

Muresan, Gabriela Mihaela; Mare, Codruta; Lazar, Dan Tudor; Lazar, Sorin Paul

Article

Can Health Insurance Improve the Happiness of the Romanian People?

Amfiteatru Economic Journal

Provided in Cooperation with:

The Bucharest University of Economic Studies

Suggested Citation: Muresan, Gabriela Mihaela; Mare, Codruta; Lazar, Dan Tudor; Lazar, Sorin Paul (2023) : Can Health Insurance Improve the Happiness of the Romanian People?, Amfiteatru Economic Journal, ISSN 2247-9104, The Bucharest University of Economic Studies, Bucharest, Vol. 25, Iss. 64, pp. 903-918, <https://doi.org/10.24818/EA/2023/64/903>

This Version is available at:

<https://hdl.handle.net/10419/281739>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



<https://creativecommons.org/licenses/by/4.0/>

CAN HEALTH INSURANCE IMPROVE THE HAPPINESS OF THE ROMANIAN PEOPLE?

Gabriela Mihaela Mureşan^{*1}, Codruţa Mare², Dan Tudor Lazăr³
and Sorin Paul Lazăr⁴

¹⁾²⁾³⁾⁴⁾ Babeş-Bolyai University, Cluj Napoca, România.

Please cite this article as:

Mureşan, G.M., Mare, C., Lazăr, D.T. and Lazăr, S.P., 2023. Can Health Insurance Improve the Happiness of the Romanian People? *Amfiteatru Economic*, 25(64), pp. 903-918.

DOI: <https://doi.org/10.24818/EA/2023/64/903>

Article History

Received: 17 March 2023

Revised: 18 May 2023

Accepted: 26 June 2023

Abstract

Developing a strategy to increase happiness is a major focus of a positive economy. The purpose of the present study is to find an answer to the following question: can insurers contribute to happiness? Starting from the ANOVA approach and regression analysis on the Romanian sample, we show that financial factors, self-rated stress level, age, and private health insurance affect the level of reported happiness. This is one of the first Romanian studies to approach happiness from the perspective of a financial health insurance product. From another perspective, for people without health insurance, income is a key factor of influence. Thus, our paper is primarily addressed to insurers who want to improve their sales techniques and to all insureds who want to know other benefits that appear after signing a health insurance policy.

Keywords: Happiness, income, health insurance, Romania.

JEL Classification: G22

Introduction

Health insurance receives special attention, especially in periods when health is fragile. It is obvious that the Covid pandemic has brought numerous changes in our physical and mental health. We must just see how we can make our lives better, even if uninsurable events can occur, and try to be happy regardless of any situation.

First, a large part of the literature contains information on factors in health insurance demand, but the influence of predictors on the health market is rather restricted. Secondly, health insurance improves physical health (Dor, Sudano and Baker, 2003; Hadley and Waidmann,

* Corresponding author, **Mureşan Gabriela Mihaela** – e-mail: gabriela.muresan@econ.ubbcluj.ro



This is an Open Access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. © 2023 The Author(s).

2006; Levy and Melzer, 2008). Unfortunately, we have not identified any study that addresses the connection between well-being and private health insurance (PHI) in Romania. Third, according to the Financial Supervisory Authority, the health insurance market is growing, although this does not seem to be enough. In 2019, the total premiums subscribed to private health insurance were of approximately 380 million lei, and in 2021, they reached 500 million lei. This value, as a share of total subscriptions, is very small.

Considering this gap in the literature in the field, and taking into account the importance of health, in general, this study offers new information on health, insurance, and happiness attributed to people in a northwest city of Romania. The remaining study is organised as follows: *Section 1* contains information provided by previous studies organised according to the geographical area. *Section 2* presents the experimental design, our data, and the methodology used; *Section 3* describes our empirical outcomes and the discussions, and the last section of the article, conclusions.

1. Review of the scientific literature

A large part of the health insurance literature approaches the predictors that act on the behaviour of the insured. In the next subsection, we review here some of the recent studies that focus on developing and/or emerging European countries, and we propose an overview of the determinants of the European PHI market organised according to the geographical area, and also the predictors of the happiness and the link between happiness and PHI.

1.1. Overview of health insurance literature

The British Isles

In a recent study, Kapur (2020) examines the factors of demand for private health insurance in Ireland from 2009 to 2017 based on a survey. The results show that the economic condition, sociodemographic factors, and health status have a significant influence on demand. Furthermore, older and sicker Irish people are more likely to buy health insurance and individual preferences appear to play an important role. Similar results were obtained by Bolhaar, Lindeboom and Van Der Klaauw (2012) in the panel data from 1994-2001 - Living in Ireland Survey. In the UK, King and Mossialos (2005) using logistic regression models for panel data found that factors such as income, education, political affiliation, and age affected PHI demand.

Northern Europe

Ito (1979) analyses the Danish and Swedish health insurance markets and emphasises the importance of the quality of health insurance programmes. The four key factors are the nature of the benefits, the mode of financing, the scope of coverage, and the level of health resources. The study also suggests the importance of socio-political factors. In the paper containing a rhetorical title: Health insurance for the healthy? Kullberg, Blomqvist and Winblad (2019) conclude that voluntary health insurance in Sweden offers benefits foremost for the wealthy and healthy. Furthermore, factors such as employment status, income, and occupation influence insurance acceptance.

Western Europe

In a representative sample of the German population, Polyakova (2016) found evidence that people that appear to exhibit preferences are more presumably registered in the private system. According to Hofmann and Browne (2013), German women pay about 20% more for health insurance premiums than men do.

Eastern Europe

Kuhlbrandt et al. (2014) seek to examine the Roma health insurance status in Central and Eastern Europe and assess the importance of socioeconomic factors. According to them, the insurance coverage for Roma varied considerably between the 12 CEE countries (from 2.8% without insurance in Slovakia to 67.7% in Albania).

Southern Europe

According to Pinilla and López-Valcárcel (2020) in Spain, the effect of wealth and income on voluntary private health insurance (VPHI) is non-linear. They estimated the annual VPHI prices increase from 897 € in 2008 to 960 € in 2014, using data from the Household Budget Survey. Cantarero-Prieto, Pascual-Sáez and Gonzalez-Prieto (2017) demonstrate that individuals who have private health insurance in Spain use the public health system less than people without double health insurance coverage. Furthermore, they suggest that promoting PHI can produce a decrease in public health expenditure. In a previous article, Paccagnella, Rebba and Weber (2013), analyse the factors that influence the demand for health insurance in countries such as Belgium, Denmark, Germany, Austria, Greece, Italy, Spain, Sweden, Netherlands, and Switzerland.

1.2. Links between health insurance and happiness

If previous studies indicate that health is strongly associated with happiness, a few rigorous empirical findings evaluate the links between health insurance and happiness (Brook et al., 1979; Lucas, Barr-Anderson and Kington, 2003; Pan, Lei and Liu, 2016). Using a large survey of the US adult population, Tran, Wassmer and Lascher (2017), found that people without health insurance policies were less likely to be satisfied or very satisfied with their life. Similarly, Keng and Wu (2014) found that National Health Insurance coverage in Taiwan predicts a higher level of life satisfaction and happiness. In a recent study, Yang and Hanewald (2022) do not identify significant differences in life satisfaction levels between people who have or do not have health insurance, using data from a longitudinal Chinese study, 2011-2013-2015. But when they control for a set of covariates, they show that health insurance coverage packages affect life satisfaction levels. Additionally, poor self-rated health status is negatively associated with life satisfaction.

1.3. Overview of happiness literature

People have long wondered about the link between income and happiness, welfare and happiness, and what makes them happy. Previously, we saw that there is little empirical evidence to examine how health insurance contributes to happiness, so what makes us happy?

The British Isles

Borooah (2006) investigates what makes people happy in Northern Ireland. Using the ordered logit models proves that £6.70 in weekly additional household income increases the probability of being happy. In addition, the sources of happiness are a healthy life and

freedom from financial worries. Similarly, satisfaction with income and health was associated with happiness, according to Doherty and Kelly (2013). Additionally, the happiness level of the Irish people is not affected by gender.

Northern Europe

Danes are still some of the happiest people in the world. According to Wiking (2017), the reasons why they feel happiness are when they are loved and safe. Exploring the Danish population, Santini et al. (2021) showed that flourishing (optimal levels of psychological well-being) was associated with lower health-related government expenditure. An online survey conducted by Barrafreem, Tinghög and Västfjäll (2021), found that trust in the government in the COVID-19 pandemic context is directly related to general well-being (subjective happiness and life satisfaction level). Swedish participants in the study also admit their fear of COVID-19 is worried about contact with the disease, or that they will not be able to financially support their family.

Western Europe

In a longitudinal study, Lepinteur et al. (2022) showed that German women's life satisfaction dropped dramatically after the outbreak of COVID-19, while men's levels remained stable. Also, starting from individual panel data on 7812 people living in Germany, Di Tella, Haisken-De New and MacCulloch (2010), proved evidence that the effect of income on life satisfaction largely dissipates over time.

Eastern Europe

According to Djankov, Nikolova and Zilinsky (2016) people in Eastern Europe are less satisfied with their lives compared to people from other regions. Among the factors of happiness, income per capita has also received a lot of attention over time. The same positive effect of income in the case of Eastern European countries is found by Caporale et al. (2009).

Southern Europe

Cuñado and De Gracia (2012) investigate the determinants that affect happiness levels in Spain, using individual data from the European Social Survey. Using Ordinal Logit Models they found a positive effect of education on happiness. In addition, labour status, income, and other socio-economic factors influence the happiness of Spanish people.

2. Research methodology

2.1. Experimental design

The study was conducted through the online intern survey platform in companies and was distributed to all employees. We reserve the right to keep the name of the company anonymous. The survey was open for two months, in 2022, October and November.

Before starting the questionnaire, informed consent was obtained from all individuals, they were also notified that their participation in the survey is exclusively voluntary, and they are free to leave the survey at any moment. Individuals were also ensured that their responses would remain confidential. The data collection tool was a four-part questionnaire: sociodemographic information (i); a financial section covering the income aspect of the participants (ii); an insurance section that captures information on the existence of a voluntary

insurance policy, and in its absence of the respondents' intention to purchase one and how much they would be willing to pay for it (iii); the health section (iv), which was developed based on the scale proposed and validated by the literature.

2.2. Data description

An overview of the subjects covered in our survey is presented in Figure 1.

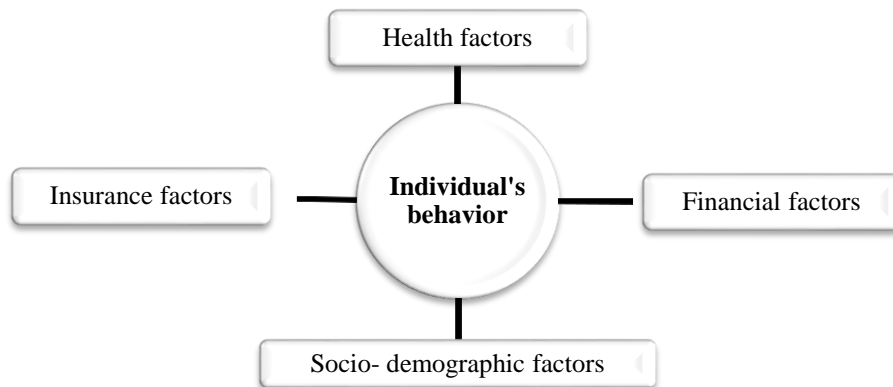


Figure no. 1. A brief overview of the subject

Source: own processing

The description of all factors and their units is presented in tabular form. In the first table, we present all the socio-demographic factors (age, gender, and marital status, see Table no. 1). The sample consists of 39% men and 61% women, most of whom are married, single, or in a relationship, and their average age is of 32 years.

Table no. 1. Socio-demographic factors

Variables	Questions	Mean/ Frequency (%)
Age	What is your age?	32.07
Gender	Which is your gender?	
	1. Male.	38.1%
	2. Female.	61.9%
	3. Other.	0%
Marital status	What is your marital status? Choose a variant:	
	1. Single.	27.9%
	2. In a relationship.	25.0%
	3. Married.	43.0%
	4. Divorced.	2.5%
	5. Widow/ Widower.	1.6%
6. Other.	0%	

Source: own processing

Regarding the income perspective, we address two questions to collect information on monthly income and the impact of the COVID-19 pandemic on income (Table no. 2).

Table no. 2. Financial factors

Variables	Questions	Frequency (%)
Personal monthly income	Choose which is your monthly net income:	
	1. Below 400 euros.	30.7%
	2. Between 400-600 euros.	23.0%
	3. Between 601-800 euros.	20.9%
	4. Between 801-1000 euros.	13.9%
5. More than 1000 euros.	11.5%	
Financial status affected by COVID-19	In the context of COVID-19, has your income been negatively affected?	
	1. Yes.	54.1%
	0. No.	45.9%

Source: own processing

In addition, our database contains information on insurance aspects (Table no.3). We want to observe if they have a voluntary health insurance policy, moreover, if they do not have this type of financial product, we want to evaluate their intention. This aspect is based on a theory from Psychology that shows that intention is the most important predictor of behaviour (see the Theory of Planned Behaviour elaborated by Ajzen, (1991)). However, we include a personal question regarding how much of the monthly income they are willing to pay for a voluntary health insurance policy.

Table no. 3. Insurance factors

Variables	Questions	Frequency (%)
Health Insurance	Do you have a voluntary health insurance policy?	
	1. Yes.	67.2%
	0. No.	32.8%
Intention to buy	Do you intend to buy a voluntary health insurance policy in the future?	
	1. Yes.	15.9%
	0. No.	84.1%
Financial intention	How much would you be willing to pay for a voluntary health insurance policy per month?	
	_____ euro/monthly	

Source: own processing

Following the specialised literature, we used scales by which we measured happiness (The Subjective Happiness Scale developed by Lyubomirsky and Lepper, 1999) and self-rated Health (Ware and Sherbourne,1992), Self-Rated Stress level (Mureşan et al., 2022) (Table no. 4).

Table no. 4. Health status

Variables	Questions	Mean
Happiness Scale	„For each of the following statements and/or questions, please circle the point on the scale that you feel is most appropriate to describe you. Item A. In general, I consider myself: 1. not a very happy person ... 7. a very happy person Item B. Compared to most of my peers, I consider myself: 1. less happy ... 7. happier	4.95

Variables	Questions	Mean
	<p>Item C. Some people are generally very happy. They enjoy life regardless of what is happening, getting the most out of everything. To what extent does this characterisation describe you? 1. not at all ... 7. a great deal</p> <p>Item D. Some people are generally not very happy. Although they are not depressed, they never seem as happy as they might be. To what extent does this characterisation describe you? 1. not at all ... 7. a great deal</p> <p>Scoring: To calculate the scale, reverse code the 4th (D) item (i.e., turn a 7 into a 1, and a 1 into a 7), and compute the mean of the 4 items.” Source: Lyubomirsky and Lepper (1999).</p>	
Self-Rated Health	<p>„In general, would you say that your physical health is poor, fair, good, very good, or excellent? 1. Excellent 2. Very good 3. Good 4. Fair 5. Poor</p> <p>Scoring: To calculate the total score for each participant, use the response to the single item of the scale.” Source: Ware and Sherbourne (1992).</p>	2.18
Self-Rated Stress level	<p>„Regarding your level of stress, please evaluate your level. 1. Low level 7. High level” Source: Mureşan et al. (2022).</p>	3.13

Source: own processing

2.3. Methodology

The variables mentioned above were first descriptively assessed and quality checking procedures were applied to the initial dataset. A final sample of 244 respondents remained in the analysis. A descriptive evaluation was conducted based on frequencies and percentages, descriptive statistics and plots (bar charts, box plots, etc.).

As most of the literature in the field (see, for example, Muresan et al., 2022) stresses the relationship between income and insurance, we first evaluated this relationship in our sample. We use the Chi² test and Kendall’s tau-b coefficient for this. The results show that there is a weak relationship between having health insurance and financial problems. Consequently, we can include these variables in the following regressions without expecting significant multicollinearity problems.

Our main goal is to find out whether having health insurance contributes to happiness. For this, we have constructed the following regression model (eq. 1), to which, in a second step, we added control factors to test the robustness of the main relationship (eq. 2).

$$\text{Happiness}_i = a_i + b_i * \text{Health insurance}_i + \varepsilon_i \quad (1)$$

$$\text{Happiness}_i = a_i + b_i * \text{Health insurance}_i + \sum_k c_k * X_k + \varepsilon_i \quad (2)$$

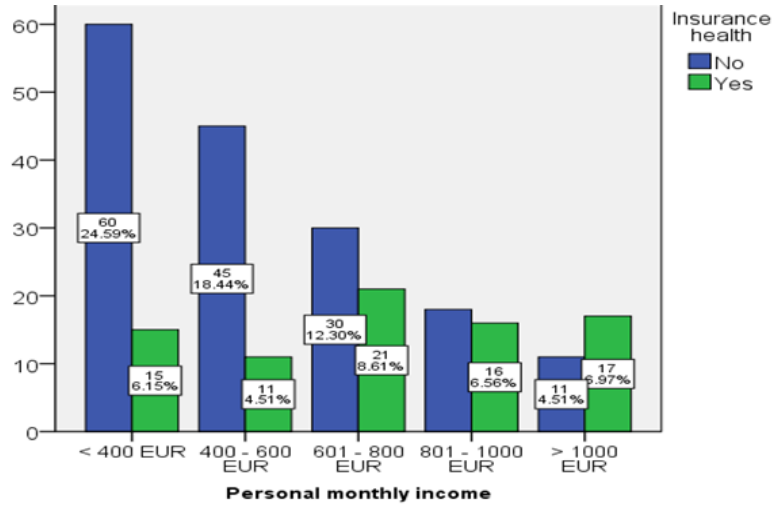
Where: X_k are the control factors described in the Data description part.

As there are possible correlations among the control factors in eq. 2, we have also applied multicollinearity testing procedures in the regression estimation process. The last part of the analysis focusses on the participation of the respondents who did not have health insurance at the time the survey was conducted. We assess, using binary and classical regressions, the willingness to buy such a contract, on the one hand, and the willingness to pay for it. We use

the same factors as for the main analysis. In the last step of this assessment, we also include happiness to account for the robustness of the main results.

3. Results and discussion

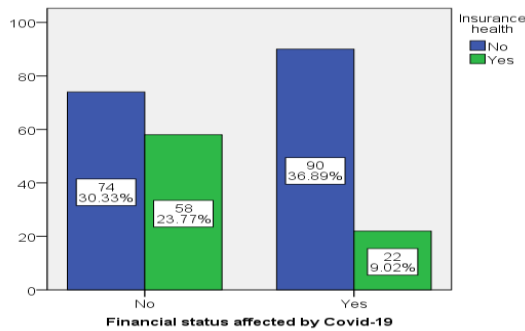
The simple descriptive assessment of health insurance in terms of income and the context of the COVID-19 pandemic shows that the biggest discrepancies between having or not having health insurance occur in the low-income categories (Graph no.1 from the personal monthly income perspective, and Graph no.2 from the financial status affected by COVID-19 perspective).



Graph no. 1. Health insurance and personal monthly income

Source: own calculations in SPSS 24

With the help of Graph no.1, we can see that approximately 24.59% of the people who have an income of less than 400 euros per month do not have private health insurance, while 36.89% of all respondents stated that the Covid pandemic -19 affected them financially (Graph no. 2).



Graph no. 2. Health insurance and financial status affected by COVID-19

Source: own calculations in SPSS 24

The relationship assessment analyses reveal that there is a significant association between having health insurance and the income group (a similar result was obtained by Escobar, Griffin and Shaw, 2011) or the financial status being affected by COVID-19 (Table no. 5). However, the correlation coefficients are low (< 0.3), which means that the relationship between the variables is weak. Therefore, we should not have multicollinearity problems when introducing these variables into the regression model. The signs of the coefficients are the ones expected: higher income groups have health insurance policies, while those with income affected by the COVID-19 pandemic do not have such contracts. This is an intuitive result, as Romania has a communist background, with universal social services for all citizens. Thus, a health insurance policy is not a must. Consequently, with the affected income levels, purchasing health insurance becomes not a priority.

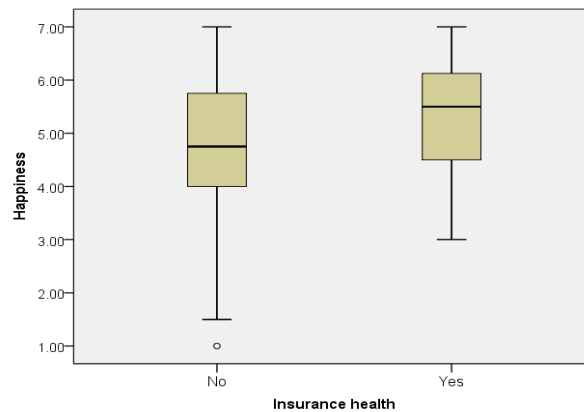
Table no. 5. Relationship assessment – Health Insurance vs. income variables

Health insurance vs.:	Chi-square	Chi-square Prob.	Kendall's tau-b	Kendall's tau-b Prob
Personal monthly income	24.64	0.000	0.266	0.000
Financial status affected by COVID-19	16.23	0.000	-0.258	0.000

Source: own calculations in SPSS 24

3.1 Are we happier if we have health insurance?

The first step of the analysis was to evaluate if there are significant differences between the insured and non-insured respondents in terms of happiness. Both the Mann-Whitney (p-value = 0.002) and the Student t test (p-value = 0.001) show that there is a significant difference in the perceived happiness level between respondents who do not have a health insurance policy and those who do. Descriptive statistics show that the latter group is happier (Graph no. 3). This may be because, once an insurance policy is contracted, the individual's stress level related to the risks the contract covers is significantly reduced. Consequently, to test this, we will include the perceived stress level as a control variable in the final regression model.



Graph no. 3. The relationship between health insurance and happiness

Source: own calculations in SPSS 24

To account for the contribution of having a health insurance policy to the perceived happiness level, we first employ a simple regression model between the two variables (Eq.1). But the literature in the field and our previous findings show that other factors such as income, age, sex, health, or stress level may also affect happiness and may condition the impact of having a health insurance policy may have on perceived happiness (Eq.2). Consequently, in the second stage of this research, we include such factors in the regression model.

ANOVA was applied to examine the simple impact of the factors considered. Our results show that health insurance improves happiness (model 1, $F=11.263$, sig.0.001; model 2, $F=10.933$, sig. 0.000) in a Romanian context (Table no. 6). Furthermore, previous studies indicate that health insurance is associated with happiness (Keng and Wu, 2014; Tran, Wassmer and Lascher, 2017; Yang and Hanewald, 2022).

Table no. 6. Happiness vs health insurance (eq. 1) and other factors (eq. 2) – ANOVA analysis synthesis

Model	Variable(s)	Happiness level	
		F	Sig
Eq. 1	Health insurance	11.263	0.001
Eq. 2	Health insurance, Gender, Self-Rated Stress Level, Personal monthly income, Financial status affected by COVID-19, Self-Rated Health, Age	10.933	0.000

Source: own calculations in SPSS 24

In the next part of the analysis, we employ regression models to assess the actual impact of the factors considered on the perceived happiness level (see Table no. 7 and Table no. 8).

Table no. 7. Model regression summary

Dependent variable: Happiness				
Model	Variable(s)	R2	Adj. R2	Std. Error
Eq. 1	Health insurance	0.044	0.041	1.1994
Eq. 2	Health insurance, Gender, Self-Rated Stress Level, Personal monthly income, Financial status affected by COVID-19, Self-Rated Health, Age	0.245	0.222	1.0797

Source: own calculations in SPSS 24

As we can observe, there is a direct and significant link between health insurance and happiness (significant at 1% in the first model and at 5% in the second model). As expected, the level of stress has a reverse effect on the level of happiness. Therefore, stressed people are more unhappy (Schiffrin and Nelson, 2010).

Table no. 8. Regression results

Dependent variable: Happiness								
Eq.	Variables	Unstand. Coeff.		Stand. Coeff.	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	4.770	0.094		50.929	0.000		
	Health Insurance	0.549	0.164	0.211	3.356	0.001	1.00	1.00
2	(Constant)	5.651	0.354		15.957	0.000		
	Health Insurance	0.392	0.188	0.151	2.084	0.038	0.611	1.636
	Self-Rated Stress Level	-0.227	0.035	-0.380	-6.447	0.000	0.921	1.085
	Self-Rated Health	0.051	0.080	0.043	0.632	0.528	0.683	1.464
	Personal monthly income	0.229	0.075	0.253	3.042	0.003	0.462	2.166
	Financial status affected by COVID-19	-0.376	0.145	-0.153	-2.589	0.010	0.913	1.095
	Age	-0.021	0.009	-0.183	-2.273	0.024	0.492	2.033
	Gender	0.020	0.144	0.008	0.136	0.892	0.976	1.025

Source: own calculations in SPSS 24

Furthermore, young people seem to be happier (Kim et al., 2023). Financial status affected by COVID-19 had a significant influence on the level of happiness; similar results were obtained by Muresan et al. (2022). Moreover, as we noticed in the specialised literature, income is a key factor in explaining the level of happiness and the subscription of an insurance policy. Individuals with higher income are happier.

2.4. What can lead Romanians to buy health insurance?

In the previous section, we evaluated the main goal of this investigation - assessing whether having a health insurance contract impacts the level of happiness, considering that this type of insurance addresses some key risks in the life of every individual. Following the results of our main analysis, we went further and assessed the factors that impact the decision to buy health insurance and the price to be paid for such a contract.

The intention of Romanians to buy health insurance was captured with a binary regression (Cox & Snell $R^2 = 0.201$, while Nagelkerke $R^2 = 0.344$). Our results show that people with a higher level of stress are more likely to intend to buy health insurance (Table no. 9).

Table no. 9. Binary regression for intention to buy health insurance

Dependent variable: Intention to buy health insurance					
	B	S.E.	Wald	Sig.	Exp(B)
Self-Rated Stress Level	0.493	0.181	7.440	0.006	1.638
Personal monthly income	0.226	0.347	0.424	0.515	1.254
Financial status affected by COVID-19	-0.396	0.531	0.556	0.456	0.673
Age	-0.032	0.042	0.580	0.446	0.969
Gender	2.48	0.573	18.75	0.000	11.937
Marital status	-0.337	0.262	1.647	0.199	0.714
Constant	-2.874	1.574	3.332	0.068	0.056

Source: own calculations in SPSS 24

The probability of buying is 1.64 times higher with each additional point in the stress score. Connecting this with our main results, we can conclude that people want, actually, to be happier, so they try to find means to deal with issues that prevent them to be. Additionally, women are almost 12 times more likely to intend to purchase such a policy than men. This means that women are more attentive to their health and their general status and are more aware of the benefits that such insurance may bring to their lives. This is in line with previous findings (Lepinteur et al., 2022).

In addition, we also discuss the cost of health insurance from the point of view of the individual’s perception. In the first step, we only introduced the relevant factors from the literature of the field. It is interesting to see that in Table no. 10 that for people who do not have a health insurance contract, income is the only significant factor of influence (Adj. R² = 0.388, ANOVA p-value = 0.000). The higher the income group, the higher the price willing to be paid for a health insurance contract.

But our main analysis pointed out that people with health insurance are happier. Consequently, we also included the happiness score in the last regression to estimate if, for individuals who do not own health insurance, happiness would contribute to buying one.

Table no. 10. Financial intention in terms of happiness

Dependent Variable: Financial intention						
Variables	Model 1			Model 2		
	B	t	Sig.	B	t	Sig.
(Constant)	2.648	1.077	0.283	8.366	2.381	0.019
Self-Rated Health	0.473	0.696	0.488	0.334	0.496	0.621
Self-Rated Stress Level	-0.148	-0.631	0.529	-0.400	-1.555	0.123
Age	0.099	1.516	0.132	0.076	1.172	0.243
Gender	-1.239	-1.348	0.180	-1.203	-1.328	0.187
Marital status	-0.371	-0.863	0.390	-0.497	-1.163	0.247
Personal monthly income	2.424	4.568	0.000	2.625	4.951	0.000
Financial status affected by COVID-19	0.358	0.424	0.673	0.180	0.215	0.830
Happiness				-0.849	-2.246	0.026

Source: own calculations in SPSS 24

The adjusted R^2 increases to 40.7%. The same effect is to be found in the income coefficient: an increase from 2.42 in the first regression to 2.63 in the second one. The happiness score significantly affects the price that clients have to pay. But its coefficient is negative, emphasising that less happy people are more inclined to pay more to buy a health insurance contract. This result confirms once again our main findings. Having a health insurance policy contributes to an increase in perceived happiness. In addition, the individuals in our sample also see this as a means to increase happiness.

Conclusions

Participants aged 20 to 60 years answered the instrument on an online platform of interns. First, the perception of participants' state of health, the intention of individuals to buy health insurance, and their level of happiness are reported. Second, we discovered some of the factors that influence the happiness of individuals in a pandemic context. But one of the most important results clearly shows a direct relationship between health insurance and happiness level. This can be explained by the fact that the insurance sector can increase the well-being of citizens with a financial insurance product. Health is an important aspect of our daily life that conditions our happiness. A health insurance contract is perceived as a means to deal with this, even in a former communist country like Romania, with a public health system.

Furthermore, our results are in line with the literature in the field: people with higher incomes are willing to pay more to deal with health risks through health insurance contracts. Interesting, but not illogical, is also our results in terms of gender. Women, which are more interested in their health status, have a much higher probability of buying a health insurance contract compared to men. The same applies to the perceived level of stress.

What is interesting is that, although we expected the general health status to condition the happiness level, it does not, when having a health insurance contract is considered in the analysis.

Our research has some general limitations, one of which is related to the lack of longitudinal data and self-reported variables. These types of variables capture the subjectivism of the respondents. Secondly, our results may have partial generalisability across other people and countries. And the last remark, we do not include any positive coping scale in the questionnaire. However, these limits can be transformed into a future research direction.

Acknowledgements

This work was supported by the project "The Development of Advanced and Applicative Research Competencies in the Logic of STEAM + Health"/POCU/993/6/13/153310, project co-financed by the European Social Fund through the Romanian Operational Programme Human Capital 2014-2020".

This work was carried out through the project 'COST CA19130 FinAI - Fintech and Artificial Intelligence in Finance: Toward a Transparent Financial Industry'.

References

- Ajzen, I., 1991. The theory of planned behavior. *Organizational behavior and human decision processes*, 50(2), pp.179-211.
- Barrafrem, K., Tinghög, G., and Västfjäll, D., 2021. Trust in the government increases financial well-being and general well-being during COVID-19. *Journal of Behavioral and Experimental Finance*, 31, p.100514.
- Bolhaar, J., Lindeboom, M. and Van Der Klaauw, B., 2012. A dynamic analysis of the demand for health insurance and health care. *European Economic Review*, 56(4), pp.669-690. <https://doi.org/10.1016/j.eurocorev.2012.03.002>.
- Boroovah, V.K., 2006. What makes people happy? Some evidence from Northern Ireland. *Journal of Happiness Studies*, 7, pp.427-465.
- Brook, R.H., Ware, J.E., Jr., Davies-Avery, A., Stewart, A.L., Donald, C.A., Rogers, W.H., Williams, K.N. and Johnston, S.A., 1979. Overview of adult health status measures fielded in Rand's Health Insurance Study. *Medical Care*, 17(7 Supp), i-vii.
- Cantarero-Prieto, D., Pascual-Sáez, M. and Gonzalez-Prieto, N., 2017. Effect of having private health insurance on the use of health care services: the case of Spain. *BMC health services research*, 17(1), p.716.
- Caporale, G.M., Georgellis, Y., Tsitsianis, N., and Yin, Y.P., 2009. Income and happiness across Europe: Do reference values matter?. *Journal of Economic Psychology*, 30(1), pp.42-51.
- Cuñado, J., and De Gracia, F.P., 2012. Does education affect happiness? Evidence for Spain. *Social indicators research*, 108, pp.185-196.
- Di Tella, R., Haisken-De New, J. and MacCulloch, R., 2010. Happiness adaptation to income and to status in an individual panel. *Journal of Economic Behavior & Organization*, 76(3), pp.834-852. <https://doi.org/10.1016/j.jebo.2010.09.016>.
- Djankov, S., Nikolova, E. and Zilinsky, J., 2016. The happiness gap in Eastern Europe. *Journal of Comparative Economics*, 44(1), pp.108-124. <https://doi.org/10.1016/j.jce.2015.10.006>.
- Doherty, A.M. and Kelly, B.D., 2013. When Irish eyes are smiling: income and happiness in Ireland, 2003-2009. *Irish Journal of Medical Science*, 182(1), pp.113-119. <https://doi.org/10.1007/s11845-012-0843-4>.
- Dor, A., Sudano, J. and Baker, D.W., 2006. The Effect of Private Insurance on the Health of Older, Working Age Adults: Evidence from the Health and Retirement Study. *Health Services Research*, 41(3p1), pp.759-787. <https://doi.org/10.1111/j.1475-6773.2006.00513.x>.
- Escobar, M.L., Griffin, C.C., and Shaw, R.P. (Eds.), 2011. *The impact of health insurance in low-and middle-income countries*. Brookings Institution Press.
- Hadley, J. and Waidmann, T., 2006. Health Insurance and Health at Age 65: Implications for Medical Care Spending on New Medicare Beneficiaries. *Health Services Research*, 41(2), pp.429-451. <https://doi.org/10.1111/j.1475-6773.2005.00491.x>.
- Hofmann, A. and Browne, M., 2013. One-sided commitment in dynamic insurance contracts: Evidence from private health insurance in Germany. *Journal of Risk and Uncertainty*, 46(1), pp.81-112. <https://doi.org/10.1007/s11166-012-9160-6>.

- Ito, H., 1979. Health insurance policy development in Denmark and Sweden 1860-1950. *Social Science & Medicine. Part C: Medical Economics*, 13(3), pp.143-160. [https://doi.org/10.1016/0160-7995\(79\)90039-X](https://doi.org/10.1016/0160-7995(79)90039-X).
- Kapur, K., 2020. Private health insurance in Ireland: Trends and determinants. *The Economic and Social Review*, 51(1, Spring), pp.63-92.
- Keng, S.-H. and Wu, S.-Y., 2014. Living Happily Ever After? The Effect of Taiwan's National Health Insurance on the Happiness of the Elderly. *Journal of Happiness Studies*, 15(4), pp.783-808. <https://doi.org/10.1007/s10902-013-9449-4>.
- Kim, J.H., Choi, E., Kim, N. and Choi, I., 2023. Older people are not always happier than younger people: The moderating role of personality. *Applied Psychology: Health and Well-Being*, 15(1), pp.275-292. <https://doi.org/10.1111/aphw.12377>.
- King, D. and Mossialos, E., 2005. The Determinants of Private Medical Insurance Prevalence in England, 1997-2000. *Health Services Research*, 40(1), pp.195-212. <https://doi.org/10.1111/j.1475-6773.2005.00349.x>.
- Kuhlbrandt, C., Footman, K., Rechel, B. and McKee, M., 2014. An examination of Roma health insurance status in Central and Eastern Europe. *The European Journal of Public Health*, 24(5), pp.707-712. <https://doi.org/10.1093/eurpub/cku004>.
- Kullberg, L., Blomqvist, P. and Winblad, U., 2019. Health insurance for the healthy? Voluntary health insurance in Sweden. *Health Policy*, 123(8), pp.737-746. <https://doi.org/10.1016/j.healthpol.2019.06.004>.
- Lepinteur, A., Clark, A.E., Ferrer-i-Carbonell, A., Piper, A., Schröder, C. and D'Ambrosio, C., 2022. Gender, loneliness and happiness during COVID-19. *Journal of Behavioral and Experimental Economics*, 101, no. art.101952. <https://doi.org/10.1016/j.socec.2022.101952>.
- Levy, H. and Meltzer, D., 2008. The Impact of Health Insurance on Health. *Annual Review of Public Health*, 29(1), pp.399-409. <https://doi.org/10.1146/annurev.publhealth.28.021406.144042>.
- Lucas, J.W., Barr-Anderson, D.J. and Kington, R.S., 2003. Health Status, Health Insurance, and Health Care Utilization Patterns of Immigrant Black Men. *American Journal of Public Health*, 93(10), pp.1740-1747. <https://doi.org/10.2105/AJPH.93.10.1740>.
- Lyubomirsky, S. and Lepper, H.S., 1999. A Measure of Subjective Happiness: Preliminary Reliability and Construct Validation. *Social Indicators Research*, 46(2), pp.137-155. <https://doi.org/10.1023/A:1006824100041>.
- Mureşan, G.-M., Văidean, V.-L., Mare, C. and Achim, M.V., 2023. Were we happy and we didn't know it? A subjective dynamic and financial assessment pre-, during and post-COVID-19. *The European Journal of Health Economics*, 24(5), pp.749-768. <https://doi.org/10.1007/s10198-022-01506-1>.
- Paccagnella, O., Rebba, V. and Weber, G., 2013. Voluntary Private Health Insurance Among the Over 50s in Europe: Voluntary Private Health Insurance Among the Over 50s in Europe. *Health Economics*, 22(3), pp.289-315. <https://doi.org/10.1002/hec.2800>.
- Pan, J., Lei, X. and Liu, G.G., 2016. Health Insurance and Health Status: Exploring the Causal Effect from a Policy Intervention: Health Insurance and Health Status: Exploring the Causal Effect. *Health Economics*, 25(11), pp.1389-1402. <https://doi.org/10.1002/hec.3225>.

- Pinilla, J. and López-Valcárcel, B.G., 2020. Income and wealth as determinants of voluntary private health insurance: empirical evidence in Spain, 2008-2014. *BMC Public Health*, 20(1), p.1262. <https://doi.org/10.1186/s12889-020-09362-5>.
- Polyakova, M., 2016. Risk selection and heterogeneous preferences in health insurance markets with a public option. *Journal of Health Economics*, 49, pp.153-168. <https://doi.org/10.1016/j.jhealeco.2016.06.012>.
- Santini, Z.I., Nielsen, L., Hinrichsen, C., Nelausen, M.K., Meilstrup, C., Koyanagi, A., McDaid, D., Lyubomirsky, S., VanderWeele, T.J. and Koushede, V., 2021. Mental health economics: A prospective study on psychological flourishing and associations with healthcare costs and sickness benefit transfers in Denmark. *Mental Health & Prevention*, 24, p.200222. <https://doi.org/10.1016/j.mhp.2021.200222>.
- Schiffirin, H.H. and Nelson, S.K., 2010. Stressed and Happy? Investigating the Relationship Between Happiness and Perceived Stress. *Journal of Happiness Studies*, 11(1), pp.33-39. <https://doi.org/10.1007/s10902-008-9104-7>.
- Tran, N.L.T., Wassmer, R.W. and Lascher, E.L., 2017. The Health Insurance and Life Satisfaction Connection. *Journal of Happiness Studies*, 18(2), pp.409-426. <https://doi.org/10.1007/s10902-016-9729-x>.
- Ware, J.E. and Sherbourne, C.D., 1992. The MOS 36-Item Short-Form Health Survey (SF-36): I. Conceptual Framework and Item Selection. *Medical Care*, 30(6), pp.473-483. <https://doi.org/10.1097/00005650-199206000-00002>.
- Wiking, M., 2017. *The little book of hygge: Danish secrets to happy living*. New York, NY: William Morrow, an imprint of HarperCollins Publishers.
- Yang, S. and Hanewald, K., 2022. Life Satisfaction of Middle-Aged and Older Chinese: The Role of Health and Health Insurance. *Social Indicators Research*, 160(2-3), pp.601-624. <https://doi.org/10.1007/s11205-020-02390-z>.