

Effect of Physical and Human Geographical Features on the Results of Elections-Comparative analysis of Different Countries

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Abstract

Electoral Geography is a new and interesting sub-direction of Human Geography. It includes finding out the tendencies that are revealed by electorate at the polling stations. Then, election results and tendencies in general, are transferred into Geographical space. The main goal of electoral geography is to reach conclusions from pondering these tendencies. These conclusions are interesting for people who work in Human Geography, also for candidates and political parties and for ordinary people, who are interested in the results of upcoming elections, results can be easily predicted if we know the tendencies of electoral geography of our country. Unfortunately, electoral geography as a science is not developed in Georgia. That is the main reason why I have decided to choose this topic for our conference. I have also decided to choose Georgia as one of the countries while conducting comparative analysis of electoral geography of different countries in this survey. Despite being young state, from the electoral map of Georgia we can find out some interesting tendencies. I think my decision will be a good donation in the process of developing Electoral Geography as a science in Georgia. My survey will not be only about the dependence of election results on Human Geographical features such as Language, Religion of the people, Culture and Ethnicity, but also on the Physical Geographical features, such as terrains and proximity to the sea. We will find out if the countries show similar or different tendencies. In this thesis we will use different research methods: Historical Analysis will be massively used, because while speaking about the electoral tendencies of different states, we need to compare election results of different years to one another. Also, we will have a general cartographical description of regions and subdivisions of countries which have been chosen. We will also analyze detailed electoral maps region-by-region, city-by-city. In survey the most important Human Geographical features of regions will be observed, such as density, Literacy rate, Average salary, Average age of the population, HDI, Ethnicity, Religion, Language.... The Method of data comparison will be used, as the aim of the research is to find out electoral tendencies of different countries, we must compare the results of elections of different years and reach interesting conclusions.

Keywords: Elections, Geography, Turkey, USA, Georgia

Introduction

Electoral geography is a new and very interesting sub-direction of the human geography field. It is a helpful indicator to predict final results, election winners or outcomes, even in the first hours of vote counting, but for correct predictions, we should know our countries' trends based on the single regions or even single polling stations. In the United States of America, we cannot imagine election nights without electoral maps anymore. Especially after 2008, all major cable networks work based on electoral geographical trends, not state by state or even county by county, to predict the final results of their elections. Then this sub-direction of human geography spread across other countries in Europe and later in developing countries, such as Turkey and Brazil. Unfortunately, electoral geography is not

popular in Georgia yet; our networks do not have specialists who can explain results from polling stations on a wider scale and, based on it, predict election results. This is a main motivation for me. I do believe that this study field should become popular in our country, especially as we are a developing nation; political parties and organisations should build their campaigns on the awareness of this science. I hope that my survey will be helpful in the process of developing this sub-direction in our country.

In this study, we will identify the major trends in electoral geography across different countries. I chose the US because it invented electoral geography and has the most accurate data. Turkey – as one of the Islamic countries where we have competitive elections – and Georgia, as it is our country, and my interest is to make this field more popular than it is right now. We will also have a comparative analysis of the trends of these countries and find out their similarities and differences. We will analyse results of different elections of selected countries, their electoral maps and trends based on geographical features, such as demographics and physical geography.

Methods and Materials

As studying electoral geography involves analysing how geographical factors affect electoral outcomes, it requires a combination of quantitative and qualitative methods, as well as different materials.

In this study we will usually use electoral data analysis, which involves statistical analyses of voting results, voter turnout and turnout of different demographic groups. Techniques include regression analysis, correlation studies and cluster analysis to identify trends based on the time and period in history. We will also use GIS (Geographic Information Systems); they are essential because of their helpful role in visualising electoral data, identifying patterns, and analysing the impact of geographical factors like urbanisation, terrain, and topography. We will also use demographic and socioeconomic analysis, as it is a main and vital part in terms of people's behaviour in front of their ballots.

Case studies – as we have three different countries in this study and different elections to study, we will use a method called case study, as we need in-depth studies of specific regions or elections to provide detailed insights into the influence of geography on election results.

Materials which are going to be used in this study are voting records, voter turnout data, polls and surveys, and demographics of different regions of the countries, as analysis of election results should be made based on these demographical data. We will also use census data and political boundary maps to find out if the boundaries are correct or if there is a factor of gerrymandering in the outcome.

We will also use secondary sources such as government reports and academic articles and books about this issue.

Results

In this survey two tables are used: Table 1 and Table 2. Table 1- Table represents detailed results of 2012 parliamentary elections of Georgia. It compares outcomes of 10 biggest urban areas and 10 smallest mainly rural towns to underline the difference between results from these geographical areas. It also compares mountains and seashores to demonstrate how different people in the mountainous regions and seashore cities behave during the elections. Table 2- Table represents detailed results of 2021 local election of Georgia. It compares outcomes of big urban areas to the rural towns to demonstrate different electoral results. It also compares mountainous regions to the seashores.

Table 1. Results of 2012 Parliamentary elections in Georgia

Party	Nationwide	Heavily populated by Minorities	10 Biggest cities	10 smallest towns	Mountains	Seashore
GD	54.97%	26.6% (-28.3%)	61.7% (+6.73)	40% (-14.97%)	45% (-9.97%)	56% (+1.03%)
UNM	40.34%	70.8% (+30.5%)	36.4% (-3.9%)	54% (+13.6%)	51% (+10.6%)	41%
Others	4.69%	2.6% (-2%)	2% (-2.69%)	6% (+2.69%)	4% (+2.69%)	3% (-1.69%)

Table 2. Results of 2021 local elections of Georgia

General Results	General Results	Capital Cities	5 Biggest cities*	5 Smallest Towns*	Mountains
GD	46.7%	40.39 (-6.31%)	39% (-7.7%)	52% (-5.3%)	53% (+6.3%)
Pro-Western Opposition*	51.3%	58.01% (+6.71%)	About 60% (+8.7%)	46% (-5.3%)	43% (-8.3%)
Others*	2%	1.6% (-0.4%)	1% (-1%)	4% (+2%)	4% (+2%)

Electoral Geography, USA

In the United States of America, electoral Geography as a sub-direction of human Geography is very popular. There have not been single election night without big boards and electoral maps. Specialists analysing election results state by state and county by county on electoral maps and they conclude major tendencies. This usually happens on all major TV networks, such as CNN, MSNBC, FOX, and CBS.

President of the USA is not directly elected by the people. People in every state elects electoral college delegates and whoever wins a state it takes all electoral votes. Number of Electoral votes for every state is depend on its population and is calculated by this formula: Number of State congressional districts+ Number of Senators (2 in every state), so for example, California has 52 congressional districts based on 2020 census and 2 senators, so the biggest state of the union has 54 electoral college delegates and usually all of them goes to Democratic party.

In US we have two major parties (fig. 1). Republicans and Democrats. Majority of Republicans are conservatives, they are pro-life, so they support ban of abortion. They were against same-sex marriage, majority of them does not support strict gun control. Democrats are usually liberals, they are pro-choice, so they support abortion, they supported same-sex marriage, liberal economies and strengthening alliances around the world to defend democracy from terrorism and states such as Iran and Russia.

Today, Republicans controlled by MAGA group aspiring towards more conservatism and Democrats becoming more and more liberals, so environment becomes more polarized than it was years ago.

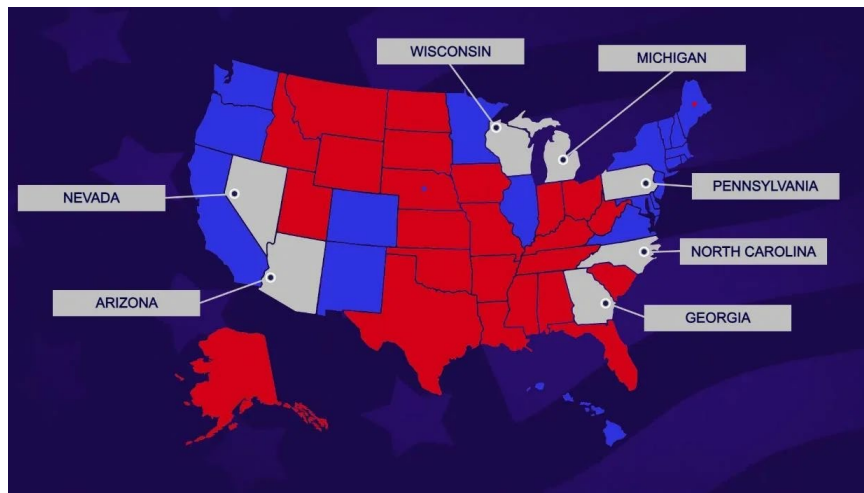


Figure 1. US electoral Geography. Red, Blue and Swing states. Source: (Burr, 2024)

As we know ideologies of political parties, now we can see geographical features of US elections and conclude some trends on it.

This is electoral map of the US presidential election. Blue states are state that always vote for Democratic nominee, Red states are leaning towards Republicans and Yellow states are so-called swing states. Neither Blue nor Red states are not enough to earn 270 electoral vote in presidential election without yellow states, so candidate cannot become president by only Blue or by only Red states.

Which states are Blue?

Blue states are the state which have a great economy, majority of their population lives through coastlines and states in which we have major urban areas or megapolises. For example, California. The biggest state in the US, won by Biden by more than 5 million votes and by Hillary Clinton by more than 4 million votes. California always votes for Democrats thanks to major population centers, such as Los-Angeles, San-Francisco and San-Diego. Let's talk about Illinois. Which is one of the biggest state in the US (fig. 2).

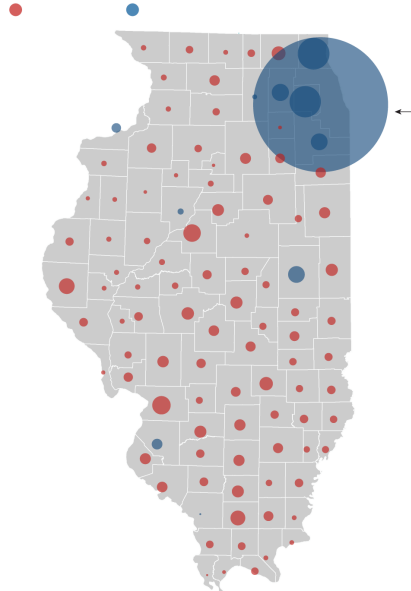


Figure 2. Illinois 2016 Presidential Election Map. source: (Bentle, 2019)

It is clear that majority of counties of Illinois has been won by Donald Trump, but Trump has been blown out of the water by Hillary Clinton. Because it is true that majority of the counties are red, but we have one huge blue county in the north-eastern part of the state and it is great city of Chicago. Hillary Clinton earned more than 70% in Chicago and that's why she won Illinois by double digit margin.

On the Other hand, Republicans are winning state in which there are no major population centers so urbanization is relatively low (fig. 3).

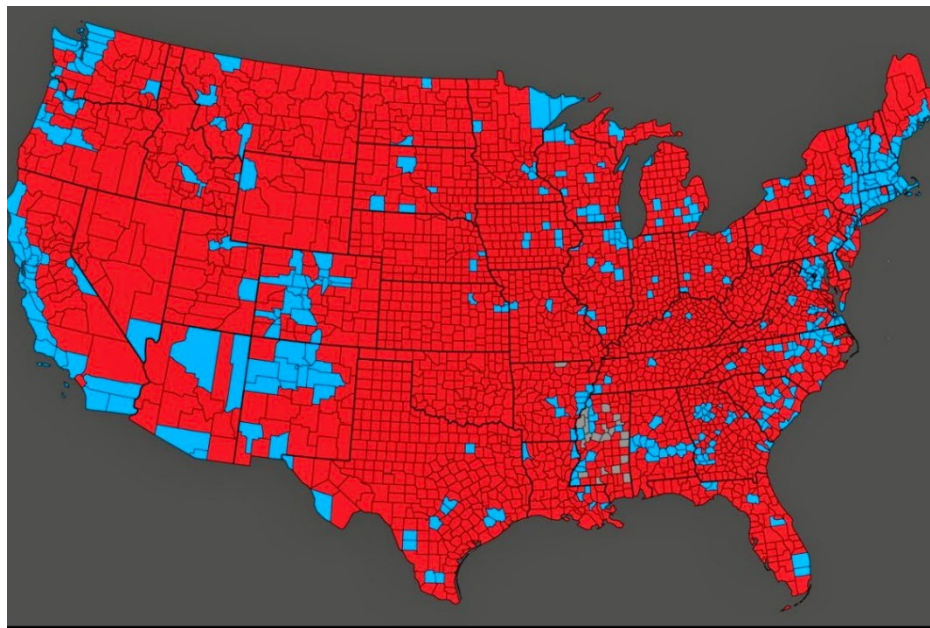


Figure 3. US electoral map county by county

But in the swing states we have a situation that number of people in a major population centers and people in rural areas are approximately same. So, in these states everything comes down to suburban electorate, they can swing to Republicans or Democrats depend on the nominees and environment, For Example, in 2016 Hillary Clinton lost because of Wisconsin and Michigan. In Michigan, Hillary won Detroit by a huge margin, but lost rural areas by double digits, so everything came down to suburban areas, where Trump won narrowly and carried this huge state. Same happened in Wisconsin (fig. 4).

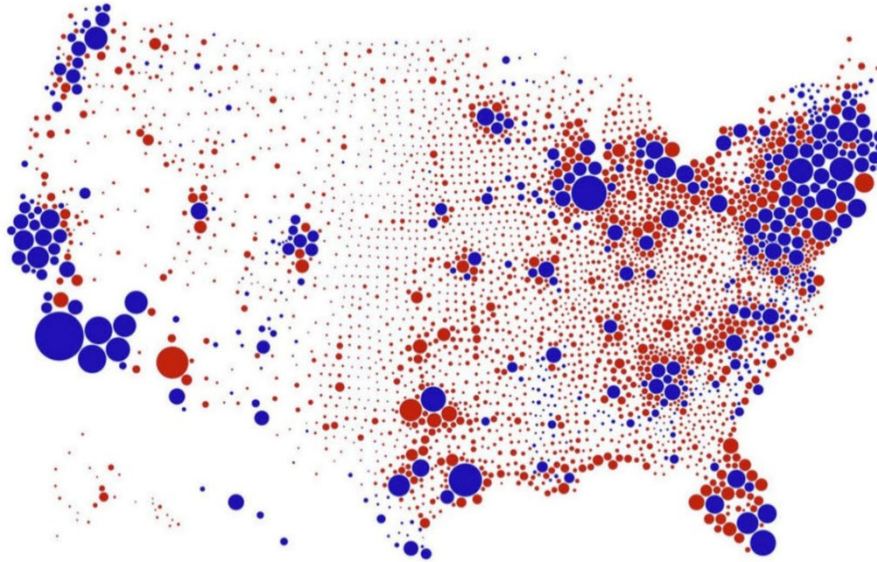
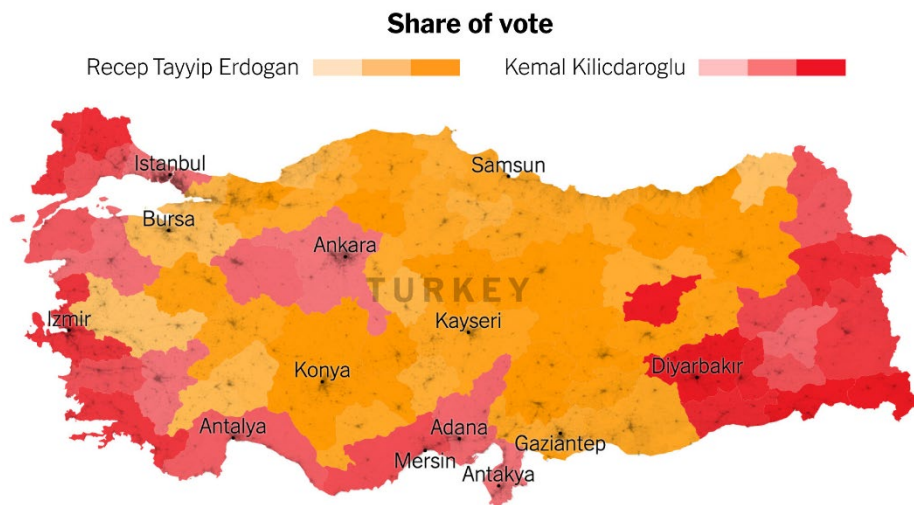


Figure 4. "Land does not vote, people do"

If we only see map N1, we will be sure that Republican nominee won the election, because 70% of the counties have been won by him, but then we should see the second map. Big cities, coastlines and urban areas voting for Democrats and in the middle of the country, which is a mountainous region Republican is ahead. In these republican counties, population is low, but counties are big by area, density is very low, they are rural counties and that's why it seems on the first map that Red won by a landslide.

After analysing electoral maps of the United State, one thing is absolutely clear: Nominees of Republican party, which are conservatives are winning in mountainous regions, rural and suburban counties and more liberals winning coastlines and big urban areas, states where we have urbanization more than 70%. After the US, we will also review Turkey and Georgia and find out if the trends are same or different.

Electoral Geography, Turkey



Source: Preliminary results from Anadolu news agency

Figure 5. Results of Turkish presidential election. Source: Leatherby

While having research about Turkish electoral Geography, we have a lack of materials and data compare to the United States of America, where electoral geography as a sub-direction of human Human Geography is the most developed. But we can still make some conclusions based on Geographic Factors such as division between urban and rural areas and we can compare it to the US (fig. 5).

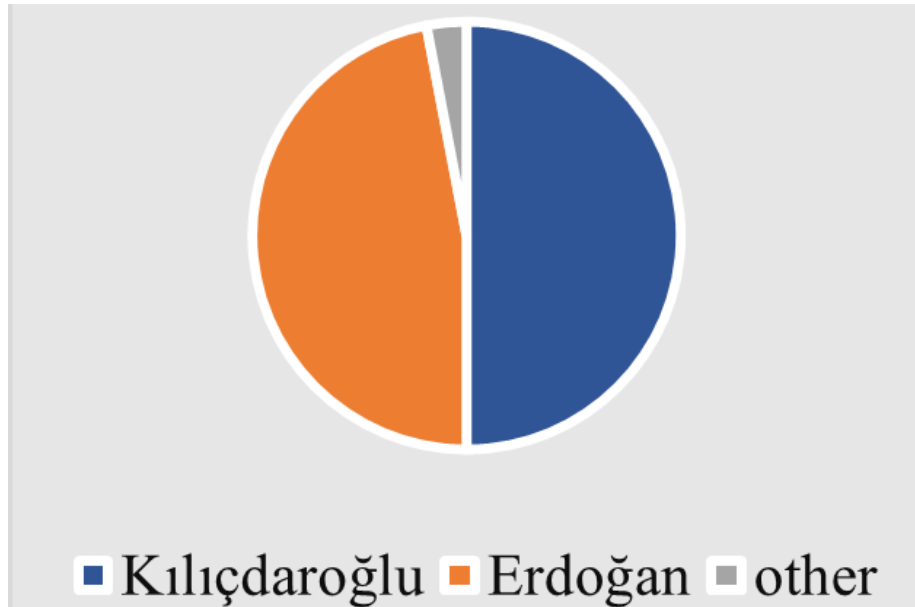


Figure 6. Daily Sabah election results in 10 biggest cities (Daily Sabah Election Results 2023, 2024)

First of all, In Turkish politic we have three major parties. One is AK parti, which is led by Erdogan. Second main opposition, CHP Party of once Mustafa Kemal Atatürk, which supports ideas of secularism and modern liberal-centrism. We should underline that CHP supports modern time secularism and defending of rights of minorities, such as LGBT rights for example, which is very unusual for Islamic Society. Istanbul was the first city of the Islamic world, where Pride Festival has been held, under mayor Erkem Imamoglu, who received 54.22% in 2019 controversial election of mayor of Istanbul. Third strong party is Pro-Kurdish regional party, which is always ahead in south-eastern party of Turkey (fig. 6).

The tendencies of The US elections are that Democratic party always wins urban areas and states where percentage of urban population is much more than rural. Now we should compare data of Turkish election to the outcomes of the US and see if tendencies are similar or different.

Kemal Kilicdaroglu, candidate of CHP, backed by liberal and centrist population, wins: Istanbul (First biggest city of the nation), Ankara (Second biggest city of the nation), Izmir (Third biggest city of the nation), Antalya (5-th biggest city of Turkey) and other big urban centers such as: Mersin, Adana, Antakya, Diyarbakir. To sum these results up in urban areas: (Results based on 10 biggest cities of Turkey).

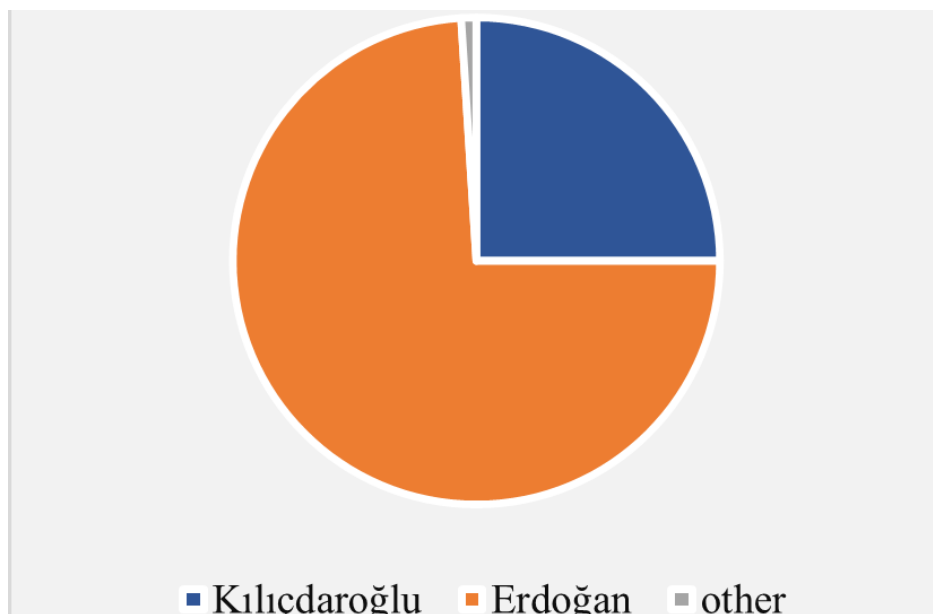


Figure 7. Daily Sabah, election results 2023 in 10 smallest cities, (Daily Sabah Election Results 2023, 2024)

Now, we can sum results of 10 less populated towns of Turkey: Difference is clear. Kilicdaroglu won big cities but lost more rural areas heavily (fig. 7).

Tendencies are absolutely similar to the US. More conservative parties winning in mountainous regions and rural areas, more liberal parties winning in major urban population centers.

Electoral Geography, Georgia

Georgia was back on the political map of the world in 1991. The first competitive election in the country since it regaining independence from Soviet Empire was held in 2008, where incumbent president Mikheil Saakashvili was running against Levan Gachechiladze, who was a nominee of “National Council”, Badri Patarkatsishvili was also running, he was pro-Russian candidate.

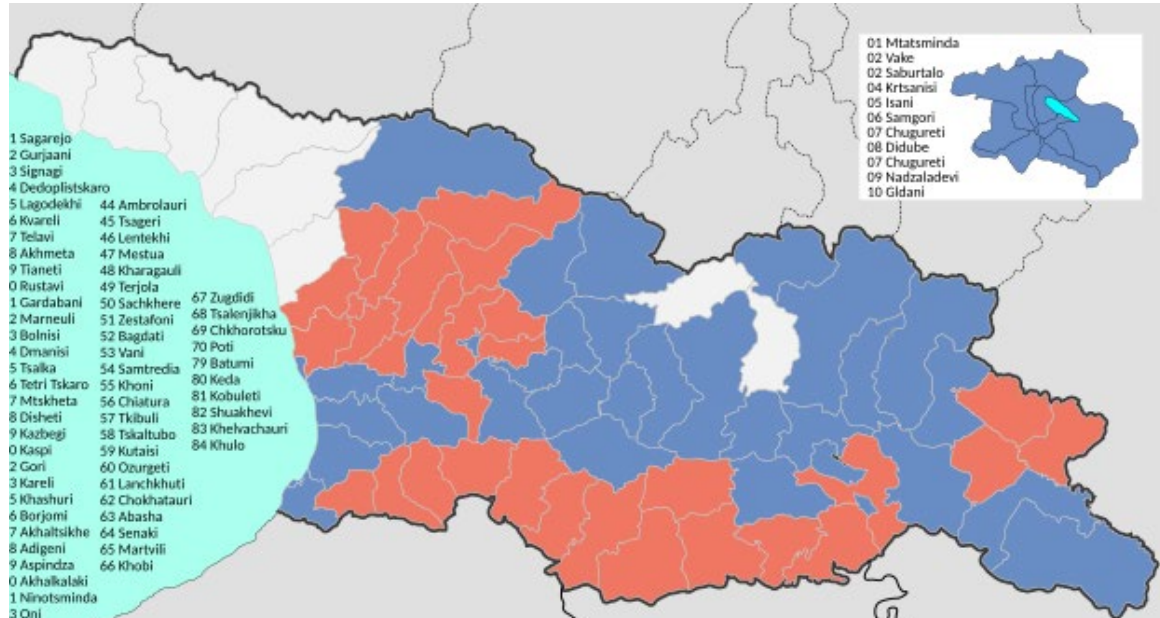


Figure 8. Map of 2012 parliamentary elections in Georgia. Source: (Livny, Babych, Mzhavanadze 2017)

It was a time when Mikheil Saakashvili was very popular in Georgia. He has won this election by avoiding runoff, received 54.7% of the votes, but if we look to the geographical features of this election, we will see that Saakashvili won because of landslide victory in regions and southern Georgia, where ethnical and religious minorities live and they always support governments heavily. But, it was the first time, when incumbent president lost Capital city, we can consider it as the first signal that Georgia was inclined towards the tendencies of different countries. Opposition candidate was supported by the biggest city of the nation.

In 2012, we have the first peaceful transfer of power since regaining independence. UNM, party of Mikheil Saakashvili was defeated by GD, party of Bidzina Ivanishvili, which was coalition of 6 different parties in 2012 (fig. 8).

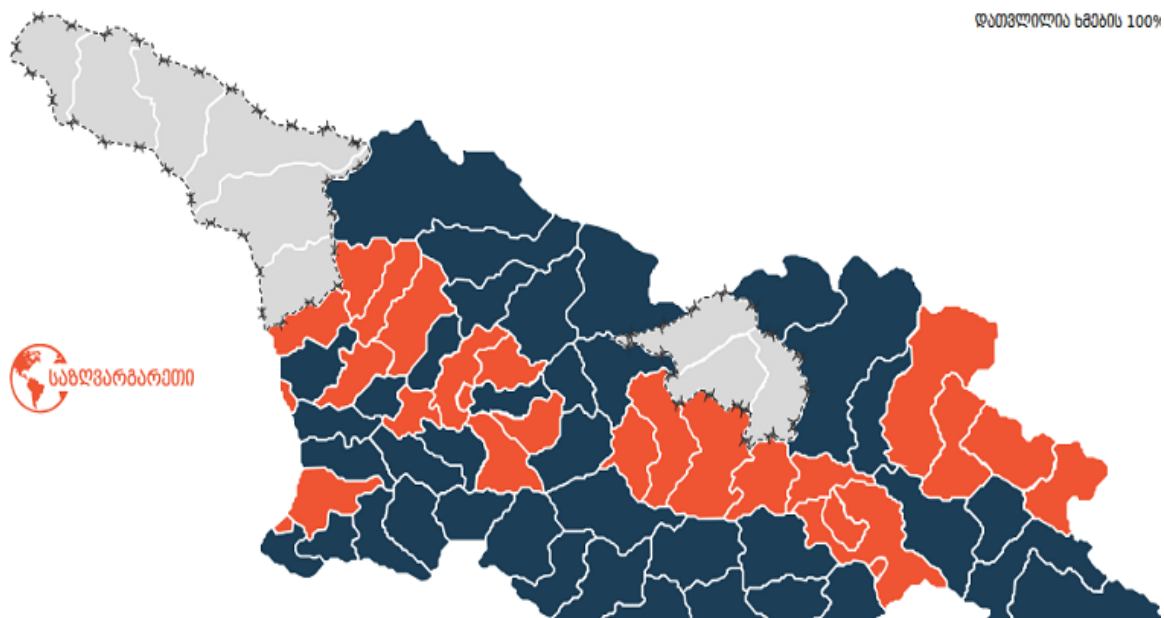


Figure 9. Results of Presidential Election of Georgia 2018: Blue- GD backed Salome Zourabichvili, Red- UNM candidate Grigol Vashadze

We will start detailed analysis of 2012 election map:

Detailed Analyses of the results of 2012 elections shows same trends as in Turkey and the US. Opposition GD, which was center-liberal party in 2012, standing for Human Rights, wins big urban cities, capital city and seashores, which are active economically. More conservative opposition UNM wins ethnical minorities and small towns, rural areas and is tie with GD in suburban areas.

The next election which will be researched in this survey is 2021 local elections of Georgia, I skipped 2020 because of untraditional environment because of pandemic.

Results of Presidential Election of Georgia 2018: Salome Zourabichvili- 38.6%, Grigol Vashadze- 37.7%. We have same trends on the map of 2018 presidential election as we had in 2012. Difference is that in 2012 Government was UNM and southern Georgia heavily populated with ethnical and religious minorities has been won by the, but now it totally changed as GD took over the power, this region has been won by GD. It proves that Southern Georgia populated by minorities vote for government and I think it has its reasons. First, these minorities have feeling that they are not equal citizens as ethnically Georgians, so they don't want to be opposition of government. Second, Because of different language and informational vacuum, they have no access to every information necessary, news and announcements of political figures. This has its influence on their decision. Also, Georgia is hybrid democracy and manipulation with the votes of minorities, especially who lives in the rural areas is easy for government (fig. 9).

As in 2012, Opposition wins in capital city and in major urban areas, but government backed Zourabichvili wins in villages, rural areas, mountainous regions and among ethnical minorities. Trends are exactly the same, as in 2012.

This gives us opportunity to conclude that in Georgia Opposition, which was more liberal than government in 2012 and which is more liberal than the government now, is strong in the capital city and big urban areas, but they lose because of big margins among ethnical minorities and rural areas. Therefore, Georgian trends are the same of Turkey, which has many similarities to the Electoral Geography of the United States of America.

Results of Local elections of Georgia 2021: We had reached a conclusion above, but to be sure by 100%, I decided to analyse one more election season in Georgia, local elections 2021 (I skipped 2020 because it was held under unusual circumstances, which was caused by Covid-19 Global Pandemic).

In 2021 we had local elections in Georgia. Georgian Dream received about 47% of the votes, 52% was received by Pro-Western opposition. (100-47- % of Alliance of Patriots of Georgia). But the results were different by urbanization, ethnicity and terrains:

- 1) Pro-western opposition ("UNM" + "Gakharia for Georgia" + "Lelo" + "Aleko Elisashvili Citizens", + "Girchi- More Freedom" + "European Georgia" + "Elene Khoshtaria-Droa", + "Girchi" + "Labour party of Georgia"
- 2) Others: Pro-Russian opposition parties: "Alliance of Patriots of Georgia" and "Nation"
- 3) 5 Biggest Cities- Tbilisi, Kutaisi, Batumi, Rustavi, Zugdidi
- 4) 5 Smallest towns- Kazbegi, Lentekhi, Mestia, Oni, Aspindza
- 5) Mountains- Mountainous regions of Georgia- Svaneti, Mtianeti.

With the election of political parties, we had mayoral races in 2021. Opposition candidate lead or tied in the second round in 4 out of 5 biggest cities of Georgia (UNM candidate lead in Zugdidi, Batumi, Kutaisi. Tied in Rustavi and was behind in Tbilisi).

About 80% of municipalities, which has been won by GD candidates by margin to avoid runoff (50%+1), is rural and suburban, without big urban population

Detailed analyses of 2008, 2012, 2018 and 2021 election proves once more that Georgia has its trends in terms of electoral geography. There is a clear contrast between rural and urban areas, coastlines and mountains, majorities and minorities. So, it has similarities to Turkey and The United States of America.

Conclusion

In this survey, we reviewed the electoral geography of three different countries and researched major tendencies of the electorate based on their geographical environment. Research indicated that geographical division makes a huge controversy on electoral maps. Coastlines and cities with ports always lean to more liberal candidates and parties or more diversity in the political process. This has some reasons: First, coastlines usually have a more diverse population than rural areas; such diversity can lead the electorate to more progressive views. Mountainous regions are characterised by rural populations that tend to lead conservative, traditional lifestyles, which means that progressive ideas and modern culture require more time to become integrated into their daily lives. The second reason is

economy. Industries like tourism, finance, and technology often drive coastal economies. Education is the third factor, as educated individuals tend to support progressive ideas more than those without a university education. The fourth reason is urbanisation; coastlines and big cities usually have more universities and urban amenities which are attractive for young people, and these demographics always support progressive ideas and liberal political groups. In contrast, the majority of the rural population in every country are older generations which do not support globalisation, liberal policies and change of lifestyle.

Research showed us that the hypothesis of our thesis – the results of elections in the democratic countries of the world and regions of these countries directly depend on human and physical geographical features of the nation – has been proven true. Election results are largely dependent on geographical features. For example, if turnout is much higher in urban areas and coastline cities, liberal candidates have more chance to earn more support than conservatives; if turnout is higher in mountainous regions and rural areas, conservatives have more chance. We saw the 2016 US presidential election, which was won by Donald Trump because of huge turnout in rural areas and suburban men, which was considered a “rural revolt” against liberal Hillary Clinton.

Competing interests

The authors declare that they have no competing interests.

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