IDENTIFYING KEY DETERMINANTS OF POVERTY IN SLOVAKIA

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Abstract: *The article deals with identifying key determinants of poverty in Slovakia. The two main goals of this article are to examine which factors have a significant effect on poverty and to determine the influence of relevant factors on poverty of Slovak households. A logistic regression model was used to quantify the impact of selected factors on the risk of the poverty and for probability modelling. We compared two models, using data from EU SILC 2013 and EU SILC 2016. Statistically significant differences are by the region and also by the degree of urbanization. We found that variables such as gender, age, household type, households' economic activity, marital status, education, health, and tenure status significantly affected the occurrence of poverty. According to contingency coefficients, the rate of poverty was at most influenced by the economic activity, on the other hand, the lowest rate was obtained for general health of the person at the head of the household. The obtained results are compared with the known researches in this field.*

Keywords: *EU SILC − European Union Statistics on Income and Living Conditions; Europe 2020, Poverty; Logistic Regression*

JEL Classification: I32, R1, C31.

Introduction

Very popular and important topic in the political and public debate is the problem of poverty (e.g Šimúnková, 2000). According to the latest statistics, in 2017, 112.8 million people, or 22.4 % of the EU population, were at risk of poverty or social exclusion. This means roughly one in four people in the EU experienced at least one of the following three forms of poverty: monetary poverty, severe material deprivation, or are living in a household with very low work intensity (see Eurostat, 2018b). In Slovakia it was about 16.3 %. There was a slight decrease, by -1.7 percentage points, in comparison with previous year (see Eurostat, 2018b). The European Union offers specific programmes and draw up various proposals and recommendations for individual member states. The main programme is strategy Europe 2020. One of the five headline targets of the Europe 2020 indicators is to reduce poverty by lifting at least 20 million people out of the risk of poverty and social exclusion by 2020.

The main objective of this article is to identify key determinants that affect poverty in Slovak households. Examining the determinants of poverty in Slovakia is in this time of great interest especially for the implementation of the priorities and objectives set out in the strategy called Europe 2020. It is assumed that fiscal consolidation and long-term financial sustainability should be accompanied by important structural reforms particularly in the area of pension systems, health care systems, social protection and education. Set goals must be measurable and should be used for comparisons within EU. Other goal of the article is to construct useful model for the measurement of the influence of the relevant factors on the poverty in Slovak household. Poverty is a multidimensional problem (see Cheng and Wang, 2015 or Labudová et al, 2010, Řezanková and Želinský,

2014, Želinský, 2010). There are many researches investigating the factors that determine the poverty. For example Rogan, 2016 or Botti et al., 2012 found the evidence, that gender is the significant factor that influenced poverty. Poverty is connected to individual characteristics and household. There is significant evidence of a strong negative correlation between household size and consumption (or income) per person in developing countries (see Lanjouw and Ravallion, 1995, Šoltés and Ulman, 2015, Šoltés and Vojtková, 2018). An important cause and effect of poverty is education level (see Bici and Cela, 2017). The main recent study on determinants of poverty in Slovakia was done in 2012, (see Šoltés and Šoltésová, 2012a nad 2012b). They used EU SILC database to find out the factors affecting poverty in Slovakia. They measured intensity of dependence between selected factors on poverty. In our paper the results of the analysis will be compared with this older study about determinants of poverty in Slovakia.

1. Data and Methodology

The European Union Statistics on Income and Living Conditions (EU-SILC) is an instrument aiming at collecting timely and comparable cross-sectional and longitudinal multidimensional microdata on income, poverty, social exclusion and living conditions. Data for this research are obtained from survey EU SILC 2013 and EU SILC 2016. The sample size was 5214 households in 2013 and 5738 of households in 2016. Period, which is used, is calendar year preceding the year of the survey, i.e. for EU SILC 2016, reference period was calendar year 2015.

We use a binomial logistic regression model. This model allows quantifying the chances of dependent variable occurrence depending on the values of explanatory variables. The dependent variable is dichotomous variable *poverty* with values: 0 when a household disposable income is above poverty line[1] (household is not poor) and 1 when is below the poverty line (household is poor). Let P_i denote the probability that the i-th household is below the poverty line. We assume that P_i is a Bernoulli variable and its distribution depends on the vector of predictors X:

$$P_i = P(y_i = 1 \mid x_i, \alpha, \beta) = \frac{e^{\alpha + \beta x_i}}{1 + e^{\alpha + \beta x_i}} \tag{1}$$

where α – is a scalar,

β – is the vector of estimated coefficients,

x_i – the i-th row of the regression matrix X containing the explanatory variables.

The logit model to be estimated is then written as

$$\ln \frac{P_i}{1 - P_i} = \alpha + \sum_{i=1}^{10} \beta_i x_i \tag{2}$$

The logit variable $\ln \dfrac{P_i}{1 - P_i}$ is the natural logarithm of the odds in favour of the household falling below the poverty line. Equation is estimated by maximum likelihood

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[1] Poverty line is given by at-risk-of-poverty threshold, which is set at 60 % of the national median equivalised disposable income after social transfers (http://epp.eurostat.ec.europa.eu/).

method and the procedure does not require normality assumption or homoskedasticity of errors in predictors' variables (see Stankovičová and Vojtková, 2007).

Predictor (or explanatory) variables are a set of socioeconomic and demographic variables[2]. In the brackets is the code of the variable in EU SILC database. We worked with indicators that relate to the person at the head of the household. The coding of the categorical variables in the model has been changed to better interpretation of the results.

- X_1 - *Degree of urbanisation* (DB100) : Basic household data including degree of urbanisation: 1 - densely populated area ("ref") , 2 - intermediate area, 3 - thinly populated area
- X_2 – *Region* (KRAJ): For the database EUSILC2013: 1- Bratislava region ("ref"), 2 – West Slovakia region, 3 – Middle Slovakia region, 4 – East Slovakia region. For the database EUSILC 2016: 1- Bratislava region ("ref"), 2 - Trnava region, 3 - Trenčín region, 4 - Nitra region, 5 – Žilina region, 6 – Banská Bystrica region, 7 – Prešov region, 8 – Košice region
- X_3 - *Tenure status* (HH21) - Dwelling type, tenure status and housing conditions: 1 - Outright owner ("ref") , 2 - Owner paying mortgage, 3 - Tenant or subtenant paying rent at prevailing or market rate, 4 - Accommodation is rented at a reduced rate (lower price that the market price), 5 - Accommodation is provided free
- X_4 - *Household type* (HT) - 5 - One person household ("ref"), 6 - 2 adults, no dependent children, both adults under 65 years, 7 - 2 adults, no dependent children, at least one adult 65 years or more, 8 - Other households without dependent children, 9 - Single parent household, one or more dependent children, 10 - 2 adults, one dependent child, 11 - 2 adults, two dependent children, 12 - 2 adults, three or more dependent children, 13 - Other households with dependent children, 16 - Other (these household are excluded from Laeken indicators calculation)
- X_5 - *Marital status* (PB190) – 1 - Never married ("ref"), 2 - Married, 3 - Separated, 4 - Widowed, 5 - Divorced
- X_6 - *Highest ISCED level attained* (PE040) - 1 – primary education ("ref"), 2 - secondary education (lower and upper), 3 - post-secondary non tertiary education and short cycle of tertiary education, 4 - Bachelor or equivalent, 5 – Master or equivalent, 6 - Doctorate or equivalent
- X_7 - *Self-defined current economic status of the person in the head of the household* (PL031): 1 - Employee working full-time ("ref"), 2 -Employee working part-time, 3 - Self-employed working full-time (including family worker), 4 - Self-employed working part-time (including family worker), 5 –Unemployed, 6 - Pupil, student, further training, unpaid work experience, 7 - In retirement or in early retirement or has given up business, 8 - Permanently disabled or/and unfit to work, 9 - In compulsory military community or service, 10 - Fulfilling domestic tasks and care responsibilities, 11 - Other inactive person
- X_8 - *Age of the person in the head of the household*(RX10)
- X_9 - *Gender* (RB090): 1 – Male ("ref"), 2 – Female
- X_{10} - *General health* (PH010) : 1-Very good, 2 – Good, 3 – Fair, 4 – Bad, 5 - Very bad

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[2] For each variable the refence category is defined as "ref" for the corresponding variable (generally first category)

The collected data allow us to monitor poverty and social exclusion from many aspects and dimensions - in terms of the development of poverty over time, in terms of household structure, but also in terms of health, education, economic activity etc. In Slovakia, the poverty rate was estimated at approximately 12.7%. There exist regional disparities between regions, what can be seen also within the poverty rate. The poverty rate varies from 8% to 19.2% in 2013 and from 5.4% to 18.6% in 2016. Several years the Prešov region has the highest poverty rate and Bratislava region the lowest (see Tab. 1).

Tab. 1: At-risk-of- poverty rate after social transfers: Total and by regions

At risk poverty rate		
EU SILC 2013	**EU SILC 2016**	**Region**
12.8	12.7	SR
8	5.4	Region of Bratislava
9.2	9	Region of Trnava
8.2	7.8	Region of Trenčín
16.3	14.6	Region of Nitra
11.1	14.1	Region of Žilina
15.6	15.3	Region of Banská Bystrica
19.2	18.6	Region of Prešov
12.3	13.5	Region of Košice

Source: Vlačuha and Kováčová, 2014 and 2017

Household type is also important factor in analysis of poverty. The household with three and more dependent children is the most vulnerable group in terms of poverty (at-risk-of-poverty rate was 34.8% in 2016). Other vulnerable household type was single parent (i.e. incomplete family), for which at-risk-of poverty-rate was 33.6%. We can say that in Slovakia, households with dependent children were generally more at risk of poverty (rate was 17.2 %) than households without dependent children (rate was 7.2%). Therefore, social policy should focus on families with dependent children, which are the most at risk of poverty. The position of the individual in the labour market is important factor related to the measurement of poverty. The self-defined economic activity is the variable in EU SILC database, which allows us to describe the most frequent activity status and study their poverty status. The factors described above are analysed by many authors in research papers (e.g. Bici and Cela, 2017; Botti et al., 2012; Lanjouw and Ravallion, 1995; Rogan, 2016 or Stankovičová, 2010). In mentioned researches is shown that they influence the households poverty. We added to the model other factors, which can influenced poverty such as degree of urbanization, tenure status, marital status, education, age and health. In the next part of the paper we will present a model of logistic regression to determine which of the factors statistically significant influence the poverty.

2. Results and discussion

First we made an assessment of the statistical significance and intensity of dependence between poverty and selected factors. The chi-squared test, contingency coefficient and Phi and Cramer's coefficient were used. Using Chi-Squared test for analyzing contingency between poverty and selected factors, we confirmed that all of the selected factors influenced poverty significantly (the quantitative variable age is excluded from this analysis). The results are shown in the Tab. 2, below.

Tab. 2: Results of the Chi-Squared test for poverty and selected factors

Factor	EU SILC 2013				EU SILC 2016			
	Chi-Square Test statistics	Sign.	Coeff. of conting.	Phi and Cramer's V	Chi-Square Test statistics	Sign.	Coeff. of conting.	Phi and Cramer's V
Urbanization	27.88	***	0.072	0.072	261.72	***	0.122	0.123
Region	257.40	***	0.136	0.137	306.15	***	0.131	0.133
Tenure status	43.48	***	0.089	0.09	376.79	***	0.146	0.147
Marital status	113.19	***	0.143	0.143	180.24	***	0.101	0.102
Education	109.13	***	0.141	0.142	613.69	***	0.184	0.188
Health	62.48	***	0.107	0.108	100.47	***	0.076	0.076
Gender	22.77	***	0.065	0.065	130.21	***	0.086	0.086
Household type	159.84	***	0.17	0.172	1186.1	***	0.253	0.261
Economic activity	730.35	***	0.345	0.368	1993.2	***	0.32	0.338

Source: own processing in IBM SPSS Statistic 19 using EU-SILC 2016

In order to determine the intensity of this dependence, coefficient of contingency and Phi and Cramer's V were calculated (see Tab. 2). The value ranges between 0 and 1, with 0 indicating no association between the variables and values close to 1 indicating a high degree of association between the variables. This association has shown that poverty was most affected by economic activity in both compared years. The second largest impact was the type of household, followed by education and tenure status. The other variables significantly affected poverty, but the intensity of their relationship to poverty was lower. The influence of the selected variables on the poverty was determined by the use of the model of logistic regression (Stankovičová and Vojtková, 2007, Maleček and Černáková, 2015, Mareš, 1999). The estimates of the logistic regression parameters, the main tests and statistics are shown in Tab. 3 and Tab. 4.

Tab. 3: Parameter estimates of logistic regression model for EU SILC 2013

Factor		Estimated Coefficients	P-Value	Significance	Point Estimates (Resulting Coefficients)
intercept		-1.802	0.014	*	0.165
Urbanization	densely pop. area	reference category			
	intermediate pop. area	0.391	0.017	*	1.478
	thinly pop. area	0.632	<0.0001	***	1.882
Region	**Bratislava**	reference category			
	West Slovakia	0.215	0.051	.	1.24
	Middle Slovakia	0.218	0.052	.	1.244
	East Slovakia	0.541	<0.0001	***	1.718
Tenure status	**Outright owner**	reference category			

	Owner paying mortgage	-0.535	0.035	*	0.585
	Tenant or subtenant paying rent at prevailing or market rate.	0.32	0.08	.	1.377
	Accommodation is rented at a reduced rate	0.568	0.252		1.765
	Accommodation is provided free	0.429	0.237		1.535
Household type	**One person household**	reference category			
	2 adults, no dependent children (under 65 years)	-1.01	<0.0001	***	0.364
	2 adults,no dependent children. (at least one adult 65+)	-1.473	<0.0001	***	0.229
	Other households without dependent children	-1.524	<0.0001	***	0.218
	Single parent household. one or more dependent children	0.508	0.073	.	1.662
	2 adults, one dependent child	-0.499	0.065	.	0.607
	2 adults, two dependent children	0.029	0.915		1.029
	2 adults, three or more dependent children	1.045	<0.0001	***	2.844
Marital status	**Never married**	reference category			
	Married	-0.656	0.005	**	0.519
	Widowed	-1.48	<0.0001	***	0.228
	Divorced	0.141	0.473		1.152
Education	**Primary education**	reference category			
	Secondary education and post -secondary	0.037	0.946		1.038
	Bachelor or equivalent	-1.007	0.073	.	0.365
	Master or equivalent	-1.392	0.045	*	0.248
	Doctorate or	-2.19	0	***	0.112

	Factor	Estimated Coefficients	P-Value	Significance	Point Estimates (Resulting Coefficients)
	equivalent				
Economic activity	Employee working full-time	reference category			
	Employee working part-time	1.488	<0.0001	***	4.428
	Self-employed working full-time	1.92	<0.0001	***	6.821
	Self-employed working part-time	2.1	0.003	**	8.166
	Unemployed	3.299	<0.0001	***	27.098
	Pupil, student, further training, unpaid work experience	1.557	0.222		4.743
	In retirement	0.519	0.026	*	1.68
	Perm.disabled	1.596	<0.0001	***	4.934
	In compulsory mil.com. or service	1.432	0.154		4.185
	Fulfilling domestic tasks and care respons.	1.674	<0.0001	***	5.333
Age		-0.003	0.71		0.997
Gender	Male	reference category			
	Female	0.047	0.767		1.048
Health status	Very good	reference category			
	Good	0.042	0.822		1.042
	Fair	0.49	0.014	*	1.633
	Bad	0.787	<0.0001	***	2.196
	Very bad	0.858	0.009	**	2.358

*Significance codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1*

Source: own processing in program R and SAS Enterprise Guide using EU-SILC 2013

Tab. 4: Parameter estimates of logistic regression model for EU SILC 2016

	Factor	Estimated Coefficients	P-Value	Significance	Point Estimates (Resulting Coefficients)
	intercept	-2.869	<0.0001	***	
Urbanization	densely pop. area	reference category			
	intermediate pop. area	0.407	<0.0001	***	1.502
	thinly pop. area	0.687	<0.0001	***	1.988
Region	Bratislava region	reference category			

	Trnava region	0.076	<0.0001	***	1.079
	Trenčín region	0.045	0.462		1.046
	Nitra region	0.728	0.653		2.7
	Žilina region	0.491	<0.0001	***	1.634
	Banská Bystrica region	0.481	<0.0001	***	1.618
	Prešov region	0.81	<0.0001	***	2.248
	Košice region	0.963	<0.0001	***	2.62
Tenure status	**Outright owner**	reference category			
	Owner paying mortgage	-0.319	<0.0001	***	0.727
	Tenant or subtenant paying rent at prevailing or market rate	0.079	0.22		1.082
	Accommodation is rented at a reduced rate	1.095	<0.0001	***	2.989
	Accommodation is provided free	0.309	<0.0001	***	1.361
Household type	**One person household**	reference category			
	2 adults. no dependent children (under 65 years)	-0.793	<0.0001	***	0.453
	2 adults. no dependent children. (at least one adult 65+)	-1.747	<0.0001	***	0.174
	Other households without dependent children	-1.414	<0.0001	***	0.243
	Single parent household. one or more dependent children	0.916	<0.0001	***	2.5
	2 adults. one dependent child	-0.329	0.009	**	0.719
	2 adults. two dependent children	0.002	0.989		1.002
	2 adults. three or more dependent children	1.048	<0.0001	***	2.851
Marital status	**Never married**	reference category			
	Married	-0.064	0.289		0.938
	Widowed	0.187	0.073		1.206
	Divorced	0.305	0.001	***	1.357
Education	**Primary education**	reference category			
	Secondary education (lower and upper)	-0.499	0.038	*	0.607

	Post-secondary non tertiary education and short cycle of tertiary education	-0.88	0.002	**	0.415
	Bachelor or equivalent	-1	0	***	0.368
	Master or equivalent	-1.421	<0.0001	***	0.241
	Doctorate or equivalent	-2.576	0.001	***	0.076
Economic activity	Employee working full-time	reference category			
	Employee working part-time	1.616	<0.0001	***	5.035
	Self-employed working full-time	1.399	<0.0001	***	4.5
	Self-employed working part-time	1.949	<0.0001	***	7.2
	Unemployed	2.913	<0.0001	***	18.409
	Pupil, student, further training, unpaid work experience	0.574	<0.0001	***	1.775
	In retirement	0.463	<0.0001	***	1.588
	Permanently disabled or/and unfit to work	1.543	<0.0001	***	4.68
	In com. Milit. community or service	2.836	<0.0001	***	17.047
	Fulfilling domestic tasks and care responsibilities	1.776	<0.0001	***	5.908
Age		-0.004	0.081		0.996
Gender	Male	reference category			
	Female	-0.142	0	***	0.868
Health status	Very good	reference category			
	Good	0.199	<0.0001	***	1.221
	Fair	0.31	<0.0001	***	1.363
	Bad	0.299	<0.0001	***	1.349
	Very bad	0.403	0	***	1.497

*Significance codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1*

Source: own processing in program R and SAS Enterprise Guide using EU-SILC 2016

In general, the logit model fitted the data quite well. The Chi-squared test rejects the null hypothesis of no explanatory power of the model. The R-squared coefficient for the model EU SILC 2013 is about 0.318, it means that model explains about 31.8 % variability of dependent variable. The R-squared coefficient for the model EUSILC 2016 is about 0.4347 it means that model explains about 43.47% variability of dependent variable. The next part of the article describes the odds ratios of estimators. The influence of the factors on the dependent variable poverty can be measured by point estimates (resulting coefficients or odds ratios) from logistic regression model (see Tab. 3 and

Tab. 4). Note that the interpretations of the odds ratios assume that the other factors included in logistic models remain constant. Analysis and interpretation of selected determinants can helps us to understand the influence of factor in positive or negative way on the poverty.

The factor *urbanization* statistically significantly influenced the poverty in both years. Households living in the thinly populated areas are the most vulnerable group, the chance of being poor for them is approximately 1.988 in the year 2016 (1.882 in the year 2013) times higher than for the households from densely populated area. The variable *Region* has different categories for used databases, but we used the same reference category (Bratislava Region) for both models. In the year 2013 the highest chance for the households became poor was for the East Slovakian. We got the similar results for the year 2016. It was to be expected that households living in other regions have a greater chance of becoming poor compared to the Bratislava region. In Košice region, is the chance of being poor 2,62 times higher than in Bratislava region, while in Prešov is the probability 2.248 times higher. These results don't correspond with statistics in Tab. 1, where the Prešov region has the highest poverty rate. *Tenure status* of the household dwelling is statistical significant factor which influenced the poverty. According to the results from logistic regression, the households which are living in the rented dwelling are the most risky group in terms of poverty. Interesting finding is, that the mortgage paying households have the smaller chance become poor than the households for which is the household's head the outright owner. The intensity of influence for the most risky group for the tenure status has increased from 1.765 to 2.989. The impact of *household type* was reflected in the expected way. The presence of children is associated with the higher poverty rates. Households with three and more children and single parent households are found to be at a higher risk compared to the other types in both calculated models. The probability becoming poor is 2.844 (2.851 in 2016) times greater than for the one person household (reference category). In 2016, for the households without dependent children with at least one member over 65 years is the chance of becoming poor less than for the households with members under 65 years. *Marital status* came out in our analysis as not very significant factor in analysing household's poverty. It is not surprising that the worst social situation is for divorced person. The odds ratio is 1.152 in model 2013 and 1.357 in model 2016, so the chance becoming poor in the year 2016 was 1.357 times greater for the divorced household's head than for the never married. The variable *education* is an important determinant (Bici and Cela, 2017). The signs on the parameter estimates support expectations. We obtained negative signs for the both models. The risk of poverty for households' heads with a low level of education is several times larger than other households with higher level of education. With a higher qualification, the chances to become poor falling down and are the smallest for the households whose heads have doctorate. Reference category for the variable *Economic activity,* were the households with the full-time employed heads. We found that for other categories are the chances to become poor a few times higher for the both models. Very high chances of becoming the poor, were for the households with unemployed heads, in the year 2013 it was 27.098 times higher and in the year 2016 it was 18.409 times higher chance compared with full-time employed household head. In this category, the intensity of the influence on the poverty has changed the most, in the year 2016 was the chance of becoming poor for unemployed considerably smaller than in the year 2013. We proved that variable *Age* is statistically insignificant in the study of poverty. As in the works of

the several researchers (see Botti et al., 2012, Rogan, 2016), the influence of *gender* on household poverty was detected as statistically significant. An interesting result is that for the model with EU SILC 2016 is a higher chance of becoming poor for men than for the women. The last factor that has a significant effect on poverty is the head of household's *general health*. The results show what we expected. The worse health indicates the higher risk of becoming poor. Household head with a very bad health status has about 2.358 in the year 2013 resp. 1.5 in the year 2013 times larger risk to become poor than household head with a very good health.

Conclusion

The strategy Europe 2020 seeks to reduce the number of people at risk of poverty and social exclusion. EU governments have set national targets to help achieve the overall EU targets, and are reporting on them as part of their annual national reform programmes. The main goal of this article was to determine which factors have a significant effect on poverty and to quantify the impact of individual variables on poverty in the Slovak households. A view of only one aspect (e.g. income) does not capture the complexity of the problem of poverty. There are many factors that cause poverty. The main causes are diseases, illiteracy, inability or government failure, unfavourable geographic location or poverty itself. Therefore, methods based on several indicators, demographic and social, provide a more comprehensive view.

Based on the data EU SILC 2013 and EU SILC 2016, our analysis confirmed that several factors significantly influenced the households' poverty. Results from the logistic regression model showed that statistically significant factors are urbanization, region, tenure status, household type, marital status, education, economic activity, gender and health. Only one factor appeared as insignificant, it was surprisingly age of the household's head. The impact of individual variables was quantified by odds ratios from logistic regression model. Based on our analysis we showed that poverty in Slovakia has regional aspects. Comparing two used models, we found that, households living in the Košice and Prešov region are prone to poverty more than households from Bratislava region. Problems arise due to undeveloped infrastructure, poor transport network, less evolving business environment and lower educational level of the population. Other very important factor which influenced the poverty is household type. Larger families are vulnerable to poverty, household with three or more dependent children are the most risky group. We obviously expected the findings that education plays important role in the study of household's poverty. With a higher qualification, the chances to become poor falling down and are the smallest for the households whose heads have doctorate degree. The results further show that the impact of economic activity is noteworthy. The worst situation was in the households with the unemployed head. Household's heads with very bad health are also a risky group in terms of poverty. Comparing two periods, year 2013 and year 2016, we found that the most noticeable improvement occurred the unemployed group. The latest study about factors affecting poverty in Slovakia, was done by Šoltés and Šoltésová in 2012. They used data from EU SILC database for the years 2005-2010. Except the factors like urbanization and tenure status, they used all other factors mentioned in our study. The gender variable was not confirmed as statistically significant. They conculed that the most endangered by poverty are households from the Prešov Region, headed by an unemployed, unemployed single person or unemployed

divorced person, with a primary or lower secondary education and with a bad health. The results of our analysis indicate that the same characteristics of the household's head can cause the risk for the family becoming poor. Therefore the politicians and local governments should focus their support to increase education level which can increase the employability. Other way is to improve investments into the infrastructure what would attract the Slovakia for more investors. We will continue in study of poverty of Slovak households and search for other factors and connections to expand the knowledge of poverty.

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