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Changing patterns of electoral behaviour:  
A comparative analysis of Central and Eastern  
European countries

Doctoral thesis

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Declaration:

I hereby declare that the following doctoral thesis was fully written by me, and with the help of my supervisor, it was based on the stated scholarly academic sources and literature.

In Prague, 24 April 2022

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Table of contents:

<b>Abstract</b> .....	6
<b>1. Prologue and introduction</b> .....	7
1.1. Foreword.....	7
1.2. What we know about electoral volatility.....	8
1.3. What we do not know about electoral volatility in CEE.....	10
1.4. How may future research contribute?.....	11
1.5. Research question and hypothesis.....	13
1.6. Current literature review and characteristics.....	14
1.7. Structure of the thesis.....	17
1.8. Methodological introduction.....	18
<b>2. Theoretical part</b> .....	20
2.1. Introduction.....	20
2.2. Early stages of studying electoral behaviour: political cleavages.....	22
2.3. Dealignment and electoral volatility.....	24
2.4. Political cleavages, decline of old political parties, and the rise of new ones in CEE.....	25
2.4.1. Factors potentially affecting electoral behaviour.....	36
2.4.1.1. Socio-demographic variables: Age, gender, and education.....	36
2.4.1.2. Economic and geographical variables: Income, socio-economic status, occupation, and residence.....	61
2.4.1.3. Ethnical and affiliation variables: Race and religion.....	66
<b>3. Methodology of research</b> .....	70
3.1. Case selection.....	70
3.2. Methodology, models, and analytics tools.....	72
3.3. Data structure, formatting, and the analysis – CSES1.....	74
3.4. Data structure, formatting, and the analysis – CSES2.....	77
3.5. Data structure, formatting, and the analysis – CSES3.....	80
3.6. Data structure, formatting, and the analysis – CSES4.....	82
3.7. Data structure, formatting, and the analysis – CSES5.....	84
3.8. Final remarks on methodology of the thesis.....	86
<b>4. Results</b> .....	88
<b>5. Findings</b> .....	110
<b>6. Evaluation, discussion, and conclusions</b> .....	112
<b>7. References</b> .....	116
<b>Appendix</b> .....	142

## Abstract

The aim of this doctoral thesis is to provide new information concerning electoral behaviour in countries of Central and Eastern Europe (CEE) during transformation period and in election terms following onward. Political scientists who studied electoral behaviour across countries of Central and Eastern Europe with new democracies established shortly after fall of authoritarian regimes have found several findings, unique for this area; one of them being specific type of electoral volatility, typical for political systems which follow longer periods of authoritarian regime. This electoral volatility correlates with high party system instability with new parties emerging every electoral term and old political parties vanishing from political competition. While political scientists studied relationship between electoral volatility and increasing number of political parties, party switching presents considerable threat to stability of party system in CEE. Therefore, this paper studies socio-economic, demographic, and psychologic factors determining specific type of volatile voter. The aim of this article is to provide further knowledge of how political systems of CEE struggle with party system instability, identify major problems and what factors are required to change if political systems are to achieve higher level of stability. The results of this article prove that while voters' volatility is "natural" for countries of Central and Eastern Europe, the main reason for abstaining from voting are voters' low education, low socio-economic status of voters and most importantly minimal trust towards democratic principles.

**Keywords:** electoral volatility, countries of Central and Eastern Europe, party switching, party system instability

# 1. Prologue and introduction

## 1.1. Foreword

The new democracies of Central and Eastern Europe (CEE) started to build their democratic systems on a very fragile heritage of democratic values and principles from their very own pre-transition period. Apart from few exceptions of weak democratic periods (for instance, the First Czechoslovak Republic from the end of the Great War in 1918 until the 1938 Munich Agreement and the ensuing cession of the territory to Nazi Germany and Hungary), authoritarian or non-democratic regimes had been dominant throughout the history of most countries of CEE. The First Czechoslovak Republic had, however, remained the only democratic state in Central Europe. Following the end of the World War II (WW2), the Iron Curtain has been used as a phenomenon to characterise the political developments affecting political systems of CEE countries: ie, a strong, centralized, and authoritarian rule resulting from one political centre along with citizens' limited access to civil liberties of the Eastern Bloc spanning from the German Democratic Republic (GDR) onwards to the western borders of the Union of Soviet Socialist Republics (USSR). In the following political period, revolutions (Hungarian Revolution in 1956) or attempts to set up a liberalization process (Prague Spring in 1968) were halted or suppressed by the State Police or Warsaw Pact Armed Forces, respectively. After the fall of the Berlin Wall and the subsequent democratic transitions following the breakdown of authoritarian regimes in Central and Eastern Europe, young democracies had little to no experience with neither democratic consolidation nor democratic governance. Nevertheless, the countries were not left without any help; four countries had formed the modern Visegrad Group political alliance, which re-emerged in 1991, and later joined the North Atlantic Treaty Organisation (NATO), and finally the European Union (EU), which then hastened the process of democratic consolidation, especially during a pre-entering phase when the countries were required to meet distinctive conditions, known as the Copenhagen criteria. However, the countries that joined the European Union in either 2004 or 2007 had their Freedom House Index ratings gradually decreased after joining the organisation. From being labelled as "*consolidated democracies with seemingly workable constitutions, administration, and markets*", they are currently "*seen as particularly vulnerable and susceptible to a dictatorial turn*" (Berend, Bulgaric 2015: 777). These factors embody low levels of income, authoritarian rule of power, corruption, tax evasion, and other symptoms of peripheral political behaviour (ibid: 768). In addition to these factors, rising levels of electoral volatility, resulting in a political party system instability represents a high threat to the overall democratic stability

of CEE (Tavits 2008, Powell, Tucker 2013), eventually resulting in the “political disaster”, “earthquake”, “hurricane season” (Haughton, Deegan-Krause 2015), or simply a high level of volatility (Ágh 1998:202). According to those who study political systems of Central and Eastern Europe, these factors are present in most, if not all, democratic systems. Furthermore, these issues are far from short-term occurrences, but instead, they form a systematic pattern progressing from one electoral term to another one.

## **1.2. What we know about electoral volatility**

In general, the concept of electoral volatility is being understood as net or total instability of party systems. Net volatility means the aggregated change in electoral results for each political party. In most cases, this volatility is calculated by the Pedersen Index (Pedersen 1979), which is measured by summing the absolute values of all the gains and losses by a particular political party and then divided by two. The total volatility is a personal representation of changed candidates between the election terms. Since the 1960s (see Żukiewicz 2022), the overall volatility in Great Britain has been relatively stable, while net volatility has changed substantially (Oxford Reference 2022). This fact may point out to a defection of political party members. While there are political scientists who warn of the use of the Pedersen index and its limitations (Sikk 2005, Tavits 2008, Šedo 2011: 64), and thus use the Pedersen index of volatility (Jurek 2010) modified by Powell and Tucker (Powell, Tucker 2009), others consider this measure to be a sufficient one for their analysis (Ersson 2012: 23). As political scientists may differ in their decisions, measurements, classification of political parties, and calculation, they may accordingly come by to different results after using the Pedersen index (Bértoa, Deegan-Krause, Haughton 2017). This issue is also addressed by Linek who recommends using the individual volatility instead of net volatility or gross volatility, as the latter two often bring misleading outcomes. Therefore, both inner and outer volatility (as by Powell, Tucker 2013) symbolise a more “elegant” solution (Linek 2014).

Specifically, electoral volatility stands for the individual choice of respective voters for political parties they cast the ballot for in two consecutive elections. While further divided into several groups, the main type of volatility this thesis focuses on is a volatile (instable) voter who usually switches from the political party he or she had voted for in the two consecutive elections. While other types of volatility (a stable voter, for example, who consecutively votes for the same party; a new voter, who had never voted until the examined election; a former voter who had previously voted but has not recently; and finally, a stable non-voter) are to be



analysed as well, more attention will be paid to the factors driving the electoral switch among political parties. This type of volatility, when there is the high likelihood of voters switching from one party to another, relates to an increasing number of political parties entering the electoral competition and thereby causing the instability of party systems (Tavits 2008). Multiplied by the fact that this volatility often tends towards new political parties, party systems of CEE dive deep into the whirlpool of electoral volatility as voters start voting for new political parties at the expense of the old ones. However, in the next electoral term, even those newer political parties become very popular at the expense of the “old new” ones. This specific process was described by Haughton and Deegan-Krause as the “hurricane season”, meaning the dynamics of political party system, consisting of 4 stages: stability, disruption, turnover, and (re)stabilization. While the authors attribute this challenge to the increasing *dealignment* process and the increasing role of celebrities (in politics, auth. note), the growth of the number of *start-up* political parties then implies an erosion of traditional party system. It is advised to deepen the interactions among democratic actors and to increase the strength of local institutions. Nevertheless, “*we are likely to see a certain degree of churn in almost every party system over the coming decades* (Haughton, Deegan Krause 2015:77).” While these recommendations may be beneficial whilst delivering a very much needed change, the losses and the short life-expectancy of political parties are democracy-damaging (Haughton, Deegan Krause 2015:78).

There are also other models of electoral volatility, Powell and Tucker recognise different types of voters’ behaviour: type A volatility and type B volatility. The type B volatility, when voters switch votes between two existing political parties, is perceived as a vital feature of democratic systems, and can be found in political systems of established democracies of the Western world. On the contrary, the cases in which voters switch from old parties to the new ones, as described by Haughton and Deegan Krause, are categorized as the type A volatility. This type of electoral volatility can be found in a large proportion of overall electoral volatility in the post-communist countries, and it is much closely associated with a party system instability (Powell, Tucker 2013: 124). This, indeed, leaves no guarantee and makes it impossible to estimate how the government may look like after the election.

As expected, this begs the question about the relation between certain types of electoral volatility and the political system instability, especially in respect of the number of political parties running for elections. Does electoral volatility increase the number of political parties competing for voters as the increased volatility from the previous election shows them enough

room for electoral gains, or does the increasing number of political parties cause a higher electoral volatility because voters have an opportunity to vote for more political parties? Tavits manifests that causality runs from the supply of parties to electoral volatility. A higher number of political parties competing in elections produces a higher electoral volatility; and elites frequently play a big role in the rise of new political parties. As political party systems in democracies with high levels of electoral volatility or system instability are mostly elite driven, the logic of party system stabilisation in the new democracies of CEE may differ from other advanced democracies. The factor increasing the level of stability within high-volatile systems is rooted in stable and consistent choices made by political and party elites (Tavits 2008). Not a negligible effect must be attributed to the role of elites in the post-socialist political systems of Central and Eastern Europe, too. The importance and popularity of political parties which provide a strong leadership and/or competence rather than ideological consistence and decentralised governance have increased in the party systems of CEE. Especially technocratic populist political parties and their narratives, such as the ANO2011 in the Czech Republic, may signify a growing ground for illiberal anti-pluralism (Havlík 2019:3).

### **1.3. What we do not know about electoral volatility in CEE**

Above all, three fields of research have been omitted in the current study of electoral volatility in Central and Eastern Europe. The first issue is the overall strength of social cleavages, as defined by Lipset and Rokkan (Lipset, Rokkan 1967). While prior to the 1970s, societies in most Western democracies were divided into separate voting blocs in accordance with social cleavages produced by the conflict lines, the question is to what extent and how deep societies in Central and Eastern Europe were allowed to be divided. Authoritarian regimes allowed only a limited stratification of society, and under these conditions, it is questionable how effectively were those cleavages able to develop. Even if society were able to form voting blocs, there was not a suitable political representation, as merely a limited political competition was allowed prior to the democratic transition. Secondly, the existence and strength of *dealignment* process as present in Western democracies in the 1970s and the following years (Dalton 1984), and potentially present in CEE, might have had its effects mitigated by the electoral turnout because citizens were highly expected to vote, and were disadvantaged if they had not (Havelková 1992:88–89 in Vodochodský 2007). Thirdly, after the process of transition to democracy, political parties of CEE had very little time to structure the electorate in accordance with the voting blocs created by political cleavages. In Western democracies, ties of political parties to society have been lasting over half of the century; while in CEE, these ties,

if even in existence, are short-term. With new political parties emerging and the old ones fading away from the political competition, this effect appears to be very limited in a long-term point of view. And finally, dissatisfied democrats, especially the voters that tend to switch among political parties in elections, should bear similar characteristics; at least we should be able to distinguish them from satisfied democrats and/or stable voter. If political parties are expected to have its electorate with certain characteristics, the same should apply to volatile voters. While only limited attention has been devoted to social, demographic, economic, and value variables of the electorate, which seems reasonably understandable, due to the constant switches, little or no attention has been paid to volatile voters and their characteristics in Central and Eastern Europe. Socio-demographics, accompanied by psychological, ideological, and value orientations have been shown to determine the targets and degree of intolerance against minority groups (Enyedi, Todosijevic 2015). If party systems of this region offer “*a laboratory for understanding trends in party system volatility that are emerging in Western Europe and across the globe* (Haughton, Deegan-Krause 2015)”, it makes sense to go further and study volatile voters.

#### **1.4. How may future research contribute?**

As one might see from the sources in the previous subchapters and respective academic sources, political scientists, even those from Western democracies, raise questions about the stability of party systems in Central and Eastern Europe, not mentioning their high volatility and uncertain future, which is very unlikely to bring any political stability. The issue of electoral volatility may then be studied from two main perspectives.

First, there are analyses investigating into political parties, their policies, accountability, political leaders, democratic institutions, and the general flow of politics towards voters. The original idea of this thesis project was to examine electoral volatility, and thereby studying the relations among political parties, especially their leaders and elites, and towards their voters. Initially, the objective was to deliver an extensive academic study on attitudes and statements of representatives from various political parties, be it either oral, written, or behavioural, and its effect to win the voters over. A study dealing with the political leadership theories and characteristics of political leaders able to persuade a vast majority of voters to vote for them instead of other political rivals was meant to be a primary focus of this thesis. Even ideas of tracking different voters’ bodies and physical reactions to different political elites’ speeches, photographs, and videos had been initially considered to determine the most successful political

elite would have been able to get most volatile voters. There is, however, lack of consistent and robust theories and literature pertaining to this field, followed by unobtainable research methods and tools for measurement, analyses, and validation of potential results. The precarious background for such research and insufficient theory made this pattern of research infeasible in this case, and a new line of research had to be identified. In the end, even obtaining reliable data for this method would have required more time and effort.

The second type of research on electoral volatility proceeds from the opposite direction, ie, from voters towards political parties. Therefore, the characteristics of (volatile) voters, their social, demographic, economic, and value variables, their subjective perception of government performance, and well-being might explain electoral switches from one party to another one. As traits of specific groups of voters voting for certain political parties or even characteristics of dissatisfied voter can be identified (Dahlberg, Linde, Holmberg 2013), one should also be able to identify volatile voters as well.

The data analysed in this thesis come from the Comparative Study of Electoral Systems project, and it allows an individual approach to every volatile voter, meaning one's electoral choices, party choices, social, demographic, economic, and value statistics can be obtained to determine each voter's motives for the ensuing electoral behaviour. The data are standardised, and thus allow a cross-national comparison, contrary to the more popular exit-poll data, which are faster to be obtained but do not contain that many variables and are tailored for each country, and therefore it cannot be taken to cross-national analyses. Furthermore, as the data enable to be analysed in the course of time, a longitudinal analysis of "evolution of changes in electoral behaviour" can be conducted. In this regard, as most of the previous studies researched net volatility of political parties or used the individual data at the national level of one country, and very rarely compared multiple countries, this thesis instead employs a comparative cross-national analysis of 5 countries of Central and Eastern Europe: Czech Republic, Hungary, Lithuania, Romania, and Slovenia (more on the case selection may be found further in the text). Additionally, a time perspective is occasionally seen in such analyses. If so, its authors often turn their analysis to a single country. In this sense, a comparative analysis dealing with multiple electoral systems in different time periods (more on the election years may be found further in the text) is unique and may be spotted very rarely in academic sources. While the electoral behaviour was one of the favourite topics of many political scientists (in Lithuania) since the mid-1990s, for instance, (see Krupavičius, 1998; Žėruolis, 1998a, 1998b; Degutis, 2001, 2002;

Gaidys, 2004; Ramonaitė, 2007, 2008; Mačiūnas, 2009), comprehensive electoral studies are almost non-existent (Ramonaitė, Žiliukaitė 2008).

In a vast majority of previous studies on electoral behaviour, if of quantitative nature, the authors satisfy their readers with basic descriptive statistics of cross-tabulations, t-distribution tests, or ANOVA. Only rarely they go beyond ordinary least squares regression statistics. By nature of dependent variable (five different types of volatility), statistical models in this thesis are the results of negative binomial regression. For this approach, I would like to thank my mentors, former teachers, and colleagues who have directed me this way. Naturally, before conducting advanced statistical models, basic tests of descriptive statistics, such as the data distribution, correlation matrix, and t-tests/ANOVA were calculated. Only independent variables, that produced either a high coefficient index or a high statistical significance (or ideally both), have been used in academic models as control variables or have had strong theoretical support in the context of Central and Eastern European countries. The compromise of whether to keep independent variables that are specific to one electoral system, while not to the others but should be kept in the models to allow their cross-national comparative analysis, was solved by having kept all the independent variables that have proved to be relevant. All in all, statistical models even in recent studies frequently consist of few variables or are single-issue focused (eg, the effect of religion on electoral behaviour; further information on this topic may be found in the theoretical part). As I consider this approach to be a simplification of reality, the bare minimum of control as well as all the relevant variables should be used. After all, the aim of this thesis is to describe current trends and electoral reality in detail—and this fact cannot be achieved with having focused on a limited number of independent variables and having neglected the others. Speaking from experience, such complex issues as electoral volatility can be affected by numerous factors.

## **1.5. Research question and hypothesis**

In line with the above mentioned, the elementary issue in the form of research question that is addressed in this thesis is:

*RQ: Are there factors that increase any likelihood of voters being volatile?*

This argument is derived from the knowledge that there are specific characteristics which unsatisfied democrats share (Dahlberg, Linde, Holmberg 2013). And so, there are certain variables which different voting blocs share, it is expected that there shall be common

characteristics that volatile voters share. While the above-mentioned assumptions are mostly valid for Western democracies, the question is to which extent are they valid for volatile systems of Central and Eastern Europe. The substance of this research question is rooted in the fact that while different political parties come in and fade away, the same happens to its connection to society—while volatile voters will, most likely, remain the same as they should share the same characteristics, no matter what party they leave behind.

Being derived from these assumptions, voters that switch from one political party to another one should, in an ideal scenario, share the same characteristics, while the opposing group of voters, ie, those that keep voting for the same party, should, in an ideal case, share the same characteristics and yet opposing values. Elaborating on this line, five different types of volatility can be calculated (more on this may be found in the methodology part). In the end, all these types of volatility might correlate with voters' characteristics, resulting in the following hypothesis:

*H: There are specific social, demographic, economic, and value variables that determine a specific type of voters' electoral volatility.*

The hypothesis will be addressed through statistical models further in the thesis. These models are based on statistical modelling, that is fitting for the available data and its nature, and on the previous knowledge of political cleavages, the phenomenon of electoral volatility, and realities specific for the fragile post-transition democracies in Central and Eastern Europe as those countries differentiate from other fully developed democracies of the West. Overall, the focus of the thesis is to empirically prove that voters with a specific type of volatility can be characterised by distinct features. Depending on this knowledge, the author should be able to draft how to make the electorate more stable and the party system less volatile.

In the current analytical framework, the thesis does consider different electoral systems (Jastramskis 2018) and aberrations caused by them. However, it is beyond the capacity of this thesis to further engage in this relation. Likewise, the doctoral thesis is not able to include the optional effect, such as electoral bribing (Gherghina 2013) which may have impact on electoral behaviour too.

## **1.6. Current literature review and characteristics**

While the literature appropriateness shall be discussed in the concluding part of each thesis, and a considerable amount of theoretical part is dedicated to well-known theoretical concepts,

it is the introduction where a critical evaluation of academic sources and literature should be addressed. It must be stressed that the sources dedicated to electoral volatility and social cleavages are vast and far beyond the capacity of this thesis to be described. However, in the amount of scientific knowledge that was taken as a theoretical background for this project, major and relevant sources as well as few points must be mentioned.

Starting with the theoretical background of social cleavages that is a setting stone based on which all the assumptions about voters' characteristics spring, the ultimate work political scientists build upon (Pedersen 1979, von Beyme, 1996, Dalton, Bürklin 2003, Drummond 2006) is *Party Systems and Voter Alignments* by Seymour Martin Lipset and Stein Rokkan. The work was revolutionary not only from the perspective of political science, but also in a sociology view, thanks to not only characterising how cleavages influence political decisions, but how the two revolutions (national and industrial) have shaped society itself. Taking into account the era of publication and the number of sociologists, political scientists, and other social scientists, there is little to no reason to raise objections about the insufficiency of their work. After all, Lipset and Rokkan were among the first scholars to describe electoral behaviour in detail. The following authors and academic sources that elaborate on social cleavages, especially in Central and Eastern Europe, delivered merely limited findings. This fact is not caused by any shortage of scientists, but rather because of the character of political systems across Central and Eastern Europe.

First, when political scientists, like von Beyme, define new political cleavages, in addition to Lipset and Rokkan (nationalism vs pro-European or pro-West movement, bureaucracy vs libertarianism, centrism vs de-centrism, and materialism vs post materialism, or similarly Inglehart 1977, Inglehart, Norris 2000), they were indeed relevant to the transition period. In the recent years, however, these conflict lines seem to fade away, and the local society and population in these countries is so polarized that it can be divided into two blocs if any civilization or cultural issue is being raised (Vašečka 2022). This division is also seen right before any elections when electoral decisions are shaped. As noted further in the text, it is questionable to what extent social cleavages, as described by Rokkan and Lipset, von Beyme and others, are still present in political societies of CEE countries, or whether society and political decisions in elections are shaped by current “short-term” trends, issues, and events. Secondly, and prior to this, it is questionable how deeply were the previously mentioned conflict lines able to develop in authoritarian societies where the population had been kept homogeneous, and the ruling party had allowed little to no stratification of society. These two

factors, in the view of this thesis, are the main reasons why, and despite the tremendous efforts of political scientists, it is complicated to define political cleavages with such unambiguity as in case of Western democracies in the second half of the previous century. And once again, this is not a remark on any insufficient endeavour of political scientists studying political systems of Central and Eastern Europe, but rather a critical appraisal of ideas presented in their academic work and contrasting them with reality.

Dealignment and the following electoral volatility is well-known in the current state of research. And due to its rising importance in all democratic systems, not only in the areas of CEE; it has also become an established field of political research that encompasses a great amount of knowledge which, in this case, is backed up by the data and statistical models. Many scholars had aimed to confirm or to falsify their hypotheses and research questions on electoral volatility, and after confirming these assumptions, they studied the causes of this phenomenon. In this regard, scientists analysing both Western democracies and democracies of CEE often use either not sufficient statistical methods to prove causal effects, or rely on a limited number of statistical variables in their models (Hayes 1997, McElroy, Marsh 2010, Studlar, McAllister, Hayes 1998, Emmenegger, Marx, Schraff 2015, Bean, McAllister 2009 in Simms, Wanna 2012, Sawyer 2010; more on this topic may be found in the theoretical part on factors potentially affecting electoral behaviour). In this manner, this thesis project tries to go further and analyse the current trends by more sophisticated statistical tools and a higher number of independent variables in respective analytical models.

Finally, the most relevant academic sources on electoral volatility in CEE provide the unprecedented knowledge of political instability in the post-transition democracies. Haughton and Deegan-Krause outline the hurricane mechanism of how net electoral volatility works in Central and Eastern Europe and how old parties are being replaced by the new ones, which are then replaced by even newer parties. This coins a cycle of instability consisting of stability, disruption, and partial turnover, which is followed by either juvenilization or (re)stabilization. This process can be halted, as authors recommend, by an interaction among contemporary forces of political change and the strength of local institutions. As their work on the hurricane season is qualitative by nature, it hardly emphasised the role of voters as the main catalyst of changes (Haughton, Deegan-Krause 2015). While respecting their field of study, it is expected that electoral volatility is then, if not examined, at least seen as a relation between political parties and voters; and none of these categories should be left out from conclusions.



Voters' perspectives and contribution to electoral volatility is brought by both Powell & Tucker and Tavits. Powell and Tucker redefined Pedersen's net volatility into two categories of electoral volatility in CEE—B type: when voters return to their former choice and the A type volatility, when voters tend to abandon old parties and switch to new ones. In the countries of Central and Eastern Europe, the A type volatility prevails, while in Western democracies, one can find the B type volatility more often. For the political system stability, the A type presents a danger, and even defines a reason for this as voters' relative economic performance output is believed to cause this A type volatility. In addition, solutions to this issue, according to the authors, are to set up a higher threshold for obtaining seats in the legislative bodies. Finally, Tavits addresses the issue of relations between the party system instability and electoral volatility. In her findings, voters and electoral volatility react to, rather than cause any higher demand of political parties. This publication is one of the rarest to analyse electoral volatility in both directions—from the political party perspective towards voters and vice versa. The author's recommendations for the elite driven young democracies of Central and Eastern Europe is to have more stable and consistent decisions delivered by party elites, which may bring a more coherent and predictable electoral alignment and preferences (Tavits 2008). In this matter, however, one would have relatively too high expectations to think that elites elected by volatile voters would make stable and consistent decisions. Especially since these elites are aware of the fact, that the more they adjust their policies to swings of their voters' mood, the longer they stay in office.

## **1.7. Structure of the thesis**

The general structure of this thesis is as follows: General information on electoral volatility is provided in the part of introduction, whilst the following subchapters offer a description of less clear or unknown features of this phenomenon. In a subsequent section, one finds the potential contribution of this thesis to this field and consequentially, research questions and a hypothesis are derived. By the end of introduction, the literature review on the current state of the examined topic is provided. However, it does not consist of general statements and impressions which may be found in the art of discussion. In this sub-chapter, academic sources, literature, and particularly their findings, are critically analysed.

The theoretical part opens with the overall introduction to the issue of electoral volatility with a specific focus to the political systems of Central and Eastern Europe. The next part further elaborates on electoral behaviour in connection to the voting blocs which can be

distinguished by a different structure of electorate. The most relevant publication is Lipset and Rokkan's *Cleavage Structures, Party Systems, and Voter Alignments*, functioning as a primary source of ideas for this thesis. With other academic sources contributing to this knowledge, the narrative shifts to the issue of voters' dealignment and threats to electoral volatility, beginning in Western democracies in the 1970s. The following sub-chapters are dedicated to political cleavages in the political systems of Central and Eastern Europe as these were slightly different in comparison to Western counterparts during the transition period. A subsequent decline of old political parties and the rise of new ones in CEE precedes the electoral volatility chapters where the major effects, that have been proved to cause voters' switching their elected party in the next election, are analysed in detail. In addition to the current literature review and a critical appraisal of sources in the introduction, relevant academic sources and their conclusions are also highlighted.

In the first part of methodology section, case selection of the analysed countries, particularly due to the data and methodological reasoning, may be found. Afterwards, statistical methods and the reasoning behind its selection will be provided, following a description of the data, its use, possible formatting, and calculations within the analysis in all the waves of the project (meaning different waves of Comparative Study of Electoral Systems Modules).

The section of results contains a depiction of negative binomial regression models, and it offers an evaluation and assessment of these models. This part smoothly passes over with the chapter of conclusion with the personal perspectives towards the results, followed by the successes, failures, problems, and even possible future research recommendations. The answers to the research question as well as reactions to the hypothesis will result in a general discussion and concluding remarks.

The last part of this thesis consists of the list of used academic literature and sources and the list of R packages necessary for the analysis.

## **1.8. Methodological introduction**

Analytical tools and statistical methods chosen for this analysis depend heavily on the data. While academic sources studying electoral behaviour often analyse net or overall volatility (see further), this thesis focuses on the lowest possible level of analysis—the individual level. This type of data not only allows more sophisticated methods of statistical analysing but adds the significance to results as well. All the data that enter models in this thesis come from the

Comparative Study of Electoral Systems Project (CSES), which is a collaborative program of representative post-election studies database from many political systems of the world. Responses from respondents are being collected individually via questionnaires and they are always representative samples of the country's population.

Variables of the current and past electoral choices, in addition to basic socio-demographic, economic, and value variables allow a more detailed analysis of electoral behaviour. The method chosen as the most suitable one for the analysis is (based on the data distribution, see further) negative binomial regression. The total of 20 models of regression are presented in the results section to describe past and current patterns of electoral behaviour in Central and Eastern Europe. Variables chosen for the analysis are calculated by the author (electoral choice) and selected in accordance with the previous correlation analysis or are generally accepted and widely used in models studying electoral behaviour by other sociologists, political geographers, or political scientists. In the last two models, two additional variables were added. While these models cannot be compared to the previous ones because of two additional variables entering the calculations, they are beneficial to the author as he then formulates the future findings accordingly. At the same time, these two variables were not available in the previous waves of CSES study (for further information on the data, analysis, and methodology, see page 69).

## 2. Theoretical part

### 2.1. Introduction

After the transition to democratic systems, political and party systems of Central and Eastern Europe were expected to evolve in full democracies within a few electoral terms. However, even after establishing the democratic institutions, political systems in this area yielded a high rate of political distrust from the citizens towards political institutions (mainly the political parties, but institutions, including the executive, legislative, and judicial powers), leading to an increase in political instability. The elections that scored a relatively low turnout, low “partisanship” of voters in the political parties, and finally a high volatility rate have been labelled as the “hurricane season”. In these elections, reality often meets the fact that the long-established political parties do lose their electoral support to the new-born parties, uncorrupted (by the political system), which, after rapid gains of political support, lose to even newer political parties (Haughton, Deegan-Krause 2015). In a longitudinal analysis of electoral support of parties actively participating in the party system, however, some political parties seem to be more stable than the others (Krupavicius 1999, Tavits 2005, Sikk 2005, Gherghina 2009).

New phenomena then formed the party systems in CEE in, at least, the same level as the original political cleavages, as defined by Lipset and Rokkan. The question is how stable the systems can be. The breaking point, however, is not solely the nature of cleavages within society, which, in Western democracies, were defined as the differences in political opinions, rooted in society’s social structure (von Schoultz 2017, Bartolini and Mair 1990, Lipset and Rokkan 1967), and thus providing the overall stability of electoral support for political parties which then represent these differences, but more their numbers, lifespan, and depth. In CEE, political cleavages do not seem to be a dividing force *per se*, but instead it serves more like short-term subjects for electoral support (Wang 2020).

Many political scientists and sociologists have actively challenged (or in some sense revised) theories of social cleavages and described other future issues regarding this topic. Among many of these challenges, one stands out. It is the erosion of traditional relationship of voters and political parties with which they had been previously identifying with, and as originally commenced in the late 1970s (Crewe 1977, Crewe and Denver 1985, Dalton and Wattenberg 2000, Franklin et al. 1992, Maguire 1983, Pedersen 1979, Hawes 2021, Mattinson 2020, Dalton 1984, Dalton, Wattenberg 2020, Gherghina 2009, Haughton and Deegan-Krause

2015, Mair 1997, Powell and Tucker 2013, Tavits 2008). In literature, this process is known as *dealignment*, is the main breaker of traditional support of political parties, and its consequences are, for instance, the instability of party systems and a high level of electoral volatility. In vast number of studies on electoral volatility, attention was drawn to the party systems of western democracies, while there were fewer studies specialising in the same theme within the area of CEE (which is understandable, as prior to the fall of authoritarian regimes in Central and Eastern Europe, one could only hardly describe party systems as competitive, which then enabled studies of this nature). However, this has been changing in recent decades as the scope of many political and social scientists has turned to studying electoral volatility in newly democratic states after the democratic transition (Hix and Marsh 2007, Chiamonte and Emanuele 2015, Madrid 2005, Mainwaring and Zoco 2007, Mair 2008, Morgenstern and Potthoff 2005, Patek et al. 2009, Pedersen 1979, Roberts and Wibbels 1999, Taagepera, Grofman 2003, Tavits 2005). Political parties in the Western democracies had more time to build their support, based on political cleavages which had already been present in society structure. Also, they had operated in systems with limited (if any) political competition, and non-democratic regimes with a leading role of communist parties allowed only a limited stratification of society based on cleavages. The current party systems and political parties are not often consolidated, and therefore had little to no chance to root their electoral support within society as their counterparts in western democracies could. Moreover, political parties of CEE started to build their electoral support when political parties in the western democracies were experiencing an erosion of their voters' support. These may be the reasons why studying political systems in Central and Eastern Europe is vital for a political stability as whole; but it often requires longitudinal and more data-driven analyses.

Studies analysing the relationship between voters and party systems in CEE have discovered some distinguishing features of the party systems in this territory. First, there is a very low identification rate with political parties (Bielasak 2002, Bielasak 1997, Tavits 2008). Second, election volatility lies in a direction to new political parties (contrary to Western Europe where voters go back to the established political parties; Powell and Tucker 2013). Third, there is evidence that old and established parties lose their support to new “uncorrupted (both by political experience and economic ties) new parties”, and these new parties quickly lose their relatively rapid gains again in electoral support to even newer political parties (Haughton and Deegan-Krause 2015). This turbulent change of party system is perceived as a laboratory for

understanding the trends in the instability of party systems emerging in Western Europe and the whole world.

## **2.2. Early stages of studying electoral behaviour: political cleavages**

During the second half of the 20<sup>th</sup> century, with the universal suffrage, attempts to describe basic patterns of electoral behaviour (at that time more popular from the side of parties) and how political parties were able to represent interests from their voters started to claim their place among political scientists' interest. In that time, their knowledge was based on party models delivered by Sartori (Sartori 1976), Duverger (Duverger 1972), and many others. It has proved to be a stable ground upon which many political scientists have been building their reflections on party systems up to nowadays. However, a source of these party systems had remained relatively unknown until Seymour M. Lipset and Stein Rokkan's work on "societal conflicts and their translation into party systems" or "alliances in conflicts over policies and value commitments within the larger body politic" (Merkl 1969: 470). The work presents a pattern how political parties are able to aggregate interests of society which, with the legalisation of universal suffrage, demands to be represented as based on the conflict lines. Furthermore, the paper attempts to formulate the then political alignments of voters towards political parties, based on the historically developed principles of opposing groups, which have eventually froze into the traditional party systems as these cleavages have manifested in the overall patterns of electoral competition.

Historically, these cleavages had not emerged by accident, but were determined on social and cultural lines which have divided society into separate classes with different interests, and thereby resulting in a political conflict among these classes. Given conflict lines, however, do not predominantly only determine any party system, but are among the first complex works to explain the roots of electoral behaviour in the Western democracies. According to Lipset and Rokkan (Lipset, Rokkan 1967), political cleavages are results of two types of revolutions which enabled a stratification of society structure into 8 antagonistic groups:

1. The national revolution that gave rise to two conflict lines:
  - a. Centre versus periphery (also known as regional nationalism) as a result of modern nation-states building, creating the majority and minority nations.
  - b. State versus the church represented as religious and secular voters, which interests are represented by religious parties and secular ones.

2. The industrial revolution that created two cleavages:
  - a. Owner versus workers, which as a cleavage follows the ideological concepts of other social scientists (Marx, Engels 1848, Weber 1934, Smith 1776, Rousseau 1913, Mill 1861), and is probably the most prominent among them all; the results of this division of political parties are on the right-left scale. This cleavage mainly elaborates on economical conflicts since it is sometimes seen as a conflict between the rich and poor. As many parties tried to represent this very conflict, it may be seen as predominant.
  - b. Urban versus rural is represented mainly as a conflict between the industry and agriculture policies (this issue has been a domain particularly for political geographers and geographers, see Dická, Gessert, Sinčák 2019, Madleňák 2019, Buček et al. 2009).

In addition to those revolutions that divided conflict lines into two groups, as described above, the final division lies in the territorial and functional dimension. As the former produces the centre-periphery and urban-rural conflict, and the latter produces the state-church and owner-worker cleavage. The whole division, therefore, shapes in a pattern of matrix. This division of social structure has been used for a long time as a basic ground for other studies of the theory of cleavages in political sciences and sociology. The theory has also been relatively confirmed by political scientists (see, for instance, Rose, Urwin 1969, Rose, Urwin 1970) on the examples of many Western democracies. It evidenced the “frozen” cleavage system—an area where political parties can *rely* on its society stratification, based on conflict lines they can build their stable support on. However, Rose and Urwin found that from 1945 to 1970, some indicators of party stability shown a few signs of decline in the Western party systems, though the systems remained overall more or less stable. Close to the end of the 20<sup>th</sup> century, almost all the indicators of party instability in the Anglo-American world and Scandinavia generally increased (latter being the biggest change). The continental area experienced some patterns of stability but even signs of erosion as well. Furthermore, social cleavages up to 2006 *seemed to be really frozen* (See Drummond 2006). After a closer examination of political parties and their competition, changes in stability and the proof of electoral volatility could be seen almost everywhere (see the chapter on dealignment for more information).

Not long after Lipset and Rokkan’s work, in the late 20<sup>th</sup> century and the beginning of the 21<sup>st</sup> century, as argued by several scholars (Kriesi, Grande, Lachat, Dolezal 2008, Van Hooren 2017, Inglehart 1977), new political cleavages emerged and significantly gained

importance. At first, an example of these may be *globalization winners versus globalization losers*, which is an idea introduced by Hanspeter Kriesi and his colleagues. Even though this conflict may be perceived as a cleavage between the group of capitalists, who profit from the post-industrialized globalized sectors and workers, who are negatively affected, it must be noted that this cleavage is more of profiteers and losers from global economy and free trade (Kreisi et al. 2008). Supported by the right-wing populist parties (Caramani 2017), losers' interests often convert to welfare chauvinism (as a branch of nationalist ideology supporting the idea of a restricted distribution of welfare which would benefits to certain groups, ranging from immigrants to national minorities, and thereby leaving the majority or all welfare benefits to the majoritarian local population, Van Hooren 2017). Secondly, the post-materialist theory in the late 1970s gave rise to the *materialism versus post-materialism* cleavage. Here, one side of the coin resides in materialistic values, just as the national security, protection of private property, and tradition of authority held by the older generation, while the other side of the coin are the ideas of fair trade, peace, environmental protection, and solidarity held by the younger generation (Inglehart 1977).

### **2.3. Dealignment and electoral volatility**

Starting in the 1970s, the “frozen” social cleavage seemed to start melting and conflict lines began to be less reliable as a means of explaining electoral results of political parties, the structure of voters, and changes in electoral behaviour as such. This process, characterised by an erosion of traditional ties between voters and respective political parties, has come to be known as *dealignment*. In general, the term is defined as a process in which voters abandon political parties they had been affiliated with in the previous electoral term(s). This may be accompanied by voters switching to other political parties, however, seldom with the same affiliation as to the previous political party. This process is closely connected to a decrease of voters' trust towards political institutions (not only political parties as such). Only a decade after Lipset and Rokkan's book on political cleavages, Western political scientists realised the increasing amount of evidence of party dealignment (Dalton 1984, Dalton 2000, Dalton 2006, Schmitt 2014) since voters started to switch among the parties and become electorally volatile. This may result in several outcomes: First, a voter abstains from the elections when one does not cast a vote for any candidate and/or party amid the elections. Second, a voter's preference changes from one traditional political party to another traditional political party (in a sense of a



long-established one), which in general does not result in higher electoral results for the new political parties; and finally, a voter's switch from one traditional party to a newly established political party, which then results in a decreasing electoral result for older parties and an increase in electoral results for the new political parties. In this this, this relationship shall be addressed, elaborated, and further analysed. While the first option of dealignment prevails in the western democracies; the latter is more typical for dealignment in new democracies of Central and Eastern Europe.

However, the relationship between voters and political parties appears to be more complicated than just described above. As research studies suggest, dealignment and the rise of distrust towards political institutions may not be the only reasons of increase in voters' volatility in Central and Eastern Europe. One study (Tavits 2008) confirms that, rather than a reason, voters' electoral switch from one party to another one is a consequence of a higher number of political parties. At least in the initial stage of political system consolidation, political parties themselves (and party leaders) are more likely to be responsible for the party instability than voters. Tavits also differentiates between *electoral volatility*, which represents only some minor variations in electoral results, and the *instability of party system*, which results in a changing number of parties running in elections. There is an assumption, however, that elites tend to establish new parties when they see a larger portion of voters who are not represented within the existing political parties or did not cast a vote in the elections. The ruling parties, on the other hand, might tend to give up rather than start an expensive campaign to get their former voters back after suffering an electoral defeat (Tavits 2008).

#### **2.4. Political cleavages, decline of old political parties, and the rise of new ones in CEE**

Nevertheless, research studies show that voters do not take part only in their party switching—they also switch their partisan loyalties as a response to shifts of party policies. This just completes the fact that as voters do respond to party elites, party elites tend to adjust their policies as a response to shift in their supporters' positions. Surprising findings can be found in Adams, Ezrow, and Somer-Topcu's study where they conduct a data-driven analysis of European voters' response to political parties and their elites' policy shift. They find that citizens hardly ever recondition their views on a political party's policy than that party shifts their policy statements on the left-right scale. In addition, the scientists did not find any sufficient data that voters themselves respond to the party shifting statements by changing their

own left-right positions. These findings may evoke a feeling that there is no one listening when it comes to political parties and their campaigning in Europe. Voters, however, react to their perceptions of parties' left-right positions, and adjust their positions in response to the party policy images. Therefore, voters tend to react more to perceptions of party shifts rather than their actual policy shift. And as voters' perceptions of policy shifts often do not match the parties' actual policy shift, there seems to be a disconnection between shifts in parties' policy and voters' response (Adams, Ezrow and Somer-Topcu 2011). As we may expect, political parties in CEE are not fully rooted in society, and voters' electoral behaviour seems to be more volatile, they might be even more willing to change their policies, which even increases the distance between the political party and the voter. Their final finding that voters react to their perceptions of parties' ideological shifts rather than to parties' actual shifts challenges the relationship of voters and political parties (or a mass-elite relationship) and calls for its revision. In general, political parties are also susceptible to change their ideological positions as a response to *environmental changes*, meaning the voter change, party voter change, and electoral defeats/success (Adams, Clark, Ezrow, Glasgow 2004, Adams, Clark, Ezrow, Glasgow 2006, Adams, Haupt, Stoll 2009, Adams and Somer-Topcu 2009). Furthermore, mainstream political parties tend to respond to the average voter change, while marginalised parties, just as the communists, greens, or radical right incline to respond to their respective voters' change (Ezrow, De Vries, Steenbergen, Edwards 2011). These relationships seem to be correlated with a leadership-domination of political parties. Hence, the more one party is based on leadership, the more positive effect the average voter change has on the political party shift, while the average voter change has a negative effect on the party shift among the activist-based political parties (Schumacher, de Vries, Vis 2013).

Widely used as a long-term explanation for a decline of social democratic parties in Central and Eastern Europe, the reason behind the fading of electoral support is caused by the decline in the working class, followed by the emerge of new political parties which steal their voters, and the increase in misunderstanding the relationship between voters and political parties. In many cases, the class oriented political parties shifted to catch-all parties in order to compensate the losses from the dealignment and realignment processes. The left-wing political parties Central and Eastern Europe followed different routes to recover from these processes. In case of Visegrad Four (V4) countries, there does not seem to be the process of *dealignment*, as experienced in Western Europe by the end of the 20<sup>th</sup> century. As researchers state, this is simply because class voting was too weak to begin with. Therefore, the rise and fall of social

democracy in the V4 countries is a result of party policy performance and their strategy (Bakke, Sitter 2021). The source of decline in electoral results of political parties, particularly the left-wing ones, is that voters with a lower status (who represent a typical electorate of left-wing political parties, such as social democracy) do vote at lower and more variable rates than the higher status voters who are natural supporters of centrist parties of right-wing ones. An increase in voters' turnout, therefore, helps left-wing parties only in the environment where voters' choices are dependent (among others) on socio-economic status, and might not help at all in the environment where the choice is independent of it (Pacek, Radcliff 1995). While a majority of research confirm that parties are more successful in gaining electoral support when they move closer to the mean of voters' choice (Alvarez, Nagler and Bowler 2000, Alvarez, Nagler and Willette 2000, Dow 2001, Dow 2011, Schofield 2004, Schofield, Sened, Nixon, 1998, Schofield, Martin, Quinn, Nixon 1998), some argue that for some political parties, it is much more profitable if they occupy the positions close to extremes; that is, at least in case of new democracies. This hypothesis stands on 3 central arguments. First, the more specific and certain position a political party has on the left-right scale, the more electoral support this political party can build. Second, opposing to the previous one, centrist political parties, because of the uncertainty, produce fewer electoral support. Finally, specific and certain (extremist positions) are more effective in case of lack of other information pertaining to the political party, such as the identification or party policy (Ezrow, Homola, Tavits 2014). This study finds that this relationship can be confirmed in the post-communist countries, while we see the exact opposite in established democracies. Moreover, voters do not vote for political parties they are uncertain about, so in CEE, voters are uncertain about political parties around the centre; in established democracies, voters are uncertain about the extremist political parties.

Due to the authoritative regime ruling for over a half of the decade, countries of CEE and their political systems had almost never seen any electoral competition as we understand the term from western perspective. These regimes where the majority (if not all) of power was executed by one single party, allowed a very limited social stratification and a growth of social groups, upon which political parties may start building their support. Party systems that emerged after the democratic transition were created shortly after the process of consolidation of political systems which followed the fall of authoritative regimes. Therefore, political parties in these countries had close or no chance to build any long-lasting and stable electoral support in society based on political cleavages. As they did not have the advantage of this "building phase", political parties of CEE came to existence amid the age when political cleavages started

to fade and when it came to explaining electoral support in Western democracies. In this matter, party systems in the countries of Central and Eastern Europe require a deeper analysis with a greater number of variables, analysed over a period of time. Considering the lack of this “building phase”, one may not be surprised that the conflict lines that created cleavages in the party systems and electoral behaviour, happen to be, most of the time, of different character (as confirmed by many political scientists; see further): First, the competition of old and new political leaderships; second, (the pace of) integration into the western structures, such as the NATO or European Union; and finally, the nature, adaptation, and form of economic transition, whilst others cleavages, such as urban versus rural, faded away, or marginalised (Kubát et al 2004). As Apter sums up, the role of Western political parties was not only as a democratic institution, but it also helped develop mass societies and build modern states (Apter 1965 in Enyedi 2003). When one looks back at CEE, after the breakdown of authoritarian regimes and during the democratic transitions, citizens were already “*incorporated, mobilised, activated and politicised* (Mair 1997: 180)”, and the unified political market was given at the arrival of the electoral competition. In this environment, political parties have played only a marginal role (Tóka 1997). In addition, the regional diversity and instability of politics and society made development of political structures difficult, and the general evaluation of the development even harder (Enyedi, Deegan-Krause 2010).

These paths could have been seen in Bulgaria (with conflicts determining a direction of political processes were the relationship before 1989 and the following relationship until the period of 1990—2001 was seen as a competition of an old and new political style accompanied by an erosion of political trust as a result of corruption scandals and bad economic situation, Chytilek 2004) and Romania (old parties followed up the communist regime, new political parties, and political parties relating to the time before the authoritarian regime with the nationalistic cleavage were represented by Romanian people vs ethnic Hungarian people, Rosulek 2004). Centre vs periphery (or national territory cleavage), however, faded away shortly with the new millennium (Giugal, Johnston, Constantinescu 2011: 159). A 2010 analysis confirms that a vast majority of volatility is towards new political parties (Jurek 2010), and at the same time, most parties do not have a stable and loyal group of voters (partisan voters) to rely upon (Pilet, De Waele 2007). When it comes to volatility in the Romanian party systems, parties differ. It seems that the liberal political family is the most institutionalised one, while conservatives and social democrats are in a win-lose relationship (Gherghina Jiglaŭ 2011).

Following 1989, the main issue in the Czech Republic was the future political transformation, represented by the communist party versus all the other parties. It was accompanied by a revision of relations with Slovakia, its neighbour with which the Czech Republic had formed a federation almost 30 years ago. It can be seen as centre vs periphery. After forming an independent state, the dominant conflict lines upon which the party system was divided, was the direction, speed, and depth of economic reforms, accompanied by centre vs periphery and state vs the church. Following the beginning of the new century, the chief cleavages are rooted in the conflicts about economic policies and attitudes towards integration into the European Union (Mrklas 2004). A relative stability of the party system up to 2010 was eroded by the 2013 general elections due to the new political parties entering the parliament—the party turnover only increased in the following years. The dissatisfaction of Czech (and Slovenian) voters was caused by a low political party coherence (not only contradictions, but often even forming different policy wings inside the parties, auth. note) and convincing the electorate about the widespread corruption. As this issue was addressed in many Czech political campaigns, it seems that it was attractive for voters, and additionally by a personalization of electoral behaviour (Linek, Voželníková 2017). All in all, the argument of corruption was the main driving force to replace old political parties by the new ones (Klvaňová 2016). Thanks to the round tables negotiations, the Hungarian party system had successfully transformed into a democratic one. Even the MSZP, with a personal heritage from the communist regime, transformed itself into a modern social democratic party. In general, the parties appeared to be stable. Behind this overall stability, however, there is a considerable rate of electoral volatility among parties. With splitting from the original parties, new parties emerged, and it then increased the number of parliamentary parties in 1993/1994. However, this fragmentation appeared to be only brief and from the second half of the 1990s, the Hungarian party system had bipolar tendencies (Benda 2004). The Polish party system was unique as the conflict line of old versus new political parties and leadership was not present, as the SLD, the post-communist party in Poland, fully accepted democratisation of the system. However, deep cleavages were represented by socio-economic relations and the Catholic church. Its role in the Polish political system has remained very relevant as it has had historical, social, and political roots. Even though more than 90% of Poles are Catholics, a vast majority of society do not approve its significant role in the decision-making processes. Political attitudes of people do not reflect the religious ones within Polish society (Kubát 2004). It supports the findings of a generally low level of partisanship (Zarycki, Nowak 2000). After the new millennium, political parties of Poland failed to fulfil the expectations and were not able to bring a solid political

system, combining electoral volatility and party volatility into the times of instability (Millard 2009). According to the analysis, after a minor decrease, electoral volatility between 2001 and 2005 reached its peaks as in the beginning of the transition period in 1991/1993 (Shabad, Slomczynski 2011, Lane, Ersson 2007). The breakdown of authoritarian regime created the cleavage common for the new political systems of CEE, ie, communism vs anti-communism. Besides, federalism vs. secessionism was also present in Czechoslovakia (Štefančík, Stradlotová 2020). However, Slovakia's main cleavage line during the 1990s was not socio-economic or left-wing, but it was represented by the political figure of Vladimír Mečiar, and particularly by his methods and execution of politics. This had created two political groups—for-Mečiar and anti-Mečiar. This conflict line faded away shortly after the beginning of the new millennium. Although the Catholic church has been highly represented within the Slovak society, the state versus the church conflict line was marginalised during the transformation period and did not affect the political and party system greatly (as seen in Poland, Kopeček 2004). The persistence of social cleavages (even the regional and ethnic ones, which shape policy at the national level, Klimovsky et al 2016) and its lasting effect on electoral behaviour in the 2009 and 2013 regional elections is summed by Plešivčák (Plešivčák 2017). Additionally, in Slovakia, political parties often cross conflict lines or form coalitions that are contradictory, especially at the local level (Bardovič 2016). This makes it easier for political parties to win the electorate of opposition parties (as in Kavicky et al 2011).

The Croatian transformation process had been affected by the nationalistic minority of Serbians living in Croatia, but this cleavage seemed to fade away with the end of the millennium, and thus it plays no relevant role nowadays. Following the year of 1989, however, the nature of political regime and economic transformation persisted in changing the Croatian policy up to the end of the 1990s (Hloušek 2004). A recent analysis shows that the party system of the new millennium indicates that most of the volatility takes place among the old parties. (Jurek 2010: 117)

Serbia and Montenegro's political and transformation processes were influenced mainly by personalized conflicts (represented by Slobodan Milošević, the Serbian and later Federal Yugoslavian Republic President) with inner and outer enemies. The issue was accentuated by nationalistic discrepancies (firstly between Serbia and Montenegro and secondly between Federal Yugoslavian Republic and Kosovo, reaching the international level), which resulted in a constitutional and political crisis. A stable democratic opposition which could challenge the post-communist politics was created only just at the brink of new millennium. (Cabada 2004).

The Slovenian party system was shaped by the independence process in the 1990s as well as by the state versus church cleavage. The Catholic church remained a prevalent religious denomination during democratization, and many political subjects and elites inclined towards the church. The Slovenian society represents one of the most Catholic populations among the countries of Central and Eastern Europe (Šaradín 2004). The Slovenian party system remained fairly stable for a long time up to the electoral years of 2011 and 2014 (similarity to the Czech Republic and its electoral years 2010 and 2013), ranking among the most stable ones of CEE region (Klvaňová 2016). Some authors even observe the beginnings of the party system instability after the 2008 elections (Lipicer, Henjak 2015, Malčič, Krašovec 2019: 115) as clientelism, corruption, and economic downturn, resulting in a governmental crisis, stormed the party system in new millennium. (Krašovec et al. 2014, Krašovec, Johannsen 2016: 315, Cabada, Tomšič 2016:43). It was evidenced that the emergence of new parties is caused by above mentioned issues, not by citizens' intentions (Malčič, Krašovec 2019: 131). New political parties, however, do not enjoy the advantages of those old parties, and they lack any strong connections to the voters. Therefore, one can expect the current wave of instability to carry on in the future (Lipicer, Henjak 2015: 101). Jurek's analysis from 2010 (Jurek 2010) show medium levels of volatility towards new political parties. As stemming from the aforesaid sources, nevertheless, the phase of higher volatility continued to increase in 2010, while the current state shows an opposite direction.

The Lithuanian transformation process was characterised by the cleavage for independency of the USSR and against it. Ideological switching in the executive was based on the socioeconomic cleavage and was accompanied by a debate on the range of competencies of the head of state in relation to other powers. Additionally, Lithuania's politics (and even foreign policy) was influenced by the national minorities (9,4% of Russians and 7% of Poles, according to the data from 1989). The dispersion of political parties negatively affected the trust of voters towards the political subjects in 1990. Already in 2000, electoral volatility yielded 46,5%, which is the highest among the new democracies in CEE (Dančák, Kubát 2004). The Latvian party system had also been affected by the Russian minority cleavage that existed along the traditional left-right wing cleavage. The direction of Latvian foreign policy was in clast too. The centre and right-wing parties supported a faster integration into the Western structures, represented by the NATO and European Union, while left-wing parties inclined towards a closer relationship with Russia. Many times, however, Latvian nationalism had turned out to be an obstacle of any faster integration process. For example, before Latvia was officially

announced to become a member of the Council of Europe in 1995. The main political parties represented ideology only in part —except for the post-communist and right-wing nationalistic parties, political parties did not have a long-lasting ideological political programme. Political parties worked more like instruments of political ambitions rather than a representation of social tiers (Švec 2004). Estonia's politics was divided by the nationalistic question regarding the Russians minority and the economic transformation (which influenced the left wing and right-wing parties as well, Švec 2004). In addition, the three Baltic states do have different experience with the populist political parties. While this phenomenon was minor in Estonia, in both Latvia and Lithuania, populist movements were either core or influential in the party politics. The opportunity for populist parties to emerge and gain electoral support was twofold: a low level of institutionalization of political parties and too loose law restrictions for political parties. The first argument refers to the overall high turnover for political parties (measured particularly by the Pedersen Index), resulting in the high likelihood of voters switching from one party to another one. The fragmentation of Lithuanian party system started in the new millennium, while in the 1990s, the Lithuanian electorate was quite stable. The same can be applied to the number of parliamentary political parties since it had increased dramatically from the 1990s to the 2000s. In contrast, the Estonian political party system became more and more institutionalised following the 1990s onwards. The second argument is linked to the minimum membership number. While Estonia adopted a minimum membership threshold of 1000 members in 1994, Latvia and Lithuania followed at a slower pace. Lithuania, for instance, adopted the same criterion in 2004 and increased it to 2000 members in 2015. This factor has led to a bigger number of political parties in Estonia and a smaller one in Latvia and Lithuania. Both factors combined the increased political party turnover and volatility in Latvia and Lithuania, leaving the door open for the populist parties. The issue was amplified by the fact that small parties of Latvian and Lithuanian political party systems felt threatened by the rise of populist parties, and as a response these old political parties started using populist slogans and rhetoric (Auers 2018). A study analysing the partisan loyalty in Lithuania by three concepts of explanation: social cleavages theory, social learning model, and a political trust model confirmed “opened market of political system” from the argument above. It also confirmed that only a small share of the Lithuanian electorate was loyal, and floating voters tended to vote for the winning opposition party. As a result of the generally low trust to politicians, this may be a future scenario for other CEE political systems as well (Ramonaitė, Žiliukaitė 2008). Societal conflicts have had only little incidence on the party system in Lithuania as a relationship between the



social structure and electoral behaviour is nowhere near stabilised (Jurkynas 2004). A great deal of instability lies in organisational preference changes of politicians (Kreuzer, Pettai 2003).

The communist regime and a strong directive management of state left deep scars in societies of all the countries even after 1989. However, one must not forget that the nature of most of these lines cannot be compared to those identified by Lipset and Rokkan since these were more of temporary political issues. From a brief description of political cleavages in Central and Eastern Europe in the beginning of the democratic transformation process in the 1990s, most of the conflict lines were even of different character than those defined by Lipset and Rokkan. Indeed, some were already present (state vs the church in Poland, centre versus periphery in Czechoslovakia and respective countries), but mostly new conflict lines appeared. First, as countries were under the executive control of one party during the authoritative regime, no nationalistic conflict did turn out to be a critical issue (one example lies in the nationalistic antagonism in Yugoslavia). The transformation process and democratisation fully uncovered this problem as nationalistic tendencies started to appear in a vast majority of the CEE countries. The way in which the ruling powers dealt with this cleavage of minority vs majority population then shaped the transformation process, if not by its direction, then surely in its speed. This cleavage though can be seen as a territorial issue, it is far from the original concepts of centre versus periphery or urban versus rural cleavages as presented by Lipset and Rokkan. Additionally, this cleavage between national minorities and the majoritarian native population resulted in a debate on the ideal direction of foreign policy (see the Baltic states). Secondly, the clash of old style of politics versus a new style of politics can be seen in a vast majority of states (the states where the post-communist parties accepted the democratization process were exceptions, as in Poland). This cleavage accompanied the party systems during the whole transformation process, even after the transformation of political parties into modern democratic ones. Ruling elites that had been part of the communist regime during the authoritative times remained high-ranked members of political parties in the democratic period after the transformation process. Thirdly, the direction, the pace, and the nature of economic transformation from the state-controlled and state-governed economy into a free market oriented democratic environment was present in all the countries of Central and Eastern Europe. This clash created a difference of opinions which can be interpreted as an opinion difference between the left-wing and right-wing parties. It heavily shaped the transformation process (not only economical, but political as well). In addition, this cleavage was present in a different way,

as the socioeconomic cleavage was more of the clashes about the direction of economic transformation rather than a conflict between owners versus workers.

Therefore, when it comes to the coalition building, it depends on the party systems' regime divide, depth, and the nature of generational conflict between political parties with the communist heritage and new political parties. The bigger divide, the harder time political parties of Central and Eastern Europe experience in building stable coalitions as traditional theories of coalition building do not seem to apply for the political systems in this region. As post-transition political parties' priority was to build its stable electorate by setting a clear identity and root the political support on voters' interests, coalition building process may be hampered by two issues. At first, successors of the communist regime, who still gain considerable electoral support, often seek the coalition formation, rather than are needed. Secondly, political parties, which cross the line between the old and new political parties by making coalitions, may expect punishment from the voters by experiencing an electoral defeat in the next elections (Grzymala-Busse 2001). The nature of communist legacy plays a significant role in other scientists' assumptions as well. While Kitschelt (Kitschelt 1995) suggests that the cleavages of CEE are historically based too as different patterns of communist regime shaped the type of party competition after democratic transformation, Rivera (Rivera 1996) calls attention to the heritage of the communist rule.

This leads to conclusions that political parties of Central and Eastern Europe, at least after the democratic transition, could not rely on the classical conflict lines as defined by Lipset and Rokkan, and thus had to build their voters' support on different issues. These, however, were more of short-term electoral topics rather than strongly rooted historical cleavages shaping society over decades, if not centuries, as we have seen in various Western democracies.

While class and religion rooted the left-right self-identification in Western democracies successfully (Lipset, Rokkan 1967), there is only a limited amount of evidence that any of these processes can be found within the relationship between voters and political parties in the countries of CEE. Rather than class and religion, Jou (Jou 2011) finds that education (or political sophistication) and a level of closeness to (but not trust to) political parties might be a better explanation for different rates of ideological voting. However, Dalton (Dalton 2006) finds that views on the government ownership of industry and the importance of religion (not the religion itself or its denomination) define the left-right orientations in both Western and Eastern Europe.

Based on the individual data from election studies across several electoral terms in countries of Central and Eastern Europe, the aim of this thesis is to further analyse the factors that may be leading to the instability of party systems, leading to the high volatility among elections, which is so common for the states in this area. This analysis focuses on the attitudes of citizens and voters towards political parties, directly resulting in voters' behaviour.

As a research study clarifies, before vanishing from the political party system, political parties of CEE are able to step across the previously designated conflict (cleavage) lines, reform their relations with other political parties, and start off a new campaign towards another election success—compete for the new electorate, integrate different political ideologies, and form a cooperative relationship with other political subjects (Enyedi 2005). By his argument, Enyedi claims that in a volatile environment of Central and Eastern Europe, political parties face institutional and social constraints which force them to respond—by focusing on the different electorate, re-structuralising relationship with political identities, erase social divisions, and move across the pre-set borders. On top of that, the potential room for manoeuvre is considerable as individual interests and values (of both political parties and their voters, auth. note) allow a fusion in various combinations. This is one way in which the old political parties may survive the current earthquake of political systems. One such party that has transformed was the Fidesz. This change, however, would not be possible without another important factor, and that was the change of electorate. By Enyedi's analysis, the Fidesz launched as least authoritarian political party of the Hungarian political system. However, in the new millennium, its electorate appeared to be the opposite. In this regard, the Fidesz only reacted to the shifts of the electorate. The same principle applied to the church attendance, urbanisation, and the self-left-right placement. For that reason, a transformation of any political party is a simple result of politicians' calculations (ibid).

The phenomenon of protesting political parties has been present in the political systems of CEE for decades. The first political parties (which, by their nature, reminded more of movements rather than political parties) of which main ideology consisted of direct democracy and (right-wing) populism emerged in the late 1990s. And these parties have accompanied the political party system up to this day. While not all of the parties survived, every parliamentary election in the countries of CEE has reminded voters of their existence. Many of these political parties have changed the name and affiliation numerous times, while also shifting its ideology and electorate in accordance with represented interests. While one can find examples of these

movements across CEE, for the political systems analysed in this thesis, the following examples are the most representative ones:

- for the Czech Republic, the *Right Bloc* political party (Volte Pravý Blok [www.cibulka.net](http://www.cibulka.net)), founded in 1996 and active up to now; *Rally for the Republic – Republican Party of Czechoslovakia* (Sdružení pro republiku – Republikánská strana Československa Miroslava Sládka) founded in 1989, but currently dissolved; however, the party had been in the parliament from 1992 to 1998;
- for Hungary, *Jobbik* (Jobbik Magyarországért Mozgalom) recently retreated from its original populism, and yet kept Hungarian nationalism and it still remains present in the National Assembly; other populist party is *Our Homeland Movement* (Mi Hazánk Mozgalom);
- for Lithuania, populist *The Way of Courage* (Drąsos kelias), a former Seimas member and anti-globalist and pro-direct democracy *National Alliance* (Nacionalinis susivienijimas), formerly populist *National Resurrection Party* (Tautos prisikėlimo partija);
- for Romania, nationalist and right-wing populist *Alliance for the Union of Romanians* (Alianța pentru Unirea Românilor)
- finally the *Slovenian Democratic Party* (Slovenska demokratska stranka) for Slovenia, particularly its leader Ivan Janša

Populist movements in other CEE countries include *SME RODINA*, *OLaNO* (Křtínová 2013), *People's Party Our Slovakia* (Kluknavská 2015) in Slovakia, *Self Defence and Law and Justice* in Poland (van Kessel 2015), ГЕРБ in Bulgaria (Zankina 2017), Ključ Hrvatske in Croatia and so forth. Other political parties of humorous character are Friends of Beer Party for the Czech Republic, Hungarian Two Tailed Dog Party for Hungary, and Paliho Kapurková in Slovakia. As one can see, many of these political movements are centred around one *persona*, which, more of a leader, suggests of the main ideologist of the movement.

## **2.4.1. Factors potentially affecting electoral behaviour**

### **2.4.1.1. Socio-demographic variables: Age, gender, and education**

Up to this stage, most studies and statistical models of electoral behaviour have incorporated “age” as a control variable. The traditional hypothesis of a higher age of voter resulting in a higher turnout in the elections (parliamentary or any other type) had been a “long-

term trend” with “unusually stable findings” (Goerres 2007:90). The relationship, based on prior knowledge, expected younger age groups of first-time voters, or voters just passing the minimum working age to have the lowest percentages of turnout in the elections; with an increasing turnout of those voters who reached the middle working age, or have already worked in stable jobs, or already started a family in their 30s; and the election turnout peaking among the age groups of post-productive age of seniors citizens and pensioners, attributing this fact to a longer life and political experience.

Moreover, life experience can show the importance of voting so significantly that it can be taken as important as education. However, scholars admit that with an increasing age, other explanations may increase the individual turnout. The overall life experience, family status and children potentially, benefiting from the political system compared to simply personal gains in one’s mid 30s, and political expertise can increase voters’ turnout. And while the turnout may correlate with age, eventually it may be these alternative variables that may be able to explain the increase in the electoral participation far better than any moving higher in the age group. The older the voters get, the higher their income is (at least most of the time). Afterwards, it can contribute to a higher political participation as well. Two less likely explanations are represented by the personal material possession as in different stages of life, we become sometimes more or less dependent on the public wealth, and a higher value contributed to the elections as a democratic feature. This explanation, however, seems implausible since both younger and older age groups may benefit from the public goods in different political and economic systems. Finally, older people are supposed to participate in the elections more often than their younger counterparts. Among different societies, however, this argument loses its standing ground due to the fact that older people in western democracies may recognise the importance of elections more than their children or grandchildren because of their political expertise (or lower political competence, respectively). It may not be the case of older voters in Central and Eastern Europe who lived most of their lives in the course of authoritarian regimes when one could hardly learn about how valuable elections were for the democratic process (Goerres 2007:109). Nonetheless, recent studies (based on the empirical data) of political scientists, concerning electoral behaviour, show that the relationship between the year in which voters were born and their voting behaviour may not be as straightforward as one might expect.

Other recent analyses demonstrate that the determined relationship stressing “the higher age the higher electoral turnout” does not apply to the political systems of many countries, ranging from western democracies to those political systems in the states of Central and Eastern

Europe. No matter if the political system has been a stable democracy for the past century or has experienced totalitarian or authoritarian regimes, the correlations between the turnout and age seem to be far from any linear or exponential growth relationship. The study conducted by Arzheimer, Evans, and Lewis-Beck (Arzheimer, Evans and Lewis-Beck 2016) analysed the predicted turnout (ie, whether respondents were more or less likely to vote in the following elections) by estimating logistic regression models based on the CSES3<sup>1</sup> and CSES4<sup>2</sup> module's data (demographic variables and overreported turnout weights were added to the models for more accurate results). As depicted in Picture 1, the models show two particularly important phenomena

First, the estimated models predicted the voters' turnout which, in correlation with voters' age, reminded a curve that yielded little to average values among the youngest voters, with the curve peaking (with some exceptions) around the age of 60, with the highest values only to drop back to low or average values in the late years of life. In all the countries of Central and Eastern Europe that were analysed in that study, the probability of turnout peaked around the 60<sup>th</sup> year of voters' lives—those voters were just a little before their 30s during the collapse of the authoritarian regimes of the Eastern Bloc. Frequently, these were the people who, in that time, were students or just a few years older and were the biggest driving force demanding a dialogue and reforms of the then regimes. After the 30 years of transition period, voters of the age of 70 and more are the voters who, in that time, already had their families and were operating within the authoritarian system for some time. I will address this phenomenon once again in the following point. Lastly, younger voters of the age of 40 or less acquired their primary education during the transition period and had a chance to benefit from the democratic values. How deeply are these ideas woven in their lives, however, remains obscure.

Second, and more interestingly, it is the different shape and level of different variances among the countries themselves and among different age groups within the same country models. While certain countries are relatively low in their variance of predicted probabilities of voting (Switzerland is prominent in this category as well as Germany and France), the opposite side of high variance is not only a feature of Central and Eastern European countries (Australia, Chile, Korea, Mexico, and Sweden, too). As it is obvious from the results of Arzheimer et al., in these countries, the age groups are unstable in their predicted probability of vote (and because regression models are based on the then election and the previous electoral term, even the real

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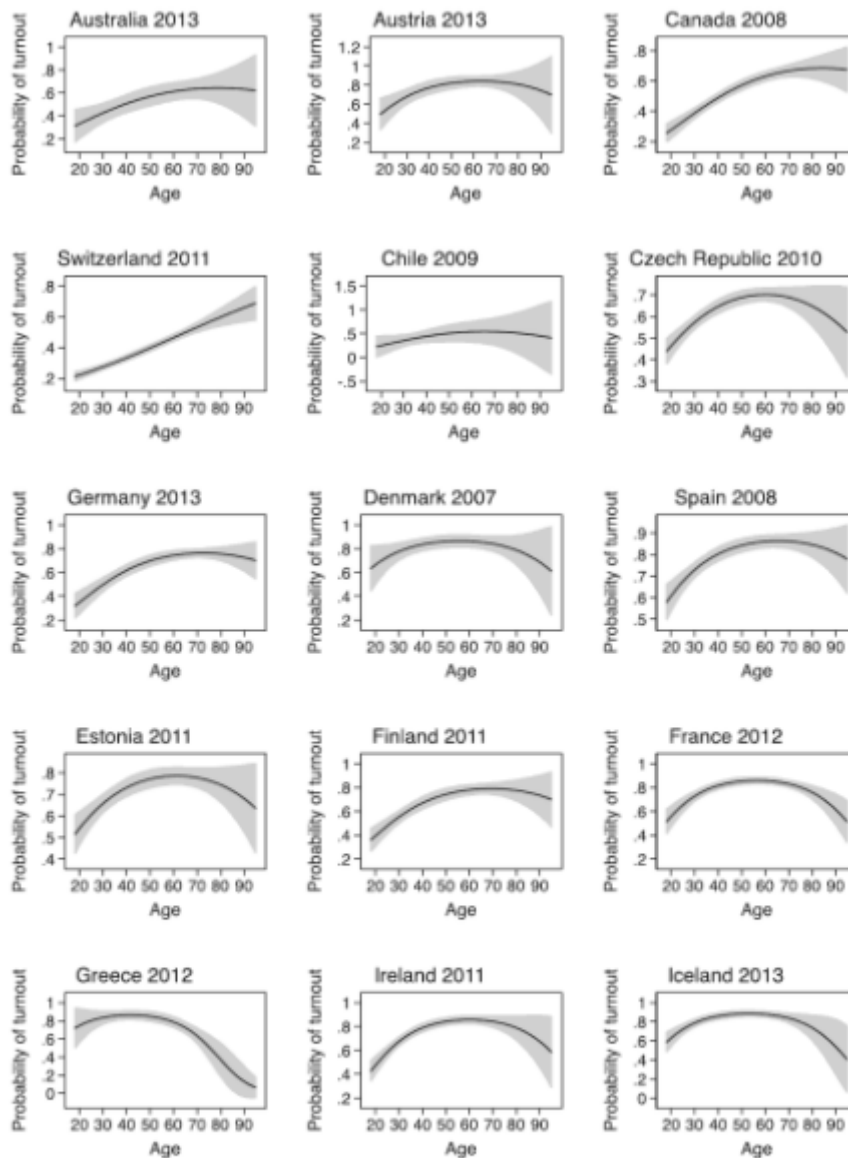
<sup>1</sup> Comparative Study of Electoral Systems, Module 3

<sup>2</sup> Comparative Study of Electoral Systems, Module 4

time electoral decisions were unstable), meaning the voters are volatile when it comes to abstaining from the vote or actual voting. Why is that? And why do certain political systems show little or no volatility in the same age groups?

Different age groups of voters in the same country also have different levels of variance—younger and older age groups of voters have their variance of predicted probabilities of vote average to high, while middle-aged groups, aged from their 40s to 60s, have their variance of predicted probability of vote low to average. Once again, we have come to the point where this fact might have a connection to the fall of authoritarian regimes and transitional period. That theory may, however, be applied only to the countries of Central and Eastern Europe or those which previously experienced authoritarian regimes. That is not always the case—the same situation applies to many countries which have been stable democracies for a long period of time. One reason may be that the older age groups of voters did not have the advantage of democratic features, such as elections, and after the transition, the benefit of voting opportunities and the ensuing policies might not have been in line with their expectations. Younger generations, on the other hand, had the opportunity to enjoy the benefits of democracy, but the benefits themselves do not render stable democracies. It may be the reason why the variance of predicted probabilities of voting remains high in many cases. Lastly, the middle-aged groups ranging from the age of 40 to 60 are in the age group that represented the main driving force of protests about the authoritarian regimes—and these voters are the most stable in their predicted voting probability. This representation, however, is far more complex, and may be applied to the post-authoritarian political systems. The reason why this situation remains similar in established democracies is a clue that the very same reasons, which are relevant to stable democracies, may be applied to new democracies too—the reality is just strengthened by their authoritarian heritage. To sum up Arzheimer, Evans, and Lewis-Beck's research, the relationship between the age and probability (even the actual electoral choice) is not always straightforward. The correlation curve does not confirm any linear or exponential correlation but is rather similar to what statistics knows as the bell curve, or normal distribution curve (with the exception of Switzerland as the analysis of Arzheimer et al. shows below).

**Picture n. 1: Probability of the turnout based on age.**

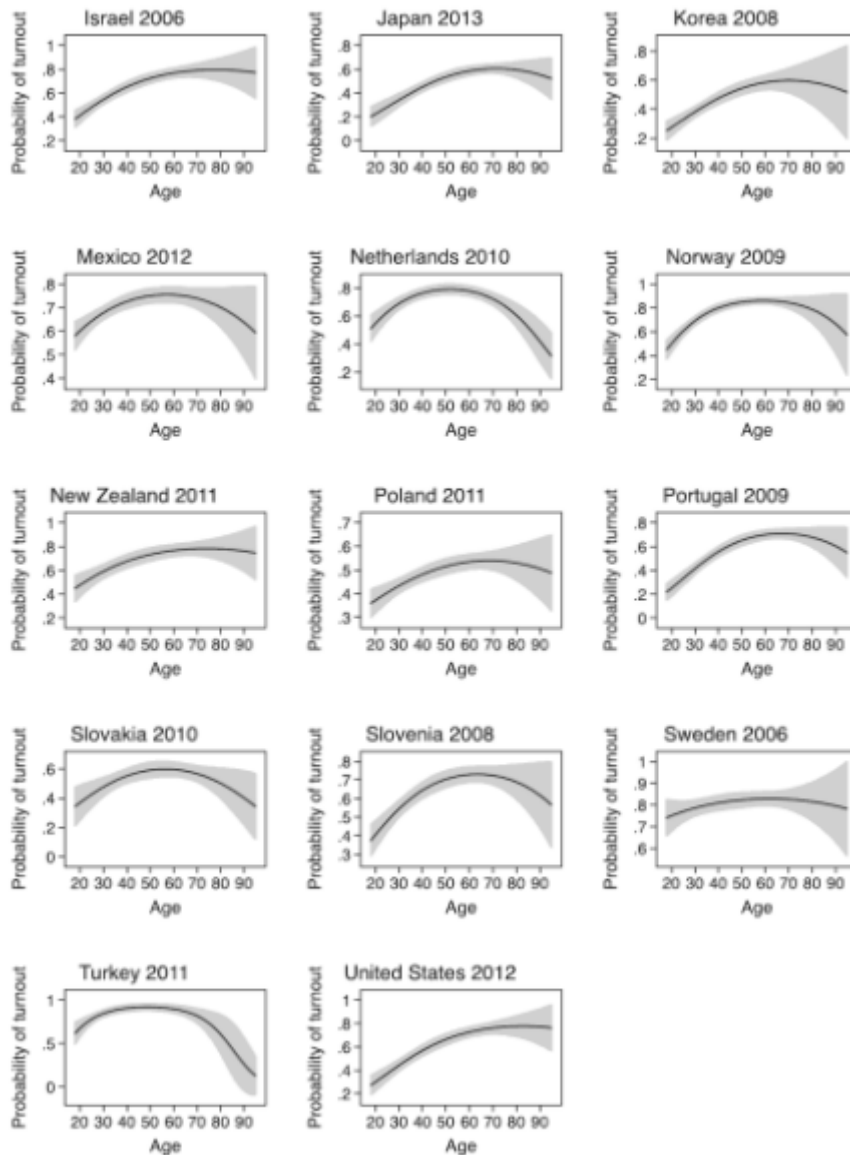


**Figure 7.1** Probability of turning out to vote by age

Note: Predicted probabilities and 95%-confidence intervals. Predictions obtained after estimating logistic regression models predicting turnout (0 = did not cast a ballot, 1 = cast a ballot) with age and age squared.

Sources: CSES Module 3 (2015) and CSES Module 4 (2016). Demographic weights and a weight to correct for overreported turnout were applied.





**Figure 7.1 Continued**

(Arzheimer, Evans and Lewis-Beck 2016: 143-144)

The previous figures show a typical rise in electoral interest among the young voters up to their middle age when it begins to decline after they reach their retirement age. However, there is a significantly higher range in the later stage of life than in the earlier or middle-aged phases, meaning that there are voters who do vote with a high frequency and those with a low frequency (or abstaining from the elections).

The additional study, shedding light on all the findings from previous sources, describes a special type of electoral behaviour and voting turnout of young age groups, and thus challenging both the theory of increasing turnout as voters age and the “curve” correlation of voter turnout and age as provided by Arzheimer et al. According to study by Bhatti, Hansen, and Wass (Bhatti, Hansen, Wass 2012), the first-time voters exercise a special type of electoral

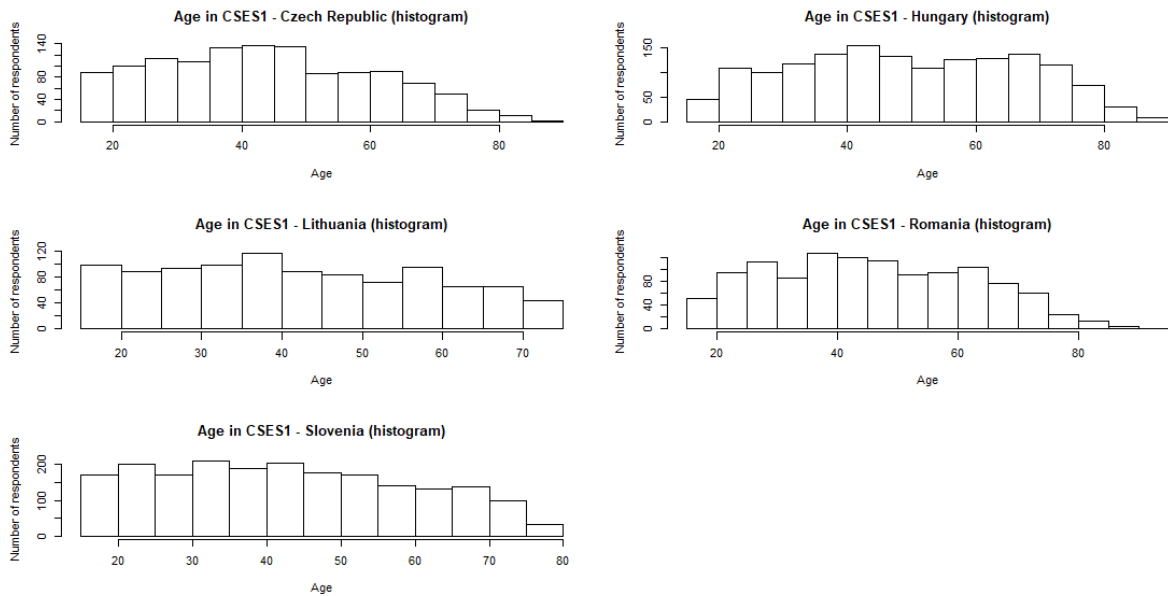
behaviour that opposes both theories above, ie, that their turnout is the lowest among all the age groups. Shortly after gaining the right to vote, the interest of voting for this specific age group booms, and then it goes back to predicted values by both theories around the age of mid-20s. While even Bhatti, Hansen, and Wass agree that most of current literature describes how the first-time voters do not participate in elections as often as their older counterparts. And this fact is valid in most democracies as it was backed up by the empirical evidence (Fieldhouse et al. 2007, Highton, Wolfinger 2001, Phelps 2004, Sloam 2007, Wass 2007 in Bhatti, Hansen and Wass 2012, Bhatti, Hansen 2012). Recent studies, however, oppose the conventional theory of this linear relationship between the age and turnout, corresponding to the adult role theory. In the empirical study on Denmark, the electoral turnout of voters who just gained the right to vote boomed and dropped right around the average age of 20. After this short period, the electoral turnout begins to drop, and does not rise again onto high values before the age of 35 (Bhatti, Hansen and Wass 2012).

While it is important to understand the low electoral turnout of any age group in order to detect the variables causing it and their relationship, the issue is the most grievous among the youngest group of voters. It shall be them to bring up a new generation of people and educate them about the democratic process—and quite reasonably to pass some of their behaviour to the younger generations, and thus create a vicious circle of low electoral turnout. Even more importantly, if the *boom* effect of fresh new voters confirms in multiple case studies in numerous party systems of Western democracies, the reason why the electoral turnout decreases, seems to be even more troubling. If the boom effect is caused solely by the primary joy or excitement from gaining the right to vote for the first time, and then it decreases to normal (understand predicted values based on age and relationship estimation between age and electoral turnout), the issue is not that worrying, and this effect may be attributed to the general types of human behaviour of desensitization when an emotional response diminishes over time. However, there may be cases when the decrease of voters' turnout at the age of around 20 is related to not being represented in the legislative body (ie, voters voted for a political party which did not meet the criteria for entering the parliament) or due to their disappointment by the government's performance or disrespect and disillusion about the democratic process. While the former may be changed in the next election when a party, those voters had previously voted for, makes its way to the parliament, the latter poses a great danger to democracy and should be treated accordingly. *“Understanding youth abstention is important, as voting has strong habitual properties (eg, Campbell et al. 1960, Denny, Doyle 2009, Franklin 2004, Gerber et al. 2003) and failure to mobilise youth can therefore possibly have long-term*

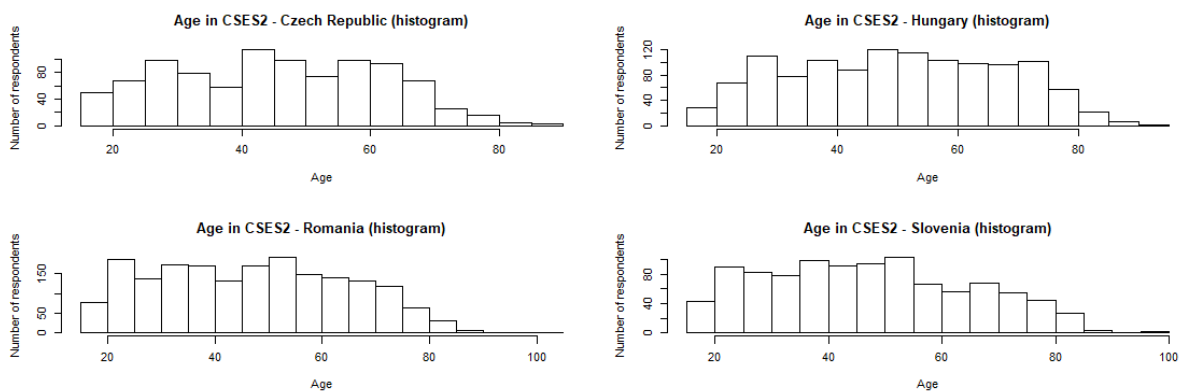
*consequences for political participation.*” (Bhatti, Hansen 2012: 380). In respect of these facts, one may anticipate that the relationship between the electoral behaviour and age changes in different states and indeed, in different time periods. Therefore, before any further analysis in this thesis, the author conducted basic descriptive statistics to see how the data were distributed and what the relationship between the variables towards electoral behaviour occurred. As complicated as the relationship between the age and electoral turnout may be, the following correlation between the age and electoral volatility might be even more complex; more to say if we incorporate additional social, demographic, and economic variables into the regression models. Especially without a clear direction of correlation tie between the younger age group, who abstain from voting more frequently, and the elder age groups, who vote more, yielded coefficients, resulting from the regression models, may not reach expected values. And thus, the relationship might not be able to explain reality in a sufficient way. In some cases, the variable of age does seem to be neither a strong nor constant determinant of electoral behaviour (Birch 1995). For the countries of Central and Eastern Europe, this may be relevant in the years during the democratic transition and the elections held shortly after. The primary “boom” of joy from gaining the right to vote in case of the first-time voters, as described above, may be amplified and then applied to the wider population of voters after having received a chance to cast their vote democratically, meaning to numerous political parties after the periods of authoritative regimes with a limited (or no) political party competition.

The age distribution among the countries of Central and Eastern Europe seems to be normal, as the histograms of age are similar or identical to normal distribution (see the histograms below).

**Histogram 1: The age distribution in selected CEE countries (Comparative Study of Electoral systems, Module 1, author calculations):**

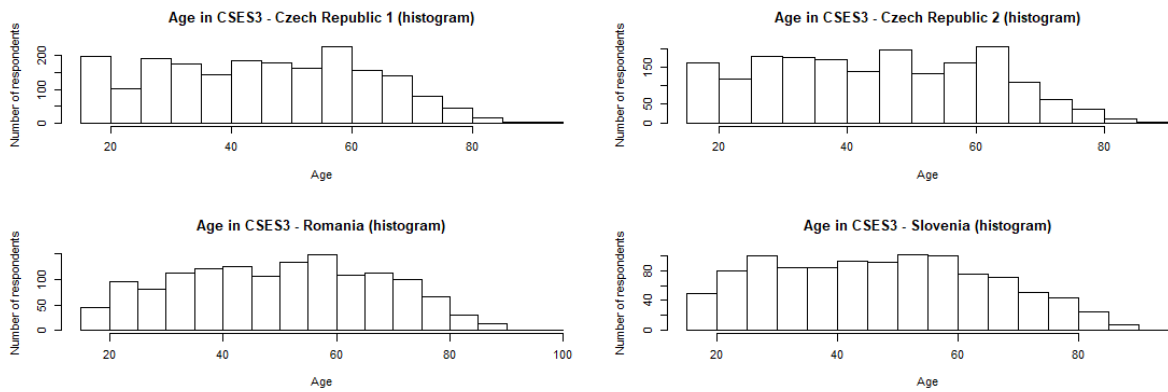


**Histogram 2: The age distribution in selected CEE countries (Comparative Study of Electoral systems, Module 2, author calculations)<sup>3</sup>:**

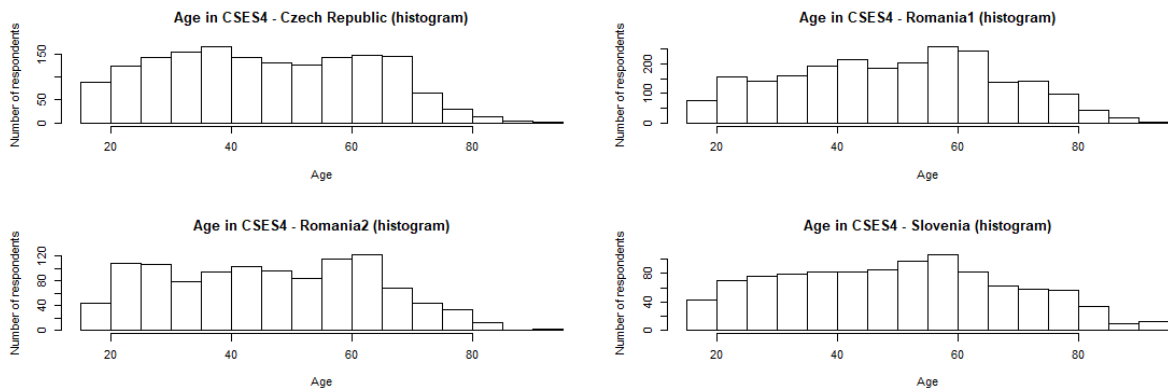


<sup>3</sup> The histogram for Lithuania was not included because of the missing data from this country in the CSES2.

**Histogram 3: The age distribution in selected CEE countries (Comparative Study of Electoral systems, Module 3, author calculations)<sup>4</sup>:**



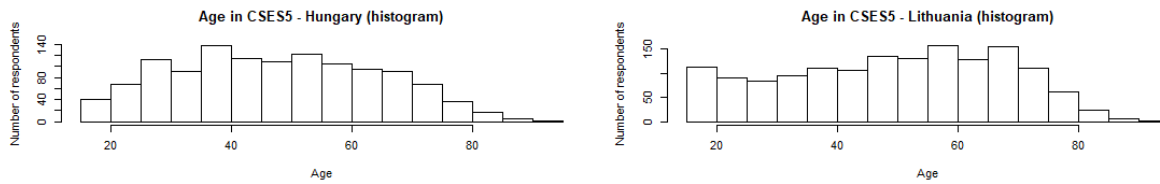
**Histogram 4: The age distribution in selected CEE countries (Comparative Study of Electoral systems, Module 4, author calculations)<sup>5</sup>:**



<sup>4</sup> The histograms for Lithuania and Hungary were not included because of the missing data from these countries in the CSES3.

<sup>5</sup> The histograms for Lithuania and Hungary were not included because of the missing data from these countries in the CSES4.

**Histogram 5: The age distribution in selected CEE countries (Comparative Study of Electoral systems, Module 5, author calculations)<sup>6</sup>:**



The data collected by the Comparative Study of Electoral Systems are supposed to be representative in their social, demographic, and economic variables to the actual population (CSES1 Codebook, CSES2 Codebook, CSES3 Codebook, CSES4 Codebook, CSES5 Codebook). If this is the case, in the chronological view of the population age across the countries, we may see some deviations from the normal distribution. In some cases, histograms reminded more of a bell curve with two peaks rather than one. This may be taken as the evidence of how the structure of society looked like, though it may also pose serious complications for the following comparative analyses. However, nearly all the regression models regarding behaviour incorporated the *age* variable if not as independent variable, then at least as its control variable.

In the authoritative regimes of Central and Eastern Europe during the second half of the 20<sup>th</sup> century, the electoral process was far from the one of Western democracies. While the electoral process as well as participation were both encouraged and celebrated by the regime as democratic “heydays”, voters technically did not have a chance of free choice at all in the Czechoslovak Socialist Republic (ČSSR) in the 1960s, 1970s, and the 1980s.

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<sup>6</sup> The histograms for the Czech Republic, Romania, and Slovenia were not included because of the missing data from these countries in the CSES5.

Firstly, multiple elections were held at the same time: eg, after entering the polling station and being proved one's identity, each voter in Prague 4 ballots:

- For the election to the National District Committee (Okresní Národní výbor);
- For the election to National City Committee, in this case National Committee of the Capital City of Prague (Národní výbor města Prahy);
- For the election to the National Assembly of CSSR;
- For the election of juries.

All in all, while the election days were accompanied by foreign supervisors, the ballots consisted of only one candidate list, and therefore one could hardly see this as democratic elections. Each voter was able to (but not expected) to edit the ballot in the pooling booth. Very few voters made use of this chance, and even those who did then faced unfavourable consequences at work or school. Voting was not officially obligatory (but was highly expected), just as not using the polling booth and thereby affirming the candidate list as given on the ballot. In this regard, this electoral process can be classified as the “manifestation voting”—a voter was not allowed to choose from political parties at all. Even attempts to modify the ballot had been perceived as a manifestation of dissatisfaction with the regime and thus a good way to make life harder for the voters (Český Rozhlas 2019). Jerzy Wiatr in *Elections and Voting Behaviour in Poland* describes a similar situation when in the “consent elections”, voters could not choose a party but could choose either their approval or disapproval of the ruling party and its policy. And by modifying the candidate list, one had a chance to decide how the country would be ruled, but not by whom. These elections, eventually, cannot be taken as any evidence of regime's popularity or voters' consent to the regime (Wiatr in Ranney, 1962<sup>7</sup>, Dinka, Skidmore 1973).

In this type of elections, when the process itself is encouraged by the regime and voters just *approve* the ruling party, all the social groups are expected to have similar scores of the turnout—and this, of course, applies to the gender, too. In authoritarian regimes, women just as much as men were expected to participate in political life, regarding the electoral process as well. Women's emancipation process was supposed to be voiced through women's organisations but those became just a means to control the whole society from the upside (Sedláková 2015). The overall economic activity of female population in the CSSR was one of the highest in the world, rising from 54% of active female population in the productive age in

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<sup>7</sup> Jerzy J. Wiatr, “Elections and Voting Behaviour in Poland,” in Austin Ranney, ed., *Essays on the Behavioural Study of Politics* (Urbana, Ill., 1962) 239.

1950 to 85% in 1970. The supervision and guarantee that women would have enough time for the family while simultaneously contributing to the national economy was one of the main roles of state institutions (Hamerník 1976). The role of women in society was threefold; women were supposed to be economically independent of their male counterparts, the gap between education became lower and yet women were still expected to be responsible for hearth and home, as a vast majority of duties and house chores remained carried women's shoulders (Havelková 1993a: 91 in Vodochodský 2007). However, in this socialist society, there had been a deep-rooted stereotype of a man being the main (though not the only one) breadwinner of the family. And simultaneously, women's political emancipation as well as their participation in political life was expected, though the tools for male supremacy prevailed; in Hungary, for instance, by the exclusion primarily by political means, in Austria by economic and cultural means; Šiklová 1993: 75). Scholars believe that political blackmailing, under threats of various punishments, occurred mainly at work and was put into effect in the form of demand for political activity. According to Havelková, women had a chance to avoid this pressure by referring to their family duties. Nevertheless, this had significantly limited their chances of any work progress and was a cornerstone of their segregation. Men, by contrast, had little to no chance to avoid blackmailing (Havelková 1992:88–89 in Vodochodský 2007). As noted by Fodor, in the political hierarchy, it was especially men who, as members of the Politburo of the Communist party and its ideological philosophers, deliberately constructed women as *politically less valuable "communist subjects"*. It then had fitted the inferior communal duties until they underwent the re-educational process (Fodor 2002, Fodor 2004). In this regard, the communist official might be viewed as those maintaining the hierarchic division of society (the social organization of men, Connell 1995) where both men and women are subject of repression. All female authors agree that a vast majority of ruling positions had been taken by men, and women had remained in an inferior and subjective position (Vodochodský 2007). Therefore, sundry barriers to women's representation in politics have persist in CEE up to nowadays (Clavero, Galligan 2005). This is naturally not enough to label the communist regime as patriarchal, but it is enough to see that women experienced a harder time fulfilling their political role in the socialistic society. And this type of behaviour might have long term consequences, being transferred to the younger generations from their parents. As reports from India exemplify, women are more likely to participate in the electoral process if they are interested in politics and believe that voting matters (Rai 2011).



In generally, when political scientists study gender effects on electoral behaviour, studies can be divided into three categories (see, for example, McElroy, Marsh 2010):

- aggregate studies, mainly consisting of overall election results and respective statistics of gender distribution in given societies (Studlar, McAllister, Hayes 1998);
- survey analyses in which interviewers and study managers try to be as representative as possible (or they include as many social groups as possible in their analysis so that the actual study sample yields the same distribution and statistics as the total population to which the results are expected to refer to), even though this is not always feasible;
- experimental research in which methodological analyses of only one variable (ie, gender) is used as the effect on electoral behaviour.

These types of studies often bring along contradictory results. For example, aggregate studies come by very poor results to prove the theory that female candidates obtain a lower number of votes because of their gender (Darcy et al 1994 in McElroy, Marsh 2010, Welch, Studlar 1986 in McElroy, Marsh 2010, Sims, Wanna 2010, Kelley, McAllister 1983, Sapiro, Conover 1997).

When explaining the Gender Gap in Voting, a cross-national analysis suggests that the direction of gender gap, its depth, and explanation vary from case to case. The major reason, as described by Studlar, McAllister, and Hayes, is rooted mainly in the structural factors and, in a fewer margin, the situational ones. Based on the evidence from the Australian and British cases, they manifest that understanding the gender gap is much more complex as the former analysis of the United States of America had suggested. Variables, such as women's occupation, involvement in family responsibilities, political ambitions, or left-right leaning, may help explain electoral decisions (Studlar, McAllister, Hayes 1998). Similarly, and more often than men, women agree with the following statements stressing that the female representation in British politics requires improvements: the lack of female opportunities in political parties, an equal role for women in the industry, business, and government, and finally equal opportunities for women in Britain as a whole (Hayes 1997). Later, statistical models do not show any statistically significant difference between men and women in a vast majority of calculated models. Overall, these models however incorporated a few, but contrary to other studies, more demographic variables. Concluding this study, the authors confirm that there is predictive power of variables, such as sex and gender, but the relationship between variables and electoral behaviour is not overly large (Hayes 1997). These correlations and relationship might even be lesser if one would have incorporated more variables into the statistical models. Several studies

have verified the fact that women as voters, more often than men, support female candidates (Burrell 1994 in McElroy, Marsh 2010, Welch, Studlar 1986 in McElroy, Marsh 2010, Dolan 1998 in McElroy, Marsh 2010). Voters then do generally tend to see women as more fitting for social policies (Burrell 1994 in McElroy, Marsh 2010, Golebiowska 2001 in McElroy, Marsh 2010).

One of the examples of survey analysis with numerous variables is the study on women's electoral participation and electoral behaviour in Japan (Steel 2004). According to the author, some of the models, that use only socio-demographic variables to explain electoral behaviour, can explain only limited reality of political participation. Based on these models, scientists may conclude that these factors are the ones to explain reality that in general, women participate less sufficiently in politics. The view of women not realising political activities less than their male counterparts may be influenced by the research conducted in the second half of the 20<sup>th</sup> century, particularly in its beginnings. His findings support my primary theory that social reality is much more complex than a vast majority of studies show—a *puzzle network analysis* of variables, such as the occupation or social group mobilisation, and the overall political integration. The subsequent recommendation for future research is to conduct a study with a larger sample size so that scientists may be more confident in statistical analyses. The author even calls for using qualitative methods and implementing focus groups or in-depth personalised interviews (Steel 2004). Similarly, Karp and Banducci argue that *value* variables, such as the belief that voting makes a difference, correlate with the probability of voting (across all voters in general, ie, men and women). In their models, variables as age, education, and efficacy show a high correlation coefficient with a statistical significance. The correlation coefficient of sex yields very low values and is not significant though. The study was conducted on the party systems and their voters across 27 democracies (Karp, Banducci 2008). Another example of survey study on gender inequality and its consequences on numerous aspects of women's life may be found in the World Value Survey comparative analysis. The subjective well-being of female participants yields a strong positive correlation with gender equality—the higher the gender inequality, the lower subjective well-being women report (Tesch-Römer, Motel-Klingebiel Tomasik 2008). The countries analysed further in the thesis (Czech Republic, Hungary, Lithuania, Romania, and Slovenia) are all below the average of the EU in respect of the Gender Equality index in 2020 (Statista Research Department 2022), meaning that the higher inequality in these countries may affect women's lives and possibly their electoral behaviour. While the results are not straightforward, political participation may be increasing

in society with gender equality beliefs—contrary to this stands the membership or activity in religious organisations which correlates negatively with gender equality. This study, however, presents the results based on models with a limited group of variables (though diversified into several subgroups). Therefore, the actual reality might differ from those described models (Voicu, Voicu 2016). Similarly, Hatemi, McDermott, Bailey, and Martin confirm that while there is a correlation between respondents' gender and, in this case, predicted electoral support, the authors agree that the variable of sex is not the “*most important determinant*” (Hatemi, McDermott, Bailey, Martin 2012). Moreover, while these results are based on the individual data, the analysed sample does not represent the population accordingly, and variables used in the models included only basic socio-demographic statistics.

Alternatively, McElroy and Marsh provide an additional explanation. In their survey on political candidates in 2007, only 17% of respondents agreed with the statement that “Most voters preferred male candidates”, while 80% of respondents (83% and 72% of male and female respondents, respectively) either agreed or strongly agreed with the statement that “Not enough women came forward” (to run for office on candidate ballots, auth. note; McElroy, Marsh 2010). This finding then confirms the conclusion that women in the United States of America have a significantly lower interest in running for office (Fox, Lawless 2004).

Experimental methods where gender as an isolated variable is correlated against electoral behaviour (most typically the turnout or probability of voting certain party/political candidate) may yield mixed results, too due to the statistical models consisting of only one variable.

The World Value Survey analysis from 2000, based on the data from the 1980s and 1990s, conducted by Pippa Norris and Ronald Inglehart, revealed that the differences in political values and electoral behaviour based on gender were becoming prevalent (also known as *realignment*), even though this was not in the case of the post-communist countries and countries of the developing world. The reasoning of this is mainly linked to the structural and cultural factors (Inglehart, Norris 2000). This research study thus challenges the theory of *dealignment* that influenced electoral behaviour of western democracies in the second half of the 20<sup>th</sup> century. The gender gap was also significant during those years—in Italy, Germany, Belgium, Britain, France, and Netherlands, women abstained from voting more than their male counterparts, only in case of the USA, the relationship functioned the other way round. Attributing these differences to the structural and cultural factors, such as women being more apathetic, parochial, and conservative (Almond, Verba 1963 in Inglehart, Norris 2000), gender

was viewed neither as social nor political cleavage, similarly to religion, region, or class. In the end, Lipset and Rokkan (Lipset, Rokkan 1967 in Inglehart, Norris 2000) labelled the variable of sex as a cleavage that affected electoral behaviour. During the time of dealignment, political parties could hardly expect any structural factors to affect electoral behaviour; rather than that, institutional factors, such as the government performance, party leadership, and policies were to guarantee the voter turnout. Analysed via responses to the question “If there were a national election tomorrow, for which party on this list would you vote?” and then tested by ANOVA for its significance by grouping variable of sex, the gender gap was confirmed in all of 11 western democracies analysed in the 1981 and 1990 survey (and most of these were statistically significant). However, when the post-communist societies were examined, the average difference between men and women was very low and was not significant either. The same applies to the OLS regression models when the advanced industrialized societies and post-communist societies (both in 1990) were analysed; effects of gender on the left-right voting scale were minimal (Inglehart, Norris 2000: 455), especially when structural and value variables were added, meaning religiosity or socio-economic status, post materialism or support of women’s movement (in case of the post-communist societies, two more variables yielded moderate results with a statistical significance, and these were the left-right leanings and education). Concluding the paper, Inglehart and Norris agree that the gender gap has persisted and has had consequences on electoral behaviour. It should be added, however, that gender not only yielded lower correlation coefficients and often even less statistical significance, but the total Rsquared was considerably higher in the models in which gender was accompanied by other variables.

Numerous t-tests of dependent variable concerning electoral behaviour (a specific type of electoral volatility, see further in the text) against gender (as independent variable) were conducted before the actual negative binomial regression models were calculated. In the results of these t-test models, there has been a significant ( $p$  lower than  $< 0,05$ ) mean difference among the gender groups. This, however, does not imply that gender is the main reason for electoral volatility, nor does it imply that gender even correlates with electoral volatility; only that the gender groups have a different mean of electoral volatility variable. It may be explained by more variables and not only gender. Other factors, such as average income, education, or the main occupation, may affect electoral behaviour too but these variables may be “hidden” in the gender variable. For example, a higher average income, higher education, and being fully employed for the past 10 years may indicate a lower level of electoral volatility, though these

values are more likely to be found in the male population; a lower average income and lower period of non-stop employment (due to the maternity leave) may correlate higher with electoral volatility as these values are more typical for women. Similar t-tests were conducted in case of other variables as well, but in this regard, these tests were more of a save mechanism—in case that the independent variable did not show any significant mean difference among the groups, it was less probable that these variables would show a higher correlation coefficient or statistical signification in the regression models.

The last remark is that the political systems of CEE countries are predominantly a domain of male politicians. A 2008 study (Chiao, Bowman, Gill 2008) showed that while female candidates were viewed as attractive (and not surprisingly more attractive among the male voters than among female voters) and approachable by the electorate, they were viewed as less competent than male candidates (the approachability was not analysed in the group of female candidates), who were seen as competent and dominant. In other cultures, men prefer women who are physically more attractive, and women prefer men with a high social status.

Just as there is a proved causal relationship between various forms of electoral behaviour and education in developed Western democracies, so is this relationship expected to be relevant in the political systems of new democracies of Central and Eastern Europe. While there may be variables which are more important than education, it is believed that it plays a role in citizens' active implementation of their democratic rights. Nevertheless, education itself does not always provide citizens with the information and knowledge of how democracy works and what role they are expected to fulfil in this mechanism. This type of education was missing amid the period of authoritarian regimes in CEE—and it was not included as equal part of education until late after the transition. This means that the elder population of these countries is not always aware of how democracy works (for example, in respect of the separation of powers or checks and balances system) and what is the voters' role in this milieu, and most importantly, that democracy is not symbolised by only casting a ballot once in 4 years. On the other hand, the younger generation of people who do have any access to sufficient education pertaining to democracy, frequently abstain from voting. In order to avoid any duplication of electoral behaviour and gender, I shall focus more on education in this chapter). This leaves the political systems of Central and Eastern Europe with a very limited share of voters who truly value the perks of democratic voting. Such misunderstanding of the democratic process accompanied by the erosion or absence of social cleavages may lead to volatility of party system which then yields the highest scores, particularly in the countries of Central and Eastern Europe (Haughton,

Deegan-Krause 2015, Powell and Tucker 2013, Tavits 2008). And while in the education systems of CEE, citizenship education is not completely absent from the school curricula and educational schemes, there are certain aspects that dampen down its effect on students. First, school subjects dealing with citizenship education are compulsory only for a limited period and are then optional subjects only. Second, these subjects develop students' capability of "interacting effectively and constructively with others" and "acting in a sociably responsible manner" rather than "acting democratically" and "thinking critically" (Eurydice Report 2017). And lastly, these subjects are often either a subcategory or are replaced by other subjects, including philosophy, economy, and psychology. Therefore, there is a limited time to develop political education among the students. In this regard, it is expected that a higher emphasis on education, especially social science and civic (eg, citizenship) education would bring positive effects on electoral behaviour: a greater interest in politics, better understanding of democracy, increased involvement in voluntary actions, higher electoral turnout, lower scores of electoral volatility and higher stability of the party systems. All the previous facts shall be discussed further, as many of these effects have been empirically proved. There is moderate number of analyses available for the political systems of Central and Eastern Europe (on the effects of education on electoral behaviour), while there are some examples from the developing world – for example, Bolivia (Lafleury, Sanchez-Domínguez 2014). However, most of analyses come from the political and party systems of developed Western democracies. Regarding all these facts, a majority of studies specialising in electoral behaviour have education incorporated in their models as an independent variable (Emmenegger, Marx, Schraff 2015, Bean, McAllister in Simms, Wanna 2012).

By many scientists, education, specifically citizenship education, is regarded as a central pivot of building democratic values and increasing the voters' turnout. Many of them consider crucial that citizen participate in the democratic process (Crick 2002, Crick 2007, Dalton 2004, Forbrig 2005, Galston 2004, Macedo 2005, Power Inquiry 2006, Print, Saha 2006, Print 2006 in Print 2007). Apart from being barrier against the low voters' turnout and electoral volatility, it helps governments achieve a higher level of legitimacy and challenges political actors who use non-democratic means (ibid). While schools are meant to be the primary source of education, Print et al. argue that parents and television are also influential sources of political information for young people (Print et al 2004). In recent years, social media might have taken over the primary role of civic education among youth, mainly because the frequent use and easier accessibility for younger people and political leaders. And while these sources may

provide some information, it cannot possibly substitute citizenship education or compensate its absence from school. This type of education, of course, may be substituted by various courses for civic education and engagement, especially to provide further knowledge to the citizens in their high age as they had not obtained the information at school as the authoritarian regimes of CEE had not allow democratic education in the school curricula.

Education not only prepares ordinary citizens for the democratic life and provides them with necessary skills to utilise their civic rights fully, but it also increases the chances of succeeding in life in a general sense and helps citizens take control of their lives. The need for cognition (NFC) index, introduced by Sohlberg (Sohlberg 2019), which is anticipated to be high among the people, who think that election results have greater consequences, rely on more complex news as opposed to simpler news, seek out more campaign-related information, and prefer stronger arguments for a party vote choice over the weaker ones, was correlated against numerous socio-demographic, economic, and value variables. The data from the Internet Campaign panel from 2014, which was carried out in Sweden regarding to the European Parliament elections and the Swedish national elections, gathered in 7 waves of survey, included 7,000 respondents from a mixed type of recruitment. Out of all respondents, the level of participation varied from 78 to 87 per cent, which is considerably high for the online type of research, and it allows to take results of this study seriously. Responses to questions such as *“I like to have the responsibility of handling a situation that requires a lot of thinking”*, *“I find satisfaction in deliberating hard and for long hours”*, *“I would rather do something that requires little thought than something that is sure to challenge my thinking abilities”*, *“Thinking is not my idea of fun,”* and *“I try to anticipate and avoid situations where there is a likely chance I will have to think in depth about something”* were aggregated to three categories: *election importance*, *simple and complex news media consumption*, and *campaign exposure*. These categories were included in a correlation matrix with other variables. In the results, it is evident that while education did not correlate high with the aggregated categories, in comparison to other variables, it yielded the highest correlation coefficients with the NFC. Even though the study does not provide us with any further analysis, such as the regression models, education and the NFC are highly correlated and were related (Sohlberg 2019).

If we follow Kitschelt’s reasoning (Kitschelt 1992) and believe that citizen’s level of skills defines their economic interest, we should see the variables of occupation and education playing an important role in citizens’ attitudes for a change. However, in the countries of CEE, there may be cases in which education is just a spurious variable, and the effects of the variable

are in a causal relationship with a third variable. In Ukraine, the variables of ethnic distinctions and region appear to be more important than education. The political reality of Ukraine cannot be fully comprehended until having studied Soviet Ukraine and its social structure and ethnicity in detail. This shows how important it is to look far beyond a couple of previous years; at least when it comes to the countries of Central and Eastern Europe, their long history of social structure must be considered. This makes it impossible to understand general analyses of human behaviour without any prior knowledge. Following the end of WW2, as Judt (Judt 2017) points out, the successor states of Central and Eastern Europe were not homogeneous but were formed as multiple nationalities living in one state as countrymen. And these different national groups, yet they belong to a different nationality and are not likely to live homogeneously across the whole country, rather form a specific settlement over certain areas. While forming one country with a majoritarian nationality, these minority groups might have different interests and electoral goals. More on the territorial division may be found later in the following chapter. Nevertheless, in some cases, such as in Ukraine, social class (and the occupation), education and ethnicity (or the territorial division) may be closely correlated. In the end, that is the reason why we put all these variables in our models. In fact, this proved to be a correct assumption as in case of Ukraine. There really is a significant interaction between the percentage of ethnic Russians and the percentage of higher education. Furthermore, in such cases as in Ukraine, the data on education were not reliable, as only the data that were available until recently were the educational attainment (Birch 1995). This study confirms the fact that minority ethnic groups may not have different types of vote choice (among themselves), but rather have a specific type of electoral behaviour compared to the majority group in terms of nationality.

After the 2013 general election, the German electoral study showed that the electoral abstention is prevalent among young voters—but not only the variable of age played role, as these voters were often from lower educational backgrounds. In addition to that, the difference between voters who were from a higher educational background compared to those with the lower one was huge. Expressed numerically, of those individual voters with the age of 36 or younger with a high (reported) educational level, the average turnout to the 2013 federal election was 90 per cent, while the average turnout among those of the same age category but with a low reported education was only 50 per cent. As it is believed that this decline of turnout may be seen in many developed democracies of Western political systems, Germany is not a rare example. In fact, it is reported that in the first decades of the new millennium, a vast majority of countries experienced the lowest turnout in recorded history. As described by Elff



and Roßteutscher, Germany's decline and amount of social disparity was particularly high, which was accompanied by an increasing inequality of voting (Elff, Roßteutscher 2017). Gradually, the number of variables explaining the turnout has increased. While in the 1980s, the turnout yielded the same results among those with both high and low education levels, in the 1990s, the relationship between electoral participation and both educational level and social class became stronger (particularly among younger voters). This process just speeded up in the 2000s—the turnout related to either education, income, or class (Schäfer, Roßteutscher 2015 in Elff, Roßteutscher 2017). There has been a dispute whether this change in time was linear, or the 2009 general parliamentary election had posed a breaking point. In conclusion, voters with lower segment of society were then affirmed—meaning the voters from working class, lower income, and low educational levels. Some elections also recorded a significant rate of abstaining from voting. The study also reveals that electoral reality has undergone two phenomena in Germany —party defection and electoral abstention, both as results of different processes. First, with the lower age, there comes the higher likelihood of abstaining from voting (older people are more like to vote, compared to their younger counterparts). Second, apart from a slight tendency of rising party switching among the members of younger age group, there are certain elections when voters switched political parties, they voted for, more often than in other elections. These trends are hard to be explained by everyday policy and its impact on voters' choices (Elff, Roßteutscher 2017), but it is believed to impact on voters' choices. Moreover, education may be correlated with some political parties more than the others, which creates an opportunity for electoral gains thanks political campaigning (Gauja, Chen, Curtin, Pietsch 2018).

Special attention has been devoted to returning voters (or those who lost their trust towards political parties or institutions) and their orientation after their return to voting. Another research study confirms that in CEE, there is a higher percentage of protests that are party-sponsored, contrary to most of Western democracies where protests are without any party affiliation (Borbáth, Hutter. 2021, which reduces political trust, auth. note). As it often happens that voters in the political systems of Central and Eastern Europe do have a considerable level of distrust towards political parties and are volatile in their electoral behaviour, there is a positive relationship between the turnout and political trust. Therefore, voters that are not satisfied or lack trust either abstain from voting or manifest their mistrust by voting for populist or extremist parties. Education seems to be a predictable variable for voting, as a study of Belgium showed that low-educated voters were more likely to abstain (Hooghe, Marien,

Pauwelsgoop 2011), and likewise, lower education was a significant predictor of voting for extreme or nationalist political parties (The Vlaams Belang and New Flemish Alliance, respectively). However, this relationship does not apply to the likelihood of abstaining from choosing the then incumbent party (Socialist Party) in the Walloon region. Neither low nor secondary education does yield significant coefficients with casting blank or invalid ballots since voting is compulsory in Belgium (ibid). And while the main purpose of that article was to study whether low levels of political trust manifested as invalid votes in a system of compulsory voting, it indeed provided additional support for selecting education as a control variable in the analyses on electoral behaviour.

Another study, based on the nationally representative data from the British Election Study Internet Panel, focuses on direct and indirect effects on electoral behaviour in accordance with different levels of education. In the models, other socio-demographic and economic variables are incorporated, however it yields the highest correlation coefficients and proves to be statistically significant (Simon 2021). The main objective of that article, meaning to describe how much of educational gap may signify in direct and indirect effects on electoral behaviour, also supports the prime idea of this thesis too as education plays a significant role.

A survey of Central and Eastern European countries showed the effects of education on political participation, which stayed deeply below the level of political participation in Western democracies. It may be a result of corruption, poor governance, and/or bad economic situation. Especially the first two factors are proved to have a negative impact on civic engagement across these countries. Through the data from Estonia, Latvia, Lithuania, Poland, the Eastern part of Germany, Bulgaria, Slovakia, Slovenia, Hungary, Romania, and the Czech Republic (from the European Social Survey), the authors show that education is (among others) a statistically significant predictor of both institutionalised and non-institutionalised participation when showing a positive relationship (ie, the more educated voter, the higher the likelihood that he or she will participate in political life). This relationship is just an affirmation of earlier relationship claims by other authors (Verba et al, 1995, Stolle and Hooghe, 2011 in Hooghe, Quintelier 2013). The decline in participation and its correlation with voters' education, in addition to the effects of regional income inequality, is also confirmed by Scervini and Segatti (Scervini, Segatti 2012).

Education is then believed to influence voters' authoritarian-libertarian values (Stubager 2008, Van de Werfhorst, de Graaf 2004) with voters with higher education levels supporting libertarian ideology versus lower-educated voters leaning towards the authoritarian one. In the

context of Central and Eastern Europe, voters who are leaning towards a more authoritative style of politics may be attracted to, or are more likely to support illiberal, populist leaders with an autocratic type of policy. Owing to the previous regime, leader-driven policies of strong personas with authoritarian tendencies is not unknown to the new democracies. Moreover, the authoritarian-libertarian cleavage has recently started to increase its impact on voters' electoral decisions more distinctively than the economic variables (Knutsen, Kumlin 2005 in Stubager 2008). Confirming the hypothesis designed earlier, political parties which rely on an authoritarian style of policy have been on the rise in Western democratic systems (Norris 2005). Until recently, it was unclear what factors or aspects of education might determine the direction and strength of this relationship. Educational factors that may influence electoral behaviour are introduced by Stubager in a representative study on the sample of Danish voters (Stubager 2008). As direct effects of education, three different models are identified: psychodynamic, cognitive, and socialization models. A brief description of these models is needed. Nevertheless, it is not possible to elaborate on them in detail due to extent of this thesis. First, psychodynamic models contain factors and values which increase the psychological security and life obstacles resilience, and it eventually enables a better control over one's life. Second, socialization models represent an ability of one to transmit and internationalise the values simply by participating in institutions (mainly in education, such as interactions among students). And finally, cognitive models involve a sophisticated reasoning, giving one's ability to understand and to empathise in various situations, meaning even in different from those one has already experienced. The theory behind this declares that higher education makes voters more likely to have a higher average income, and a more secure position in the labour market. Therefore, one may not be afraid of losing his or her job (Pallas 2000). Consequently, there is a relationship between the latter fact and the authoritarian-libertarian position of voters. In electoral systems of CEE countries, the libertarian-authoritarian dimension is present in a few countries (Kitschelt 1992). In respect of tolerance towards minorities (mainly the ethnic ones), one probably agrees with the author and the relative deprivation argument supposing that the lower class (and most likely economic too) status results in a higher economic insecurity. And it eventually results in the lack of tolerance and higher chances of having authoritarian values rather than the libertarian ones. By contrast, people with a higher social status are more likely to be more economically secure because they have jobs which require higher-level skills. Low skilled minorities, therefore, often pose little to no challenge for these types of employments, and it then symbolises no reason to adopt for authoritarian values, and thus these voters are mostly supporters of libertarian values (Lipset 1981; Jenssen and Engesbak 1994; Gaasholt and

Togebly 1995; Nannestad 1999). All in all, education has crucial effects on several variables as well as to the socio-economic status and income (Kitschelt 1994b, Kitschelt 1995 in Stubager 2008). This may work in the presented research as well, indicating that voters that are from the group of lower education levels are likely to switch from one party to another, and thereby increasing the level of electoral volatility and instability of party systems. As new political parties in the systems of CEE emerge and old ones fade away, a considerable proportion of these political parties are populist with an accent on its party leader, and, in this case, also leaning more towards authoritarian policy rather than any libertarian values. These political parties are likely to be supported by voters who share similar values; voters with lower education are likely to support the “hurricane season” of political parties and contribute to electoral volatility.

A regression analysis conducted on a representative sample of 2,000 Danish voters, however, did not support some of author’s early hypotheses. Having proved that there is no effect between the income and authoritarian-libertarian values and that those respondents with most rationalised education are more authoritarian, it was confirmed that respondents educated in care, instruction, and arts are less authoritarian, and there is a difference in value positions among the respondents of different education-level groups. And while the analysis cast a shadow over some relationships, education (and particularly its socialisation part) has the effect on electoral behaviour (Stubager 2008).

Other interesting findings are raised in Kolstad and Wiig’s survey study, based on Tanzania’s data and voters. This study may be regarded as a warning shot to all scientists who develop their theories and analyses on the data from surveys, especially when including respondents’ self-reported values. The research shows a significant difference between self-reported electoral behaviour and the actual electoral behaviour during elections. And education serves as an explanatory variable in this case, as only education shows correlation coefficients with a statistical significance. Providing evidence by asking a respondent whether he or she had voted or not and then confirming the answer by bringing forward 4 types of ballots, followed by asking which one was the one used during the election, scientists were able to divide the respondents into two groups – those who had actually voted and those who only claimed that they had voted, but had not participated in the election whatsoever (otherwise they would have known how the ballot looked like). Indeed, the “actual” voters could have known how the ballot looked like from other sources, not only by taking part in the elections and voting, but this option is regarded as so marginal that it may not be considered. However, based on the results

of regression models, the analysis shows a negative correlation in all the levels of education (primary, secondary, and tertiary). In other words, the higher the level of education, the lower the level of misrepresentation (Kolstad, Wiig 2015). In the end, this study, should advocate of a higher awareness of using the standard and nationally representative surveys of voting behaviour as they may be biased. However, this study also confirms that education is an important explanatory variable that should not be left out from any analysis concerning electoral behaviour. And as our analysis is based on the data that included questions on retrospective electoral behaviour (“Did you vote in the past elections?” and “Which party did you vote for?”), which may reduce voters’ intentions of false reporting.

Following the previous chapters, many independent variables were characterised. From now on, we shall move forward to the last couple of them. Their roles, however, seem to be smaller in electoral behaviour than of those above-mentioned ones. Nonetheless, these variables are often included in comparative analyses of such character. And as the whole issue of electoral behaviour is complicated and one variable usually affects another, quite some space has already been dedicated to these variables since they are often correlated. Only some limited room could be reserved for the new variables—not for their low value but because their effect on electoral behaviour has been proved in the previous sections.

#### **2.4.1.2. Economic and geographical variables: Income, socio-economic status, occupation, and residence**

As it may appear that these variables deserve separate chapters on their own, they are often seen as a multiple force driving electoral behaviour rather than isolated variables shaming voters’ decisions. After all, one or even more of them were described or briefly mentioned in the previous chapters. In the area of Central and Eastern Europe, it seems that it is logical to take these variables as a “package” rather than treating them separately—for its specificity as the countries are regionally heterogeneous. More developed and less developed areas alternate, resulting in different types of occupation, and it eventually divides the regions into groups or areas with a higher average income and socio-economic status. The rural/urban division is to be understood as a division between the countryside (making most of its value by agriculture, forestry, or resource extraction, including the industrial sector) and city or industrial areas (making most of its value by services). The territorial division, based on a different nationality or race, shall be studied in the following chapter, and is not addressed by the current cleavage.

On the one hand, there are brief reports or papers on the regional division (meaning the rural/urban cleavage) in the political systems of CEE, mostly in the media. These, however, provide very little scientific knowledge and are rather focused on the post-election analyses. On the other hand, some analyses do address specific cleavages in comprehensive comments, such as in the post-election conference talk delivered by Lebeda and Lysek in the aftermath of the 2017 Czech parliamentary election (Lebeda, Lysek 2017). They clarify that there are certain political parties in the political system of the Czech Republic that are more likely to have their electoral gains in the regional cities and some, by contrast, score better in the peripheries. As an example, the ANO2011 in the 2017 election was stronger in the regional peripheries and rather weak in the regional cities. The similar case is the KSČM (Communist Party of Czechia and Moravia) that, up to 2017, was particularly strong in some specific areas—the communist strongholds, to quote the author. While the political party that was particularly strong in the cities in 2017 was the Civic Democratic Party (ODS). These divisions may be attributed to a more systematic division by other cleavages (such as income or social status). But as these may be often correlated and, not conditioned to a little extent, it is rather hard to sturdily claim which one of these has the strongest effect. Nonetheless, most (if not all) of these variables, accompanied by variables described in the previous chapters, are routinely analysed in the regression models examining electoral behaviour. Going back Lebeda and Lysek’s talk, what is even more interesting, though, is that political parties do change these factors between the elections. Probably the best example as provided by authors is the ANO2011 showing a 0.393 correlation coefficient with self-employment in the 2013 election; while in the 2017 election, the correlation coefficient with the same category was -1.042. As it was confirmed by Lebeda, one can hardly find a case of political party that would change its electorate so dramatically within one electoral term. This, of course, is an extreme example but it comes as no surprise when political parties in the political systems of CEE slightly deviate from their long-standing electorate. Once again, we find the satisfactory explanation in the “hurricane season” (Haughton, Deegan-Krause 2015).

The division, or more specifically, different patterns of electoral behaviour based on the region of residence has a long history in Western democracies. Ever since Lipset and Rokkan defined the rural vs urban cleavage, electoral analyses contained or at least mentioned this distinction (Vatter, Freitag, Magin 2008, Goldberg 2019, Plešivčák 2012, Rohrschneider 2015). Western political scientists confirm that the regional division may be in relationship with the economic divisions of specific regions. Alvarez and Nagler (Alvarez, Nagler 2000) vindicate

that in British electoral behaviour, divisions amongst the regions (specifically the North-South political cleavage) “may be more of an artefact of economic divisions more than anything specific to certain regions”. They also incorporate other variables, such as age, sex, income, and the level of education into their models. Most of regional variables (South, but more Midlands, and especially Scotland) yield a medium correlation coefficient and are statistically significant, accompanied by the union membership, public sector employee, and family income (for the models of multinomial probit estimates). And while that paper concentrates on the phenomenon of strategic voting, the authors indeed confirm that there is a variance amongst the British constituencies pertaining to strategic voting (Alvarez, Nagler 2000).

Birch’s study (Birch 1995) summons up evidence from CEE whilst studying electoral behaviour amid the general elections and referendums in Ukraine. In the previous example (Alvarez, Nagler 2000), regional differences were treated as past relics of economic division—in case of Ukraine, however, regional differences are historically woven in culture. The historical background of Western Ukraine. Specifically, four regions of Bukovyna, Galicia, Transcarpathia, and Volhynia, had been known as parts of different countries throughout history: Bukovyna used to be part of Romania, Galicia used to be part of Poland, Transcarpathia used to be part of Hungary, and Volhynia used to be part of both Poland and Lithuania, while Eastern Ukraine used to belong to the Russian Empire. Ethnic, religious, geographical, and occupational cleavages are currently the most present among the citizens of Western Ukraine. One would expect that occupation and education to play an important role among the voting attitude towards a change. In case of Ukraine, however, class and ethnic distinctions still matter more, while the author expected (but was confirmed only in a specific case) an interaction between education and ethnicity. In the aggregate-level analysis of electoral data from the 1989 Soviet census, Birch shows that in the 1989 turnout, in the OLS regression models for the 1990 elections in March 1991, the all-union referendum in March 1991, Ukrainian referendum in March 1991, December 1991 referendum as well as the 1991 presidential vote, respondents from different regions and/or different education yielded slightly different results (yet statistically significant). In these models, regions, Russian ethnicity (often linked to education in Russian language), age, and the degree of urbanisation were the most significant variables. The regional differences are most beneficial when they explained in the sense of historical and cultural divisions rather than territorial or administrative ones. In addition, all regions that were previously described had a different length, depth, and width of democratic features: free and competitive elections, referendums, and democratic institutions, while the alternative

explanation may include political, economic variables, religion variables as well as religious differences. In the Ukrainian case, however, there is little evidence to support the statement regarding the religion cleavage between the Orthodox and Catholic church. On the other hand, the degree of industrialisation and the share of farmers, may affect some regional differences, but there are exceptions from this theory. Finally, the access to free press and motivation by democratic ideas might be an explanation too, but there are no data for this theory. In fact, having this confirmed would require a far closer investigation and a different data structure. Although ethnicity was the second biggest cleavage in the Ukrainian society in the time of this paper, its position might have changed in the current society. While in the previous example, regional differences had various possible explanations, the explanation is simple and straightforward in case of ethnicity. Attitudes of Russian ethnicity towards the Ukrainian independence was influenced by the social position, while the same was not confirmed across the Ukraine ethnicity representatives. Apart from some cases, other minorities were not responsibly analysed, but behaviour was resembling the ethnic Russians in those rare ones. Age and urbanisation did not yield as satisfactory results as expected (or as constant variables). In some cases, urbanisation had surprisingly negative impact on the vote. Overall, rural areas were more conservative than the urban areas, while in the referendum question, urban areas “were” slightly more radical than the rural areas. Respondents’ occupation shaped electoral behaviour at the expense of the urban/rural divide, especially when considering rural nationalism. The author provides a plausible explanation that the social isolation of farmers and strong control over them had isolated these respondents from events happening in other regions. A following radicalisation and self-interest of this group also plays a role as economic reforms and independence have hurt agriculture more than other branches of economy (Birch 1995). Overall, the region division, ethnicity, education, occupation, and urbanization did shape electoral behaviour in Ukraine in the late 1980s and early 1990s. In the following example, evidence of a similar situation in another country of CEE will be offered.

Recently, many political scientists have believed that the settlement area type was as influential as a new form of political cleavage in Slovenia. In addition to the traditional cleavages, namely the regime changes and attitudes towards the church, this theory was tested and confirmed by Tiran (Tiran 2011) on the 1996 and 2008 general election results by ANOVA. The electoral turnout thus changes along the “urban” and “rural” axis, with the rural areas increasing its turnout from 1996 to 2000, 2004, and eventually 2008, while the urban areas and cities decrease in the turnout. While no further statistical analysis was provided, the analysis at



the level of polling stations, which were the smallest units, made results more precise. It shows that while there are factors which endeavour to decrease the differences between the rural and urban areas (economical, spatial, and the population density development), it is still a significant political cleavage in Slovenia. According to author, the sources of these differences are represented, in addition to education, religion, occupation, and the socio-economic status, by the different style of living and rural/city identification (Tiran 2011). This event, however, occurs in line with political parties contributing to, rather than suppressing, this cleavage.

Another confirmation of regional differences in electoral behaviour is delivered by Walks who analysed the electoral turnout and voters' choices in the 2006 Canadian federal election. As provinces of residence Alberta and British Columbia, yielded high coefficients (which were statistically significant) in the OLS regression not only in the turnout but also the vote for certain political parties; NDP (New Democratic Party, Green, Liberal and Conservative Party). No other variable (income, minority, education, or age) from the model does reach anywhere near the regional division (Walks 2009). The paper proved that closed communities did have specific patterns of electoral behaviour (specifically leaning right, therefore more supporting the Conservative Party). According to the author, however, other variables, including the metropolitan context and location, should also be considered. Walks suggests that communities' behaviour is dependent on partisanship, rather than socio-demographics, which seem to have no correlation (at least the voting patterns are independent of them). The differences between the gated community and outside population were not huge in the turnout—but were bigger and more consistent in partisanship. Finally, it is not probable that communities will abstain from democratic process in a long term; therefore, it is likely that detached communities will continue with different electoral patterns (Walks 2009). If it is not the government's intention to incorporate and include those communities in the majoritarian society, it is vital to consider their specific type of electoral behaviour. Additional results may be added to the Canadian example thanks to the study of Mahéo and Bélanger. They analysed electoral behaviour in the 2014 Canadian provincial election in Quebec. Variables or factors determining voting of the Quebec political party (Parti Québécois) were, most of the time, in relationship to Quebec, or to say, partisanship to Quebec (the value attachment, support for sovereignty, support for giving Quebec more powers), and less in case of income, education or being Francophone. Surprisingly, the self-placement on the left-right scale basically had no effect. Younger voters may divert from this pattern in the following years as there is a difference among the generations of voters (Mahéo, Bélanger 2018).

Walk's other paper, this time neatly confirming Rokkan and Lipset's urban/rural cleavage, comes from the aggregate election data and account for all elections from 1950 to 2001. Though not controlling for basic socio-economic variables, a vast majority of regional variables comes mostly statistically significant ( $p < 0.001$ ) and yields high correlation coefficients in three OLS regression models (one for each party, ie, the Labour, Conservative and Liberal, Liberal/SDP Alliance and Liberal Democrat support, respectively). The study proves that in post-war Britain, differences between cities, suburbs, and rural agricultural areas defined voters' electoral behaviour. The main electoral gains of the Labour Party were in the core of cities (especially in the 1980s), while the Conservatives scored high in the suburbs (Walks 2005).

As a final remark on when the rural vs urban division couples with the low income and low socio-economic status cleavage, these combined factors may produce so called "geography of discontent" in some cities. As in Catalonia, there is a direct relationship between the urban segregation, average income on one hand and political attitudes and electoral behaviour among young people on the other. The authors emphasise that further research establishing a causal relationship is needed, whilst the analysis shows that the previous factors did shape electoral behaviour, and this relationship could be found in other parts of Europe (Nel-Io, Gomà 2018).

Overall, all variables described in this chapter do have impact on electoral behaviour. An analysis of 24 democratic, non-presidential system elections from 1996 to 2006 was conducted by Bernauer, Giger, and Rosset (Bernauer, Giger, Rosset 2015) to test a hypothesis concerning the representation of females and poor citizens in the legislative bodies. Their findings confirm that women, but more importantly low-income respondents are underrepresented in the political parties. Income, in the form of unequally distributed wealth, heavily influences the process of decision making and electoral behaviour, as it is related to the social status, and it is linked to political participation then (Lijphart 1997). In addition, the proportional representation systems were proved to represent low-income voters better than majoritarian electoral systems (Bernauer, Giger, Rosset 2015).

### **2.4.1.3. Ethnical and affiliation variables: Race and religion**

Religion, as a variable expressing voters' views on the world and a coherent set of moral values, was to shape electoral behaviour in the West for at least a half of the century. Cleavages

based on religion helped political parties grow their stable electorate until the dealignment phase in the 1970s. Across the political systems of Europe, it is no exception to find a political party that is heavily focused on topics of religion and supporting ideas of certain religious dominations. These parties are obvious members of political systems in societies where religious is an integral part of society. In Central and Eastern Europe, this applies to Poland, Slovenia, Hungary, until recently Slovakia, and the Czech Republic, etc. Recently though, many political parties representing other political ideologies started to accentuate religious topics, whilst celebrating religious feasts and taking over the electoral base of religious voters. As Slovakia's Christian Democratic Party (KDH) had not managed to make it to the parliament in the 2020 general election with 4.65% of the votes (Statistic Office of the Slovak Republic, 2020), other political parties took over its ideology. And hence, one may state that many political parties represent religious voters and their interests.

Therefore, voters with a religious denomination are supposed to keep their political party preference and vote for the same political party (maybe even regardless of its popularity). One issue might be found in the disintegration of political parties but that might not be the reason for voters to stop voting, mainly because of two factors. First, political parties which do not make it to the parliament often survive and remain active. Amid the time of writing this thesis, Slovakia has had 159 active political parties (Slovak Ministry of the Interior, 2022). In this regard, voters should feel close to the party, notwithstanding its popularity or presence in the legislative body, as they are free to vote if the party decides to run for office. We are, however, witnesses of voters' switching even among the popular parties. Secondly, when running in elections, political parties of Central and Eastern Europe rarely run by themselves; they often form coalitions. In the Czech Republic, the current (2022) government consists of 5 political parties (ODS, STAN, TOP 09, Piráti, and the KDU-ČSL), which ran for office on two candidate lists (ODS, KDU-ČSL, and the TOP 09 as a pre-election coalition named SPOLU, while the Piráti and STAN formed a coalition named Piráti a Starostové). Having the government based on 5 political parties was appraised in 2021 by Lebeda as “*absolutely exceptional*” within the European or worldwide merit, and it may “*point out to a tremendous risk of government instability*” (ČT24 2021). Just 20 months ago, the general election to the National Council of Slovakia produced a government composed of 4 subjects. However, this coalition consisted of 8 political parties (SaS, OKS, SME RODINA, ZA ĽUDÍ, OĽaNO, KÚ, NOVA, and the Zmena Zdola, DÚ). Moreover, political scientists argue that while the traditional Slovak parties representing Christian ideology (KDH and SDKÚ-DS) are not present

in the parliament. By creating the pre-election coalitions, the National Council has more conservative members than in the previous electoral term. Religious ideas are practised by many political parties (or wings of political parties); however, these political parties may not be included in the Christian-democratic family of political parties. This family is currently out of the National Council, as two of its main representatives did not reach the parliament. Now, its ideology is being represented by the conservative family and far-right extremists, while the social democratic family (which should be expected to be secular by its nature, auth. note) can also be considered as representatives of religious values as the public speeches of its members do possess Christian features (Štefančík, Stradiotová 2021: 183).

Religion, as a type of cleavage, still does have its place in shaping electoral behaviour in the political systems of Western democracies. Just to name three examples, religion has continued to determine electoral behaviour of British voters, mainly in combination with the social class system. These differences do have its historical roots, though the strength has faded over time. One such relic might be found in the historical partnership between the Scottish Church and pre-Conservative Party, the Tories. And while effects usually require a deeper analysis, Kotler-Berkowitz concludes that any analysis of electoral behaviour patterns is “*incomplete if they do not contain religious variables* (Kotler-Berkowitz 2001)”. Italy, the second example, has been shaped by many variables—until the 1970s, however, religiosity played a central role. After this decade, its importance started to fade away. Nevertheless, this fading process did not hit the main Italian Christian democratic party, Democrazia Cristiana, as the same happened globally—the biggest slump was in its stronghold, Zona Bianca in the northeast, while in the south, this party has even experienced an increase in support across the regions with a higher level of secularization. While religion does not seem to be the main cleavage anymore, its effect on electoral behaviour has persisted (Ignazi, Wellhofer 2013). The third example comes from Germany where the traditional representative (CDU-CSU) of Christian ideology (both Catholic and Protestant) is the customary choice among religious voters. In contrast to the previous case, there are no signs that religion and class would lose their significance in determining electoral behaviour in Germany. The same as in the British case can be applied—electoral behaviour and patterns of voting are hard to be understood without these two variables. One must be cautious not to expect different parts of pre-unified Germany to have the same patterns, though (Elff, Rossteutscher 2011). The following study of the same authors also found that Christian workers were more likely to abstain from voting while more importantly, it was the social class system as workers usually voted less. And

afterwards, this hurt Social Democrats' results more than in case of CDU-CSU (Elff, Rossteutscher 2017).

It was also revealed that the voting patterns of different ethnicities differed in comparison to the majoritarian society, too (Teney, Jacobs, Rea, Delwitb 2010). However, ethnic minorities stably have political parties that represent their interests in the democratic system. These political parties often endure in the electoral competition for several electoral terms (one exception may be spotted in the Hungarian minority in Slovakia as it has been unrepresented in the National Council since the 2019 general election).

### 3. Methodology of research

#### 3.1. Case selection

After taking into consideration the overall complexity of the issue, the nature of social cleavages (yet being similar in certain aspects) as well as, to some extent, the different process of their development and different patterns of electoral behaviour among the states of Central and Eastern Europe, a few things must be reappraised. First, one must steer clear of the excitement to examine all those possibly relevant findings. Even though the existing literature and recent knowledge with the available data allow to have an analysis of volatility from different perspectives, one must limit the direction, depth, and cases for the very own analysis. Any work which would endeavour to explain this issue in detail might end up being a volume of thousands of pages, and thereby exceeding the extent of this thesis. Yet, a clear case selection must have been set. Second, some case selections based on the data and methodology must be applied: a list of all the countries that came into consideration when studying electoral volatility and electoral patterns of Central and Eastern Europe were the following ones: Albania, Belarus, Bulgaria, Bosnia and Herzegovina, Croatia, Czech Republic, Estonia, FYROM, Hungary, Latvia, Lithuania, Montenegro, Poland, Romania, Serbia, Slovakia, Slovenia, and Ukraine.

Chart 1. Representation of CEE countries in the CSES Modules:

CSES Modules	CSES1	CSES2	CSES3	CSES4	CSES5
Albania		2005			
Belarus	2001		2008		
Bulgaria		2001		2014	
Bosnia and Herzegovina					
Croatia			2007		
Czech Republic	1996	2002	2006, 2010	2013	
Estonia			2011		
FYROM					
Hungary	1998	2002			2018
Latvia			2010	2011, 2014	
Lithuania	1997				2016
Montenegro				2012	2016
Poland	1997	2001	2005, 2007	2011	
Romania	1996	2004	2009	2012, 2014	
Serbia				2012	
Slovakia			2010	2016	
Slovenia	1996	2004	2008	2011	
Ukraine	1998				

1. As we are not comparing only one country to another, but several countries in time too, we must rule out the countries that were studied only once (eg, those with only one election study in our data). One point must be noted, though – although the election study asks which political party the respondent voted for in the previous election, many of our analyses depend on other variables (such as socio-demographic and economic conditions). These variables lack in the previous term and in order to study the development in certain countries, one needs at least two electoral studies. The following countries did not meet the criteria (see Chart 1): Albania, Bosnia and Herzegovina, Croatia, Estonia, FYROM, Serbia, and Ukraine;
2. The second condition, that is more stringent and yet reasonable, is to have the data collected and available for the time span of at least 15 years so that one may observe the evolution over time (15 years is to symbolise approximately one half of the transition period up to this date). The main objective of this criterion emphasises that only those countries we can responsibly draw inferences from may be recognised in the research study. In accordance with this condition, Belarus, Bulgaria, Latvia, Montenegro, Poland, and Slovakia could not be allowed to enter the analysis.

This reduction of samples based on legitimate requirements leaves our case selection with five countries allowed to be in the following analysis. Surprisingly (and suitably), the countries represent different areas of CEE:

- a) Czech Republic + Hungary for the V4 countries
- b) Lithuania representing the Baltic States
- c) Romania as a South-Eastern European country, a recent member of a democratic transnational organisation (EU)
- d) Slovenia as a former representative of Yugoslavia.

Hence, the above-listed countries are the cases that will be used in the analysis in respective years of the election study. In the next section, methodology with statistical methods and the detailed data structure are to be described.

### 3.2. Methodology, models, and analytics tools

All the available data of electoral behaviour come from the Comparative Study of Electoral Systems. It is a free database containing the individual data of voters representing numerous countries from all over the world. The election studies had been conducted in separate modules (every 5 years) during the period of elections of each country. These data packages consist of a large amount of data (each individual respondent answers more than 400 variables of various types; these include their identification, weighting variable, election type and information, interview metadata as well as their social, demographic, economic, value, and electoral behaviour data, and so forth).

While a detailed view into the data structure is available in the following sub-chapters, the next section is dedicated to the data-analysing method, (which is determined by the data structure and distribution). Based on the questions regarding the voters' current turnout, previous turnout, current party list choice, and previous party list choice, each respondent can be categorised into one of five different categories of electoral volatility. These types then enter the analysis as dependent variable, while each one of them is supposed to depend on independent variables (social, demographic, economic, and value characteristics of the voter). As all these categories describe a different pattern of electoral behaviour, a separate statistical model is to be calculated for every respective category.

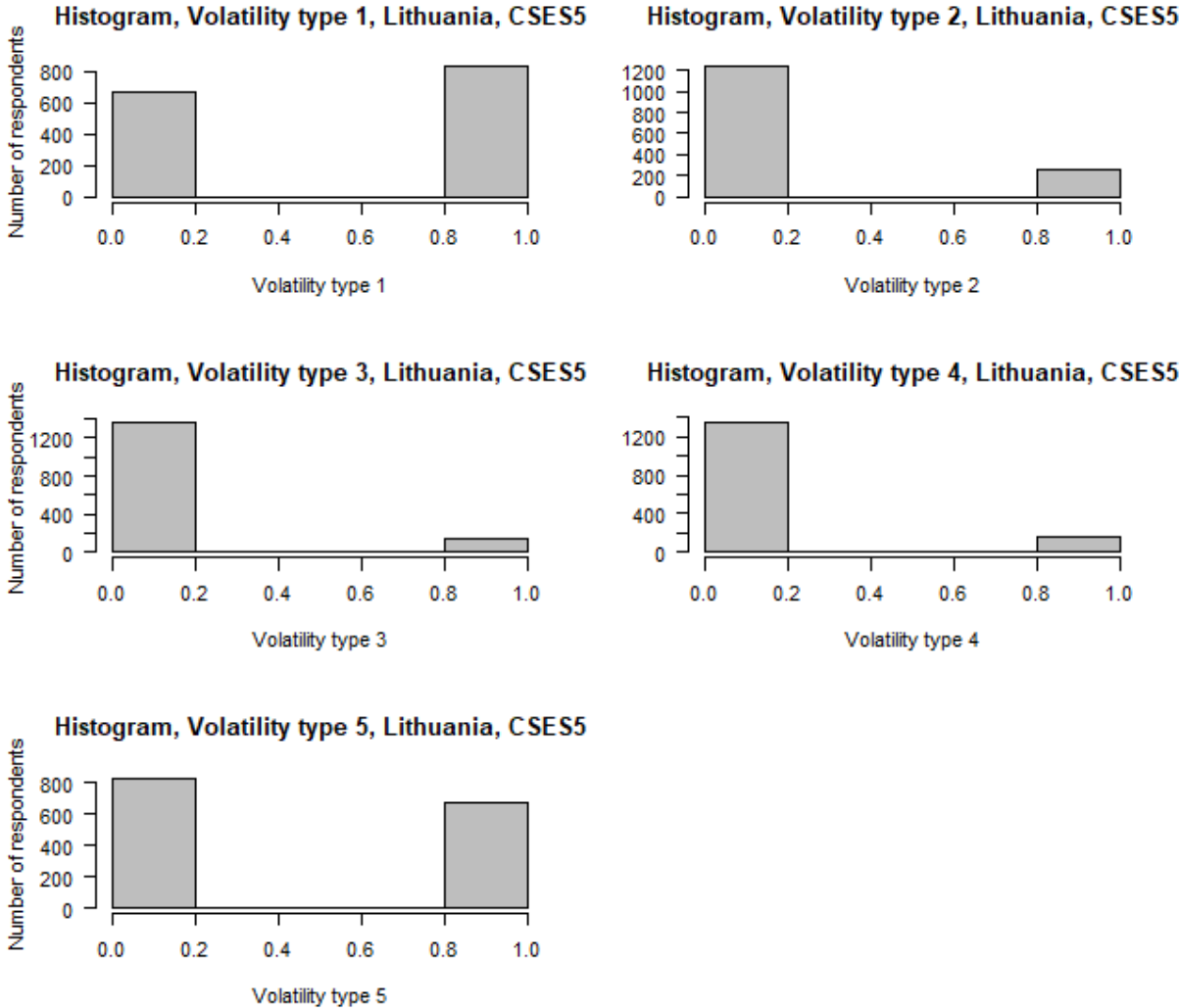
Besides the theoretical reasoning, the data analysing methods to select independent variables are t-tests in this case (ANOVA in the situations of variables with more categories). While the results of these distribution tests are not present in this project (due to the extent reasons), all the following independent variables *do* have either strong support in theory or their different categories have different means, and they are expected to have effects on electoral volatility (both are true in most cases). In the process of deciding how to analyse the effects of these variables, it is always felicitous to examine the distribution of dependent variables.

Chart 2: Descriptive statistics of Lithuania, CSES5:

Data Summary	Min.	1 <sup>st</sup> quartile	Median	Mean	Variance	3 <sup>rd</sup> quartile	Max.
Volatility Type 1	0,00	0,00	1,00	0,55	0,25	1,00	1,00
Volatility Type 2	0,00	0,00	0,00	0,18	0,15	0,00	1,00
Volatility Type 3	0,00	0,00	0,00	0,09	0,08	0,00	1,00
Volatility Type 4	0,00	0,00	0,00	0,10	0,09	0,00	1,00
Volatility Type 5	0,00	0,00	0,00	0,45	0,25	1,00	1,00



To illustrate, a vast majority of distributions of dependent variables look the same:



As one can observe, all the dependent variables have a binomial character, and most of the data are leaning towards the zero value. The variance also scores are close to the mean of variables. Negative binomial or Poisson models are used in those cases where the variance is close or exceeds the mean value of the variable<sup>8</sup>. The initial version of the thesis had used the standard OLS regression. And although a higher correlation and more significant results had yielded, using statistical methods that would more aptly correspond to the nature of data seems more viable. In the ongoing analysis, negative binomial regression models are used for every type of volatility, for every case (ie, country), and for every available election study, which then allows

<sup>8</sup> See further here: <https://www.theanalysisfactor.com/poisson-or-negative-binomial-using-count-model-diagnostics-to-select-a-model/> and here: <https://stats.oarc.ucla.edu/stata/dae/negative-binomial-regression/>.

a cross-national comparison and a longitudinal analysis as well. In total, the analytical part consists of 19 charts, each accounting for 5 different models of volatility for each respective case in the given time. All data sets were downloaded on 21 August 2021 from the official Comparative Study of Electoral Systems website (Comparative Study of Electoral Systems). All data sets from the given countries are representative (the distribution of variables in the data sets copies the distribution of variables in society; this allows us to relate the results to the actual population). All statistical models are conducted in the RStudio programme, and the list of all packages used or required for running the analysis can be found in the Appendix section by the end of this thesis.

In addition, all independent variables entering the models were selected either on the previous correlation analysis (there is a statistically strong significance between them and the dependent variable) or are widely used in the previous research as mentioned earlier. Therefore, even if basic variables, such as age or gender, would not yield any statistical significance (and most of the time, they do) or moderate to a high correlation, they are still usually used as control variables since they enhance the internal validity of results. Furthermore, not all variables yield satisfactory results in all the models.

### **3.3. Data structure, formatting, and the analysis – CSES1**

The first Module is unique in the way that it contains the data from the first election after breakdown of the authoritarian regime. Hence, no data exemplifying the previous turnout or party choice are available. In the models, the voters' turnout is being regressed against the socio-demographic, economic, and value variables.

In this case, a response to the original question "*Whether or not has the respondent cast a ballot (regardless of whether the ballot was valid)*" served as the dependent variable. However, all inconsistent or uncertain answers—when respondents claimed to vote but provided no vote choice, claimed that they did not vote, and yet the vote choice was indicated, respondent did not know or refused to say—have been given missing values. In case of Slovenia, the election study was carried out the whole year after the election (Comparative Study of Electoral Systems, Module 1, Codebook – variables). The variable whether a respondent voted or not is of binary nature.

The following independent variables are all part of the CSES Module 1, and besides the necessary formatting, they enter the analysis as original. One variable comes in two types,

because the variable of respondents' **age** was either an interval (a range) or a discrete variable (the age in years). The latter is then used in the analysis. Respondents' answers may range from 10 to 150 years; while the answers as "*don't know*" and "*missing*" were all recoded to missing since those cases were not suitable.

**Gender** of the respondents, as a variable, does not require any formatting as uncertain answers are already coded as missing and are not part of the analysis.

**Education** brings some issues as the examined countries do not have the same system of education. Nevertheless, categories of *no education*, *incomplete primary*, *primary*, *incomplete secondary*, *full secondary*, *post-secondary*, and *(in)complete university* can be distinguished in four out of five countries. As the CSES Module 1 variable codebook notes, in case of Hungary, respondents with *some primary education and some post-primary (without any secondary education completed)* are originally coded as respondents with *full primary education*. In case of Lithuania, the categories are *primary education complete (or less)*, *incomplete secondary*, *complete secondary (vocational school)*, *university degree (incomplete or complete)*. In Slovenia, the original CSES education categories are preserved with slight deviations in *primary completed* (original) to *primary complete*, *secondary incomplete* (Slovenia), and *incomplete secondary* (original) to *3-year vocational schools (less than a technical degree; Slovenia)*.

The variable of **marital status** reports on respondents' marital status of that time. The categories are *married (or living together as married)*, *widowed*, *divorced*, *or separated (married but separated or not living with a legal spouse)*, and *single, never married*. Responses "*don't know*" and "*missing*" were all recoded to missing since those cases were not suitable. Note that the data for Hungary came from the pre-election wave of the survey.

**Union membership** is coded as a binary nominal variable of whether the respondent is or is not a member of the union. The "*don't know*" and "*missing*" responses were all recoded to missing since those cases were not suitable for the analysis.

The variable of **current employment status** is categorically ordered from the full employment status through part time jobs to unemployed, student, or retired. The same ordering was kept for Lithuania, although categories are slightly different. For the Czech Republic, employed pensioners are recoded as working respondents.

The purpose of **employment type: public or private** variable was to draw a line between respondents who work for the government, or their occupation is related to the government, and those working without any relation to the government (or self-employed respondents or other forms of private employment). The “*don't know*” and “*missing*” responses were all recoded to missing since those cases were not suitable for the analysis.

**Household income** is calculated into quintiles, ordered from the lowest to the highest. In Hungary, the data come from the pre-election wave of the study.

**Number of people in the household** and **number of people in the household under the age of 18** is coded as a discrete variable, with responses of “*don't know*” and “*missing*” all being recoded to missing since those cases were not suitable for the analysis. The data from Hungary come from the pre-election wave of the study.

The variable of **religious services attendance** was added to categorise the respondents into groups based on practicing or attending the religious events. Categories range from “*never*” to “*once a week*”. The “*don't know*” and “*missing*” responses were all recoded to missing since those cases were not suitable for the analysis. In Hungary, the data come from the pre-election wave of survey, and the answer to question: “*How often do you go to the church, [I mean] to religious gatherings*” was originally coded in a reverse order. However, in the CSES Module 1 responses to this variable, all categories are sorted from never to most frequently.

The variable of **ethnicity** is supposed to distinguish the majoritarian population from minority groups in society. Different ethnicity groups exist in different countries, and thus no uniform categories can be created. However, for each country, there are different categories for the majoritarian and minority population. For example, in Lithuania, those categories are *Lithuanian, Russian, Polish, and Other*. The “*don't know*” and “*missing*” responses were all recoded to missing since those cases were not suitable for the analysis.

**Rural or urban residence**, in definition by Lipset and Rokkan, is one of the main political cleavages, and it is expected to affect electoral behaviour in young democracies of Central and Eastern Europe. The categories are ordered from the lowest population of “*rural area or villages*” to “*large town or city*”. The “*don't know*” and “*missing*” responses were all recoded to missing since those cases were not suitable for the analysis.

### 3.4. Data structure, formatting, and the analysis – CSES2

In respect of the structure, the second Module is initial one that is applicable to all the following Modules. It contains four questions respondents can be categorised into one of five types of volatility in accordance with the responses. In the statistical models based on these data, five different types of volatility are regressed against the socio-demographic, economic, and value variables. The dependent variable of volatility is of binary nature.

Overall, based on the following 4 questions:

1. Current lower chamber election – did the respondent cast a ballot?
2. Previous lower chamber election – did the respondent cast a ballot?
3. Current lower chamber election – vote choice from the party list:
4. Previous lower chamber election – vote choice from the party list:

All respondents were categorised into 5 groups of electoral volatility (respective numbers for each category are assigned as types of volatility):

<i>Electoral behaviour in t-1</i>		<i>Electoral behaviour in t</i>		<i>category of volatility</i>
1. Political party A	>	Political party A	=	loyal voter
2. Abstained from vote	>	Abstained from vote	=	stable non-voter
3. Abstained from vote	>	Voted	=	new voter
4. Voted	>	Abstained from vote	=	former voter
5. Political party A	>	Political party B	=	volatile voter

Thoroughly explained, at first, a loyal voter (labelled as *volatility 1* in the analyses) represents a respondent who voted for a specific party in both time frames, therefore is a non-volatile voter providing a stable level of support for the given political party. Second, a stable non-voter (*volatility 2*) categorised a respondent who abstained from the electoral process in both electoral terms. Third, a new voter (*volatility 3*) category is beneficial for finding out what were the factors which had led the voter to vote again, and therefore what distinguished the *volatility 2* respondent from the *volatility 3* respondent. Four, a former voter (*volatility 4*) represents a respondent who did vote in the *t-1* time frame but abstained from voting in the then election. The factors, which have led the respondent to quit voting, are a little difficult to be

analysed as socio-democratic variables asked about the state of that time. Nevertheless, the analysis has offered some interesting findings. Lastly, but most interestingly, a volatile voter (*volatility 5*) represents a voter who has switched from one party to another one between the elections. As one may expect, this process might correlate with favour/disfavour of a certain political party – however, this analysis would require distinctively more space and time. Nevertheless, basic socio-demographic and economic variables were used to analyse this type, too. This methodology is applied to all the subsequent Modules.

While different types of *volatility* represent dependent variables in the following models, independent variables that could potentially have impact on electoral behaviour were selected as follows: Age, gender, education, marital status, current employment status, main occupation, socio-economic status, employment type (public or private), household income, religious services attendance, rural or urban residence, and answers to the following questions: “*Who is in power can make any difference*” and “*Who people vote for makes any difference*”.

The following independent variables are all part of the CSES Module 2, and besides some necessary formatting, they enter the analysis as original. In the variable of **age**, the same information as in the Module 1 applies. In addition, the responses as “*refused to answer*”, “*don’t know*”, and “*missing*” were all recoded to missing since those cases were not suitable for the analysis. In Slovenia, the age of respondents was calculated through subtracting the year in which survey was administered (2005) from the year in which the respondent was born.

For the variable of **gender**, the same information as in the Module 1 applies. In addition, the responses as “*refused to answer*”, “*don’t know*”, and “*missing*” were all recoded to missing since those cases were not suitable for the analysis.

In the CSES Module 2 Variable codebook notes, the highest values for the variable of **education** are assigned to education higher than basic university degree in case of Romania and the Czech Republic. For Slovenia, the variable lies in slightly different categories, but its ordering remains in the original logic. In addition, the responses as “*refused to answer*”, “*don’t know*”, and “*missing*” were all recoded to missing since those cases were not suitable for the analysis.

In the variable of **marital status**, **union membership**, and the **current employment status**, the same information as in the CSES Module 1 applies. In addition, the responses as “*refused*

*to answer*", *"don't know"*, and *"missing"* were all recoded to missing since those cases were not suitable for the analysis.

In the CSES Module 2, a new variable for the **socio-economic status** is added; it consisted of *white collar*, *worker*, *farmer*, or *self-employed* as categories; additional responses as *"refused to answer"*, *"don't know"*, and *"missing"* were all recoded to missing since those cases were not suitable for the analysis.

For the variable of **employment type: public or private**, the same information as in the CSES Module 1 applies, apart from the additional category of *"third or non-profit sector"*. In Romania, categories of private sector and non-profit sector are merged. In Slovenia, more detailed categories are coded to match the CSES coding system. In addition, the responses as *"refused to answer"*, *"don't know"*, and *"missing"* were all recoded to missing since those cases were not suitable for the analysis.

For **household income**, the same information as in the CSES Module 1 applies. In addition, the responses as *"refused to answer"*, *"don't know"*, and *"missing"* were all recoded to missing since those cases were not suitable for the analysis. For the Czech Republic, quintile ranges are not provided, however the variable is coded into 5 categories as expected. For Hungary, the net monthly family income is calculated, and all values are in Hungarian forints.

For the **number of people in the household** and the **number of people in the household under the age of 18**, the same information as in the CSES Module 1 applies. In addition, the responses as *"refused to answer"*, *"don't know"*, and *"missing"* were all recoded to missing since those cases were not suitable for the analysis. For the Czech Republic, equal or higher numbers of people in the household under the age of 18 than the numbers of people in the household – the data remain unchanged.

For the **religious services attendance**, the same information as in the Module 1 applies. In addition, the responses as *"refused to answer"*, *"don't know"*, and *"missing"* were all recoded to missing since those cases were not suitable for the analysis. For the Hungarian respondents, this variable's categories are slightly different, however its ordering and frequency logic remains the same as in other countries that are being coded in the universal system for the CSES.

The variable of **ethnicity** is structured in the very same manner as in the previous Module, and therefore the same information as in the Module 1 applies. In addition, the responses as “*refused to answer*”, “*don’t know*”, and “*missing*” were all recoded to missing since those cases were not suitable for the analysis.

Finally, for **rural or urban residence**, the same information as in the Module 1 applies. In addition, the responses as “*refused to answer*”, “*don’t know*”, and “*missing*” were all recoded to missing since those cases were not suitable for the analysis. For Romania, Slovenia, and the Czech Republic, the categories with the number of inhabitants are introduced, however no difference can be found compared to the CSES Module 1.

### 3.5. Data structure, formatting, and the analysis – CSES3

As in the previous Module, five types of volatility are calculated from 4 questions pertaining to respondents’ electoral behaviour. In the statistical models based on these data, five different types of volatility are regressed against the socio-demographic, economic, and value variables. Romania is the only exception because its data of the previous party vote are missing. For this reason, models for the volatility type (1) and volatility type (5) could not be calculated.

All respondents were categorised into 5 groups of electoral volatility (respective numbers for each category are assigned as types of volatility), just as in the previous Module.

Besides some necessary formatting, the following independent variables are all part of the CSES Module 3, and they enter the analysis as original. In the variable of **age**, the same information as in the Module 1 applies. In addition, the responses as “*refused to answer*”, “*don’t know*”, and “*missing*” were all recoded to missing since those cases were not suitable for the analysis.

For the variable of **gender**, the same information as in the Module 2 applies. In addition, the responses as “*refused to answer*”, “*don’t know*”, and “*missing*” were all recoded to missing since those cases were not suitable for the analysis.

Interviewers asked for more detailed information on **education** from the Czech respondents. The leading addition to the previous Modules was rooted in the introduction of separate values for secondary education with and without the leaving exams. In addition, the responses as “*refused to answer*”, “*don’t know*”, and “*missing*” were all recoded to missing since those cases were not suitable for the analysis.



Even though some categories were added to the variables of **marital status**, **union membership**, and the **current employment status**, the same information as in the CSES Module 2 applies. In addition, the responses as “*refused to answer*”, “*don’t know*”, and “*missing*” were all recoded to missing since those cases were not suitable for the analysis.

In the CSES Module 3, new categories for the **socio-economic status** variable are added for the Czech Republic, however its order has remained the same. In addition, the responses as “*refused to answer*”, “*don’t know*”, and “*missing*” were all recoded to missing since those cases were not suitable for the analysis.

For the variables of **employment type: public or private**, the same information as in the CSES Module applies. In addition, the responses as “*refused to answer*”, “*don’t know*”, and “*missing*” were all recoded to missing since those cases were not suitable for the analysis.

For **household income**, the same information as in the CSES Module 2 applies. In addition, the responses as “*refused to answer*”, “*don’t know*”, and “*missing*” were all recoded to missing since those cases were not suitable for the analysis.

For the **number of people in the household** and the **number of people in the household under the age of 18**, the same information as in the CSES Module 2 applies. In addition, the responses as “*refused to answer*”, “*don’t know*”, and “*missing*” were all recoded to missing since those cases were not suitable for the analysis.

For the **religious service attendance**, the same information as in the Module 2 applies. In addition, the responses as “*refused to answer*”, “*don’t know*”, and “*missing*” were all recoded to missing since those cases were not suitable for the analysis. Respondents from Slovenia were given additional options in which they could be more subjective (uncertain categories “*less frequently*” or “*a couple of times a year*”), however the main logic has remained the same.

The variable of **ethnicity** is structured in the very same manner as in the previous Module, and therefore, the same information as in the Module 2 applies. In addition, the responses as “*refused to answer*”, “*don’t know*”, and “*missing*” were all recoded to missing since those cases were not suitable for the analysis.

Finally, for **rural or urban residence**, the same information as in the Module 2 applies. In addition, the responses as “*refused to answer*”, “*don’t know*”, and “*missing*” were all recoded to missing since those cases were not suitable for the analysis. For the Czech Republic and its

election year of 2006, this variable was constructed from another one (“*the size of municipality you live in*”). Likewise, for the Czech election year of 2010, this variable was constructed from the “*type of place you live in*” variable. Consequently, 14 respondents could not find a fitting category—and hence, those answers were assigned to missing values.

### 3.6. Data structure, formatting, and the analysis – CSES4

As in the previous Module, five types of volatility are calculated from the 4 questions pertaining to respondents’ electoral behaviour. In the statistical models based on these data, five different types of volatility are regressed against the socio-demographic, economic, and value variables. Romania is the only exception as the data regarding the previous party vote are missing. For this reason, models for volatility types of 1 and 5 could not be calculated.

All respondents were categorised into 5 groups of electoral volatility (respective numbers for each category are assigned as types of volatility), just as in the previous Module.

Besides some necessary formatting, the following independent variables are all part of the CSES Module 4, and they enter the analysis as original. The CSES 4 Module does not contain the variable of **age**. However, respondents’ dates of birth are available. Accordingly, the age was calculated by subtracting the year of birth from the date the interview was conducted. In addition, the responses as “*refused to answer*”, “*don’t know*”, and “*missing*” were all recoded to missing since those cases were not suitable for the analysis.

For the variable of **gender**, the same information as in the Module 3 applies. In addition, the responses as “*refused to answer*”, “*don’t know*”, and “*missing*” were all recoded to missing since those cases were not suitable for the analysis.

New ISCED categories are introduced for **education**—*early childhood education, primary, lower/higher/post-secondary, short cycle tertiary, bachelor, master, and doctoral*. Additional categories for education with and without the leaving exams are added for the Czech Republic. Additional categories are also added to the data in Romania and Slovenia, but the logic of order is being kept. In addition, the responses as “*refused to answer*”, “*don’t know*”, and “*missing*” were all recoded to missing since those cases were not suitable for the analysis.

In the variables of **marital status**, **union membership**, and the **current employment status** (even though some categories were added), the same information as in the CSES Module

3 applies. In addition, the responses as “*refused to answer*”, “*don’t know*”, and “*missing*” were all recoded to missing since those cases were not suitable for the analysis.

In the CSES Module 4, the data for the variable of **socio-economic status** are not available for Slovenia, and in the Czech Republic, the models left out this variable due to a high number of missing variables. Additional responses as “*refused to answer*”, “*don’t know*”, and “*missing*” were all recoded to missing since those cases were not suitable for the analysis.

For the variable of **employment type: public or private**, the same information as in the CSES Module applies. In addition, the responses as “*refused to answer*”, “*don’t know*”, and “*missing*” were all recoded to missing since those cases were not suitable for the analysis. For the Czech Republic and Romania, retired or unemployed respondents were questioned about their previous socio-economic status or occupations.

For **household income**, the same information as in the CSES Module 3 applies. In addition, the responses as “*refused to answer*”, “*don’t know*”, and “*missing*” were all recoded to missing since those cases were not suitable for the analysis.

For the **number of people in the household** and the **number of people in the household under the age of 18**, the same information as in the CSES Module 2 applies. In addition, the responses as “*refused to answer*”, “*don’t know*”, and “*missing*” were all recoded to missing since those cases were not suitable for the analysis.

For the **religious services attendance**, the same information as in the Module 3 applies. In addition, the responses as “*refused to answer*”, “*don’t know*”, and “*missing*” were all recoded to missing since those cases were not suitable for the analysis.

The variable of **ethnicity** is structured in very same manner as in the previous Module, therefore the same information as in the Module 3 applies. In addition, the responses as “*refused to answer*”, “*don’t know*”, and “*missing*” were all recoded to missing since those cases were not suitable for the analysis.

Finally, for **rural or urban residence**, the same information as in the Module 3 applies. In addition, the responses as “*refused to answer*”, “*don’t know*”, and “*missing*” were all recoded to missing since those cases were not suitable for the analysis.

### 3.7. Data structure, formatting, and the analysis – CSES5

As in the previous Module, five types of volatility are calculated from the 4 questions pertaining to respondents' electoral behaviour. In the statistical models based on these data, five different types of volatility are regressed against the socio-demographic, economic, and value variables.

All respondents were categorised into 5 groups of electoral volatility (respective numbers for each category are assigned as types of volatility), just as in the previous Module

Besides some necessary formatting, the following independent variables are all part of the CSES Module 5, and they enter the analysis as original.

The CSES 5 Module does not contain the variable of **age**. However, respondents' dates of birth are available—and thus, the age for respondent was calculated by subtracting the year of birth from the date when the interview was conducted. In addition, the responses as “*refused to answer*”, “*don't know*”, and “*missing*” were all recoded to missing since those cases were not suitable for the analysis.

For the variable of **gender**, the same information as in the Module 4 applies. In addition, the responses as “*refused to answer*”, “*don't know*”, and “*missing*” were all recoded to missing since those cases were not suitable for the analysis.

The CSES Module 5 continued with the ISCED categories for **education**—*early childhood education, primary, lower/higher/post-secondary, short cycle tertiary, bachelor, master, and doctoral*. In addition, the responses as “*refused to answer*”, “*don't know*”, and “*missing*” were all recoded to missing since those cases were not suitable for the analysis.

In the variables of **marital status**, **union membership**, and the **current employment status** (the variable value of “*maternity leave*” was added for Hungary), the same information as in the CSES Module 4 applies. In addition, the responses as “*refused to answer*”, “*don't know*”, and “*missing*” were all recoded to missing since those cases were not suitable for the analysis. The union membership for Hungary yields too many missing or zero values and because of this, the models could not count with this variable.

In the variable of **socio-economic status**, the same information as in the CSES Module 4 applies. In addition, the responses as “*refused to answer*”, “*don’t know*”, and “*missing*” were all recoded to missing since those cases were not suitable for the analysis.

For the variable of **employment type: public or private**, the same information as in the CSES Module 4 applies. In addition, the responses as “*refused to answer*”, “*don’t know*”, and “*missing*” were all recoded to missing since those cases were not suitable for the analysis.

For **household income**, the same information (quintiles) as in the CSES Module 4 applies. In addition, the responses as “*refused to answer*”, “*don’t know*”, and “*missing*” were all recoded to missing since those cases were not suitable for the analysis.

For the **number of people in the household**, the same information as in the CSES Module 4 applies. In addition, the responses as “*refused to answer*”, “*don’t know*”, and “*missing*” were all recoded to missing since those cases were not suitable for the analysis. The variable of the **number of people in the household under the age of 18** was not available for none of the countries.

For the **religious services attendance**, the same information as in the Module 4 applies. In addition, the responses as “*refused to answer*”, “*don’t know*”, and “*missing*” were all recoded to missing since those cases were not suitable for the analysis.

The variable of **ethnicity** is structured in very same manner as in the previous Module, and therefore the same information as in the Module 4 applies. In addition, the responses as “*refused to answer*”, “*don’t know*”, and “*missing*” were all recoded to missing since those cases were not suitable for the analysis.

Finally, for **rural or urban residence**, the same information as in the Module 4 applies. In addition, the responses as “*refused to answer*”, “*don’t know*”, and “*missing*” were all recoded to missing since those cases were not suitable for the analysis.

After the analysis with these variables, two additional models were calculated. These contained two additional variables: specifically, respondents’ attitudes to democracy—whether **it makes any difference who is in power** and whether **it makes any difference who people vote for**. These two variables are available only for the last CSES Module (CSES Module 5). While in the models, they yield a statistical significance and a moderate correlation, a missing analysis of previous electoral terms does not allow to formulate any reliable conclusions.

Instead, I proceed to formulate future research, including these variables in the models, in the discussion part of the thesis (as they are highly valuable for studying electoral behaviour).

### **3.8. Final remarks on methodology of the thesis**

In statistics, the interpretation of negative binomial regression, which is a statistic method used in the following analysis, may be defined as follows:

*“For a one unit change in the predictor variable, the difference in the logs of expected counts of the response variable is expected to change by the respective regression coefficient, given the other predictor variables in the model are held constant (UCLA: Statistical Consulting Group 2022a, 2022b).”*

This means that the correlation coefficient for any given independent variable in the negative binomial models represents an estimated difference in logarithms of dependent variable. For the sake of simplicity and better interpretation, regression coefficients were calculated to be interpreted in a non-logarithm way: the value of 1 for no effect, values from 0.99 to 0 for a negative correlation (the lower the number, the higher the negative correlation), and other values above 1 for a positive correlation.

The interpretation of Pseudo R-squared indicators is more complex but in general, there are three ways of interpreting these R-squared indicators:

1. As the total variability explained by the model (how a dependent variable varies from its mean). The generally utilised rule says that the higher the percentage of variability explained, the better the model in the analysis.
2. As an improvement from the null model. In this case, R-squared represents a sum of errors from the null model.
3. As the square of correlation. Finally, R-squared is the square of correlation between the model’s predicted values and the actual ones.

In the (negative) binomial regression models, McFadden’s Pseudo R-squared indicator is used, and it derives from the first two ways above. In conclusion, the higher the value, the higher the explanatory value of the model, and thus the better models correspond to reality.

In the following research, all negative binomial regression models have the number of cases between 1,000 and 2,300 observations. One could argue that in case of using this high

number of observations, even the relationship that are not statistically significant yield a higher value of statistical significance (while these relationships would not be significant if fewer observations were used). In this case, however, rather than worrying about a higher number of observations producing a falsely significant relationship, the opposite poses a greater threat to a satisfactory comparative analysis.

In general, the number of observations under 30 is considered too low to draw conclusions from any type of analysis. More specifically, the whole process in detail, supported by statistics, has been proved by mathematicians (Sharma 2020). In reality, both the central limit theorem and law of large numbers support the fact that a higher number of cases (or observations) decreases the likelihood of statistical errors, and it increases the statistical significance. The opposite relationship (whether the higher number of observations increases the likelihood of errors and decreases the statistical significance) is valid only if the null hypothesis is true. Overall, the power of the test increases with a higher number of observations (STAT 200 – Elementary Statistics). The larger the sample size, the higher the probability of having found a statistically significant relationship (provided it exists). By increasing the number of observations, the impact of random error fades away and the model's precision rises (Thiese, Ronna, Ott 2016).

Additionally, a vast number of samples and representative research studies contain between 1,000 and 2,500 observations as this range is the best to provide a reliable study sample in line with an affordable research cost (beyond this limit, expenses for research and interviews might increase, while the reliability does not get much higher; whilst under this limit, the analysis is cheaper but does not provide a sufficient reliability).

## 4. Results

The negative binomial regression analysis (which is used in the cases where observations are biased towards zero, as in this case) yields the following results for each country and every specific type of volatility. In total, 20 models were calculated for every single country in the examined time of the post-election studies. The results are presented below.



**Chart 1: Binomial regression model for the dependent variable - "Did a respondent cast a ballot"**

Variable name	$\beta$ coefficient	Standard Error	Statistical Significance
Intercept	2.86	0.14	***
Age	1.00	0.00	
Gender	1.02	0.02	
Education	1.02	0.00	*
Marital status	0.96	0.01	**
Union membership	0.98	0.03	
Current employment status	1.02	0.03	
Employment type: public or private	0.98	0.00	.
Household income	1.01	0.01	
Number of people in the household	0.99	0.02	
Number of people in the household <18	0.95	0.02	*
Religious services attendance	1.00	0.01	
Ethnicity	0.97	0.03	
Rural or urban residence	0.98	0.01	

**Signif. codes:**

<b>0,001</b>	***
<b>0,01</b>	**
<b>0,05</b>	*
<b>0,1</b>	.

**Pseudo R indicators:**

<b>G2</b>	40.48
<b>McFadden</b>	0.16
<b>r2ML</b>	0.06
<b>r2CU</b>	0.19

**Number of observations:** 1,229

**Data source - Comparative Study of Electoral Systems, Module 1 (Czech Republic, election in 1996 filtered)**

**Data analysis: Author**

**Chart 2: Binomial regression model for the dependent variable - "Did a respondent cast a ballot"**

Variable name	$\beta$ coefficient	Standard Error	Statistical Significance
Intercept	2.40	0.10	***
Age	-	-	
Gender	0.96	0.02	
Education	1.05	0.01	***
Marital status	0.95	0.01	***
Union membership	0.89	0.04	**
Current employment status	1.00	0.00	
Employment type: public or private	0.99	0.01	
Household income	-	-	
Number of people in the household	0.98	0.01	
Number of people in the household <18	0.97	0.02	.
Religious services attendance	1.03	0.01	***
Ethnicity	-	-	
Rural or urban residence	1.01	0.01	

**Signif. codes:**

<b>0,001</b>	***
<b>0,01</b>	**
<b>0,05</b>	*
<b>0,1</b>	.

**Pseudo R indicators:**

<b>G2</b>	124.69
<b>McFadden</b>	0.08
<b>r2ML</b>	0.09
<b>r2CU</b>	0.13

**Number of observations:** 1,525

**Data source - Comparative Study of Electoral Systems, Module 1 (Hungary, election in 1998 filtered)**

**Data analysis: Author**

**Chart 3: Binomial regression model for the dependent variable - "Did a respondent cast a ballot"**

Variable name	$\beta$ coefficient	Standard Error
Intercept	2.48	0.06
Gender	1.03	0.02
Education	1.01	0.01
Marital status	0.95	0.01
Number of people in the household	0.99	0.01
Ethnicity	0.97	0.01
Rural or urban residence	1.01	0.01

**Signif. codes:**

<b>0,001</b>	***
<b>0,01</b>	**
<b>0,05</b>	*
<b>0,1</b>	.

**Pseudo R indicators:**

<b>G2</b>	44.01
<b>McFadden</b>	0.11
<b>r2ML</b>	0.05
<b>r2CU</b>	0.13

**Number of observations:** 1,009

**Data source - Comparative Study of Electoral Systems, Module 1 (Lithuania, election in 1997 filtered)**

**Data analysis: Author**

**Chart 4: Binomial regression model for the dependent variable - "Did a respondent cast a ballot"**

Variable name	$\beta$ coefficient	Standard Error	Statistical Significance
Intercept	2.33	0.11	***
Age	1.00	0.00	
Gender	1.01	0.02	
Education	1.03	0.01	**
Marital status	0.99	0.01	
Union membership	0.96	0.02	.
Current employment status	1.04	0.02	.
Employment type: public or private	0.99	0.01	
Household income	0.99	0.01	
Number of people in the household	1.01	0.01	
Number of people in household <18	1.00	0.02	
Religious services attendance	1.00	0.01	
Ethnicity	0.99	0.02	
Rural or urban residence	1.00	0.01	

**Signif. codes:**

<b>0,001</b>	***
<b>0,01</b>	**
<b>0,05</b>	*
<b>0,1</b>	.

**Pseudo R indicators:**

<b>G2</b>	23.01
<b>McFadden</b>	-0.75
<b>r2ML</b>	0.05
<b>r2CU</b>	-0.70

**Number of observations:** 1,175

**Data source - Comparative Study of Electoral Systems, Module 1 (Romania, election in 1996 filtered)**

**Data analysis: Author**

**Chart 5: Binomial regression model for the dependent variable - "Did a respondent cast a ballot"**

Variable name	$\beta$ coefficient	Standard Error
Intercept	1.93	0.14
Age	1.00	0.00
Gender	0.96	0.03
Education	1.01	0.01
Marital status	0.99	0.02
Union membership	0.94	0.03
Current employment status	1.01	0.01
Employment type: public or private	0.98	0.01
Household income	1.02	0.01
Number of people in household	1.01	0.02
Number of people in household <18	0.99	0.02
Religious services attendance	1.02	0.01
Ethnicity	1.01	0.01
Rural or urban residence	1.00	0.01

**Signif. codes:**

<b>0,001</b>	***
<b>0,01</b>	**
<b>0,05</b>	*
<b>0,1</b>	.

**Pseudo R indicators:**

<b>G2</b>	39.57
<b>McFadden</b>	0.05
<b>r2ML</b>	0.05
<b>r2CU</b>	0.08

**Number of observations:** 2,031

**Data source - Comparative Study of Electoral Systems, Module 1 (Slovenia, election in 1996 filtered)**

**Data analysis: Author**

**Chart 6: Negative binomial regression model for the dependent variable - volatility**

Variable name	Model1	Model2	Model3	Model4	Model5
(Intercept)	0.23(0.42)***	0.32(0.71)	0.02(1.33)**	0.18(1.04).	0.07(0.49)***
Age	1.02(0)***	1(0.01)	1.03(0.01)*	1(0.01)	1.02(0.01)**
Gender	1.05(0.1)	1.5(0.17)*	1.06(0.3)	0.79(0.24)	1.04(0.11)
Education	1.09(0.03)**	0.79(0.07)***	1.01(0.1)	0.85(0.09).	1.13(0.04)***
Marital status	0.74(0.06)***	1.13(0.08)	1.25(0.15)	1.09(0.12)	1(0.06)
Union membership	1.1(0.07)	0.94(0.15)	0.89(0.32)	0.75(0.29)	0.77(0.12)*
Current employment status	1(0)	1(0.01)	0.97(0.04)	0.99(0.01)	0.99(0.01)
Socioeconomic status	0.99(0.04)	0.99(0.07)	1.03(0.13)	0.95(0.09)	0.99(0.04)
Employment type: public or private	1.01(0.04)	0.98(0.07)	0.9(0.13)	1.01(0.09)	0.95(0.04)
Household income	0.96(0.02)	1(0.04)	1.01(0.07)	1.05(0.05)	0.99(0.02)
N of people in the household	1(0)	0.99(0.01)	1.01(0.01)	1.01(.01),	1(0)
N of people in the household <18	0.91(0.08)	0.9(0.12)	0.89(0.24)	1.11(0.16)	1.11(0.08)
Religious services attendance	0.78(0.04)***	0.97(0.05)	0.86(0.11)	0.97(0.07)	1.23(0.03)***
Ethnicity	-	-	-	-	-
Rural or urban residence	0.97(0.04)	0.97(0.08)	1.09(0.13)	1.22(0.11).	1.09(0.05).

**Signif. codes:**

<b>0,001</b>	***
<b>0,01</b>	**
<b>0,05</b>	*
<b>0,1</b>	.

**Pseudo R indicators:**

<b>G2</b>	92.05	25.19	14.35	15.52	74.02
<b>McFadden</b>	0.07	0.03	0.04	0.03	0.06
<b>r2ML</b>	0.09	0.03	0.02	0.02	0.08
<b>r2CU</b>	0.13	0.05	0.05	0.04	0.11

**Number of observations:** 948 948 948 948 948

**Data source - Comparative Study of Electoral Systems, Module 2 (Czech Republic, election in 2002 filtered)**

**Data analysis: Author**

**Chart 7: Negative binomial regression model for the dependent variable - volatility**

Variable name	Model1	Model2	Model3	Model4	Model5
(Intercept)	0.14(0.46)***	5.41(1.06)	0.33(0.83)	0.41(0.81)	0.59(0.28),
Age	1.02(0)***	0.97(0.01)***	1(0.01)	0.96(0.01)***	1(0).
Gender	1.07(0.1)	1.19(0.23)	1.03(0.2)	1.02(0.19)	0.9(0.07)
Education	1.08(0.03)*	0.6(0.11)***	0.76(0.09)**	0.86(0.08)*	1.05(0.02)*
Marital status	0.89(0.06)*	1.1(0.11)	1(0.1)	1.24(0.09)*	0.93(0.03)*
Union membership	1.09(0.09)	0.87(0.26)	0.98(0.2)	1.03(0.13)	0.95(0.08)
Current employment status	1.01(0.01)	0.99(0.04)	0.95(0.06)	0.97(0.04)	1.01(0.01)
Socioeconomic status	0.95(0.07)	1,06(0.2)	0.94(0.15)	1.22(0.16)	1(0.05)
Employment type: public or private	1.02(0.07)	1(0.19)	1.14(0.14)	0.91(0.15)	0.97(0.05)
Household income	1.05(0.02)*	0.96(0.05)	0.91(0.05).	0.97(0.04)	0.95(0.02)**
N of people in the household	0.95(0.06)	0.79(0.13).	1.19(0.11)	1.12(0.09)	1.01(0.04)
N of people in the household <18	0.88(0.08).	1.14(0.18)	0.92(0.13)	0.79(0.15)	1.03(0.04)
Religious services attendance	0.78(0.04)***	0.87(0.07)*	0.79(0.07)**	1.02(0.06)	1.11(0.02)***
Ethnicity	0.9(0.17)	1(0)	1(0.02)	0.96(0.2)	0.99(0.01)
Rural or urban residence	1.02(0.04)	0.87(0.1)	1(0.09)	1(0.08)	1.03(0.03)

**Signif. codes:**

<b>0,001</b>	***
<b>0,01</b>	**
<b>0,05</b>	*
<b>0,1</b>	.

**Pseudo R indicators:**

<b>G2</b>	87.0362509	74.77559945	37.94930005	98.68345319	37.29630311
<b>McFadden</b>	0.06020904	0.1009216	0.0552387	0.12169402	0.01939515
<b>r2ML</b>	0.06996235	0.06041125	0.03112959	0.07894563	0.03060223
<b>r2CU</b>	0.09991766	0.13113595	0.07141629	0.16070964	0.03831972

**Number of observations:** 1,200 1,200 1,200 1,200 1,200

**Data source - Comparative Study of Electoral Systems, Module 2 (Hungary, election in 2002 filtered)**

**Data analysis: Author**

**Chart 8: Negative binomial regression model for the dependent variable - volatility**

Variable name	Model1	Model2	Model3	Model4	Model5
(Intercept)	0.27(0.5)**	0.09(0.32)***	0.04(0.41)***	0.09(0.27)***	0.75(0.13)*
Age	1(0)	1(0)	1(0)	1(0)	1(0)
Gender	0.47(0.22)***	1.38(0.12)**	1.32(0.16).	0.85(0.11)	1.01(0.05)
Education	1.01(0.01)	1(0.01)	1(0.01)	1.01(0)*	1(0)
Marital status	1.13(0.06)*	1.15(0.04)**	0.88(0.07).	1.24(0.03)***	0.83(0.02)***
Union membership	0.9(0.05)*	0.92(0.03)**	1.06(0.03).	1.05(0.02)*	1(0.01)
Current employment status	1.01(0.01)	1(0.01)	0.99(0.01)	1(0)	1(0)
Socioeconomic status	-	-	-	-	-
Employment type: public or private	0.99(0.03)	1.03(0.02)	1.03(0.03)	1(0.02)	0.99(0.01)
Household income	0.81(0.06)***	0.95(0.04)	1.01(0.04)	1.06(0.03).	0.97(0.01)*
N of people in the household	1(0.01)	1(0.01)	1(0.01)	0.99(0.01)	1(0)
N of people in the household <18	0.99(0.01)	1(0.01)	0.99(0.01)	1.01(0.01)	1(0)
Religious services attendance	1.05(0.07)	0.89(0.05)*	1(0.05)	0.92(0.04)*	1(0.02)
Ethnicity	1(0)	1(0)	1(0)	1(0)	1(0)
Rural or urban residence	1.06(0.07)	1.03(0.05)	1(0.06)	1.04(0.04)	1(0.02)

**Signif. codes:**

<b>0,001</b>	***
<b>0,01</b>	**
<b>0,05</b>	*
<b>0,1</b>	.

**Pseudo R indicators:**

<b>G2</b>	42.04	31.41	16.49	77.93	51.51
<b>McFadden</b>	0.05	0.02	0.02	0.05	0.02
<b>r2ML</b>	0.02	0.02	0.01	0.04	0.03
<b>r2CU</b>	0.07	0.03	0.02	0.07	0.03

**Number of observations:** 1,913 1,913 1,913 1,913 1,913

**Data source - Comparative Study of Electoral Systems, Module 2 (Romania, election in 2004 filtered)**

**Data analysis: Author**



**Chart 9: Negative binomial regression model for the dependent variable - volatility**

Variable name	Model1	Model2	Model3	Model4	Model5
(Intercept)	1.32(0.35)	0.2(0.76)*	0.48(0.91)	0.48(1.72)	0.5(0.35)*
Age	1(0).	0.98(0.01)*	1(0.01)	0.96(0.01)**	1(0)
Gender	0.78(0.11)*	0.87(0.18)	1.18(0.21)	0.87(0.26)	0.76(0.13)*
Education	1.01(0.01)	0.91(0.07)	0.89(0.07).	0.98(0.08)	0.99(0.02)
Marital status	0.83(0.05)***	1.21(0.09)*	0.92(0.1)	1.43(0.14)*	0.87(0.06)*
Union membership	0.99(0.05)	0.95(0.06)	1.01(0.08)	0.97(0.07)	1.06(0.05)
Current employment status	0.98(0.01)	1.01(0.01)	0.96(0.05)	1.01(0.01)	0.98(0.01)
Socioeconomic status	-	-	-	-	-
Employment type: public or private	0.96(0.03)	1.06(0.04).	0.99(0.05)	1.1(0.05)*	0.96(0.03)
Household income	0.95(0.02)**	1.03(0.03)	1.03(0.04)	1.05(0.05)	0.96(0.02).
N of people in the household	0.99(0.03)	1.03(0.01)*	0.87(0.1)	0.9(0.13)	0.98(0.04)
N of people in the household <18	0.93(0.07)	1.08(0.12)	1.13(0.15)	1.39(0.2).	0.98(0.09)
Religious service attendance	0.94(0.03)*	0.96(0.05)	0.87(0.06)*	0.89(0.08)	1.03(0.03)
Ethnicity	1(0).	1(0)	1(0)	0.99(0.01)	1(0)
Rural or urban residence	1.04(0.03)	1.04(0.06)	0.9(0.08)	0.97(0.1)	1.03(0.04)

**Signif. codes:**

<b>0,001</b>	***
<b>0,01</b>	**
<b>0,05</b>	*
<b>0,1</b>	.

**Pseudo R indicators:**

<b>G2</b>	51.01	55.37	14.98	83.40	21.31
<b>McFadden</b>	0.04	0.08	0.02	0.18	0.02
<b>r2ML</b>	0.05	0.05	0.01	0.08	0.02
<b>r2CU</b>	0.07	0.10	0.03	0.21	0.03

**Number of observations:** 1,002 1,002 1,002 1,002 1,002

**Data source - Comparative Study of Electoral Systems, Module 2 (Slovenia, election in 2004 filtered)**

**Data analysis: Author**

**Chart 10: Negative binomial regression model for the dependent variable - volatility**

variable name	Model1	Model2	Model3	Model4	Model5
(Intercept)	0.45(0.38)*	0.1(0.5)***	0.53(0.45)	1.5(0.11)***	
Age	1(0)	1(0)	0.98(0)***	1(0)**	
Gender	1.21(0.09)*	0.97(0.19)	1.01(0.11)	0.88(0.04)**	
Education	0.72(0.06)***	1.01(0.02)	1.01(0.02)	1.01(0)***	
Marital status	1.12(0.05)*	1.01(0.09)	0.91(0.06)	0.79(0.02)***	
Union membership	1.04(0.08)	1.01(0.13)	1.08(0.08)	0.93(0.03)*	
Current employment status	1(0.01)	0.94(0.04).	1.01(0.01)	1(0)	
Socioeconomic status	-	-	-	-	
Employment type: public or private	0.85(0.03)***	0.96(0.05)	0.86(0.04)***	0.92(0.01)***	
Household income	0.98(0.03)	0.97(0.05)	0.94(0.03).	0.98(0.01)*	
N of people in the household	1(0.01)	1(0.02)	1.01(0.01)	0.98(0)**	
N of people in the household <18	1(0.01)	1(0.02)	1(0.01)	1.01(0)*	
Religious services attendance	0.99(0.03)	0.92(0.06)	0.99(0.04)	1(0.01)	
Ethnicity	-	-	-	-	
Rural or urban residence	1.08(0.04)*	0.93(0.07)	0.97(0.04)	0.98(0.01)	

**Signif. codes:**

<b>0,001</b>	***
<b>0,01</b>	**
<b>0,05</b>	*
<b>0,1</b>	.

**Pseudo R indicators:**

<b>G2</b>	82.08	12.13	37.16	166.79
<b>McFadden</b>	0.05	0.02	0.03	0.05
<b>r2ML</b>	0.04	0.01	0.02	0.08
<b>r2CU</b>	0.07	0.02	0.04	0.10

**Number of observations:** 2,002 2,002 2,002 2,002 2,002

**Data source - Comparative Study of Electoral Systems, Module 3 (Czech Republic, election in 2006 filtered)**

**Data analysis: Author**

**Chart 11: Negative binomial regression model for the dependent variable - volatility**

Variable name	Model1	Model2	Model3	Model4	Model5
(Intercept)	0.05(1)**	0.19(0.27)***	0.28(0.65)*	0.13(0.33)***	1.34(0.15)*
Age	1(0)	1(0)	1(0)	1(0)	1(0)*
Gender	0.98(0.35)	1.08(0.11)	1.04(0.19)	1.08(0.12)	0.9(0.05)*
Education	0.98(0.03)	1.01(0)	0.89(0.07)	1(0.01)	1(0)
Marital status	0.8(0.16)	1.11(0.04)**	0.76(0.1)**	1.07(0.05)	0.81(0.02)***
Union membership	1.14(0.17)	1.14(0.05)*	0.96(0.13)	1.01(0.08)	0.82(0.05)***
Current employment status	1.02(0.01)*	1.01(0)*	1(0.01)	1(0.01)	0.99(0)**
Socioeconomic status	-	-	-	-	-
Employment type: public or private	0.91(0.1)	0.9(0.03)***	0.91(0.06)	0.91(0.03)**	0.94(0.01)***
household income	0.98(0.09)	0.94(0.02)*	0.91(0.05)*	0.99(0.03)	0.96(0.01)***
N of people in the household	0.84(0.18)	0.99(0.01)	1.01(0.01)*	1(0.01)	1(0)
N of people in the household <18	1.03(0.01)*	1.01(0.01).	0.99(0.01)	1(0.01)	0.99(0)
Religious services attendance	0.79(0.15)	0.94(0.03).	1.01(0.06)	0.91(0.04)*	1.04(0.01)*
Ethnicity	-	-	-	-	-
Rural or urban residence	1.06(0.13)	0.96(0.04)	1.05(0.07)	1.05(0.05)	1.06(0.02)***

**Signif. codes:**

<b>0,001</b>	***
<b>0,01</b>	**
<b>0,05</b>	*
<b>0,1</b>	.

**Pseudo R indicators:**

<b>G2</b>	13.92	42.81	28.15	14.96	131.08
<b>McFadden</b>	0.05	0.03	0.03	0.01	0.04
<b>r2ML</b>	0.01	0.02	0.02	0.01	0.07
<b>r2CU</b>	0.05	0.04	0.04	0.02	0.08

**Number of observations:** 1,857 1,857 1,857 1,857 1,857

**Data source - Comparative Study of Electoral Systems, Module 3 (Czech Republic, election in 2010 filtered)**

**Data analysis: Author**

**Chart 12: Negative binomial regression model for the dependent variable - volatility**

Variable name	Model1	Model2	Model3	Model4	Model5
(Intercept)	The model	0.04(1.87).	0.4(1.84)	0.2(1.28)	The model
Age	was not	1.01(0.01)	1(0.01)	0.97(0.01)***	was not
Gender	calculated	1.57(0.3)	1.17(0.3)	1.38(0.21)	calculated
Education	because	0.78(0.13).	0.78(0.14).	1(0.09)	because
Marital status	of the	1.03(0.18)	1.27(0.15).	0.99(0.11)	of the
Union membership	missing	1.27(0.63)	0.95(0.56)	1.13(0.4)	missing
Current employment status	variable	0.98(0.05)	0.99(0.05)	1.11(0.03)**	variable
Socioeconomic status	of the	1.35(0.13)*	0.87(0.18)	0.87(0.11)	of the
Employment type: public or private	previous	0.81(0.34)	1.43(0.3)	0.76(0.23)	previous
Household income	party	1.03(0.13)	0.94(0.14)	1(0.09)	party
N of people in the household	vote	1.07(0.13)	0.94(0.15)	1.08(0.09)	vote
N of people in the household <18		0.84(0.24)	1.02(0.23)	0.84(0.15)	
Religious services attendance		0.74(0.09)**	0.81(0.1)*	0.99(0.07)	
Ethnicity		1.27(0.24)	0.9(0.34)	0.85(0.28)	
Rural or urban residence		1.19(0.12)	0.94(0.14)	1.14(0.09)	

**Signif. codes:**

<b>0,001</b>	***
<b>0,01</b>	**
<b>0,05</b>	*
<b>0,1</b>	.

**Pseudo R indicators:**

<b>G2</b>	31.44	16.06	23.72
<b>McFadden</b>	0.08	0.04	0.04
<b>r2ML</b>	0.04	0.02	0.03
<b>r2CU</b>	0.10	0.05	0.06

**Number of observations:** 1,403 1,403 1,403 1,403 1,403

**Data source - Comparative Study of Electoral Systems, Module 3 (Romania, elections in 2009 filtered)**

**Data analysis: Author**

**Chart 13: Negative binomial regression model for the dependent variable - volatility**

Variable name	Model1	Model2	Model3	Model4	Model5
(Intercept)	0.12(1.16)	30.36(1.36)	0.62(2.4)	0.01(2.13)*	0.34(0.7)
Age	1.01(0.01).	0.96(0.01).	0.98(0.02).	0.99(0.02)	1.01(0.01)*
Gender	0.71(0.22)	0.87(0.25)	0.73(0.43)	1.14(0.36)	0.9(0.13)
Education	1.21(0.08)	0.64(0.1)	0.85(0.16)	0.84(0.13)	1.07(0.04)
Marital status	0.75(0.14)	1.04(0.11)	1(0.2)	1.01(0.16)	1.01(0.06)
Union membership	0.87(0.27)*	1.04(0.33)*	1.08(0.6)*	3.79(0.55)*	0.63(0.16)**
Current employment status	1(0.05)	0.98(0.06)	1.06(0.09)	0.78(0.09)**	1.03(0.03)
Socioeconomic status	1.06(0.15)	0.92(0.2)	0.66(0.35)	1.89(0.18)***	0.83(0.1).
Employment type: public or private	1.06(0.1)	0.74(0.13)	1.15(0.2)	0.79(0.16)	1.08(0.06)
Household income	0.83(0.11)	1.02(0.12)	0.79(0.19)	1.16(0.16)	1.01(0.06)
N of people in the household	1.18(0.11)	1.04(0.13)	1.37(0.2)	0.97(0.2)	1.02(0.07)
N of people in the household <18	1.07(0.16)	0.74(0.2)	0.42(0.43)	0.63(0.31)	0.89(0.11)
Religious services attendance	1.13(0.06)	0.83(0.09)	0.91(0.15)	1.04(0.13)	0.96(0.04)
Ethnicity	0.76(0.18)	1.02(0.01)	0.97(0.11)	0.99(0.03)	0.98(0.03)
Rural or urban residence	0.84(0.11)	1.03(0.11)	0.96(0.19)	1.33(0.15).	1.06(0.05)

**Signif. codes:**

<b>0,001</b>	***
<b>0,01</b>	**
<b>0,05</b>	*
<b>0,1</b>	.

**Pseudo R indicators:**

<b>G2</b>	33.13	41.06	12.22	29.31	22.25
<b>McFadden</b>	0.08	0.11	0.07	0.12	0.03
<b>r2ML</b>	0.07	0.08	0.03	0.06	0.05
<b>r2CU</b>	0.11	0.15	0.08	0.15	0.06

**Number of observations:** 1,055 1,055 1,055 1,055 1,055

**Data source - Comparative Study of Electoral Systems, Module 3 (Slovenia, election in 2008 filtered)**

**Data analysis: Author**

**Chart 14: Negative binomial regression model for the dependent variable - volatility**

Variable name	Model1	Model2	Model3	Model4	Model5
(Intercept)	0.2(0.32)***	0.4(0.35)**	0.08(0.58)***	0.15(0.5)***	0.44(0.27)**
Age	1.02(0)***	0.99(0).	1(0.01)	0.99(0.01)*	0.99(0)*
Gender	0.87(0.08)	1.03(0.1)	1.18(0.14)	0.93(0.15)	1.17(0.07)*
Education	0.99(0.01)	1(0.01)	1(0.01)	1(0.01)	1.01(0)
Marital status	0.86(0.04)***	1.05(0.04)	1.1(0.06).	1.07(0.05)	0.97(0.03)
Union membership	0.8(0.08)**	1.02(0.06)	0.93(0.12)	1.13(0.07).	0.99(0.05)
Current employment status	0.99(0.01)*	0.99(0.01)	1(0.01)	1(0)	1(0)
Socioeconomic status	-	-	-	-	-
Employment type: public or private	0.98(0.02)	0.96(0.02).	0.95(0.04)	0.94(0.04).	0.93(0.02)***
Household income	0.98(0.02)	0.92(0.02)**	1(0.04)	0.97(0.04)	1(0.02)
N of people in the household	1(0)	1(0)	0.97(0.03)	1(0.01)	1(0)
N of people in the household <18	1(0.01)	0.97(0.03)	1.02(0.01)**	1.01(0.01)	1.01(0)
Religious services attendance	1.07(0.03)*	0.93(0.04).	0.91(0.07)	1.03(0.05)	0.95(0.03).
Ethnicity	-	-	-	-	-
Rural or urban residence	1.07(0.03)*	0.99(0.04)	0.99(0.07)	1(0.06)	0.98(0.03)

**Signif. codes:**

<b>0,001</b>	***
<b>0,01</b>	**
<b>0,05</b>	*
<b>0,1</b>	.

**Pseudo R indicators:**

<b>G2</b>	139.41	25.75	16.99	14.70	23.95
<b>McFadden</b>	0.07	0.02	0.02	0.01	0.01
<b>r2ML</b>	0.08	0.02	0.01	0.01	0.01
<b>r2CU</b>	0.12	0.02	0.03	0.02	0.02

**Number of observations:** 1,653 1,653 1,653 1,653 1,653

**Data source - Comparative Study of Electoral Systems, Module 4 (Czech Republic, election in 2013 filtered)**

**Data analysis: Author**

**Chart 15: Negative binomial regression model for the dependent variable - volatility**

Variable name	Model1	Model2	Model3	Model4	Model5
(Intercept)	The model	0.1(0.38)***	0.14(0.51)***	0.07(0.64)***	The model
Age	was not	0.99(0)*	0.99(0)*	0.99(0.01)*	was not
Gender	calculated	1.32(0.12)*	1.28(0.15).	1.01(0.18)	calculated
Education	because	0.99(0.01)	1(0.01)	0.99(0.01)	because
Marital status	of the	1.18(0.04)***	0.93(0.07)	1.12(0.07).	of the
Union membership	missing	0.96(0.07)	0.91(0.1)	0.95(0.11)	missing
Current employment status	variable	0.99(0.01)	1(0.01)	1(0.01)	variable
Socioeconomic status	of the	1.02(0.03)	0.91(0.04)*	1.06(0.04)	of the
Employment type: public or private	previous	1.03(0.03)	1.02(0.05)	1.04(0.05)	previous
Household income	party	1(0.02)	1.04(0.03)	1.04(0.04)	party
N of people in the household	vote	1.01(0.01)	1.01(0.02)	0.94(0.07)	vote
N of people in the household <18		0.99(0.01)	0.99(0.01)	1.01(0.01)	
Religious services attendance		0.9(0.04)*	1.01(0.05)	1.06(0.06)	
Ethnicity		1(0.01)	1(0)	1(0)	
Rural or urban residence		1.09(0.04)*	0.97(0.06)	0.93(0.07)	

**Signif. codes:**

<b>0,001</b>	***
<b>0,01</b>	**
<b>0,05</b>	*
<b>0,1</b>	.

**Pseudo R indicators:**

<b>G2</b>	64.07	21.75	45.64
<b>McFadden</b>	0.04	0.02	0.04
<b>r2ML</b>	0.03	0.01	0.02
<b>r2CU</b>	0.05	0.02	0.05

**Number of observations:** 2,283 2,283 2,283 2,283 2,283

**Data source - Comparative Study of Electoral Systems, Module 4 (Romania, election in 2012 filtered)**

**Data analysis: Author**

**Chart 16: Negative binomial regression model for the dependent variable - volatility**

variable name	Model1	Model2	Model3	Model4	Model5
(Intercept)	0.34(0.49)*	0.07(0.55)***	0.06(0.76)***	3.38(1.08)	0.8(0.39)
Age	1.01(0)**	1(0.01)	1.01(0.01).	0.96(0.01)***	1(0)
Gender	0.78(0.13).	0.97(0.16)	1.28(0.21)	0.74(0.24)	0.99(0.1)
Education	1(0)	1.01(0).	0.99(0.01)	0.86(0.07)*	0.99(0.01)
Marital status	0.93(0.06)	1.13(0.07).	1.11(0.09)	0.98(0.11)	0.91(0.05)*
Union membership	0.74(0.16).	1.23(0.08)*	0.87(0.21)	0.84(0.28)	0.95(0.09)
Current employment status	1.01(0.01)	1(0.01)	0.98(0.03)	0.98(0.04)	1(0.01)
Socioeconomic status					
Employment type: public or private	0.92(0.04)*	1.04(0.03)	1.08(0.04).	1.01(0.05)	0.95(0.03).
Household income	0.94(0.02)**	0.98(0.03)	0.99(0.03)	0.98(0.04)	0.99(0.02)
N of people in the household	1(0.02)	0.92(0.08)	1.01(0.04)	1.04(0.1)	0.99(0.04)
N of people in the household <18	0.95(0.1)	1.43(0.14)**	0.87(0.19)	0.84(0.2)	0.89(0.09)
Religious services attendance	1.1(0.03)**	0.8(0.06)***	0.86(0.06)*	0.96(0.07)	0.9(0.03)***
Ethnicity	1(0)	1(0)	0.92(0.14)	1(0.01)	0.95(0.07)
Rural or urban residence	1.04(0.06)	1.19(0.07)*	0.92(0.1)	0.87(0.11)	0.91(0.05).

**Signif. codes:**

<b>0,001</b>	***
<b>0,01</b>	**
<b>0,05</b>	*
<b>0,1</b>	.

**Pseudo R indicators:**

<b>G2</b>	46.81	45.37	18.28	44.54	28.30
<b>McFadden</b>	0.04	0.05	0.03	0.08	0.02
<b>r2ML</b>	0.04	0.04	0.02	0.04	0.03
<b>r2CU</b>	0.07	0.08	0.04	0.10	0.04

**Number of observations:** 1,031 1,031 1,031 1,031 1,031

**Data source - Comparative Study of Electoral Systems, Module 4 (Slovenia, election in 2011 filtered)**

**Data analysis: Author**



**Chart 17: Negative binomial regression model for the dependent variable - volatility**

Variable name	Model1	Model2	Model3	Model4	Model5
(Intercept)	1.68(0.26)*	4.03(0.9)	0.01(1.76)**	0.1(1.14)*	0.06(0.61)***
Age	1(0)	0.99(0.01)*	1(0.01)	0.98(0.01).	1(0)
Gender	0.98(0.05)	0.89(0.16)	1.78(0.36)	0.99(0.21)	1.04(0.11)
Education	0.95(0.02)*	0.74(0.08)***	1.29(0.13).	1(0.09)	1.14(0.04)**
Marital status	0.96(0.02).	1.04(0.07)	1.01(0.16)	0.98(0.09)	1.07(0.05)
Union membership	-	-	-	-	-
Current employment status	0.98(0.01).	0.99(0.03)	1.07(0.05)	1.04(0.04)	1.03(0.02)
Socioeconomic status	0.92(0.04)*	0.81(0.14)	1.5(0.25)	0.97(0.17)	1.18(0.08).
Employment type: public or private	1.03(0.05)	1.05(0.17)	0.88(0.33)	1.23(0.23)	0.91(0.11)
Household income	0.93(0.02)**	1(0)	1(0)	1(0)	1(0)*
N of people in the household	1.01(0.02)	0.78(0.09)**	1.21(0.13)	1.08(0.09)	1.02(0.05)
N of people in the household <18	-	-	-	-	-
Religious services attendance	1(0.01)	0.98(0.04)	0.85(0.09).	1(0.06)	1(0.03)
Ethnicity	0.98(0.05)	1.1(0.16)	1.56(0.21)*	1.32(0.17).	1.02(0.12)
Rural or urban residence	0.97(0.02)	0.86(0.08).	0.83(0.18)	107(0.1)	1.07(0.05)

**Signif. codes:**

<b>0,001</b>	***
<b>0,01</b>	**
<b>0,05</b>	*
<b>0,1</b>	.

**Pseudo R indicators:**

<b>G2</b>	8.40E+00	36.34229106	23.88520393	10.14393179	14.77796419
<b>McFadden</b>	5.11E-03	0.04482089	0.07197744	0.01728354	0.01311401
<b>r2ML</b>	9.69E-03	0.0412372	0.02729745	0.01168545	0.01697816
<b>r2CU</b>	1.14E-02	0.06769104	0.08551179	0.0236823	0.02328846

**Number of observations:** 1,208 1,208 1,208 1,208 1,208

**Data source - Comparative Study of Electoral Systems, Module 5 (Hungary, election in 2018 filtered)**

**Data analysis: Author**

**Chart 18: Negative binomial regression model for the dependent variable - volatility**

Variable name	Model1	Model2	Model3	Model4	Model5
(Intercept)	0.46(0.42).	1.73(0.82)	0.07(1.27)*	2.63(1.15)	0.57(0.45)
Age	1(0)	0.98(0.01)**	1.01(0.01)	0.97(0.01)**	1(0)
Gender	0.99(0.09)	1.12(0.17)	0.91(0.25)	0.77(0.22)	1.01(0.09)
Education	0.97(0.03)	0.78(0.07)***	1.03(0.09)	0.87(0.08).	1.02(0.03)
Marital status	1(0.05)	0.91(0.09)	0.97(0.14)	0.97(0.12)	0.99(0.05)
Union membership	1.31(0.18)	0.95(0.53)	1.05(0.53)	0.35(0.69)	0.79(0.18)
Current employment status	1.03(0.04)	1.02(0.06)	1(0.12)	0.79(0.15)	0.95(0.05)
Socioeconomic status	1.05(0.07)	1.21(0.13)	0.78(0.21)	0.89(0.19)	0.97(0.07)
Employment type: public or private	1.3(0.08)**	1.48(0.19)*	1.27(0.24)	0.76(0.23)	0.77(0.09)**
Household income	0.92(0.04)*	0.84(0.09)*	0.95(0.13)	1.22(0.11).	1.09(0.04)*
N of people in the household	0.95(0.05)	0.84(0.1).	1(0.15)	0.93(0.12)	1.05(0.05)
N of people in the household <18	-	-	-	-	-
Religious services attendance	1.02(0.03)	0.86(0.07)*	0.81(0.11).	1.06(0.09)	0.97(0.04)
Ethnicity	1.01(0.07)	0.98(0.15)	1.3(0.17)	0.77(0.22)	1(0.07)
Rural or urban residence	1(0.03)	1.09(0.06)	1.26(0.1)*	1(0.08)	1(0.03)

**Signif. codes:**

<b>0,001</b>	***
<b>0,01</b>	**
<b>0,05</b>	*
<b>0,1</b>	.

**Pseudo R indicators:**

<b>G2</b>	14.89	58.52	14.07	25.88	15.46
<b>McFadden</b>	0.01	0.09	0.03	0.05	0.01
<b>r2ML</b>	0.02	0.09	0.02	0.04	0.02
<b>r2CU</b>	0.03	0.13	0.04	0.07	0.03

**Number of observations:** 1,500 1,500 1,500 1,500 1,500

**Data source - Comparative Study of Electoral Systems, Module 5 (Lithuania, election in 2016 filtered)**

**Data analysis: Author**

In the last two models, two additional variables were added. Respondents were asked questions linked to their general opinion on democracy, more specifically:

*Q1: "Some people say that it doesn't make any difference who is in power. Others say that it makes a big difference who is in power. Using the scale on this card, (where ONE means that it doesn't make any difference who is in power and FIVE means that it makes a big difference who is in power), where would you place yourself?"*

and the following:

*Q2: "Some people say that no matter who people vote for, it won't make any difference to what happens. Others say that who people vote for can make a big difference to what happens. Using the scale on this card, (where ONE means that voting won't make any difference to what happens and FIVE means that voting can make a big difference), where would you place yourself?"*

These questions should indicate voters' general opinion on democracy and general knowledge of how it functions. Unfortunately, these questions were asked only in the last module (CSES5), and therefore they can be analysed only for the cases of Hungary and Lithuania.

**Chart 19: Negative binomial regression model for the dependent variable - volatility**

Variable name	Model1	Model2	Model3	Model4	Model5
(Intercept)	2.23(0.28)**	85.27(0.93)***	0.01(1.91)*	0.09(1.23)*	0.02(0.66)***
Age	1(0)	0.99(0.01)*	0.99(0.01)	0.98(0.01).	1(0)
Gender	0.96(0.05)	0.73(0.16)*	1.73(0.37)	1.02(0.21)	1.1(0.11)
Education	0.94(0.02)**	0.72(0.08)***	1.28(0.13).	1(0.09)	1.11(0.04)*
Marital status	0.96(0.02)*	1.02(0.07)	1.02(0.16)	1(0.1)	1.11(0.05)*
Union membership	0.87(0.16)	0.45(0.88)	2.5(0.77)	0.96(0.7)	1.18(0.29)
Current employment status	0.98(0.01).	0.99(0.03)	1.1(0.05).	1.05(0.04)	1.04(0.02).
Socioeconomic status	0.91(0.04)*	0.7(0.14)*	1.52(0.25).	0.99(0.17)	1.2(0.08)*
Employment type: public or private	1.03(0.05)	0.97(0.17)	0.84(0.34)	1.2(0.23)	0.92(0.12)
Household income	0.93(0.02)**	1.07(0.07)	0.78(0.16)	0.98(0.1)	1.18(0.05)**
N of people in the household	1.01(0.02)	0.74(0.09)***	1.16(0.14)	1.06(0.09)	0.99(0.06)
N of people in the household <18	-	-	-	-	-
Religious services attendance	1(0.01)	0.98(0.04)	0.83(0.1).	0.99(0.06)	0.99(0.03)
Ethnicity	0.98(0.05)	1.07(0.15)	1.6(0.21)*	1.33(0.17).	1.04(0.12)
Rural or urban residence	0.98(0.02)	0.84(0.08)*	0.83(0.18)	1.06(0.1)	1.05(0.05)
Who is in power makes a difference	0.98(0.02)	0.79(0.06)***	0.93(0.14)	1.02(0.09)	1.05(0.05)
Who people vote for makes a difference	0.96(0.02).	0.68(0.06)***	1.04(0.15)	1(0.1)	1.11(0.06).

**Signif. codes:**

<b>0,001</b>	***
<b>0,01</b>	**
<b>0,05</b>	*
<b>0,1</b>	.

**Pseudo R indicators:**

<b>G2</b>	11.59	128.24	24.58	10.26	26.20
<b>McFadden</b>	0.01	0.16	0.08	0.02	0.02
<b>r2ML</b>	0.01	0.14	0.03	0.01	0.03
<b>r2CU</b>	0.02	0.23	0.09	0.02	0.04

<b>Number of observations:</b>	1,208	1,208	1,208	1,208	1,208
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**Data source - Comparative Study of Electoral Systems, Module 5 (Hungary, election in 2018 filtered)**

**Data analysis: Author**

**Chart 20: Negative binomial regression model for the dependent variable - volatility**

Variable name	Model1	Model2	Model3	Model4	Model5
(Intercept)	0.44(0.44).	2.77(0.94)	0.09(1.33).	4.95(1.22)	0.6(0.48)
Age	1(0)	0.98(0.01)*	1(0.01)	0.97(0.01)**	1(0)
Gender	0.99(0.09)	1.05(0.18)	0.9(0.26)	0.74(0.22)	1.01(0.09)
Education	0.99(0.03)	0.84(0.07)*	1.03(0.09)	0.87(0.08).	1(0.03)
Marital status	1(0.05)	0.94(0.1)	0.95(0.15)	0.96(0.12)	0.99(0.05)
Union membership	1.28(0.18)	0.94(0.55)	1.11(0.53)	0.36(0.69)	0.81(0.18)
Current employment status	1.02(0.04)	0.99(0.07)	1.01(0.12)	0.79(0.15)	0.96(0.05)
Socioeconomic status	1.05(0.07)	1.16(0.14)	0.75(0.22)	0.9(0.19)	0.96(0.07)
Employment type: public or private	1.31(0.09)**	1.55(0.21)*	1.39(0.24)	0.73(0.24)	0.76(0.09)**
Household income	0.92(0.04).	0.87(0.09)	0.93(0.13)	1.21(0.11).	1.09(0.05)*
N of people in the household	0.96(0.05)	0.88(0.1)	1(0.15)	0.89(0.12)	1.04(0.05)
N of people in the household <18	-	-	-	-	-
Religious services attendance	1.02(0.04)	0.89(0.08)	0.84(0.11)	1.04(0.09)	0.97(0.04)
Ethnicity	1.01(0.07)	1.05(0.15)	1.32(0.17)	0.8(0.22)	1(0.07)
Rural or urban residence	0.99(0.03)	1.06(0.07)	1.31(0.1)*	0.96(0.08)	1.01(0.03)
Who is in power makes a difference	0.97(0.05)	0.85(0.09),	0.9(0.14)	0.87(0.12)	1.04(0.05)
Who people vote for makes a difference	0.99(0.05)	0.76(0.09)**	0.97(0.14)	1.15(0.12)	1.01(0.05)

**Signif. codes:**

<b>0,001</b>	***
<b>0,01</b>	**
<b>0,05</b>	*
<b>0,1</b>	.

**Pseudo R indicators:**

<b>G2</b>	14.18	85.75	17.82	29.28	14.77
<b>McFadden</b>	0.01	0.13	0.04	0.06	0.01
<b>r2ML</b>	0.02	0.13	0.03	0.05	0.02
<b>r2CU</b>	0.03	0.20	0.06	0.08	0.03

**Number of observations:** 1,500 1,500 1,500 1,500 1,500

**Data source - Comparative Study of Electoral Systems, Module 5 (Lithuania, election in 2016 filtered)**

**Data analysis: Author**

## 5. Findings

While we may find many results interesting, there are few major ones that need to be pointed out. First, in the first five models (CSES Module 1) where the voters had not been categorised into five types of volatility yet but rather the voter turnout was used as the dependent variable, multiple independent variables yielded a statistical significance. However, they do not show a high correlation coefficient. Critically speaking, they could be designed as negligible. Nevertheless, the intercept yields a high statistical significance, and the correlation coefficient is extremely high. Another finding shows that most of the time, different types of volatility are fed by different variables. In a vast number of cases, if they do show any significance, it can be found among the basic social, demographic, or economic variables. **Age, gender, education, marital status, union membership, and employment statuses** tend to be more explaining variables than religion.

**Education** seems to be negatively correlated in the most stable non-voter models. However, the opposite does not apply (the higher level of education does not correlate with the stability of vote). Most of stable non-voters are females, but it does not correlate with **household income**, and having **children in the household** does not give reliable results either. For stable voters, no characteristics can be generalised—in most models though, the **union membership** or **employment type** seem to correlate.

New voters or new former-voters seem to be correlated with the **employment type**—respondents working in the private or third sector have a higher chance of being a new voter, while respondents working in the public sector seem to be former-voters. Apart from these, no other general conclusions can be drawn.

The most important category for this research is Volatility type 5 (volatile voter). During the first year after the transition, **marital status** seemed to be the only stable variable negatively correlating with Volatility type 5 (if a respondent was widowed, divorced, or single, he or she was more likely to be volatile). In recent years, however, a combination of **education** and the economic variables do seem to predict volatility better (**education** in combination with **socio-economic, employment type, union membership, or the employment type**).

Interestingly, but coming up to expectations, two variables regarding general attitudes to democracy—meaning whether the respondent believes that **who is in power makes a**

**difference** and **who people vote for makes a difference**, correlate negatively with the stable non-voter behaviour pattern (Volatility 2 Type). This finding is consequent, as one may expect from a stable non-voter to be distrustful of democracy: meaning that it does not matter who is in power and it does not matter who people vote for. The relationship functions the very same way. And the same applies to the variable of **who is in power makes a difference** in case of a former voter (Volatility 4 Type) for respondents from Lithuania, **who people vote for makes a difference** has an opposite relationship then. Nevertheless, this does not apply to Hungary, as both variables seem to have zero effect on Volatility 4 Type.

Apart from the era right after the transition, no time changes can be seen in the first free elections, none of the variables yield any high correlation coefficient, albeit statistically significant, while only the intercept correlation remains unexpectedly high. Overall, the intercept correlation coefficients are high in a vast majority of models, and it also shows a statistical significance. This is in line with the conclusions of Tucker, Powell, Haughton, Deegan-Krause, and Tavits—voters in Central and Eastern Europe are stably unstable.

## 6. Evaluation, discussion, and conclusions

The models used explanatory variables which were supposed to (at least had been expected) to explain the issue of volatility. After a closer analysis though, some variables were removed from the analysis due to a low correlation and generally for the purpose of simplifying the models. Surprisingly, these were the variables such as average household income (due to no satisfying results) and the self-placement on the left-right scale proved as little to no importance (Even though the variable of self-placement on the left-right scale had originally been part of the models. However, the variable has not turned out to be significant as I have studied volatility of all voters, and not only right-wing or left-wing parties. It may be caused by the fact that voters from both sides of the scale are volatile. Though, if one studies electoral volatility of right/left leaning political parties, it is highly recommended having it included in the analysis). On the other hand, some variables yielded a correlation which even surpassed expectations. Yet, there are certain issues with the comparison and variables selection across the models—whether it is worth adding new variables to different models which may yield higher explanatory power whilst disrupting any chances of comparing the models among themselves. All the models that were conducted in the R software using the Comparative Study of Electoral Systems database run with little or no problems, especially thanks to the prior work of the authors. As it happens with regression, the variable selection was then the main issue. It may, however, be addressed and evaluated in the future research.

The research topics of this thesis has already been described by many authors from various countries. And recently, political behaviour has become an interesting field of study (at least from the sociologists and political scientists' view). Since the 1970s, many academics have studied the process of *dealignment*, which is closely related to the erosion of partisanship and the increasing level of electoral volatility. The two mentioned phenomena are present in all the countries, they are, nevertheless, somehow specific in Central and Eastern Europe. The so called “hurricane season”, high level of party switching, and the erosion of party-voter relationship are threats not only to the political systems, but also the democratic process itself. A similar analysis might then elaborate on and explain those matters.

The analysis pointed out that there are different types of volatility and they indeed do have different variables able to explain their occurrence among the voters. There are, however, minor differences among the examined countries. Nevertheless, one may say that the CEE countries are quite similar, at least when it comes to electoral behaviour.



First, when comparing the models, they share a similar level of “volatility” among the variables explaining the specific types of electoral behaviour. For example, the Volatility Type 1 and Volatility Type 2 (stable voters and stable non-voters, respectively) should share the same variables explaining the model, only in a different direction. This has, however, never been the case. The same can be noted regarding other models as no general and all-explaining variable or pattern could be found. However, it is possible that different types of volatility are being fed by other variables which are either not currently available or have not been analysed in the models.

Secondly, when comparing the countries, the same models of different countries are more or less explained by the same or similar variables. While the pattern was often harder to identify, some assumptions can be drawn (the variables of education and additional economic variable as well as employment type have mattered most of the time). This, however, does not mean that the countries of Central and Eastern Europe are not similar in their patterns of electoral behaviour. Both the theoretical concepts in academic literature and the results of regression models do confirm that it makes sense to study the political systems together or to compare them to elaborate on electoral volatility in CEE.

Thirdly and inconsistent in time, when comparing the models longitudinally in the years after the transition, some variables had been able to explain the models better, while the situation has changed and differed few electoral terms later. This makes sense as in the first transition years, as one can imagine, the social, demographic, economic, and value variables do increase neither voting for a respective party nor electoral volatility that much since the potential joy of voting freely after the years of authoritarian rule (for most of voters it was the first time in their lifetime) might have resulted in voting for literally any party, not only the one the respondent would attach to in accordance with its characteristics.

And finally, while one can say that there are certain characteristics pertaining to specific types of electoral behaviour (and depending on the results, these tend to change every few years), the most important finding is that the factors that affect voters’ electoral behaviour are being decided amid the young years of voters’ lives. The causes and relationships that are found in this research study, based on the data from two decades ago, may have roots in the antecedent events or actions (from the era of thirty or more years ago). The most relevant variables, such as education, economic variables, and mainly the socio-economic status, or attitudes towards democracy are acquired in the early stages of life. Even if there were any research studies that

would analyse the current data, the actual factors, meaning the reasons for electoral volatility, had taken place during voters' childhood or in the stages of early adolescence. Looking back on the current situation, this is the reason why political elites should concentrate on the issue of socio-economic status, minimise low education, and promote voters' trust in democracy and political institutions. The results of future research are decided nowadays by ordinary citizens and their quality of life.

The research models have proved that there are characteristics specific for different types of volatility, and thereby confirming the hypothesis from Introduction. These factors tend to change in time and require a further analysis. A limit of this research lies in the fact that the variables that had been expected to best picture reality of electoral behaviour (two questions on attitudes and trust in democracy) were collected only in last, 5<sup>th</sup> Module of the CSES. Therefore, these factors cannot be analysed and compared to the previous elections. In this regard, future research is needed if any impact of these factors on electoral behaviour is claimed. Another way of improvement is to try using various statistical models (Poisson regression, for example) to see whether they fit the data distribution more suitably. While there may not be any objection to the data format and accessibility, a more systematic attitude would fit the analysis. The data from the Comparative Study of Electoral Systems are beyond perfect, only a simple formatting for better analyses is required but that comes with the nature of election studies this thesis has relied on.

Academic literature and knowledge as well as the theoretical background for any research of this type is more than sufficient. And while one may say that more information on electoral volatility of CEE should be gathered, in my opinion, the existing literature is just accurate to leave the door freely open for additional research studies on the one side and yet it provides enough information as a cornerstone other scholars may work up. And as it was showed in the methodological and result part, the analysis of these factors is not an easy task, especially when researchers do not own the fitting data and/or is not skilled in more sophisticated statistical models. The contemporary field of electoral behaviour views Central and Eastern Europe as the "laboratory for research" (Haughton, Deegan-Krause 2015). Political scientists study those new democracies with the same passion as the Western ones, even though barriers caused by the missing data or more complicated patterns do persist. The future research across this region may bring new findings which may be for the benefit of the West too. The issue of electoral volatility, especially the query on how to reduce the number of voters who switch political parties they vote for in subsequent elections, or voters who regularly abstain

from voting, should help political elites and democratic institutions design the policies that would increase the overall stability of party systems. That applies, of course, if they prioritise and prefer long-term conditions and the well-being of democracy to their own political ambitions which are (no doubt about this) easier to be achieved thanks to volatile and short-term sympathisers.

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## Appendix

List of R packages used:

```
library(writexl)
```

```
library(readxl)
```

```
library(broom)
```

```
library(dplyr)
```

```
library(ggplot2)
```

```
library(readxl)
```

```
library(lme4)
```

```
library(lmerTest)
```

```
library(ggsignif)
```

```
library(Matrix)
```

```
library(tidyverse)
```

```
library(ggpubr)
```

```
library(tidyverse)
```

```
library(cowplot)
```

```
library(lme4)
```

```
library(sjPlot)
```

```
library(sjmisc)
```

```
library(effects)
```

```
library(sjstats)
```

```
library(foreign)
```

```
library(ggplot2)
```

```
library(MASS)
```

```
library(tidyverse)
```

```
library(dplyr)
```

```
library(pscl)
```