encompassing four broad areas, namely, saving, spending, borrowing and investment (Sudindra & Naidu, 2018). As a result individuals can find themselves in different financial position. According to Klapoor, Dlabaj and Huges (2007) financial position is the relationship between his total assets, liabilities and/or capital. According to Anioala-Mikolajczak (2016), financial position can be classified as good or bad, according to the perceptual, factual and administrative aspects. In our research focus is on perceptual aspect of financial position. That is why we have also included following ratios solvency ratio, as the proportion of a debt free asset and an ability to pay debts, liquidity ratio and savings ratio.

III. METHODOLOGY

The instrument used for measuring financial position and control locus was primarily based on the work of Zakaria, Jaafar and Marican (2012). When it comes to instrument used for measuring responsible financial behaviour, it was primarily based on the work of Flores and Veieria (2014). Participants were recruited by e-mail. Participation in the study was voluntary and anonymous. The research was conducted during the last quarter of 2019. Table 1 gives an overview of some basic characteristics of the sample.

Table 1. Overview of basic characteristics of the sample

Characteristic		Frequency	Per cent
Sex	Male	48	44.4
	Female	60	55.6
Living enviroment	Urban	70	64.8
	Rural	38	35.2
Education	Completed secondary school	29	26.85
	Completed tertiary education	79	73.15

Source: Authors' own work

The youngest respondent from our sample is 23 years old, and the oldest is 61 years old. The average age is 35.42 years with a standard deviation of 8.21. An average number of household members is 2.41 with a standard deviation of 1.30. When it comes to household characteristics, the average number of household members is 3.29 with a standard deviation of 0.99. The average number of employed household members is 1.89 with a standard deviation of .65.

In this research following variables were used: financial position, financial ratios, responsible financial behaviour, and locus of control. In order to calculate financial ratios, we used formulas presented in the following table.

Table 2. Ratios

Ratio	*Formula*
Solvency ratio	$Net\ worth / Total\ asset$
Liquidity ratio	$Liquid\ asset / Monthly\ expenses$
Savings ratio	$Cash\ surpluss / Gross\ Income$

Source: Kapoor, Dlabaj & Hughes (2007)

Table 3 shows all variables used in each scale, with the respective means, and standard deviations. It is important to highlight that the scales used in this study are five-point Likert scales.

Table 3. Scales used, variables, means and standard deviations

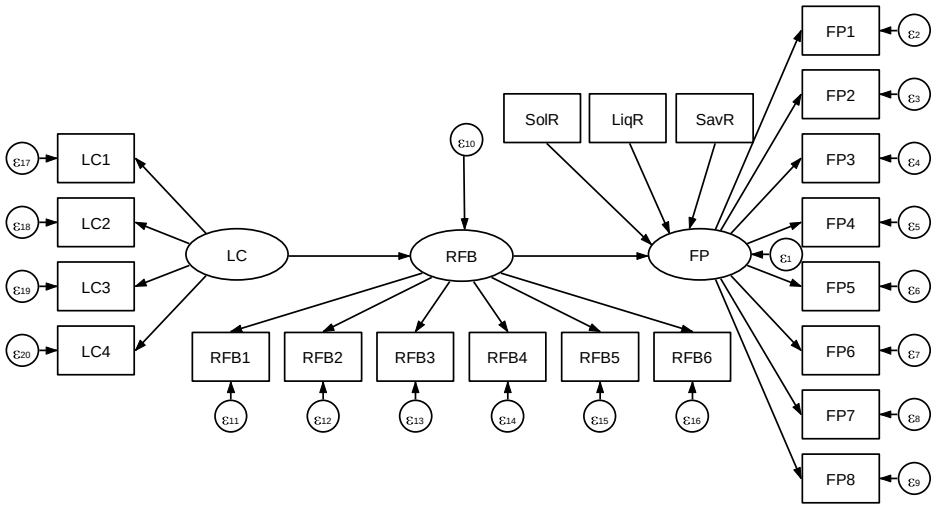
LATENT VARIABLE	CODE	ITEM	MEAN	ST. DEV.
BAD FINANCIAL POSITION	FP1	I do not have enough money for doctor, dentist, or medicine.	1.96	1.24
	FP2	I cannot afford to buy new shoes or clothes	1.73	1.08
	FP3	I cannot afford to pay for utilities (*e.g.* electricity, gas bills)	1.75	1.10
	FP4	I cannot afford to keep the car running	1.83	1.10
	FP5	I do not have enough money to pay all my bills	2.07	1.10
	FP6	I spent more than the money that I had	2.08	1.27
	FP7	I had to cut living expenses	2.76	1.21
	FP8	I had financial troubles because I did not have enough money	2.46	1.49
RESPONSIBLE FINANCIAL BEHAVIOUR	RFB1	I take notes and control all personal expenses	3.16	1.49
	RFB2	I set financial goals that influence money I have at my disposal (*e.g.*, save a specific amount in a year, avoid overdrafts)	3.78	1.16
	RFB3	I follow a budget (pocket money) or a weekly or monthly expense plan	3.88	1.14
	RFB4	I am satisfied with my method to control finances	3.73	1.19
	RFB5	I pay my bills without any delay	4.42	.88
	RFB6	In order to avoid finance charges, I pay instalments on time	4.61	.76
LOCUS OF CONTROL	LC1	When I make plans, I am almost certain that I can make them work	3.78	.99
	LC2	What happens to me is my own doing	3.62	1.04
	LC3	Doing things the right way depends upon ability, luck has nothing to do with it	3.60	1.10
	LC4	Many of the unhappy things in people's lives are their own responsibility	3.34	.99

Source: Authors' own work based on scales developed by ZAKARIA, JAAFAR & MARICAN (2012) AND FLORES & VEIERIA (2014)

The data in the previous table present the used latent variables, their codes, items, as well as the results of the mean and standard deviation. When observing financial position, the highest mean was registered for the FP7, i.e. cutting living expenses. When it comes to responsible financial behavior, the highest mean was registered for the RFB6, i.e. paying instalments on time. When observing the locus of control, the highest mean was registered for LC1, i.e. the importance of certainty in making plans.

Model estimation and validation employ structural equation modelling. Prior that, for construction and validation of the latent variables, confirmatory factor analysis was used. Figure 2 illustrates proposed structural model.

Figure 2. Proposed structural model



Note: FP= bad financial position; RFB = responsible financial behavior; LC=locus of control, SoL = solvency ratio; LiqR = liquidity ratio; SavR = savings ratio.

Source: Authors' own work

IV. EMPIRICAL RESULTS AND DISCUSSION

Before going any further with the analysis, it is necessary to conduct a reliability analysis, i.e. to examine the reliability of used instruments. First, Cronbach's alpha, α (or coefficient alpha) was used (Table 4).

Table 4. Scale statistics

Measure	N	Number of items	Cronbach's Alpha
Bad financial position	108	8	0.8358
Responsible financial behavior	108	6	0.7875
Locus of control	108	4	0.5646

Source: Author's own work

Cronbach's alpha ranges from 0 to 1, with values of .60 to .70 deemed the lower limit of acceptability (Hair, Black, Babin & Anderson, 2014). All scales, except locus control, had acceptable levels of reliability. For construction and validation of the latent variables, confirmatory factor analysis needs to be used. The convergent validity of each latent variable is assessed by observing the following fit indices of the model: root mean square error of approximation (RMSEA), comparative fit index (CFI) and Tucker–Lewis index (TLI) and standardized root mean squared residual (SRMR). Table 5 illustrates results of validation of latent variables.

Table 5. Validation of latent variables

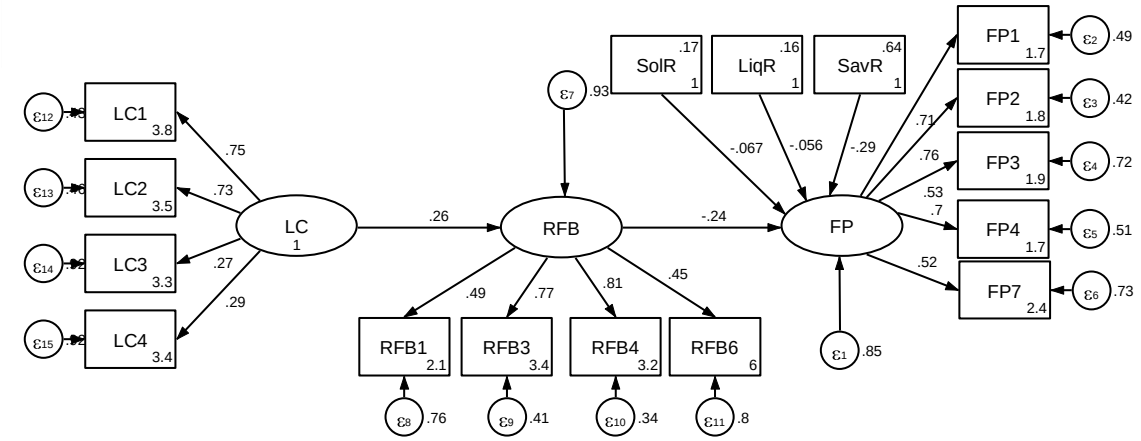
LATENT VARIABLE	INITIAL ITEMS	FINAL ITEMS	ADJUSTMENT INDEX
Bad financial position	FP1, FP2, FP3, FP4, FP5, FP6, FP7, FP8	FP1, FP2, FP3, FP4, FP7	RMSEA = 0.000 , CFI = 1.000, TLI = 1.011, SRMR = 0.027
RESPONSIBLE FINANCIAL BEHAVIOR	RFB1, RFB2, RFB3, RFB4, RFB5, RFB6	RFB1, RFB3, RFB4, RFB6	RMSEA = 0.080 , CFI = 0.985, TLI = 0.955, SRMR = 0.027

Locus of control	LC1, LC2, LC3, LC4	LC1, LC2, LC3, LC4	RMSEA = 0.000 , CFI = 1.000, TLI = 1.035, SRMR = 0.025

Source: Authors' own work

It has been suggested that RMSEA values less than 0.05 are good, values between 0.05 and 0.08 are acceptable, values between 0.08 and 0.1 are marginal, and values greater than 0.1 are poor (Fabrigar et al., 1999). The CFI value close to 0.90, and TLI over 0.90, show a relatively good fit (Bentler, 1990). When it comes to SRMR, a value less than 0.08 is generally considered a good fit (Hu & Bentler, 1999). Results presented in Table 3 are suggesting a good model fit. Next step in the analysis is to test the relationship between financial position and responsible financial behavior by using structural equation modelling. To estimate the model, we used structural equation modelling procedures using STATA version 13. The final model obtained after modification is shown in Figure 3.

Figure 3. Estimated model



Note: FP= bad financial position; RFB = responsible financial behavior; LC=locus of control, SoL = solvency ratio; LiqR = liquidity ratio; SavR = savings ratio.

Source: Authors' own work

Table 6 illustrates significance of relations of the final proposed model, as well as fit indices.

Table 6. Significance of relations of the final proposed model and fit indices

PATH	STANDARDIZED PARAMETERS			R2	R2	FIT INDICES			
	B	SE	P-VALUE			RMSEA	CFI	TLI	SRMR
RESPONSIBLE FINANCIAL BEHAVIOUR → BAD FINANCIAL POSITION	-.239	.117	.042	.148	.757	.047	.922	.908	.080
SOLVENCY RATIO → BAD FINANCIAL POSITION	-.067	.105	.522						
LIQUIDITY RATIO → BAD FINANCIAL POSITION	-.056	.106	.600						
SAVINGS RATIO → BAD FINANCIAL POSITION	-.287	.100	.004						
LOCUS OF CONTROL → RESPONSIBLE FINANCIAL BEHAVIOUR POSITION	.261	.144	.069	.068					

Source: Authors' own work

Based on the results presented in Table 6, it is reasonable to claim the statistically significant impact of financial behaviour and savings ratio on financial position. The nature of these relationships is inverse, meaning, that responsible financial behaviour and good savings habits may lead to a better financial position. These findings are in accordance with the results of Zakaria, Jaafar and Marican (2012) who showed that the most dominant determinant of having a good financial position is responsible financial behaviour.

V. CONCLUSION

The analysis results have revealed that an individual financial position is driven by responsible financial behaviour as well as their savings habit. This leads to the conclusion that in order to change or improve our financial position, one needs to change its financial behaviour. For policy purposes, these results may produce useful pieces of information which might be helpful in the creation of tailored-made training programs which would promote good practises of financial behavior and savings habits. However, this empirical research was conducted on a relatively small sample size and the limited territory of Bosnia and Herzegovina. Hence it, in order to obtain reliable and more relevant data regarding the relationship between financial behaviour and financial position, research should include a larger number of respondents.

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