

# Who are Kotleba's Voters? Voters' Transitions in the Banská Bystrica Region in 2009 – 2014

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**Who are Kotleba's Voters? Voters' Transitions in the Banská Bystrica Region in 2009 – 2014.** The aim of the article is to explore voting behaviour of supporters of Marian Kotleba, a controversial right-wing candidate that won the presidency of the Banská Bystrica Region, Slovakia, in the 2013 regional elections. Specifically, the article models transitions of voters between political parties and candidates in the 2009 – 2014 elections in order to determine who Kotleba's supporters voted for in other elections. A hierarchical Bayesian model of ecological inference is used to estimate the transitions rates. There is a group of people in the Region that consistently do not participate in the second order elections. Kotleba managed to mobilize a large share of these voters in the second round of the 2013 regional elections. Kotleba's voters were highly disciplined – almost everyone who supported him in the first round participated in the second round and voted for him again. Kotleba was also as successful as his opponent Vladimír Maňka in mobilizing voters of the SMER(-SD) party and Rober Fico.

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## Introduction

The aim of this article is to explore voting behaviour of supporters of Marian Kotleba; specifically, to model transitions of voters between Kotleba and other candidates in the regional elections and political parties and candidates in 2009 – 2014 elections. Kotleba is a far right-wing candidate of ĽSNS<sup>2</sup>, known for his controversial positions towards the Roma community in Slovakia, NATO and EU, the Jewish holocaust and the 20<sup>th</sup> century Slovak history. (e.g. TASR 2014a, 2014b, 2014c, 2014d)

He contested in the 2009 and the 2013 regional elections in the Banská Bystrica Region to become “župan”<sup>3</sup>. In the first round of the 2013 regional elections, Kotleba managed secure the second highest number of votes – 21.30 %. It was expected that his opponent Vladimír Maňka will win the second round of the elections since it has been frequently observed that in a majoritarian voting system and two-candidates setting (such as the second round of a majoritarian run-off voting system), if there is an extreme and a

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<sup>3</sup> This can be translated either as “regional president” or “regional governor”. I use the term “president” in the following text.

moderate candidate then voters from the unrepresented extreme of the political spectrum are more likely to side with the moderate candidate.

This hypothesis is in line with the median voter theorem by Harold Hotelling (1929) and Anthony Downs (1957) and has been empirically tested in multiple situations – it has been, for example, shown that candidates of the far right National Front (*Front national*) in France are comparatively less successful in the second rounds of the National Assembly elections because voters of other parties tend to support their moderate opponents. (e.g. Lubbers – Scheepers 2002) Kotleba's defeat was also expected due to the fact that explicitly far right parties gained only relatively marginal support in the Banská Bystrica Region in other types of elections<sup>4</sup>.

Contrary to expectations, Kotleba managed to win the second round of the regional elections and became the regional president since he secured 55.53 % of the vote. The turnout reached 24.59 % of all registered voters in the second round and 24.61 % in the second round. What did lead to Kotleba surprisingly becoming the regional president? The 2013 regional elections in the Banská Bystrica Region are a clear case of the theorem failing to predict the electoral outcome. Moreover, the theorem makes a very unambiguous prediction in this case since Maňka was clearly much closer to the median of the political spectrum than Kotleba. This alone makes these elections a very important case to investigate. But this case is crucial not only for testing the predictive power of the median voter theorem but also for the future prospects of democracy in Slovakia and elsewhere, given the controversial profile of Kotleba and other far-right Slovak politicians.

One way how to shed light on the subject is to explore the electorate of Kotleba in the 2013 elections – essentially to answer a simple question of what kinds of voters chose Kotleba over other candidates. When it comes to voters' characteristics, two types of questions can be asked. First, one may inquire about the social, economic or demographic characteristics of Kotleba's voters. Second, one may explore which political parties and candidates Kotleba's voters supported in other elections. This article answers the later question. It explores the structure of voters' transitions between the 2013 regional elections and other elections occurring before and after.

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<sup>4</sup> In the 2012 National Council elections, Kotleba's own party, ĽSNS, obtained 2.61 % of the vote; the nationalist SNS (Slovenská národná strana; Slovak National Party) gained 4.6 %; and ĽS-HZDS (Ľudová strana – Hnutie za demokratické Slovensko; People's Party – The Movement for Democratic Slovakia) only 1.31 % in the Banská Bystrica Region. Interestingly enough, even in the 2014 European elections that took place after Kotleba's success in the regional elections, ĽSNS only gained 3.89 % of the vote and SNS gained 3.84 % of the vote. It is therefore obvious that Kotleba's victory over Maňka cannot be sufficiently explained by a support from far right parties' voters.

I select one instance of each type of elections taking place in Slovakia except of the municipal elections<sup>5</sup> that was organized the closest to the 2013 regional elections – the 2009 regional elections, the 2012 National Council (i.e. parliamentary) elections, the 2014 presidential elections and the 2014 European elections. In each case, voters' behaviour in those elections is projected against voters' behaviour in the 2013 regional elections to see how voters changed political preferences. In each case, only electoral results in the Banská Bystrica Region are examined.

The principle of preserving the secrecy of the ballot causes an irreversible loss of information about the actual structure of voters' transitions. Any method of its reconstruction is inescapably based on an indirect estimation with a level of uncertainty. Methods based on surveying a random sample of voters are almost always the most suitable ones to perform this task. However, no such surveys were conducted in case of the Slovak regional elections. Therefore, I am forced to use a hierarchical Bayesian model of ecological inference in order to estimate the voters' transition rates based on electoral data aggregated to the level of a large number of very small territorial units, in this case to the electoral precincts (*volebný okrsk*) level. This method estimates the most probable structure of transitions given a set of statistical assumptions.

This article is split into several sections. In the first section, I briefly introduce the statistical model used to estimate the transition rates. The second section comments on data used in statistical modelling. The third and final section presents the structure of voters' transitions obtained by the models and then compares transition rates across the 2009-2014 elections and summarizes main findings.

### **The hierarchical Bayesian model of ecological inference**

Information on the real structure of voters' transitions between political parties or candidates in two consecutive elections is always irreversibly lost and cannot be retrieved. It can, however, be approximately reconstructed using two groups of methods. The first group contains methods based on direct surveying of a random sample of voters. There are four types of these surveys: panel surveys, pre-election surveys, exit polls and post-elections surveys. They differ in who is being surveyed and how. If the respondents are selected randomly, results of the survey closely approximate the actual unobserved social reality. This makes survey methods optimal strategies for voters' transitions research in most situations.

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<sup>5</sup> Voting system used in the municipal elections prevents meaningful aggregation of results to the regional level and therefore exploration of voters' transitions.

There may, however, be serious problems with surveying voters: In pre-election surveys, there is always a share of respondents who are not certain about their future electoral behaviour or may change political preferences after surveying. Exit polls do not provide any information about previous electoral behaviour of people who do not participate in the given elections since it is conducted in polling stations. And all surveys obviously run into the risk of respondents providing incorrect answers. Many voters do not remember which political party or candidate they supported in previous elections, especially in situations when a number of years have elapsed. This often causes distortions in the distribution of voters among political parties in the sample despite the respondents being selected randomly.

There were no surveys conducted before or during the 2013 regional elections which would be suitable for reconstructing information about voters' transitions. This forces me to utilize the second group of methods for estimating the structure of these transitions – statistical modelling. The specific model used in this article is a hierarchical Bayesian model of ecological inference. (Rosen et al. 2001)<sup>6</sup> The model uses aggregate data to draw inferences about individual behaviour. It consists of three steps. In the first step, a suitable probabilistic distribution of values of unobserved variables is selected using distributions of values of observed variables. In this case, the observed variables are shares of votes for political parties and presidential candidates and the unobserved variables are values in a contingency table of voters' transitions between two elections.

It is assumed that values of the unobserved variables follow the multidimensional Dirichlet distribution. It is a very general distribution that likely covers all actual distributions in social reality. In the second step, each territorial unit representing one data point is given an interval where a value of an unobserved variable must necessarily fall given the values of the observed variables. For example, if Marian Kotleba gained 35 votes in the first round and 53 votes in the second round of the elections in a hypothetical electoral precinct, it is possible to determine that the share of voters who supported him in both rounds cannot be lower than 0 % and higher than 66 % of all voters that supported him in the second round (35 divided by 53 is 66 %). In the third step, all values within this interval are assigned a probability of being the true value according to the Dirichlet distribution. Its statistical parameters are determined using distributions of the observed variables via the Bayes Theorem (see the formal description of the model in Rosen et al. 2001 and Lau et al. 2007 and further methodological literature on ecological inference, mainly King 1997; King et al. 1999; King et al. 2004).

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<sup>6</sup> The model is executed using the “eiPack” package for R. (Lau et al. 2007)

The method has been used to study electoral behaviour in a number of countries including e.g. USA (Imai – King 2004; Johnston et al. 2004; Herron – Sekhon 2005; Hawley – Sagarzazu 2012), Canada (Fetzer 2014), Germany (King et al. 2008; Lehmann 2010), Spain (Puig – Ginebra 2014), Argentina (Lupa – Stokes 2009; 2010), Japan (Burden 2009), New Zealand (Hudson et al. 2010) or Malaysia (Pepinsky 2009). In the Central European region, it has been used to study the interwar Polish and Czechoslovak parliamentary elections (Kopstein – Wittenberg 2003; 2004; 2009; 2010a; 2010b; 2011a; 2011b), as well as the Czech and Slovak presidential elections (Gregor 2014a) and the Czech parliamentary (Gregor 2014b), senatorial (Pink – Gregor 2011), presidential (Gregor 2014c), European (Linek – Lyons 2007) and regional (Gregor – Gongala 2014) elections.

An output of this method is a contingency table similar to the table 1. Variable  $v_0$  denotes the share of non-voters in elections  $t$ . Variables  $v_1$  to  $v_{i-1}$  denote shares of  $i-1$  relevant parties in these elections and variable  $v_i$  the share of votes for other parties. Variable  $s_0$  denotes the share of non-voters in elections  $t+1$ ,  $s_1$  and  $s_{j-1}$  denote shares of  $j-1$  relevant parties in these elections and  $s_j$  denotes the share of votes for other parties. Variables denoted  $\beta_{ij}$  are unobserved quantities of all possible combinations of electoral behaviour. The table does not include first-time voters, as well as voters who died between the two elections, voters who lost the right to vote etc. Since their quantities are usually unknown it is necessary to omit them.

Table 1: Contingency table of the structure of voters' transitions

	Elections $t$							
		Non-voters	Party 1	Party 2	...	Party $i-1$	Other parties	Total
Elections $t+1$	Non-voters	$\beta_{00}$	$\beta_{10}$	$\beta_{20}$	...	$\beta_{i-10}$	$\beta_{i0}$	$s_0$
	Party 1	$\beta_{01}$	$\beta_{11}$	$\beta_{21}$	...	$\beta_{i-11}$	$\beta_{i1}$	$s_1$
	Party 2	$\beta_{02}$	$\beta_{12}$	$\beta_{22}$	...	$\beta_{i-12}$	$\beta_{i2}$	$s_2$
	...	...	...	...	...	...	...	...
	Party $j-1$	$\beta_{0j-1}$	$\beta_{1j-1}$	$\beta_{2j-1}$	...	$\beta_{i-1j-1}$	$\beta_{ij-1}$	$s_{j-1}$
	Other parties	$\beta_{0j}$	$\beta_{1j}$	$\beta_{2j}$	...	$\beta_{i-1j}$	$\beta_{ij}$	$s_j$
	Total	$v_0$	$v_1$	$v_2$	...	$v_{i-1}$	$v_i$	1

Source: Author

Validity of the model is determined by measuring a match between the contingency table estimated by the model and by an electoral survey. The most extensive research on this subject to date was conducted by Lucas Leemann a Philipp Leimgruber (2009) who compared estimates of religious affiliation of voters in 113 Swiss referenda produced by six statistical models. The match between the model and a survey can be calculated using so called index of

similarity. It is a sum of absolute values of differences between a survey ( $\beta_p$ ) and the model ( $\beta_m$ ) divided by two and subtracted from zero:

$$S = 1 - \frac{\sum_{i=0}^i \sum_{j=0}^j \beta_{pij} - \beta_{mij}}{2}.$$

Table 2 presents values of this index for several models of voters' transitions between two parliamentary elections in the Czech Republic between 1996 and 2010. The transitions were estimated using municipal-level data (some 6,300 territorial units). The estimates are compared with results of the SC&C exit polls in 1998, 2002, 2006 and 2010 (see Gregor 2014b for further details).

Table 2: **Similarity index of selected models of voters' transitions**

Voters' transitions	Raw index	Standardized index	Contingency table size
Parliamentary elections 2006 and 2010	89.4%	2.29	56
Parliamentary elections 2002 and 2006	89.0%	2.27	42
Parliamentary elections 1996 and 1998	88.6%	2.11	64
Parliamentary elections 1998 and 2002	83.7%	1.94	48

Source: Author.

Raw values of the index are not comparable across models because the size and shape of the contingency table are not the same. The smaller the table, the more likely it is to correctly place a voter into a correct cell of the table at random. To compare the values, they must be standardized by the size of the contingency table. The standardized index informs whether the statistical model is more accurate than a "model" of uniform distribution of voters across the contingency table.

### Data sources

In this article, I present results of statistical modelling based on Slovak electoral data, specifically on results of the following elections: the 2009 and the 2013 regional elections (the first and the second rounds; elections of the regional president), the 2012 National Council elections, the 2014 presidential elections (the first and the second rounds) and the 2014 European elections. Data were extracted from the Slovak Statistical Office electoral website (Štatistický úrad SR 2014) that provides downloadable electoral results on the level of electoral precincts in machine readable formats within hours after elections.

In all cases, data on the smallest level aggregation available is used – results in electoral precincts that represent individual polling stations. There were some 900 precincts in the Banská Bystrica Region in the aforementioned elections. Most municipalities in the country only correspond to one precinct while larger towns and cities are divided into multiple precincts. This increases granularity of the data and effectively mitigates the so called “Manhattan effect”.<sup>7</sup> An average number of registered voters in a precinct is 580 voters with the standard deviation of 374 voters. This is an acceptable variation of population sizes since the ecological inference model calculates transition rates directly from natural numbers of valid ballots and not from shares of votes.

Geographical division of the region into precincts slightly changed in 2009 – 2014 – new precincts were occasionally created or existing ones merged. In such cases, I design artificial territorial units that remain constant during the whole period. This produces a total of 910 precinct-based territorial units, a number sufficiently high for valid statistical modelling.

The statistical model assumes that population remains constant in both elections. This obviously does not correspond to reality. In 2009 – 2014, some voters died, some gained or lost the right to vote and some casted their votes in different electoral precincts. These problems are either unsolvable or marginal so it is necessary to omit them. If the number of all registered voters differs in one territorial unit in two elections, the difference is added to non-voters. Under normal circumstances, the number of non-voters is calculated as

$$n_t = v_t - \sum_{i=1}^i s_{ti}$$

where  $n_t$  denotes the number of non-voters in elections  $t$ ,  $v_t$  denotes the number of all registered voters,  $s_{ti}$  denotes number of votes for a party  $i$ . When constructing a dataset for statistical modelling the number of non-voters is calculated as

$$n_t = \max v_t, v_{t+1} - \sum_{i=1}^i s_{ti}$$

where  $v_t$  is the number of all registered voters in elections  $t$  and  $v_{t+1}$  is the number of all registered voters in elections  $t+1$ . The number of non-voters in elections  $t+1$  can be calculated as

$$n_{t+1} = \max v_t, v_{t+1} - \sum_{i=1}^i s_{t+1i}$$

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<sup>7</sup> The “Manhattan effect” is a type of information loss caused by data aggregation. It is a situation when there is a data point representing a very large area or population in a dataset of many small territorial units. This data asymmetry can cause distortions when statistical methods are applied. The effect is named after one of its prime examples, the borough of Manhattan in New York City. (King 1997)

In all elections, electoral support for political parties and candidates that failed to obtain above 5 % of the vote nationally is added up to a residual category (“Others”).

### **Structure of voters’ transitions**

This section of the paper presents results of the ecological inference models. As I have explained, an output of such a model is a contingency table with political parties or candidates in first elections in rows and parties or candidates in second elections in columns. The cells contain quantities of voters with all possible combinations of voting behaviour in both elections. The quantities can either be the estimated absolute numbers of voters or fractions of either all voters, voters in the first elections (i.e. row totals) or voters in the second elections (i.e. column totals).

It is, however, much more instructive to present these results via charts than via tables since quantities of voters transitioning between various voting options are much easier to compare that way. Moreover, a total of 14 models of voters’ transitions are produced when analysing 2009 – 2014 elections and it is beyond the scope of the article to produce all of them. Therefore, the structure of voters’ transitions is presented using column charts such as the chart 1 below.

It shows transitions of the group of people that did not vote in the first round of the 2013 regional elections to political parties and candidates in other elections. Columns in the chart represent non-voters in the 2013 regional elections and segments inside the columns represent relative quantities of various voting options in other elections (non-voting and voting for various parties or candidates).

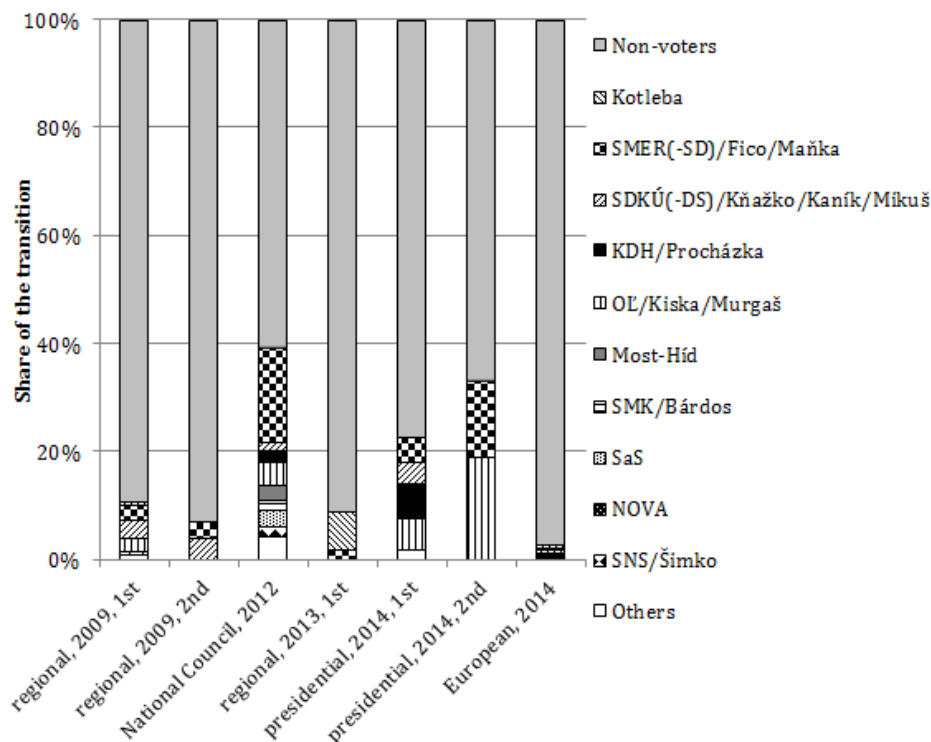
As we can see, non-voters in the 2013 regional elections mostly did not vote in other types of elections either. This shows that there is a relatively sizeable portion of the Region’s adult population that almost never votes in any elections. The only elections that these people do participate in relatively larger numbers are so called first order elections<sup>8</sup> – in this case the parliamentary elections and the presidential elections. It should be noted that the modelling of voters’ transitions presented in this article is not in and of itself sufficient to establish that non-voters we observe during various elections are actually the same people every time. The only conclusion that we can draw is that the group of people that did not vote in the second round of the 2013 regional elections also did not vote in other types of elections. It may, however, still be the case that non-voters in one of these elections are actually to a degree completely different people than in other elections.

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<sup>8</sup> See the concept of first and second order elections in Reif and Schmitt 1980.



**Chart 1: Transitions between non-voters in the second round of the 2013 regional elections and parties or candidates in other types of elections**



Source: Author

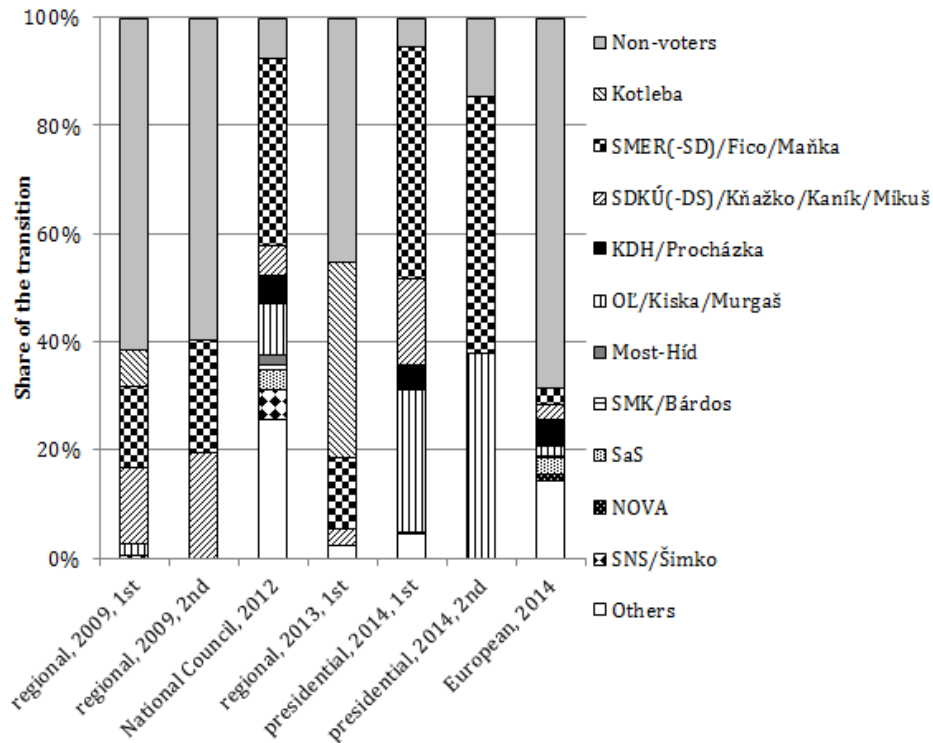
Notes: SDKÚ-DS – Slovenská demokratická a kresťanská únia – Demokratická strana (Slovak Democratic and Christian Union – Democratic Party), KDH – Kresťanskodemokratické hnutie (Christian Democratic Movement), OĽ – Obyčajní ľudia (Common People), SMK – Strana maďarskej komunity (Party of the Hungarian Community), SaS – Sloboda a Solidarita (Freedom and Solidarity).

In order to be more certain that there really is a stable group of non-voters, one would have to model voters' transitions between all combinations of the elections in questions – a total of 56 models. Then, high values in the matrix of non-voters in the 56 pairs of elections would establish the existence of a group of people that consistently do not vote. This daunting task is, however, beyond the scope of this article. Still, the shares of people that did not vote in the second round of the 2013 regional elections and in other types of elections are so large that the mutual overlaps of non-voters in all possible pairs of other elections is very likely also high.

The chart 2 shows voters' transitions between Kotleba in the second round of the 2013 regional elections and parties and candidates in other elections. It

reveals that Kotleba's voters from the first round of the 2013 regional elections were relatively highly disciplined – most of them gave him their votes in the second round as well. The section of the “regional, 2013, 1st” column in the chart corresponding to Kotleba contains almost all of his voters from the first round.

**Chart 2: Transitions between Kotleba in the second round of the 2013 regional elections and parties or candidates in other types of elections**

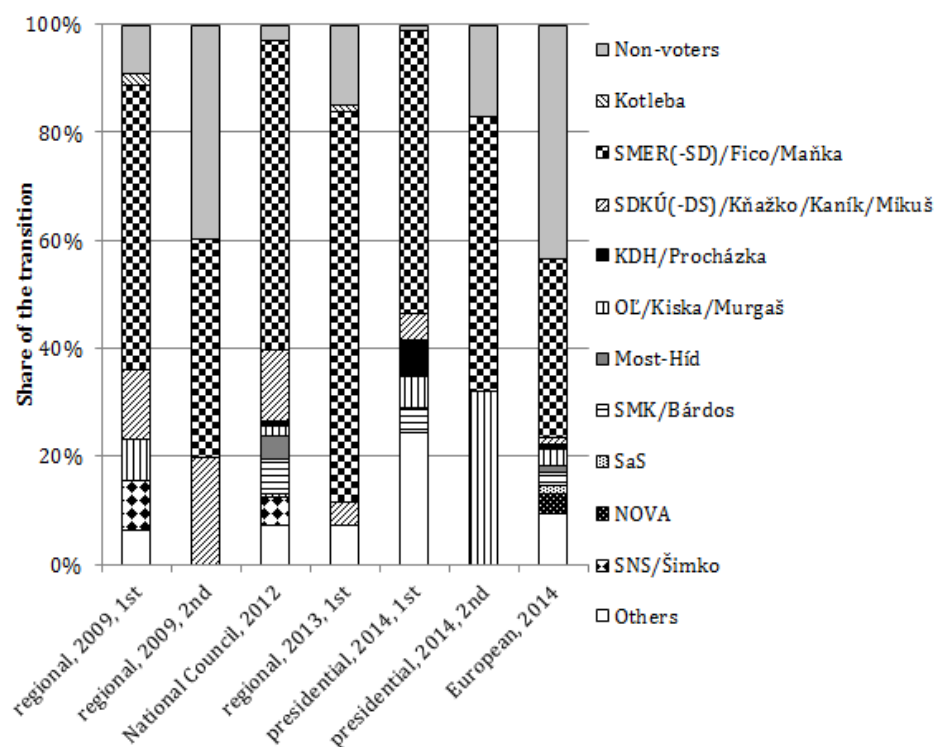


Source: Author.

The number of people that voted Kotleba in the first round and either did not vote or supported Maňka in the second round is minimal. Maňka's electorate consisted mostly of supporters of SMER(-SD) and its candidates in most elections – not surprising given that Maňka was the official candidate of SMER(-SD). However, Maňka was far from securing votes of all people that usually support SMER(-SD). In the first order elections (presidential, parliamentary), the voter base of Kotleba consisted of many supporters of SMER(-SD) and Robert Fico. This is not surprising given that especially in the National Council, presidential and European elections, SMER(-SD) and Fico

secured a very large portion of the vote<sup>9</sup>. What is surprising, however, is the fact that Kotleba was almost as successful in attracting these voters as Maňka was. This is an important finding – there was a relatively sizeable group of SMER(-SD) supporters in the Region that nevertheless rather voted for Kotleba than for the official SMER(-SD) candidate when given the choice.

**Chart 3: Transitions between Maňka in the second round of the 2013 regional elections and parties or candidates in other types of elections**



Source: Author.

Notable exceptions from this trend are the European elections – in that case, SMER(-SD) gained mostly former voters of Maňka, not Kotleba. This could be a result of the incumbency effect, given that the 2014 European elections took place after Kotleba became the regional president, or it could be a result of a

<sup>9</sup> SMER(-SD) gained 46 % of the vote in the 2012 National Council elections and 30.71 % in the 2014 European elections and Fico secured 30.27 % in the first round of the 2014 presidential elections in the Banská Bystrica Region.

relatively low turnout in the European elections<sup>10</sup> – it could be the case that voters of Kotleba from 2013 that support SMER(-SD) in other elections mostly did not participate in the European elections while voters of Maňka from 2013 that support SMER(-SD) in other elections did participate more often.

The chart 3 shows the same information as the chart 2 but for the electorate of Maňka in the second round of the 2013 regional elections. Maňka's voter base was much less fragmented among supporters of various parties or candidates than Kotleba's voter base in all the elections covered in this article. This can be expressed numerically using the Herfindahl index of concentration. It is frequently employed in economics to measure a relative size of companies in an industry or a sector. (e.g. Hirschman 1964) The normalized Herfindahl index ( $H^*$ ) is expressed as

$$H^* = \frac{\sum_{i=1}^N v_i^2 - \frac{1}{N}}{1 - \frac{1}{N}}, H^* \in [0; 1]$$

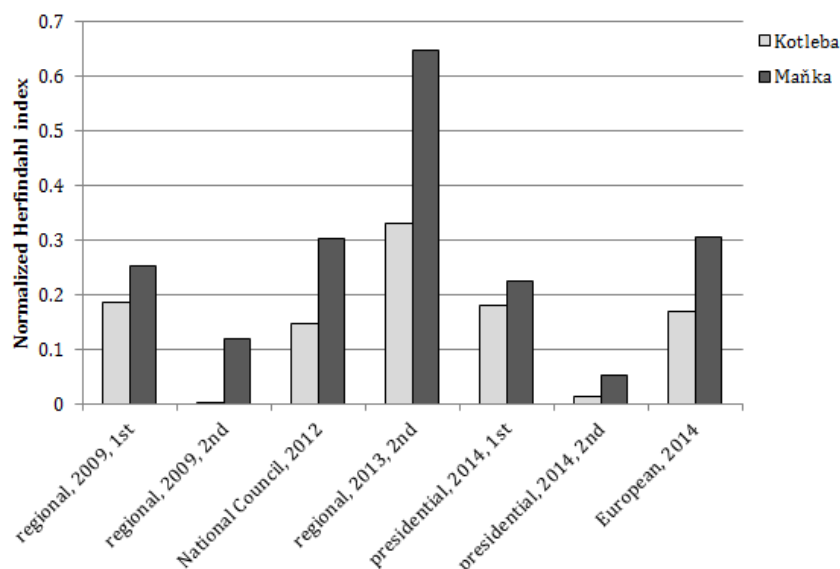
where  $v_i$  denote shares of  $i$  relevant parties or candidates in given elections and  $N$  denotes number of such parties or candidates. ( $H^* = 0$ ) corresponds to a situation of evenly fragmented voters while ( $H^* = 1$ ) corresponds to perfect concentration of voters. Non-voters are not included in the calculation and parties or candidates that failed to obtain 5 % of the vote nation-wide are treated as one entity since more granular breakdown of transitions of these parties' or candidates' voters is not available. Chart 4 shows values of the normalized Herfindahl index for Kotleba's and Maňka's voter bases in the second round of the 2013 regional elections. It is clearly visible that Maňka's electorate was more homogenous in all the elections.

Both candidates registered the most homogenous electorate in the first round of the 2013 elections. This is not surprising since both candidates contested the second round and most voters that participated in both rounds of the elections voted for the same candidate – this trend has been observed many times in other types of elections using the same voting system. (e.g. Gregor 2014a, 2014c, Pink – Gregor 2011) The most fragmented voter bases of both candidates were registered in respect to the second round of the 2014 presidential elections. Voters of both Kotleba and Maňka from 2014 split almost evenly between Andrej Kiska and Robert Fico. This may be caused by the candidate-centred character of the presidential elections that causes voters to cross party lines.

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<sup>10</sup> In the 2014 European elections, the turnout was 13.45 % of registered voters in the Banská Bystrica Region; compared to 24.59 % in the first round and 24.61 % in the second round of the 2013 regional elections.

**Chart 4: Normalized Herfindahl index of voter base concentration in the second round of the 2013 regional elections**



Source: Author

It is also notable that in the two elections when political parties contested (National Council and European), Kotleba secured relatively more voters of small parties that failed to gain over 5 % of the vote nation-wide (aggregate in “Others”). This category contains far right and populist parties, most notably ĽSNS and HZDS and also SNS (in the European elections). A more granular breakdown of voters’ transitions that would estimate whether it were voters of primarily those parties that supported Kotleba is not available but this is very likely. More importantly, Kotleba also managed to secure votes of more moderate parties, including SDKÚ(-DS), KDH, OĽ or SaS. In many cases, Kotleba was more successful in attracting voters of these parties than Maňka. Maňka only consistently secured an overwhelming majority of people that cast their votes for the Hungarian parties SMK and Most-Híd and Gyula Bárdos, the official candidate of SMK, which is not surprising given the nationalistic positions of Kotleba.

A crucial difference between the voter bases of Kotleba and Maňka is the fact that Kotleba was much more successful in attracting people that did not participated in other types of elections than Maňka. Much more people that did not vote second order elections (European and regional) did cast their vote in the second round of the 2013 regional elections for Kotleba. It has been

established that in the Banská Bystrica Region, there appears to be a relatively sizeable group of people that consistently do not participate in elections, particularly in second order elections. Kotleba managed to attract many such voters in the second round of the 2013 elections. These voters then failed to vote again the consequent presidential and European elections.

## **Conclusions**

The aim of this article was to explore the structure of voters' transitions between Kotleba in the 2013 regional elections and political parties and candidates in the 2009 regional, the 2012 National Council, the 2014 presidential and the 2014 European elections. Given the far right position of Kotleba and a much more moderate position of his opponent Maňka in the second round of the 2013 regional elections, Kotleba's defeat was expected. This is in line with the median voter theorem by Harold Hotelling (1929) and Anthony Downs (1957) predicting that in a majoritarian voting system and two-candidates setting (such as the second round of a majoritarian run-off voting system), a moderate candidate will win because the voters from the unrepresented extreme of the political spectrum are more likely to side with the moderate candidate.

Contrary to expectations, Kotleba managed to win the second round of the regional elections and became the regional president. It is therefore crucial to find out why the median voter theorem failed to predict the outcome. The principle of preserving the secrecy of the ballot causes an irreversible loss of information about the actual structure of voters' transitions. Since there were no surveys of voters' transitions conducted around the Slovak regional elections, I use a hierarchical Bayesian model of ecological inference in order to estimate the voters' transition rates based on electoral data aggregated to the level of a large number of very small territorial units.

The article shows that there is a group of people in the Banská Bystrica Region that consistently do not participate in elections, particularly in the first order elections. Kotleba managed to gain enough votes in the second round of the 2013 regional elections and defeat Maňka because he mobilize a much large share of this group than Maňka did. Kotleba's voters were also relatively disciplined – almost everyone who supported him in the first round participated in the second round and voted for him again. Moreover, he was as successful as Maňka in mobilizing supporters of SMER(-SD) and Fico from other elections despite the fact that Maňka participated in the 2013 elections as the official candidate of SMER(-SD). Kotleba seems to secure support of far right parties.

He was also as successful (and in some cases even more successful) in attracting voters of moderate parties such as SDKÚ, KDH, OĽ or SaS as Maňka was. Maňka was only able to secure a majority of Hungarian parties'

(SMK and Most-Híd) voters. Combination of these factors led to Kotleba being able to overcome almost 30 % difference between his and Maňka's share of votes from the first round of the 2013 regional elections and win the regional presidency despite the predictions of the median voter theorem.

It should be noted that this article aimed at exploring *how* Kotleba's voters transitions from and to other candidates and not necessarily *why*. Now that patterns of these transitions have been estimated using a cutting-edge statistical methodology it is time for more qualitatively oriented sociologists and political scientists to give an account of potential causes of behind them. Sketching such an account is beyond the scope of this article. However, the added value of this article is the fact that any future attempt at doing that will have to conform to empirical findings presented here.

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