

THE SUBJECTIVE WELL-BEING OF THE CZECH POPULATION IN COMPARISON WITH SELECTED COUNTRIES OF THE EUROPEAN UNION

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Abstract

This paper is dealing with measuring of living standard on the basis of their subjective perception with their living standard. This approach is different from the often-used methods of measuring of the living standard connected to the economic statistics. Likert scale of consent was used for expression of opinion. The survey took place in 2013 in 5 EU countries, which represent the countries of a cultural partnership. Processing of the results of a subjective expression of satisfaction using logistic regression brings statistically important results on the satisfaction of the citizens with their living standard and on the differences between selected states. According to the results Czech inhabitants have 1.78 times lower chance to be very happy compared to the citizens of Great Britain, 4.49 times than the Finns, even 6.05 times than the French, while the chances of the Spaniards are around a half.

Keywords: quality of life, standard of living, subjective well-being, satisfaction, happiness, European Union

INTRODUCTION

Experts from various scientific disciplines are dealing with living standards and use different methods of its examination. Some recognize purely economic point of view, others on the contrary completely abstract from it. Then there are those who will try to find an intersection between the different angles of view. On this basis various indicators and indexes start to emerge and are gradually supplemented or completely replaced. An infinite tangle of mutual criticism and disagreement emerges.

Bennett (1937) has already expressed the idea that the standard of living is the most comprehensive and very difficult to handle concept. Cottam and Mangus (1942) agree with this. Some definitions of living standard according to them focus more on material consumption, others emphasize the satisfaction, however, there is no stable definition, which would be accepted by all without reservation.

The living standard is in view of the economic standards made up of items that are affected by measurable indicators. Thus, in particular, it includes the revenue and expenditure, consumption, purchasing power, earnings, unemployment and price level (Michaelson at al, 2009).

Šrůtka (1968) examines abstraction of living from a purely economic point of view, when he argues that it is not possible to watch only the economic point of view when it comes to living standards. Many times the standard of living is determined by the circumstances of the non-material nature, which is not possible to buy for money. As a matter of fact is the living standard of citizens with lower income many times higher than those with higher income.

Research on the subjective well-being and wealth is interesting, which is summarized in the following paragraphs by Diener and Biswas-Diener (In Ryan, Deci, 2001):

- People in the richer countries are happier than those living in poorer States.
- The increase in national wealth in developed countries has not been followed by increases in subjective wellbeing, the difference in wealth of nations shows only a weak correlation with happiness.
- The growth of personal wealth usually does not lead to the growth of happiness. People are thirsty for wealth and money are more intensely unhappy.

The concept of standard of living is often confused with the quality of life. However, there is no generally accepted definition, which would exactly determine the differences between these concepts. Some authors are trying to substitute these notions by the term well-being or welfare.

Večerník (2012) explains the concept of using a term of a multi-dimensional welfare, which is the quantification factor of living standard. An important stimulus to his pursuit was the

Sarkozy report, which was prepared by the Commission of economists led by Stiglitz, Sen and Fitoussi. According to them, is the well-being affected by external factors, which are the material standards of living (income, consumption and wealth), health, education, personal activity, including work, social contacts and relations, the political environment, natural environment, personal and economic uncertainty (Stiglitz et al, 2007).

In the context of all these dates, there is a large number of variables, and therefore it is not possible to create a single model for the measurement of happiness (Diener, Diener, 1995; Ryan, Deci, 2001). Whatever the standard is determined by the level of any factors, it is essential that in the end the satisfied ones are those directly concerned - the people themselves.

Research Objective

The objective of this study is to determine satisfaction with the standard of living of the inhabitants of the States of the European Union, and to compare them with each other.

METHODOLOGY

The Study

For the determination of satisfaction of the population of selected EU Member States was conducted primary research organized in the form of questionnaire investigation in the five selected countries of the European Union, each of which is a representative of a single zone of cultural affinity. It was the Czech Republic, Finland, France, Great Britain and Spain.

Sampling

The selection of respondents in each country was based on quotas, according to the economic activity of the EU-SILC methodology - employed, unemployed, self-employed, retired and others. The quota selection was fulfilled. The questionnaire was always filled in by the head of the household. Together 2743 respondents were surveyed.

Table 1: Number of respondents by country

Identification data	Absolute frequency	Relative abundance (%)
State	2743	100
Czech Republic	1164	42,44
Finland	311	11.34
France	473	17,24
Spain	584	21,29
United Kingdom	211	7,69

Research Instrument

Research has comprehensively studied the importance of 99 factors for the standard of living. Another part of the questionnaire was to identify satisfaction with various areas of living. This second part is devoted to the respective article and it is necessary to indicate that the respondents rated their standard of living based on a comprehensive knowledge of the 99 factors that have an impact on them, as determined by the study of a number of professional resources that are devoted to this issue. Satisfaction with the standard of living is expressed with a 6-degree scale from very satisfied to very dissatisfied.

Analytical Approach

In the analysis of data is used descriptive statistics and logistic regression in two forms, namely ordinary and binary logistic regression. Using the results of the logistic regression is surveyed the difference in satisfaction with the standard of living between the Member States on the basis of the ratio of chances.

Ordinary logistic regression is used for the dependent variable "satisfaction" expressed by the scale. The independent variable is the State. The reference category is the Czech Republic, against which it will be monitored by the ratio of chances to the satisfaction of the individual States. Due to the nature of the ordinary variable it is possible to only explicate the extreme values that is very satisfied and satisfied.

Ordinary logistic regression model is based on the cumulative logits in the shape of

$$\ln \frac{F_j}{1 - F_j} = \ln \frac{P(Y \leq y_j)}{P(Y > y_j)} = \ln \frac{\pi_0 + \pi_1 + \dots + \pi_j}{\pi_{j+1} + \pi_{j+2} + \dots + \pi_{s-1}}, j = 0, 1, \dots, s - 2$$

The regression function using cumulative logit then has the shape of a

$$\ln \frac{F_j}{1 - F_j} = \mathbf{x}'\boldsymbol{\beta}_j, j = 0, 1, \dots, s - 2.$$

Parameters β_{0j} are the category variables for the respective categories of the Y threshold, they represent the logarithm of the odds, that Y gets the j-category and not a higher one.

For the purpose of the binary logistic regression an index of satisfaction was determined, for which there is a 6-level range recoded to a binary one with the poles "satisfied" and "dissatisfied". This satisfaction frequency is therefore expressed by the quantity values of 0 and 1 and it is the dependent variable. The independent variable is the State. The reference

category is the Czech Republic again. It is assumed that a random variable has a binomial distribution with the π parameter corresponding to the probability of outcome 1 π , and it changes monotonously with the value of the independent variable. The resulting model is just an estimate of this parameter depending on x and has the following form:

$$\pi(x) = \frac{\exp(\alpha + \beta x)}{1 + \exp(\alpha + \beta x)}$$

or after adjustment

$$\log \frac{\pi(x)}{1 - \pi(x)} = \alpha + \beta x$$

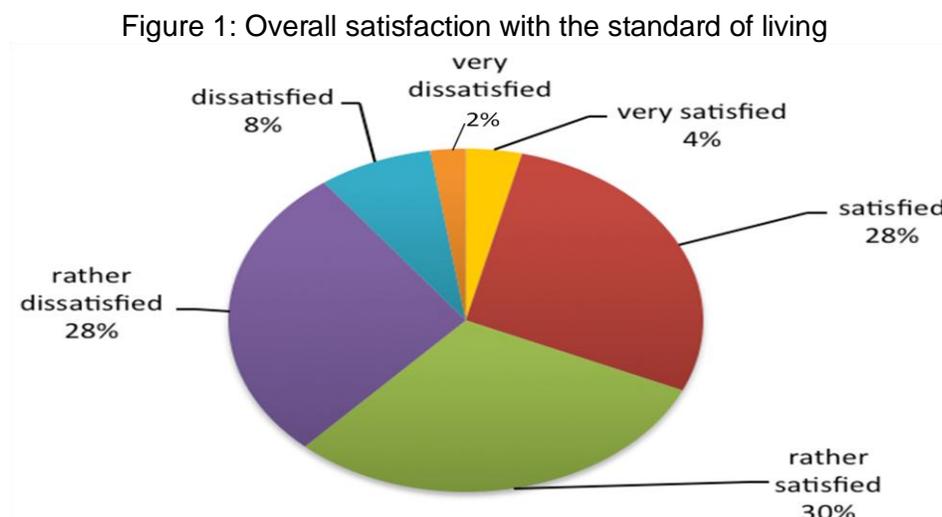
The left side of the modified shape is called the logit, the values of α and β are the regression coefficients and their iterative method is used to estimate the smallest squares.

SPSS Statistics software was used for development of logistic regressions.

EMPIRICAL RESULTS

The standard of living of the population can be measured by different indicators, whether purely economic, social, environmental, or a combination of them. One option is a research focused on the population's opinion on their satisfaction with their standard of living, which is to be called the survey of a subjective well-being.

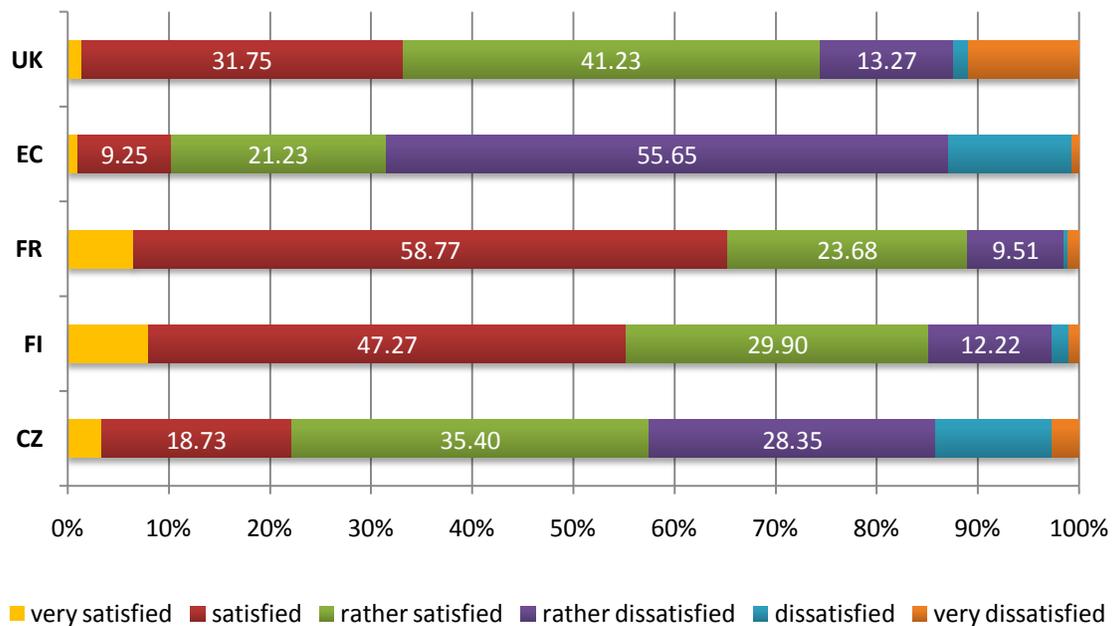
One of the questions in the research was focused on the identification of subjective evaluation of living standard using the Likert scale, modified to measure satisfaction. The results are shown in Figure 1.



Most of the respondents, namely 30% is rather satisfied with their current standard of living. The same number (28%) say they are satisfied and rather dissatisfied. 8% of asked respondents is dissatisfied. 4% of respondents marked the extreme values of very satisfied and 2% of very dissatisfied. It can be thus concluded that the inhabitants of the selected States are most commonly expressing their satisfaction with living standard as satisfied, rather satisfied up to rather dissatisfied.

Living standard of residents of the individual States is viewed differently, as shown in chart 2. The Czechs marked their standard of living with the value “rather satisfied”, Finns and French as “satisfied”, Spaniards “rather unsatisfied” and the Brits as “rather satisfied”. The most satisfied are residents of Finland and France, by contrast, the least happy are Spanish residents.

Figure 2: Overall satisfaction with the standard of living



To monitor the chances of satisfaction among the States is at this point used logistic regression, firstly ordinary, and subsequently binary. With regard to the logistic regression, the dependent variable is the ordinary satisfaction. Due to the nature of the dependent variable, which is a meaningful interpretation of analysis for its extreme values, therefore very satisfied and very dissatisfied.

As the reference category is firstly chosen the category “very satisfied”. A redundant variable is the state against which the observed ratio of chances is observed – the Czech Republic. The Parameter CZ is therefore set to 0. The coefficients are statistically significant.

Table 2: The results of the ordinary logistic regression (redundant variable - CZ)

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Lower Bound
Threshold	[Satisfaction _ inv = very dissatisfied]	-3,674	,133	761,356	1	000	-3,935	-3,413
	[Satisfaction _ inv = very dissatisfied]	-2.125-	,077	763,389	1	000	-2,275	-1,974
	[Satisfaction _ inv = rather dissatisfied]	-,251	,056	20,034	1	000	-,361	-,141
	[Satisfaction _ inv = rather satisfied]	1,276	,063	415,371	1	000	1,153	1,399
	[Satisfaction _ inv = rather satisfied]	3,999	,117	1162,719	1	000	3,769	4,229
Location	[State = UK]	,576	,136	17,882	1	000	,309	,843
	[State = FI]	1,501	,121	153,037	1	000	1,263	1,739
	[State = FR]	1,800	,107	282,524	1	000	1,590	2.010
	[State = ES]	-,740	,093	62,773	1	000	-,923	-,557
	[State = CZ]	0 ^a	.	.	0	.	.	.

Link function: Logit.

a. This parameter is set to zero because it is redundant.

It was found that a citizen of the UK has a 1.78 higher chance to be very happy than 1 the citizen of the Czech Republic, with the Finns it is 4.49 times. The most significant is the difference between the Czechs and the French because Frenchmen are 6.05 times more likely to be very happy with their life over the Czechs. For Spaniards, is this chance 0.48 times what backwards means that the Czechs have 2.10 times higher chance to be very satisfied than the Spaniards (Table 3).

Table 3: The ratio of chances for ordinary logistic regression (redundant variable-CZ)

State	B	exp (b)	1/exp (b)
UK	0,58	1.78	
FI	1.50	4.49	
FR	1.50	6.05	
EC	-0.74	0.48	2.10

In the next step and ordinary logistic regression was transferred for the other extreme value of satisfaction - very dissatisfied, which was therefore the reference category. As a redundancy variable was again used the Czech Republic. The coefficients were always statistically

significant. It was found that the ratio of chances in the reference category is the same as for category very satisfied and therefore the results are identical.

In the output of this analysis it is possible to determine the division of states into the categories, which is shown in table 4. The Finnish and French residents refer to their subjective well-being as satisfied. The Czechs and British are rather satisfied with their standard of living and the Spaniards are rather dissatisfied. These results are a reflection of certain graphic representation, described through Figure 2.

Table 4: Predicted category satisfaction

State	Predicted category
CZ	Rather satisfied
FI	Satisfied
FR	Satisfied
EC	Rather dissatisfied
UK	Rather satisfied

It is possible to view the satisfaction of citizens of selected countries in a simplified way. For this purpose an indicator of satisfaction was set. Satisfaction was thus divided into two categories: satisfied and dissatisfied. Binary logistic regression analysis consequently followed, which is shown in table 5. The reference category has been chosen the Czech Republic.

Table 5: A binary logistic regression

	B	S.E.	Wald	df	Sig.	Exp (B)	95% C.I. for EXP (B)	
							Lower	Upper
State	,305	,059	26,407	1	000	1,356		
State (UK)	,763	,169	20,470	1	000	2,144	1,541	2,983
Step 1 ^{and} State (FI)	1,446	,170	72,062	1	000	4,248	3,042	5,932
State (FR)	1,787	,159	127,060	1	000	5,969	4,375	8,144
State (EC)	-1,081	,107	102,095	1	000	,339	,275	,418

a. Variable (s) entered on step 1: State

It was found that the British people have 2.14 times higher chance to be satisfied than the Czechs. Among the Finnish population is this chance 4.25 times higher and 5.97 times higher with the French. The Spaniards have a 0.34 times higher chance to be satisfied than the Czechs, which actually means that the Czechs are 2.95 times more likely to be satisfied than the Spaniards.

On the basis of all of the analysis in this chapter it can be concluded that the most satisfied with their well-being are French. A little less are the Finns, and then the Brits. Fourth, when it comes to the satisfaction of concerned residents are the Czechs and the least satisfied of the respective states are Spaniards.

DISCUSSION AND CONCLUSION

From the results of survey related to the subjective satisfaction and living standard we can say that in all 5 surveyed countries which belong to the world's developed countries is the "rather satisfied" (30%) or "rather dissatisfied" (28%) opinion the prevalent. Very rarely the respondents are using the extreme categories - very satisfied (4%) and very dissatisfied (2%). From the reached absolute values it can be deduced that the citizens of France and Finland are the most satisfied ones. The least satisfied with their living standard are the Spaniards. Using the ordinary logistic regression with an independent variable "very satisfied" it can be stated that compared to the Czechs have the citizens of Great Britain 1.78 times higher chance to be very happy, the Finns 4.49 times, the French even 6.05 times while the chances of the Spaniards are around a half.

The use of ordinary logistic regression for the second extreme variable - very dissatisfied brought similar results and allowed for saying that the French and Finns assess their subjective well being with the category "satisfied", the Brits and the Czechs "rather satisfied" and the Spaniards "rather dissatisfied". Similar result was brought when using the simplified binary logistic regression. The expression of the level of satisfaction with the living standard can be linked to the achieved economic development of a country even though measuring based on the GDP should show higher satisfaction of the Spaniards compared to the Czechs.

Then the question is, whether the GDP per capita is the best way to measure living standard. It would be appropriate to carry out similar research in all European countries and compare the results with GDP per capita. Many studies show that the GDP per capita does not have a big influence on the satisfaction level. While it is true that other studies disprove this fact, however in today's material society which is predominant in Europe it is necessary to say that there are also other values than money and consumption connected to it, which is according to the GDP the indicator of a welfare state and the quality of life of its citizens.

This study should be complemented by objective indicators of the living standards and the results of both, subjectively- and objectively based data, could be compared, which would bring new explanations. Also, the limitation of the study is that the survey was done only in 5 selected countries. Future studies shall be undertaken considering different countries/ different regions.

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