

## THE IMPACT OF FINANCIAL POPULATION EDUCATION ON MANAGING PERSONAL FINANCES

Branko Matić, Ph.D.<sup>1</sup>, Hrvoje Serdarušić, B.Sc.<sup>2</sup>, Maja Vretenar Cobović<sup>3</sup>, B.Sc.<sup>3</sup>

<sup>1</sup>Faculty of Economics in Osijek, Republic of Croatia, matic@efos.hr

<sup>2</sup>Faculty of Economics in Osijek, Republic of Croatia, hserdar@efos.hr

<sup>3</sup>Polytechnic of Slavonski Brod, Republic of Croatia, mvretenar@vusb.hr

---

### Abstract

In the modern world, one of the core competencies of each individual is the possession of knowledge and skills in the field of finance. Financial education is a set of knowledge in the field of finance are necessary in making short-term and long-term decisions of each individual. The authors expose the results of research related to the financial education of the population and its impact on personal finance management using the survey method, comparative, analytical and synthetic methods. The expected result of the research will be reflected in the segment to determine the correlation between financial education and managing personal finances.

JEL Classification: D14, D31

**Keywords:** financial education, personal finance, financial management

---

### 1. Introduction

Economic development and the prosperity and wealth of a country to a large extent reflect the development of its regions, and the financial strength of the population in this area. Unevenness of economic development often determines the reason of the problems of the population at local and personal level. These problems stem from deficiencies in financial income conditioned economic deterioration of the Eastern Croatia for the national average. This fact largely leads to population significantly changed its attitude towards finances and strengthen the awareness of the need and necessity of rational and better relations in the management of its income and expenditure.

## **2. The impact of financial education programs in Eastern Croatian on managing personal finances - survey results**

Financial involvement as a basic starting point of social participation of every individual is increasingly gaining in importance. Financial exclusion can be defined as the gap between the needs and demands of certain social groups to offer basic financial services. It relates to the issue of participation of individuals in the financial sector through the difficulties in obtaining and using financial services. The reasons for the total or increased financial exclusion of the population is possible to seek at their marginal participation in the financial system. The reasons for this are insufficient personal income and household income, changed circumstances on the income at a given time (loss of part or total income) or insufficient knowledge of financial principles, low education in the field of personal finance and attitudes of individuals with regard to personal finance (Matic, 2010,93). The relationship of the individual to personal finances in substantially reflects its level of financial education. The authors present and analyze the results of the survey conducted on the relationship between the population of Eastern Croatia toward personal finances. Studies have been conducted in order to collect relevant information about the financial potential of the population in Eastern Croatia, the knowledge of their status in the financial system and relative to personal finances, as well as the level of financial education. The obtained results were used to calculate the correlation values between financial education and management of personal finances for individual variables from both survey questionnaires and the same were shown for the time dimension. The first survey was conducted in December 2011 on a representative sample of 1199 respondents, while the second survey conducted in November 2012 on a sample of 444 respondents. The target group included both employed and unemployed, the pensioner population, students and other persons in Eastern Croatia.

The structure and the number of respondents considering to professional qualifications in both surveys is presented in Table 1.

Table 1. Structure and the number of subjects with regard to education

		2011 survey	2012 survey	2011 survey	2012 survey
		Frequency	Frequency	Percent	Percent
Valid	Without finishing school	3	,7	20	1,7
	Finished primary school	7	1,6	103	8,6
	Completed secondary education	288	64,8	748	62,4
	Completed college education	60	13,5	163	13,6
	Completed a university degree	85	19,2	161	13,4
	Others	1	,2	4	,3
	Total	444	100,0	1199	100,0

Source: Authors

An important factor in assessing the financial resources of the population has a level of their financial involvement in the banking system. Financial involvement of the population observed through their participation and use of banking services. Trend links between qualifications and the number of respondents used services in banks is shown in Table 2.

Table 2. Education of respondents and the number of used banking services

Description	Services more banks					
	Use the one services of bank		Use the services of two banks		Use the services more than two banks	
	2011	2012	2011	2012	2011	2012
Without finishing school	1,3%	-	,4%	-	2,0%	-
Finished primary school	9,1%	,4% ↓	2,2%	-	2,0%	16,7% ↑
Completed secondary education	64,0%	66,5% ↑	56,3%	73,3% ↑	46,9%	50,0% ↑
Completed college education	13,7%	12,3% ↓	17,9%	13,3% ↓	16,3%	8,3% ↓
Completed a university degree	11,5%	20,4% ↑	22,7%	13,3% ↓	32,7%	25,0% ↓
Others	,4%	,4%	,4%	-	-	-
Total	100,0%		100,0%		100,0%	




Source: Authors

The level of education of respondents is structured into six categories: without finishing school, finished primary school, completed secondary education, completed college education and university degree, master's degree and doctorate. By analyzing and comparing the data of those surveyed can be concluded that the dominant categories of respondents are with secondary education. Given the completed qualification services of one bank uses 64% of those surveyed by research conducted in 2011, and is a significant slight upward trend of people as service users or customers of one bank in both the research carried out. A significant increase in the number of persons with a secondary education used in your daily life services between the two banks of 17%, which indicates an increase in financial mobility of users of banking services. The cause of this increase is the growing competition as increasing segmentation offers banks seek additional benefits to attract new customers.

Similar conclusions can be made for the remaining subjects of education, and the highest number of respondents uses one or two services of banks regardless of their level of education (Table 2).

Ways of getting an income for respondents are shown in Table 3.

Table 3. Method of receiving wages

Description	Frequency		Percent	
	Survey 2011	Survey 2012	Survey 2011	Survey 2012
Bank account	226	907	53,9	76,1 
Cash	121	129	28,9	10,8 
Partially on bank account & partially in cash	72	156	17,2	13,1 
Total	419	1192	100,0	100,0
Median	1,00	1,00	1,00	1,00
Std. deviation	,760	,704	,760	,704
Variance	,578	,495	,578	,495

Source: Authors

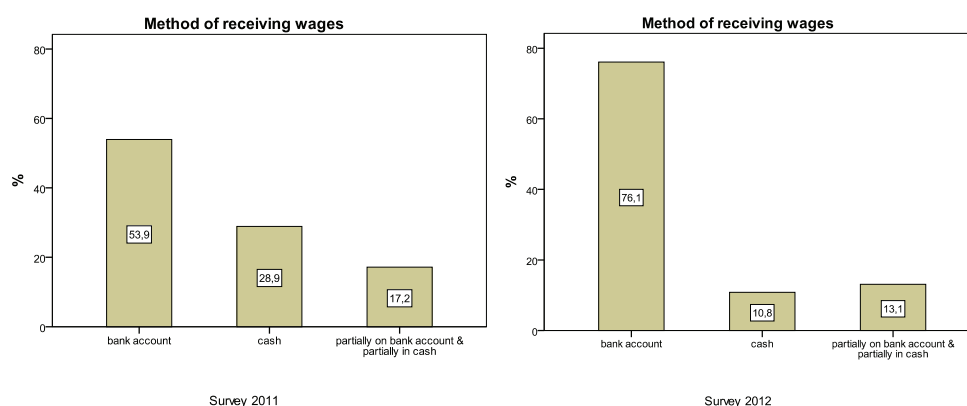
In the total sample, the question about how to receive income in the first survey did not answer 25 respondents (5.63%), while in the second survey did not answer the 7 respondents (0.58%).

In 2011 53.9% of respondents were receiving pay by bank transfer, 28.9% in cash and 17.2% partly through the account, and the rest in cash. If we compare

the data from both surveys, we can see that the apparent trend towards increasing benefits payable through accounts in banks and also observe a significant reduction in payment of wages in cash and a combination of the partial payments through accounts and part in cash. The reasons for this trend are positive developments in the expansion of activities in the fight against the gray economy and the introduction of high penalties for violators.

In the first survey ranking second receiving income takes cash, while another survey ranking second in receiving income respondents are cash and bank accounts together (Table 3).

Ways of getting an income of respondents in both the research carried out are shown Chart 1 and Chart 2.



Observing the graphs it is possible to see an increase in revenue earnings through bank accounts, compared to a cash payment and a mixed payment (part of the payment in the bank account, and part in cash) in the second research conducted in relation to the first survey (Chart 1, Chart 2).

Correlation measures the degree of linear association between certain important variables for both the research is presented in Table 4 and 5. To calculate the correlation is used Pearson correlation coefficient. Pearson's linear correlation coefficient is a measure of the direction and degree of statistical correlation and varies in the range of  $\pm 1$ . If the correlation value  $> 0$  there is a positive linear correlation, if the value is  $< 0$  correlation between the variables is negative. The value of correlation is 0 points means that there is no correlation between the variables tested. The strength of the correlation can be ranked in three levels considering range of values

obtained. The value of correlation in the range from 0 to 0.25 indicates a weak correlation, range 0.25 to 0.64 indicates high intensity correlations, ranging from 0.64 to 1 indicates a strong correlation between the studied variables.

Table 4. Correlation research variables

Survey 2011												
Survey 2011		E	HBA	WRI	SMB	AOB	UO	HBL	FSO	RBR	Mean	Std. Deviation
	E	1									3,50	,849
	HBA	,12*	1								2,25	,863
	WRI	,01	,15**	1							1,63	,760
	SMB	-,04	,12*	-,07	1						1,13	,443
	AOB	-,07	,09	,18**	-,19**	1					1,69	,465
	UO	-,01	,11*	,17**	-,01	,61**	1				2,61	,741
	HBL	,09*	,16**	,15**	-,01	,41**	,57**	1			1,86	,352
	FSO	,03	,01	,09	-,16**	,18**	,33**	,28**	1		2,47	,655
	RBR	,01	,01	,03	-,05	,09	,19**	,30**	,23**	1	1,71	,454
Survey 2012												
Survey 2012		E	HBA	WRI	SMB	AOB	UO	HBL	FSO	RBR	Mean	Std. Deviation
	E	1									3,30	,877
	HBA	,02	1								1,93	1,078
	WRI	-,07*	,28**	1							1,37	,704
	SMB	,26**	-,11**	-,07*	1						2,15	,672
	AOB	-,16**	,13**	,13**	-,23**	1					1,36	,480
	UO	,03	,14**	,09**	-,17**	,47**	1				2,03	,884
	HBL	-,14**	,16**	,11**	-,27**	,42**	,44**	1			1,61	,488
	FSO	,06	,08**	-,03	,08*	,01	,31**	,18**	1		2,16	,729
	RBR	-,04	-,05	,01	-,11**	,09**	,30**	,25**	,26**	1	1,67	,469

\*. Correlation is significant at the 0.05 level (2-tailed).

\*\*. Correlation is significant at the 0.01 level (2-tailed).

E - Education

HBA- Do you have a bank account

WRI - The way of receiving income

SMB - Services more banks

AOB - Approved overdraft in the bank

UO - Using overdrafts

HBL - Do you have a bank loan

FSO- Failure to return and settle the everyday obligations

RBR- Readiness of borrowing for refinancing of old debts

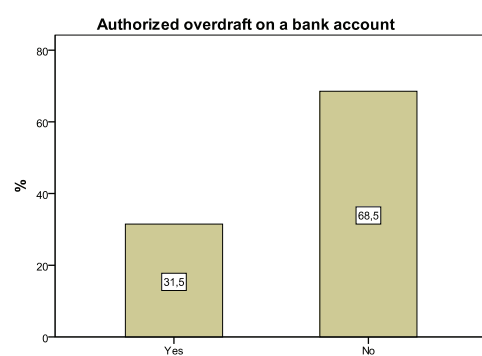
There is a significant positive linear correlation in both surveys between approved and used overdraft bank account with the trend of decline. Also notable is the intermediate level of intensity correlation between the approved and used overdrafts with a loan at the bank.

### 3. Conclusion

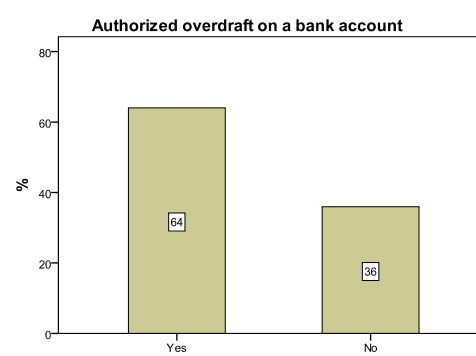
Financial education of the population is increasingly gaining in importance and has become an important factor in choosing financial products in everyday life and in making long-term financial decisions that affect the lives of every individual. The reasons for this statement are the starting point of the fact that there is increasing heterogeneity and complexity offers various financial products and services of credit institutions. The importance of choosing the rational and economically acceptable financial products and services is manifested in its long-term impact on the lives of individuals.

Results of research on the impact of financial education on the financial position and management of personal finances of population in Eastern Croatia indicate the following facts:

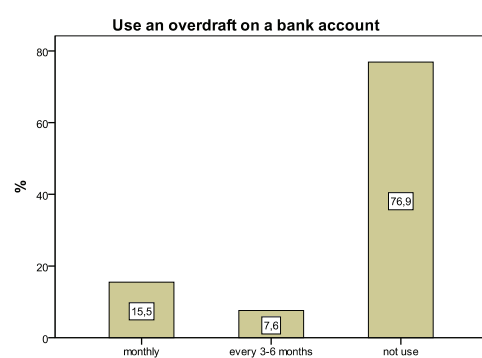
- the changing economic and business conditions is decreasing household indebtedness,
- a trend of using the services of banks increase approvals and increasing use of overdraft bank accounts,
- increasingly growing awareness on the management and care of personal finances, and is driven by the reduction in the level of financial income and disposable personal income.



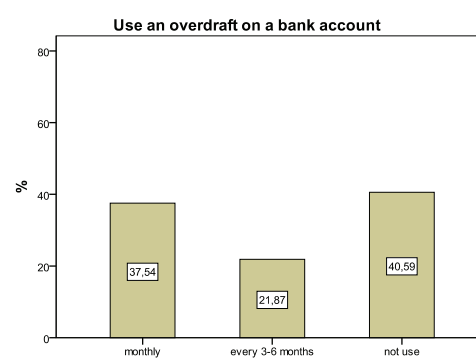
Survey 2011



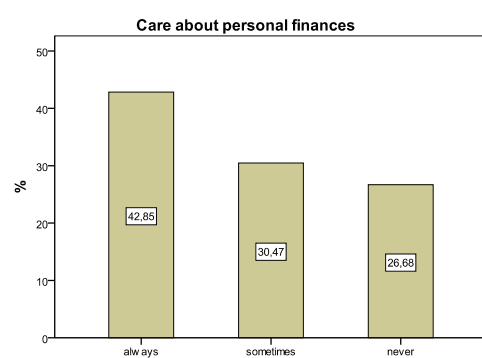
Survey 2012



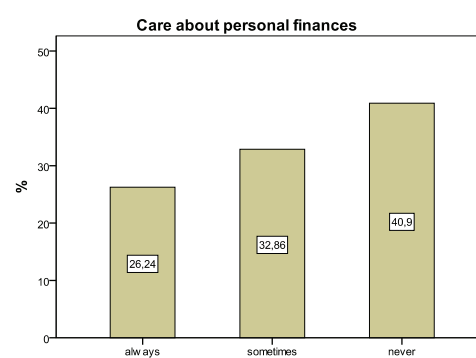
Survey 2011



Survey 2012



Survey 2012



Survey 2011



## References

- Lamza – Maronić, M. & Glavas, J. & Bošnjak S. (2008). Contribution to the Development of the Urban Management Model, *Interdisciplinary Management Research*, Faculty of Economics in Osijek, Croatia, vol. 4, pages 526-541
- Matić, B. (2010). Financijska inkluzija i regionalni razvitak, *Ekonomski fakultet u Osijeku*, Osijek
- Matić, B. (2012). Financijski potencijal stanovništva Istočne Hrvatske, *Ekonomski fakultet u Osijeku*, Osijek
- Matić, B. & Serdarušić, H. (2008). Načini i modeli financiranja regionalnog razvoja – financiranje putem zaklada i fundacija, *Ekonomski fakultet u Osijeku*, Osijek
- Matić, B. & Serdarušić, H. & Vretenar, M. (2010). Financijski marginalno stanovništvo kao faktor ograničenja regionalnog razvoja, *Proceedings of 2nd International Conference "Vallis Aurea" Focus on: Regional Development*, Katalinić, Branko (ur.), Politechnic of Požega, Croatia; DAAAM International Vienna, Austria, Požega; Vienna, pages 829-833
- Matić, B. & Serdarušić, H. & Vretenar, M. (2011). Impact of Financial Crisis on Credit Lending of Croatian Banks, *Interdisciplinary Management Research VII*, Urban Bacher; Dražen Barković; Karl - Heinz Dernoscheg; Maja Lamza - Maronić; Branko Matić; Norbert Pap; Bodo Runzheimer (ur.), Osijek: Josip Juraj Strossmayer University in Osijek, Faculty of Economics in Osijek, Croatia Postgraduate Studies "Management"; Hochschule Pforzheim University, Osijek, pages 598-607
- Matić, B. & Serdarušić, H. & Vretenar, M. (2012). Some Features of the Relationship to Personal Finances within Population of Eastern Croatia, *Interdisciplinary Management Research VIII*, Urban Bacher; Dražen Barković; Karl - Heinz Dernoscheg; Maja Lamza - Maronić; Branko Matić; Norbert Pap; Bodo Runzheimer (ur.), Osijek: Josip Juraj Strossmayer University in Osijek, Faculty of Economics in Osijek, Croatia Postgraduate Studies "Management"; Hochschule Pforzheim University, Osijek, pages 603-612