

# ANALYSIS OF SAVING BEHAVIOR IN ROMANIA, BASED ON THE “FINANCIAL SITUATION OF THE ROMANIAN HOUSEHOLDS” SURVEY

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## Abstract

Emergence from recession and economic recovery in the EU countries are complex processes that imply massive investments aimed at capital (human, physical and financial) productivity increase. The issue of finding financing funds is crucial and the solutions are not many, since they can only come from internal or external savings. External sources are very restrictive and expensive, thus, the chances of economic recovery mostly depend on national savings.

The main sector of a national economy that is saving is the household sector and for this reason the saving and consumption behaviour are of utmost importance for the financial stability of a country. Therefore, the anti-crisis and economic recovery governmental programmes should include financial policies that stimulate savings, based on an as rigorous knowledge of these behaviours as possible.

Pertinent results in the analysis of the saving behaviour of the households may be quickly obtained with the help of data from selective studies. To this purpose, the aim of this paper is to identify the leverages for attracting population savings in bank deposits, starting from the results of a survey that took place during 1-15 October 2011 on a sample of 1800 respondents, constituted with quota sampling.

**Key words:** saving behaviour; determinants of population savings; logistic regression

**JEL Code:** C14, C25, D14

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## Introduction

The empiric approach of the households saving behaviour is usually done in two plans: macroeconomic and microeconomic (individual).

From the macroeconomic perspective, many empirical studies investigate, both in developed and developing countries, the determinants of private saving rates in order to explain the diversity in saving rates in the world (Kessler et al., 1993, Muradoglu & Ttaskin, 1996). Many economic and demographic variables have been identified as saving determinants: income (temporary/permanent), uncertainty (political instability), rates of return

(interest rate), domestic and foreign borrowing constraints, inflation, fiscal policy, pension system, demographics (old or young age, urbanization). Various model specifications related to data samples and econometric strategies are suggested. However this literature provides ambiguous results. Numerous saving determinants are not significant and/or the estimated sign is not consistent with the theory. These ambiguous results are determined by the individual particularities of the countries or some characteristics of the groups (economic development level, financial education, stage of transition to market economy).

Few studies assess the determinants of saving at the individual level generally due to the lack of data. The microeconomic approach, through surveys or polls, allowed for the identification of those characteristic of the households that influence the saving behaviour. Some of the most recent studies (Abdelkhalek et al., 2009, Kulikov et al., 2007, Rehman et al., 2011), have indicated a series of results, some predictable, others less predictable: the saving rate depends positively on regular household income, but more pronouncedly on transitory income; households receiving income from self-employment have lower saving propensities; the possession of a range of durable consumer goods, in particular cars, reduces household saving; taken at face value, the above results suggest that larger debts and/or debt-servicing payments reduce household saving; the young and the elderly appear to save more than the middle-aged; higher levels of education lead to lower saving.

The literature on saving behaviour is vast. Most studies highlight the considerable heterogeneity of the households' reasons for saving (Abdelkhalek et al., 2009, Alessi & Lusardi, 1997, Browning & Lusardi, 1996).

The literature indicates a large number of reasons for household saving. The major motives leading to such a decision can be distinguished (Sturm, 1983):

1. **Retirement saving.** Generally considered the most important saving motive, form the basis of Life Cycle Hypothesis. The saving are positive during the pre-retirement phase and negative after retirement.
2. **Precautionary saving.** In the basic LCH model the household bases its decision on events the dates and magnitudes of which are assumed to be known (the future income, the date of death and the interest rate in each period). But in reality future events are uncertain and individual behaviour will be modified. Individuals seek to save for security, regardless of the life cycle stage they are in.
3. **Saving for bequest.** Up to a certain degree this reason cannot be precisely differentiated from precautionary saving. An amount saved currently may simultaneously serve both as a precautionary life-cycle function (guarding against future contingencies such

as health shocks or other emergencies) and a bequest function because, in the likely event that the money is not absorbed by these contingencies, it will be available to bequeath to children or other worthy causes. However, a bequest motive changes the size of the saving ratio only in an economy expanding due to population growth, productivity growth or both.

4. **Target saving.** We are referring especially to saving with the view to buy durable goods, but also for expenses caused by special events, holidays or education.

From a psychological point of view, saving can be considered the result of a deliberate decision making process and to save as the act of regularly putting away some resources. A hierarchy of the saving reasons based on the study of Luigina Canova, Anna Maria Manganelli Rattazzi and Paul Webley (2005) is presented in Table 1. The main reasons determining the propensity to save of the population are related to ensuring the physical and psychical comfort for present and near future (quality of life, security for unforeseen situations), as well as “target saving” (holidays, durable goods).

**Tab. 1: Ranking of saving reasons**

Rank	Saving reason	%	Rank	Saving reason	%
1	Self-gratification	72	9	Autonomy	33
2	Precaution	60	10	Retirement	31
3	Household	56	11	To avoid debt	31
4	Security	53	12	Speculation	28
5	Purchases	47	13	Saving habit and money value	28
6	Holidays/hobbies	39	14	Old age/illness	22
7	Money availability	39	15	Projects	10
8	Self-esteem	37			

Source: Canona el al. (2005)

In the empirical study made in Estonia the main saving reasons are also: purchase dwelling or save money for precautionary reasons. Saving in view of old age or for medical care is last in the ranking of the Estonian respondents.

Taking into account these results of the literature, we intend to highlight some particularities of the saving behaviour of the Romanian households from the perspective of their importance for economic recovery and financial stability of the economy.

## 1 Research Methodology

The main objective of the paper aims to identify the leverages for attracting population savings in bank deposits, starting from the results of a poll realized during 1-15 October 2011 on a sample of 1800 respondents, constituted by quota sampling.

In designing the questionnaire, the following objectives were followed: the financial situation and the saving capacity of the households; identifying the main saving reasons; preference for various saving instruments.

Starting from the economic theory regarding household savings and the empirical studies focusing on the analysis of the saving behaviour, we advanced the following hypotheses:

1. The saving capacity of the households is low. As a consequence of the economic crisis, the financial situation of the households has worsened, the disposable income has decreased and, consequently, we expect a decrease in the saving capacity. It is possible that there are households that dissave.
2. The main aim for saving is to purchase dwelling, unforeseen household expenses or save money for precautionary reasons. It is expected that Romanian households have a saving behaviour similar to those in Estonia since the macroeconomic analysis for both countries indicates a similar behaviour for households. This behaviour is characterized by sharp decreases of the saving rates (which even reached negative values during times of economic growth) and spectacular increases to levels close to those of developed European countries.
3. Preference for classical financial products. The lack of confidence shown by the population towards financial institutions determines the placement of savings in bank considered to have a higher level of security, the main option being bank deposits.

## **2. Analysis of survey results on the proposed objectives**

During 17-21 October the questionnaires were centralized in order to obtain the database, which was verified for completeness of the information. Partial non-responses were treated through methods of mean or median of nearby points imputation, formed with the help of auxiliary variables. The obtained database was processed using SPSS, with the view to allowing for a complex analysis of households saving behaviour.

### **2.1 Financial situation and saving capacity**

On a scale from 1 to 10 the satisfaction level regarding own financial situation is 5.01. The 42.7% variation coefficient suggests a heterogeneous distribution of the respondents by satisfaction level. Thus, we intended to identify the demographic, economic and social

variables that influence the satisfaction level regarding own financial situation, leading to the constitution of homogenous sub-groups.

Professional status significantly influences the satisfaction level ( $F=18$ ;  $\alpha=0.00000001$ ). We identify, however, 3 homogenous sub-groups with the help of Tuckey's Post-Hoc test (the homoskedasticity condition is fulfilled). The first group, with a very low satisfaction level (average grade around 4) is formed by: housewives, pensioners, unemployed, working in own household and employed in government sector; second group, with a moderate satisfaction level (average grade approximately 5) is formed by those employed in private sector; the third group, with a medium satisfaction level (average grade about 6.5) is formed by free-lancers and employers.

Following the effects of the economic crisis, the financial situation of the households worsened, 44.24% of the respondents declaring that their financial situation is worse than the one in the previous year. Regarding the future financial situation, we may assert that there is a certain degree of optimism, 32.32% of the respondents anticipating an improvement and only 26.67%, a worsening.

Given these aspects of the saving and dissaving behaviour, we intended to draw the profile sketch of the person with saving capacity. To this end, we used the binomial logistic regression, determining the odds that a person has saving potential.

The dependent dichotomic variable is "Saving" (1 YES, 0 No) and the independent variables of the logistic regression model are:

- $\ln(\text{Income/pers})$  = numerical variable
- Adult\_members=number of household members aged 18 and over.
- Age\_groups=categorical variable age
- Dummy\_gender=gender of the respondent (1-male, 0-female)
- Dummy\_Credit=the respondent has a credit (1 YES, 0 No)
- Professional\_status=categorical variable

Table 2 presents the coefficients of the logistic regression model. The independent variable "Income per person in the household" has a positive influence on the dependent variable. An increase in the income determines the increase in the odds of having saving capacity. If the number of adult members in the households increases by 1, the odds of having saving capacity increase 1.105 times.

In the case of the independent variable "Age", the reference category is "the less than 30 years age group". Even though the Wald test shows that not all the coefficients associated

to the age groups are statistically significant, the variable was kept in the model because there are age groups with a significant value of the test.

**Tab. 2: The coefficients of the logistic regression model**

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1a	Adult_members	,099	,054	3,438	1	,064	1,105
	ln_income_pers	,663	,091	53,609	1	,000	1,941
	Age_groups			16,285	3	,001	
	Age_groups (30;50]	,209	,155	4,130	1	,044	1,501
	Age_groups (50;65]	,330	,179	3,423	1	,064	1,392
	Age_groups (>65)	,867	,215	16,275	1	,000	2,380
	Gender(masculine)	,330	,114	8,387	1	,004	1,390
	Education(higher)	,330	,131	6,322	1	,012	1,390
	Credit(yes)	-,333	,137	5,957	1	,015	,716
	Professional_status1			25,986	3	,000	
	Professional_status1 (employee)	-1,133	,305	13,794	1	,000	,322
	Professional_status1 (free-lancer)	-,465	,432	1,161	1	,281	,628
	Professional_status1 (other situation)	-1,495	,329	20,632	1	,000	,224
	Constant	-4,882	,789	38,327	1	,000	,008

The odds that a person aged (30;50] has the saving capacity is 1.5 times higher than the reference age group (under 30 years). The saving behaviour is significantly different for the 65 ears and more age group, even though the average amount saved monthly or the savings quantum is smaller

The odds that a male has saving capacity are 1.39 times higher. A positive influence also has the education level, the odds of those with higher education of having saving capacity being 1.39 times higher than for those with medium and primary education.

In the case any type of credit exists, the financial resources will be directed towards the payment of the credit, thus the odds of saving capacity being approximately 28.3% smaller.

Regarding the influence of the professional status, the odds of having saving capacity are higher for employers and free-lancers, the other categories having approximately 70% less chances to save.

Among the 1800 respondents, 72.7% declared that they do not own any saving fund. For this reason, the following analysis only refers to the 27.3% of the respondents who declared that they have savings. Their distribution by the amount saved indicates that more

than half (55.36%) have small amount savings (regardless of the currency used), of up to 2000 lei (approximately 450 Euros).

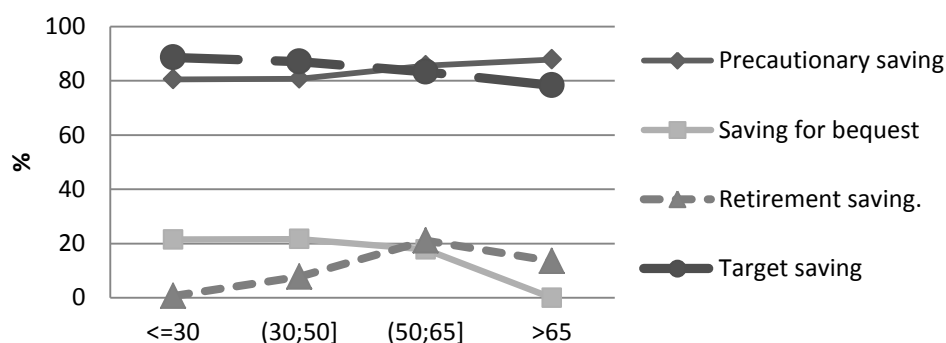
12.7% of the respondents closed a saving account or a deposit during the last 12 months. The sum was mainly directed towards consumption for covering urgent (55.8%) or current (21.9%) expenses or for purchasing products. Only 5.2% were invested using a different instrument than the banking one.

The analysis of this objective confirms the first hypothesis of this study: The saving capacity of the households is low. As expected, we may talk about a decrease in the saving capacity, moreover, some households consumed from previous savings.

## 2.2 Identification of the main saving reasons

The analysis of the saving behaviour from the motivations point of view was done only for those who declared they have savings.

**Fig. 1: Reasons of saving by age**



More than 80% of the respondents save in order to reach certain objectives or for having a reserve for unforeseen situations (Figure 1). This behaviour is rather uniform for all age groups and refers to financial plans on the short-term.

Only 8.8% manage to save for having extra-incomes after retirement and 17.9% accumulate to transmit the goods to the next generation. The lack of attractiveness of these saving methods is given by the poor financial situation. Those who save in order to transmit the goods (in this category are also included saving for buying dwellings or land) or for ensuring themselves an additional income after retirement are approximately 2 points more satisfied with their financial situation (satisfaction level is 6.46). The mean value of their savings is 10201 lei, as compared to only 1500 lei for the other households, and the mean income per person is 1528 lei as compared to 870 lei (the differences between the two groups are statistically significant for a probability close to one).

The analysis of this objective partially confirms the second hypothesis of this paper. Cautionary saving is important for more than 80% of the respondents. Unexpectedly important, however, is also saving for short-term objectives. We explain this through the fact that the financial situation does not allow for the immediate purchase of some consumption goods and services.

”The most important saving reason”, retirement saving, has a surprisingly low weight (8.8%). Nevertheless, the saving behaviour of the Life Cycle Hypothesis is recognizable. The economically active age groups save more for the retirement period.

### **2.3 Preference for various saving instruments**

The main saving instruments used by the respondents are savings with the help of the banking system, about 64.5% (saving accounts, deposits, current accounts) and, in an alarmingly large proportion (61.3%) money saved in cash. The lack of financial education makes the other saving instruments quite unattractive.

The high percentage of those who prefer to keep the money “under the mattress” is determined by the lack of confidence in the banking system. Those preferring such a saving method give an average grade of 2.82 (on a scale from 1 to 5) to the banking system as compared to 3.98 given to the security of keeping the money in cash. We may guarantee with a probability close to one that the security regarding the banking system is statistically significant and lower ( $t=7.52$ ).

Regarding the profitability of savings in the banking system, this is evaluated at an average score of 2.8 points. There are no significant differences regarding the score given to the profitability between those saving through bank instruments and those who prefer to keep their money in cash.

The profile of the respondent who prefers to keep their money in cash is given by a number of demographic and socio-economic characteristics:

- Lives in the urban area – 42.2% of the respondents in rural area rather keep their money in cash, as compared to only 25% in the urban area.
- Has a low education level – 38% of those without higher education keep their savings in cash, as compared to 26.9% of those with higher education.
- Has low saving potential – those who have savings in banks save on average 6575 lei, double the amount saved by those who prefer to keep them in cash (3161 lei). The highest amount is saved by those who chose to keep part of the money in bank and part in cash (10592 lei).



The analysis of the third objective confirms the last hypothesis of the study. The saving instruments used by the respondents were preponderantly the banking system products, but also the “money under the mattress”, to an alarmingly high extent. The lack of financial education, of trust in the banking system, as well as the bank high commissions that lower the profitability of the savings render the saving instruments present on the market less attractive.

## **Conclusion**

Following the effects of the economic crisis, the financial situation of the households worsened, 44.24% of the respondents declaring that their financial situation is worse than in the previous year. The satisfaction levels above average were registered for employers and free-lancers.

High income and the security given by the existence of savings determines the increase in the satisfaction level regarding own financial situation. We may affirm that those with higher education, living in urban areas, who benefited from an increase in their income and those who receive financial aid from abroad are generally more satisfied with their financial situation

The age has a negative influence on the satisfaction level, the persons over 50 years being statistically significantly less satisfied than the younger and adults ones.

Only 27.3% of the respondents have savings, and their amount is low (less than 450 Euros).

The main reason that caused the closing of a saving account or deposit during the last 12 months was financial difficulty. The amount was mainly directed towards consumption for covering some urgent or current (21.9%) expenses.

The main types of savings are the precautionary and the target ones. The precarious financial situation makes the population save in order to reach certain small objectives, for the near future and, to a very little extent, for future plans, investments, security after retirement.

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