Regional and spatial dimension of Roma integration in Slovak municipalities

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ABSTRACT:

In this paper we discuss the spatial aspects of Roma settlement in Slovakia and the effects thereof on the integration of Roma communities. We use data about municipalities and districts originating from the Census of Population 2011 and from the Atlas of Roma communities in Slovakia in connection with the methodology of constructing integration indexes using the above-mentioned data sources. We support our analysis by the information from the forecasts of population in the Slovak districts and the forecast of reproductive behaviour of the Roma community in Slovakia. In the applied part of the paper we discuss the possibilities for applying the results of our analysis in the framework of implementation of a new Slovak legislation aimed at supporting the least developed regions. Currently the Government identified 12 least developed regions that as a matter of fact happen to have a higher share of Roma settlements, in particular in the Eastern and Southern part of the country.

JEL: ***R100*** *General Regional Economics*

R230 *Population; Neighbourhood Characteristics*

KEYWORDS: Municipalities, Regional Data, Spatial, Regional Population, Resettlement

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Introduction

Integration issues have recently received increased attention in the context of the mass immigration of refugees to the European Union. The integration topics have been featuring high in the migration agendas of the EU countries. However, the recent influx of humanitarian refugees and other categories of migrants with vulnerable characteristics represent an unprecedented phenomenon in the recent European history. While the old Member States of the EU with the tradition of immigration managed to develop a broad array of integration measures and programs, the new Member States with much lower degree of migration exposure are trailing behind.

Slovakia as one of the Visegrad Four is among the EU countries with the lowest migration intake. Furthermore, the majority of immigrants who reside legally in the country originates from the EU or broader Europe. There is a lack of experience with the integration of migrants from culturally or ethnically different backgrounds, such as Africa or Asia. The public programs aimed at integration of foreigners are limited to a small number of measures reserved for migrants who received asylum or the status of temporary protection. This group includes several dozens of people and thus cannot provide large enough sample to analyse the effectiveness of the integration programs. In this paper we attempt to look at the experience with the integration of another group of population with a different ethnic background – the Roma ethnic group in Slovakia. The reason for this analysis is threefold. Firstly, while the data about the integration of foreigners is scarce or non-existent, there is accessible representative data about the Roma ethnic groups that allow for measurement of their integration. Secondly, the lessons from integration of Roma ethnic group can be relevant for the integration of foreigners with presumably different ethnic background. Finally, the results can inform the policies aimed at better integration of different ethnic groups in Slovakia in general.

1 Current situation

As laid down in the „Strategy of Roma Integration until 2020“ (Strategy of Roma Integration up to 2020) government document the need to not only address but also to successfully deal with the challenges of both social and societal integration of the Roma communities arises. The Strategy defined by representatives of the state and local governments as well as the non-governmental sector and academic authorities, focuses on marginalised groups in population and is an open document which is to be continually amended in the process. The “Revised National Action Plan” (Revised National Action Plan for the Roma Population Inclusion Decade 2005-2015 for years 2011-2015) defines particular actions to be

taken in order to accomplish this Strategy. In order to achieve the set goals of prevention of marginalisation, multidimensional exclusion and poverty a relevant policy must build on solid data based on valid research. Especially when Sprocha expects the Roma population in Slovakia to reach the number of almost 590.000 people by 2030 - 10,6% of overall population.(Sprocha, 2014). This analysis gives some insight on the degree of marginalisation and its spatial layout in Slovakia as well as gives some understanding on the factors which may be causing it. (Atlas of the Roma Communities in Slovakia 2013, Annex to the Atlas of Roma Communities in Slovakia 2013)

2 Methodology

This work was inspired by the Migrant Integration Policy Index (MIPEX), which represents a useful tool for measuring policies aimed at integration of migrants in the EU, Australia, Canada, Iceland, Japan, South Korea, New Zealand, Norway, Switzerland, Turkey and the USA. The index is based on 167 policy indicators that provide the index with a multi-dimensional stance. In general the index captures the migrants' opportunities to participate in society. It also allows for international comparisons of policies and measures aimed at the integration of migrants.

According to the MIPEX project, it "identifies and measures integration outcomes, integration policies, and other contextual factors that can impact policy effectiveness; describes the real and potential beneficiaries of policies; and collects and analyses high-quality evaluations of integration policy effects"[1]. The index also serves to improve standards for equal treatment. Individual indicators are grouped into seven major categories: (1) labour market mobility; (2) family reunion; (3) education; (4) political participation; (5) long-term residence; (6) access to nationality; and (7) antidiscrimination. Three editions of the MIPEX index were published so far: 2005 (pilot study), 2007 and 2010. The last (third) edition was published in Brussels by the British Council and Migration Policy Group in February 2011. Computation of index is based on an extensive questionnaire by country correspondents.

As highlighted in Balaz and Lubyova (2012), Slovakia accounted for one of the lowest MIPEX scores among the EU Member Countries both in the 2007 and 2010 surveys. Slovakia's scores were 38 and 38, while MIPEX 27 countries ranked 54 and 53 in 2007 and 2010 respectively (Table 1). The 'labour market mobility', 'political participation', and 'access to nationality' were particularly weak areas in the Slovak integration policies, compared to the MIPEX 27 averages, and major European migration destinations (United Kingdom, France, Germany) and Slovakia's potential competitors (Austria, Czech Republic), (see Table 2).

[1] http://mipex.eu/what-is-mipex

Table 1: The 2007 and 2010 MIPEX indices for Slovakia

	2010		2007		Change 2010-2007	
	MIPEX 27	Slovakia	MIPEX 27	Slovakia	MIPEX 27	Slovakia
Labour market mobility	58	21	56	21	2	0
Family	60	53	61	53	-1	0
reunion Education	42	24	X	x	x	x
Political participation	47	21	48	21	0	0
Long-term residence	59	50	59	50	0	0
Access to nationality	45	27	44	39	1	-12
Antidiscrimination	57	59	55	47	2	12
Overall score 1)	**53**	**38**	**54**	**38**	**x**	**x**
Overall ranking 1)	**x**	**26**	**X**	**26**	**x**	**x**

Source: *Balaz and Lubyova (2012)*

Notes: 1) score and ranking without education. The education indices were not included into the 2007 MIPEX index

Table 2: The 2010 MIPEX scores for particular countries and policy areas

Policy area	**labour market**	**family reunion**	**education**	**political participation**	**long-term residence**	**access to nationality**	**anti-discrimination**	**overall score**
Slovakia	21	53	24	21	50	27	59	38
Czech Rep.	55	66	44	13	65	33	44	46
Austria	56	41	44	33	58	22	40	42
Germany	77	60	43	64	50	59	48	60
France	49	52	29	44	46	59	77	54
UK	68	67	55	45	50	61	89	62
MIPEX 27	58	60	42	47	59	45	57	55

Source: Balaz and Lubyova (2012)

Notes: 1) score and ranking without education. The education indices were not included into the 2007 MIPEX index

These results document that Slovakia is a country with a considerable lag in terms of integration policies of foreigners as captured by the complex MIPEX index. However, foreigners have been a group of relatively little concern to Slovakia, as the immigration has been rather limited and the country was characterized more as emigration country or country of transit. Therefore, the integration policies have not been on the top of political and social agenda. This has changed recently with the large inflows of irregular migrants into the EU and the prospects of obligatory quotas. However, in Slovakia there has been another group of population with different ethnic background. It is the Roma ethnic group. Unlike the immigrants, the Romas represent a large population group that has been present in the country for centuries. The size of this group according to the last Population Census of 2011 is around 100 thousand, while estimates based on the Atlas of Rom Communities data reach around 400 thousand persons. In the rest of this paper we focus on exploring the Roma integration as measured by the Atlas. We believe that some of the features can be applicable also to the integration of humanitarian refugees in Slovakia.

In our research on Roma we use a similar approach based on integration indexes. We attempt to construct an integration index that would capture various aspects of the Roma integration in Slovakia. Unlike in the case of MIPEX, the integration of Roma has not been measured so far in terms of a standardized and comparable international index. Therefore, our possibilities are limited by the availability of data that would allow for constructing index-like measures. We base our analysis on the largest and most comprehensive source of data about the Roma minority in Slovakia – the Atlas of Roma Communities.

The Atlas of Roma Communities 2013 project, which also is the source of data we use here, was realised under the UN Development Programme in cooperation with the Institute of Roma Studies at University of Presov, the governmental Commissioner for Roma communities' office of Slovakia and the Union of Cities and Municipalities of Slovakia (ZMOS). The project is a part of mutual UNDP and the Ministry of Labour, Social Affairs and Family of Slovakia program focused on monitoring of the living conditions of the Roma population. The Atlas is to offer a base for public management, non-profit and private sector to help in the setting of focused public policies as well as programmes targeted on living standards and social inclusion of the Roma population improvement.

The data of the Atlas provide rather detailed information about the situation of Roma at the level of municipalities or settlements. However, the prevalence of various infrastructure variables over the demographic ones does not allow for constructing a multi-dimensional index that would correspond to MIPEX in terms of richness of indicators and broad coverage of various areas. Furthermore, our goal is to examine the degree of Roma integration in Slovakia in relation to various regional and spatial dimensions. Therefore, we adopted the following approach: we construct integration indexes based on the Atlas data.[2] Our qualitative index (IIQUAL) captures various aspects of the Roma integration measured in terms of qualitative or scale variables.

The qualitative integration index was calculated as a sum of the following binary variables:

IIQUAL_1 = 1 if the municipality has a committee for solving the issues Roma population

IIQUAL_2 = 1 if the municipality has a certain form of Roma self-governance

IIQUAL_3 = 1 if there is NGO that works also with the Roma

IIQUAL_4 = 1 if the municipality has a folklore group where Roma perform or performed in the past

IIQUAL_5 = 1 if the municipality has sports club(s) in which Roma currently participate

IIQUAL_6 = 1 if the municipality has sports club(s) in which Roma used to participate in the past (after the year 1990)

The qualitative integration index thus can adopt values between 0 and 6, depending on the presence or absence of the integration attributes enumerated above. Table 3 below provides the descriptive statistics for the qualitative index. Figure 1 illustrates the frequency distribution of the qualitative integration index values. As can be seen, among the total number of 1 068 municipalities, the average value of integration index is 1,61, which is a rather low value considering the range 0 to 6. More than 300 municipalities have 0 degree of integration based on our index, i.e. there is no form of Roma self-governance, no committees focused on Roma issues, no participation of Roma in the local cultural or sports organisation, etc. We hypothesize that this low degree of integration could be caused simply by the low share of Roma population in the settlement. In the next section we verify this assumption by the means of regression. Thus we analyse the degree of integration as captured by the index in relation to various regional and local/spatial characteristics of the municipalities or settlements where the Roma live.

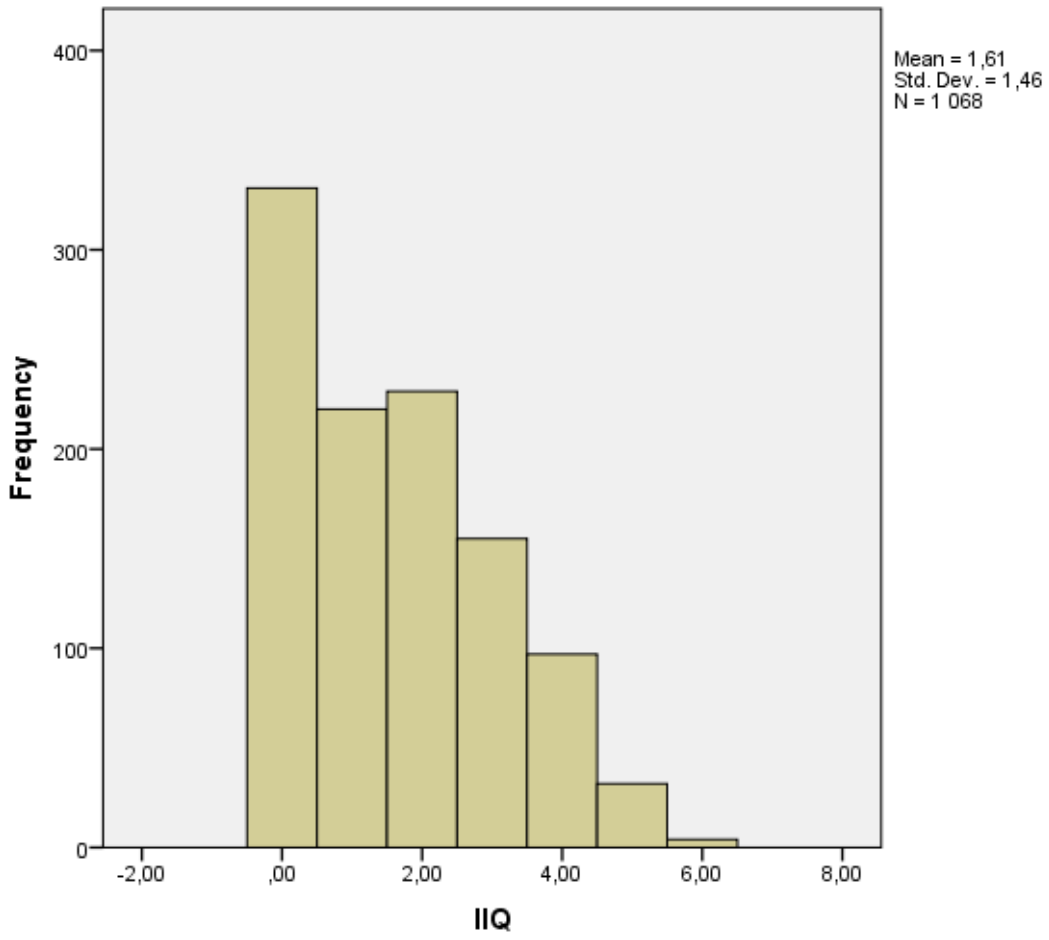
[2] We have to note that the Atlas itself constructs an index called segregation and underdevelopment index, which is based on other questions of the questionnaire. This index is used only to illustrate the spatial distribution and to create detailed maps, but is not used to analyse the relationship between the segregation and other factors.

Table 3. Summary statistics of the qualitative integration index

	N	Minimum	Maximum	Mean	Std. Deviation
IIQUAL	1 068	0,00	6,00	1,6058	1,45956

Source: Own calculation based on the ARC data

Figure 1. Frequency distribution of the values of qualitative integration index



Source: Own calculation based on the ARC data

Before we proceed with the analysis, we examine the total size of the covered population in particular regions, as well as other regional characteristics (average population per municipality, minimum and maximum population per municipality, average share of Roma population per municipality). They are depicted in Table 4. We can see that while the Bratislava region has the largest population in the country, it also has one of the lowest shares of the Roma population (after the Trencin region). On the other hand there are the Banska Bystrica and Partizanske regions which, although with the smallest share of population, have the highest share of the Roma population thereof.

Table 4. Summary statistics for total municipality size and share of Roma population in the municipalities by region

Region	Total	BA	TT	BB	KE	NR	PO	TN	ZA
Population per municipality									
Average (ths)	3,7	19,8	4,9	2,0	2,7	3,9	2,6	8,7	11,7
Minimum	59	809	430	70	100	186	59	206	422
Maximum (ths)	411,2	412,3	65,1	77,9	240,4	82,0	91,8	56,2	84,3
% of Roma in municipalities									
Average	23,8	7,7	9,1	30,4	28,1	11,0	30,6	5,1	6,9
Minimum	0	0,3	1,5	0,8	1,4	0,7	2	0,3	0
Maximum	100	25,2	62,1	96	91,5	55,7	100	17,6	32,4
Surveyed population									
Covered population (ths)	395,5	535,2	373,1	528,8	697,2	518,8	632,0	354,7	315,4
Total covered municipalities	1070	27	76	266	256	134	243	41	27

Source: Own calculations based on the ARC data

3 Methodology and empirical results

In our analysis we tried to establish a relationship between the integration index and some plausible explanatory variables that would capture the characteristics of municipalities that can be important for integration. We used two ways of estimating these effects: (a) linear regression estimated by ordinary least squares (OLS) method, and (b) multinomial logistic regression. While the first model treats the dependent variable as a numerical variable, the second method treats the dependent variable as a categorical one. Given that the integration index can have 7 plausible values, and thus it is at margin between the numerical variable (albeit not continuous) and categorical variable (with relatively many values), we deem both methods plausible.

First we estimated a linear regression model (OLS) for the dependent variable integration index. Explanatory variables included two demographic variables - the size of municipality (in terms of population measured in thousands) and the share of Roma population in the municipality. We included these variables as we believe that they can have a crucial impact on the integration ability. Firstly, we can assume that the size of municipality is important because the larger the municipality, the more opportunities there are for integration, the larger is the labour market, the more varied is the social and cultural landscape, etc. Secondly, we believe that the share of Roma population can be important as the municipalities with higher shares of Roma would be forced to develop more integration measures, take activities, etc., in order to integrate the minority effectively. We also use some other variables that capture the institutional side or the infrastructure of municipalities. Notably, we use the presence of a community low-threshold centre, the presence of a religious centre and a priest. Finally, we use the dummy variables for particular regions in order to capture the regional fixed effects. These are important as the Slovak regions are rather diverse in terms of the Roma population concentration.

Tables 5 to 7 contain the results of the linear regression estimation.

Table 5 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
OLS	,406[a]	,165	,155	1,34103

Table 6 ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
OLS	Regression	371,621	12	30,968	17,220	,000[b]
	Residual	1886,486	1049	1,798		
	Total	2258,106	1061			

Table 7 Estimated Coefficients

Model: . Dependent Variable IIQ		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
OLS	(Constant)	,952	,124		7,682	,000
	Population_1000	,015	,004	,110	3,436	,001
	%_of_ Roma_pop_in_municipality	,004	,002	,055	1,697	,090

Zilina	-,137	,283	-,014	-,483	,629
Trnava	,429	,181	,075	2,364	,018
Trencin	-,217	,235	-,028	-,922	,357
Presov	-,388	,121	-,112	-3,209	,001
Nitra	,337	,148	,077	2,275	,023
Bratislava	-,645	,281	-,068	-2,300	,022
Is_there_community_or_low_threshold_centre_in_municipality	,729	,138	,161	5,278	,000
Is_there_religious_centre_in_municipality	,147	,173	,027	,853	,394
Is_there_priest_in_municipality	,769	,091	,257	8,471	,000
Banska_Bystrica	-,068	,118	-,020	-,571	,568

Source: Own calculations based on ARC data

The results show that the size of municipality in terms of population is highly significant, but the effect is relatively small: additional thousand population increases the integration index by 0,015. The share of Roma population us only marginally significant (p=0,09), while its size is also small (0,004).

Regional fixed effects are significant only for Nitra, Trnava, Trencin, Presov and Bratislava. The effects on integration index are positive in Nitra and Trnava and negative in the rest of the mentioned regions.

Finally, it turns out that institutions matter most significantly. The presence of a community low-threshold centre is highly significant with the coefficient 0,73, the presence of a priest is also highly significant with the coefficient 0,77.

While we do not make any inference about the causality of these relationships, we can simply state the existence of statistically significant relationships between the dependent variable and the explanatory ones.

It seems that the institutional characteristics of the municipalities - notably the presence of social infrastructure in the form of community centres does matter for integration of the Roma. The significant and positive effect of priest presence in the municipality is also noteworthy.

In order to perform some sensitivity analysis, we used also another estimation method – multinomial logit model where the Integration index was treated as a categorical variable with 7 possible states (integers from 0 to 6).

Secondly, in order to perform sensitivity analysis, we estimated the relationship between the integration index and the same explanatory variables by the multinomial logit model whereas the index was treated as a categorical variable with 7 integer values ranging from 0 to 6. The model does not have any ordinal properties, as the index is an additive variable and the sequencing of the values does not have any particular meaning in our context. The results of the estimation are reproduced in the Statistical annex.

For example, the results depicted in Table A4 show that the coefficient of total population size is negative. This means that the increase of total population of the municipality by one thousand is associated with a 0,128 decrease in the relative log odds of having IIQ equal to 0 as compared to having IIQ equal to 6. Equivalently we can say that the increase of total population of the municipality by one thousand is associated with the relative risk ratio being 0,88 (exp(-.128) for having IIQ=0 versus having IIQ=6.

In the second part of the empirical analysis we treat the dependent variable as a categorical one with 7 values (integers from 0 to 6). Dependent variable can be viewed as a categorical variable. The method used for estimating relationships between categorical dependent variable and independent variables is most commonly based on logit or probit models. The difference between the two is in the assumption in the underlying distribution, whereas the former one works with normal distribution and the latter with logistic distribution. If the dependent variable is binary (dichotomous) - e.g. adopting 2 different discrete values, a simple logit or probit model can be used to estimate the relationship. However, in a more complex setting where the dependent variable adopts several discrete values, an appropriate model is multinomial logit or probit. We use logit rather than probit, given the number of observations and plausibility of the assumption about the underlying distribution (we have no strong reason to assume a normal distribution).

Another particular feature of our IIQUAL index is the lack of ordinal properties. The values of index are increasing, however this does not point to an increasing level of integration. Different values of index simply refer to different situations in terms of integration, but we cannot say that one of the situations is quantitatively “more integrated” than another one. They are simply different in qualitative terms. In order to measure the quantitative characteristics of integration we would have to decide which of the various

situations is “more integrated”. However, this is beyond our scope of analysis, as such a judgement would have to be based on individual valuations, subjective methods etc. Therefore we are not using ordinal logit model.

The main messages of the regression in terms of the significance of variables and their effects are confirmed also by the multinomial logit model. The demographic variables and institutional ones are significant and have positive effects, the magnitude of the effects is the largest for the institutional variables (community low-threshold centre and the presence of a priest in the municipality). As regards the regional fixed effects, fewer are significant in the logit model.

CONCLUSION

In the presented paper we studied the relationship between the integration of Roma population and selected demographic, institutional and regional variables in 1070 municipalities in all 8 regions of Slovakia. We constructed an integration index as a variable capturing the quality of Roma integration. We estimated the mentioned relationship by the means of linear regression and multinomial logit model. The results show that the demographic variables, such as the size of total population and share of the Roma population are significantly related to the quality of integration (as captured by the index). However, the magnitude of the coefficients is relatively small. The largest coefficients and thus the largest integration potential have the institutional arrangements, such as the presence of low-threshold community centres, or presence of the church structures in the municipality. The regional variables were used as fixed effects. The only two regions with systematically significant coefficients were Trnava and Nitra. Our results show that the integration potential is in the institutions, rather than in demographic characteristics. The message can have high relevance also for the integration of humanitarian and other irregular immigrants of different ethnic background than the majority population. As documented by comparative analysis based on the MIPEX integration index, Slovakia has been lagging in terms of integration of foreigners. Thus the institutional underpinnings of the integration process have to be beefed up in order to improve the integration potential. The institutional solution is expensive, but seems to play a prominent role in the integration process of people with different ethnic backgrounds in Slovakia.

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Statistical annex

Tables A1 –A4 Results of multinomial logit estimation

Table A1 Model Fitting Information

Model	Model Fitting Criteria	Likelihood Ratio Tests		
	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	3488,489			
Final	3207,079	281,410	72	,000

Table A2 Pseudo R-Square

Cox and Snell	,233
Nagelkerke	,242
McFadden	,081

Table A3 Likelihood Ratio Tests

Effect	Model Fitting Criteria	Likelihood Ratio Tests		
	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.
Intercept	3207,079[a]	,000	0	.
%_of_ Roma_pop_in_municipality	3221,229	14,150	6	,028
Population_1000	3235,940	28,861	6	,000
Zilina	3212,290	5,211	6	,517
Trnava	3225,657	18,579	6	,005
Trencin	3215,236	8,157	6	,227
Presov	3214,854	7,775	6	,255
Nitra	3227,140	20,061	6	,003

Kosice	3218,355	11,276	6	,080
Banska_Bystrica	3217,200	10,121	6	,120
Is_there_community_or_low_threshold_centre_in_municipality	3231,664	24,585	6	,000
Is_there_religious_centre_in_municipality	3207,975	,896	6	,989
Is_there_priest_in_municipality	3269,923	62,844	6	,000

Table A4 Parameter Estimates (for IIQ = 0 as compared to the reference category IIQ = 6)

IIQ[a]		B	Std. Error	Wald	df	Sig.	Exp(B)	95%	
								Low	Upp
0	Intercept	-	5454,9	,00	1	,99			
	%_of_ Roma_pop_in_municipality	,001	,041	,00	1	,98	1,001	,923	1,08
	Population_1000	-,128	,048	7,0	1	,00	,880	,801	,967
	[Zilina	15,0	881,58	,00	1	,98	3530694,	,000	.[b]
	[Trnava	2,81	1106,2	,00	1	,99	16,646	,000	.[b]
	[Trencin	15,2	881,58	,00	1	,98	4279082,	,000	.[b]
	[Presov	13,6	881,58	,00	1	,98	881976,6	,000	.[b]
	[Nitr	2,90	968,98	,00	1	,99	18,255	,000	.[b]
	[Kosice	,409	1395,3	,00	1	1,0	1,506	,000	.[b]
	[Banska_Bystrica	14,3	881,58	,00	1	,98	1665022,	,000	.[b]
	[Is_there_community_or_low_threshold_centre_in_	1,44	1,319	1,2	1	,27	4,258	,321	56,4
	[Is_there_religious_centre_in_municipality =0]	,713	1,360	,27	1	,60	2,040	,142	29,3
	[Is_there_priest_in_municipality =0]	12,8	436,61	,00	1	,97	392245,7	,000	.[b]

a. The reference category is: 6,00.