Economic, Social and Historical Determinants of Voting Patterns

In the 1990 and 1992 Parliamentary Elections in the Czech Republic

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Abstract: The transition from a centralised authoritative communist state to a pluralistic, liberal-democratic civic society is a global process consisting of a variety of individual changes. The common feature of these „transitions of sub-systems" is the growth in differences between individuals, groups of people, localities and different regions. The article focuses on the geography of the voting patterns in their mutual relationships with the geographies of the underlying explanatory factors. Special emphasis is placed on the examination of social, economic and historical factors. The differences between the 1990 and 1992 parliamentary election results are sought out in order to evaluate the changing significance of the individual explanatory factors.
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Introduction

The transition from a centralised authoritative communist state to a pluralistic, liberal-democratic civic society is a global process consisting of a variety of different individual changes. A common feature of these ‚transitions of sub-systems' is the growth in the differences between individuals, groups, localities and different regions. The breakdown of the Communist rule in 1989 and the subsequent 1990 and 1992 parliamentary elections in the Czech Republic have provided Czech geographers with their first opportunity to view the relationships between space and politics in the country. It was hardly surprising that recent studies of voting patterns in the Czech Republic revealed substantial differences in the voting behaviour of the different regions (for more detailed information, see [Kostelecký and Blažek 1991; Jehlička and Sýkora 1991; Pavlínek 1991; Kostelecký and Jehlička 1992; Jehlička, Kostelecký and Sýkora 1993; Kostelecký 1994a, 1994b]).

The most common questions arising from a consideration of the spatial variation of political preferences are: What factors influence the spatial variation of voting preferences? How important are the various kinds of explanatory factors? Are the voting patterns temporally stable or do they change substantially after each election? Some of these questions have been at least partially answered in the above cited literature. In this chapter, the primary focus will be the study of changes in voting patterns between the 1990 and 1992 parliamentary elections in relation to the geography of potentially underlying factors. The hypotheses to be tested can be expressed thus: there are changes in the importance of the different ‚underlying factors' explaining the spatial variation in electoral preferences during the initial (and most dramatic) phases of the transformation

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process. The importance of the local economy's situation, the socio-economic status of the inhabitants and similar factors will increase while, on the other hand, political traditions and cultural factors will lose their impact.

Theoretical approaches to electoral studies

Any researcher seeking to study and evaluate the impact of the different factors determining people's voting choices, generally have to two possible methodologies at their disposal. The first possibility is to use the survey data and then analyse this information collected on the basis of individual respondent's answers. This method is usually considered safer and more convenient since it avoids the problem of ecological fallacy, which constitutes the erroneous substitution of the ecological (aggregate) correlation between voting preferences and socio-economic characteristics for the same type of correlation on an individual level [Robinson 1950; Taylor and Johnston 1979]. It is worthy of note that in this type of analysis, the ‚units of observation‘ are individuals, (data are collected on the level of individuals): the investigator seeks to recognise the influence of various personal characteristics on the individual's voting decision. Some commentators, however, draw attention to the fact that in some localities or regions electoral results are not the simple sum of the individual votes which can be ‚predicted‘ according to the individual voters' personal characteristics: the voter's social and political environment is sometimes considered of equal importance to his or her personal characteristics [Miller 1977, 1982; Johnston 1986; Agnew 1987].

If we had sought to incorporate ‚the community dimension‘ into our study and to analyse the electoral results using the local or regional communities as the units of observation instead of individuals, the survey would still constitute a very good tool for collecting the basic data [Havighurst and Jansen 1967; Vajdová 1992]. Unfortunately, such large data sets that permit a detailed view of the relationships between the electoral preferences and the individual voters' other personal characteristics (such as occupation, age, church membership etc.) living in different localities and regions (and being thus members of different communities), are not usually available. This was also true of post-communist Czechoslovakia. Researchers interested in the regional variations of party preferences and/or contextual factors influencing the ‚community of voters‘ voting decisions usually have to adopt the second available approach – ecological analysis – in spite of its inherent difficulties. After years of decline in the popularity of ecological analyses (mainly owing to the development and number of large-scale election surveys) these methods are now being advocated by a growing number of researchers [Johnston 1986; Johnston, Pattie and Johnston 1988; Berglund and Thomsen 1990] and rather widely used. Besides the fact that ecological analyses are often the only possible method, their adoption can have some advantages which usually go unmentioned in the literature. Some of the contextual factors influencing voters' decisions can be meaningfully operationalised and measured on the level of region or locality alone (the regional or local community). Criminality represents a typical example of this, often being an important political issue during electoral campaigns. The criminality rate is, however, far more characteristic of the locality or region than of the voters living there (at least in some places the majority or a substantial part of criminal acts are ‚imported‘ by individuals coming from outside). A further typical political issue, which is not a personal characteristic, is environmental damage. Voters living in highly polluted regions tend to evaluate the various parties' political programmes with ‚different eyes‘ than other

voters, even though substantial differences in their social and economic status may not be revealed.

Since political geography did not actually exist in Czechoslovakia under the Communist rule – hence providing nothing to follow (both in theory and empirical studies) – we chose to adopt the theory of electoral cleavages developed by Lipset and Rokkan [1967] as the basic theoretical framework for our analysis. According to the electoral cleavage theory, political parties generate mobilised support within the society by focusing their activities on those social groups reflecting the dominant social conflicts at the time of mass suffrage's introduction. According to Lipset and Rokkan, four major conflicts with electoral implications can be identified: conflict between dominant and subject cultures, between church and state, between agriculture and industry and between labour and capital. Each conflict may produce a social cleavage within any country. The unique combination of cleavages in the individual European countries, which is a consequence of different histories, has resulted in a variety of political party systems within Europe as a whole. The decision to adopt the cleavage theory can, of course, be criticised, due to the fact that the social and political situation in the Czech Republic, as in other post-communist states, is in many aspects incomparable with long-term Western European liberal democracies. We hope, however, that it will help us to interpret the results of analyses, at least since, as a part of the Austrian Monarchy (till 1918) and the first Czechoslovak Republic (1918-1938), the Czech Lands underwent a social and political development very similar to Western European countries.

Lipset's and Rokkans's theory is, however, sometimes criticised for omitting the importance of the contextual factors influencing the voter's decision and differences in various regional sub-cultures. Even compositional categories such as occupation or church affiliation „may not mean the same in every place within the state's territory" [Johnston, Pattie and Johnston 1988]. Moreover, several studies indicate other important ‚explanatory factors' not included in the original cleavage theory – the state versus private sector cleavage, the rise of localism, regions' and localities' different political histories etc. [Dunleavy 1979; Archer and Shelley 1986; Agnew 1987, Johnston and Pattie 1990 and others]. We have tried to include all possible explanatory factors within our conceptual schemes in order not only to indicate the most influential factors but also to evaluate their relative importance and its development in the period between the 1990 and 1992 parliamentary elections.

Methods employed and explanatory variables

The most common approach of ecological methods is to locate the aggregate (ecological) correlation between the share of votes received by the individual political parties in a given spatial unit (dependent variable) and the different characteristics describing the population as well as the social and political milieu within the observed spatial units (independent variables). Regression analyses are usually the most frequently adopted methods for doing so.

The first practical problem of these methods is to determine the scale of the spatial units to be used in the analysis. The electoral system operating both in the 1990 and 1992 parliamentary elections in the Czech Republic was the proportional representation system, with the eight multi-member ‚electoral regions' (for more information about electoral law, see [Jehlička, Kostelecký and Sýkora 1993]). Electoral regions with an average population size of about 1.3 million are too large and too few to serve as

observation units. On the other hand, the more than 4,000 municipalities in 1990 and the more than 6,000 municipalities in 1992 seem too numerous to form a basic spatial unit for the analysis. Moreover, a substantial amount of statistical data are not available on the municipal level. Mainly for the practical reasons mentioned above, we have chosen the districts (and the capital city of Prague as one spatial unit), which represent a compromise between regions and municipalities. There are 75 districts in the Czech Republic (including the city districts Brno, Ostrava and Plzeň), each with an average population of approximately 120 thousand inhabitants. The capital city of Prague has a special status and more than 1.2 million inhabitants. The population size of the districts ranks from 46 thousand (Rokycany in Western Bohemia) to 284 thousand (Karviná in Northern Moravia), the city districts not included. The modal interval of the population size is 100-125 thousand.

The second necessary step after determining the appropriate spatial units for the analysis, is to choose independent variables representing potentially explanatory factors. We decided to use as many independent variables as possible. In the first phase, about 40 variables were collected on the district level. The initial set of data included almost every available structural characteristic of district population (age, gender, occupation, education, housing ownership, income level, ethnic and religious structure, nationality etc.), characteristics of regional and/or local milieu (rate of urbanisation, environmental pollution, criminality, divorces, abortions...), as well as the variables incorporating political traditions and some aspects of the historical development of the districts. This enormous number of independent variables was then reduced by eliminating the mutually highly inter-correlated variables, after which a cluster analysis was used to choose variables representing groups of variables with similar spatial patterns.

The final set of independent variables consisted of the following:

UNIV - university educated people per 100 inhabitants (1991). This variable indicates the educational level. It has a high positive correlation with the share of inhabitants educated at the intermediate middle level (secondary schools) and, on the other hand, a high negative correlation with the share of people with only primary education.

WORK - the % of workers in the population (1991). This is one of the very low number of available occupational structure indicators. Typical class categories such as white-collar versus blue-collar or working-class versus middle-class were either not included in the official statistics during the Communist rule or did not exist at all (employees versus employed, for example).

AGRI - the % of people working in agriculture (1991). This figure reflects one of Rokkan's classical cleavages: The national average of the agricultural population was about 12 %, that of the industrial sector more than 50 % while about 35 % working in services.

OLD - age index = the number of retired people/number of children under 15 (1991). The higher the age index, the older the population in the district.

SAL80 - the average salary in 1980. This variable was incorporated as an indicator of relative wealth during the last decade of the communist rule, the intention being to test the possibility of retrospective voting, consisting of voting responding to perceptions of economic conditions in the recent past.

URB - the % of urban population in the districts (1991). The set of cities was determined by the Czech Statistical Office and is similar to the set of municipalities with more than 5,000 inhabitants.

CRIME - the number of criminal acts per thousand inhabitants (1991). Figures are taken from police statistics and indicate the level of criminality which, after the 1989 upheaval, has become an increasingly important issue.

ABORT - the number of abortions/number of new-born children (average 1988-1990). This variable has an almost identical spatial pattern to the divorce rate, the relative number of illegitimate children and similar characteristics. The ABORT variable can thus represent the group of family destruction indicators.

MORSI - the % of inhabitants declaring themselves to be ethnic Moravians or Silesians in the 1991 census (13.5 % of the population live mostly in the region of Brno – the former capital of the historic Land of Moravia). Moravians and Silesians speak Czech (as do the majority of inhabitants declaring Czech ethnicity) such that their classification within the ethnic groups is rather problematic. Declaration of Moravian (or Silesian) ethnicity can be understood as a characteristic of both ethnic and regional identity [see Daněk 1993]. 81 % of the population in the Czech Republic declared themselves to be ethnic Czechs.

ENVI - the aggregate index of environmental damage (1987). This is an aggregate of observed individual indicators of various types (including emissions of SO_2, NO_x, fly-ash, noise levels, quality of water, damage to the natural landscape etc.).

ROMCAT - the % of inhabitants declaring themselves to be Roman-Catholics in the 1991 census (national average 39 %).

NONCAT - the % of inhabitants declaring themselves to be non-Catholic Christians (national average 4 %). The group of non-Catholic Christian churches includes two larger – the Czechoslovak Hussite Church (similar to the Church of England) and the Czech Brethren's Evangelic Church – and several smaller Protestant churches. 40 % of the population declared themselves to be atheists, while 16 % of the population refused to answer this question during the census.

GYPSY - the number of Gypsies per thousand inhabitants. Figures are based on information collected by the municipal governments in 1989.

NEW - the share of newly settled (not original) inhabitants in the border region after the transfer of Germans and the first resettlement wave in 1945-1947. These figures were estimated by comparing data from the last pre-war regular census in 1930 with data from the first post-war unofficial census conducted in 1947, and serve as an approximate measurement of population changes since World War II.

NSP46 - the % of votes received by the centrist Czechoslovak National-Social Party in current districts territory during the last pre-communist elections in 1946 (national average 24 %).

SD46 - the % of votes received by the Czechoslovak Social Democracy in the current district territory during the last pre-communist elections in 1946 (national average 16 %).

CP46 - the % of votes received by the Communist Party of Czechoslovakia in the current district territory during the last pre-communist elections in 1946 (national average

40 %). The last three variables serve as indicators of district political traditions. Theoretically, it would be more convenient to use other indicators to characterise political traditions (ideally based on a longer time-series of electoral results), but the 1946 parliamentary election results constitute the only available information concerning voting patterns after the transfer of Germans (representing about 30 % of the pre-war population of the Czech Lands) and prior to the 1989 upheaval. Moreover, with the exception of the Communist Party, the voting patterns for political parties competing in 1946 were quite similar to pre-war ones.

A note about those independent variables not included in the list should be added. During the period between 1990 and 1992, there were some rapid changes influencing social structures, the most important of these being the process of economic transformation, which includes privatisation, the creation of a managerial class and employees, a rise in the number of self-employed, unemployed and poor people. During 1991 and later, the statistical data documenting this process was gradually included into official statistical outputs. It was thus impossible to include these figures in an analysis of the 1990 parliamentary election results and, of course, in the comparative study. Nevertheless, we do not consider this to be an omission of crucial factors influencing voting decisions. The share of private sector was not so substantial in June 1992, at the time of the parliamentary elections, because the first wave of so-called ,large-scale privatisation' had not then been completed (only about 10 % of the working population was employed in the private sector in June 1992, compared with about 40-50 % in mid-1994). At this time, the unemployment rate was also extraordinarily low (about 2.5 %) and even on the decrease. Furthermore, some earlier studies failed to confirm any statistical relationship between the unemployment rate and the voting for specific parties on the district level [Tomeš 1992; Kostelecký 1993]. It is clear, however, that the indicators mentioned above will have to be taken into account in any future analyses. A variable indicating the share of votes received by the pro-Catholic Czechoslovak People's Party on current district territory in the last pre-communist elections in 1946 (national average 20 %) also had to be excluded from the set of independent variables due to the extremely high intercorrelation with the other independent variable, ROMCAT (the share of Roman-Catholics in 1991). Used thus, the variable ROMCAT to some extent indicates both the contemporary religious structure of the population and the specific political tradition of the pro-Catholic vote, because of the significant time-space stability of the politically specific Catholic population.

After having chosen both units of observation and the independent variables, the problem of determining important variables remained. We used a multiple regression analysis in order to build the statistical models with a stepwise selection of independent variables in order to identify the subsets of variables which form good predictors of the individual dependent variables. In order to assess the relative importance of each independent variable we used two statistics commonly available in regression analysis procedures: the first indicator is the standardised regression coefficient (sometimes referred to as the Beta coefficient) which is the coefficient of the independent variables when all variables are expressed in standardised (Z-score) form; the second possible indicator assessing the relative importance of independent variables is an increase in variability explained by the regression equation (change of R), whereby a variable is entered into an equation already containing the other independent variables. A significant change in R indicates that a variable provides unique information on the dependent

variable that is not available from the other independent variables in the equation (for a more detailed discussion on the statistics used, see [SPSS/PC+ Statistics 1990]).

Electoral results of the main political parties, voting patterns and underlying factors

The development of political parties in the Czech Republic since the breakdown of Communist rule in 1989 has been a rather complicated process. Several historical parties have been restored, while a number of new parties were created during the first months following the upheaval. Seventeen parties met the criteria of electoral law and competed for votes in the 1990 parliamentary elections. Between 1990 and 1992, the number of contesting political parties even increased, so that 21 political parties took part in the 1992 parliamentary elections. (For further information on political parties and politics in Czechoslovakia see [Wolchik 1991; Wightman 1990a, 1990b; Brokl and Mansfeldová 1993; Olson 1993]. The following table provides basic information on the most successful parties in the 1990 and 1992 parliamentary elections, with the percentages of total votes received by the party in brackets.

Table 1.   The most successful parties in the 1990 and 1992 parliamentary elections. The number in brackets represents the average percentages of votes received by the parties in the elections to the Chamber of Representatives and the Chamber of Nations of the Federal Parliament.

1990	1992
Civic Forum (51.6)	Civic Democratic Party + Christian Democratic Party (33.7) Civic Democratic Alliance (4.5) Civic Movement (4.6)
Communist Party of Bohemia and Moravia (13.7)	Left Bloc (14.4)
Christian and Democratic Union (8.7)	Christian and Democratic Union -Czechoslovak People's Party (6.0)
Movement for the Self-Governing Democracy - Society for Moravia and Silesia (8.5)	Movement for the Self-Governing Democracy - Society for Moravia and Silesia (4.6)
Czechoslovak Social Democracy (4.0)	Czechoslovak Social Democracy (7.2)
Agricultural Party (3.9) Green Party (3.3) Czechoslovak Socialist Party (2.8)	Liberal Social Union (5.9)
	Association for the Republic - Republican Party of Czechoslovakia (6.4)

Source: Federal Statistical Office

The 1990 parliamentary elections in the Czech Republic were characterised by the Civic Forum's dominance – a broad movement founded by the dissident, Václav Havel, and his co-operators at the time of the November ‚Velvet Revolution' in 1989. The Civic Forum's electoral programme was rather general, proposing the restoration of a democratic society with a market-based economy. Discussions concerning the realisation

strategy for the programme targets led rather quickly to the split of the winning movement and the subsequent foundation of three main successor parties with much clearer political profiles. The most successful was the right-oriented Civic Democratic Party led by the economist, Václav Klaus, which won the 1992 election in coalition with the small, conservative Christian Democratic Party. The right liberal Civic Democratic Alliance proposed a very similar political programme. The third successor of the Civic Forum – the Civic Movement – claimed to be a liberal party but, in the eyes of voters, had rather the image of a centre-left party. In spite of the personal popularity of some of the Civic Movement leaders as expressed in the opinion polls, this party failed to win a parliamentary seat in 1992.

The basic outputs of the regression equations constructed for the percentage of votes for the Civic Forum in 1990 and for its three successor parties in the 1992 parliamentary elections are presented in Tables 2-5.

Table 2.   Basic outputs of stepwise regression analysis for the Civic Forum in the 1990 parliamentary elections

Independent variables	Standardised regression coefficient	R square change (in %)
MORSI	-0.82	76.2
NSP46	0.17	5.2
AGRI	-0.26	2.1
SAL80	0.15	1.5

Goodness of fit - R = 85.0

The quality of the regression equation is very high – 85 % of the total variation was explained by the model. By far the best predictor of Civic Forum electoral support in the 1990 parliamentary elections is the share of people declaring themselves to be ethnic Moravians or Silesians. The more members of these ethnic groups, the less votes for the Civic Forum. The independent variable MORSI is quite dominant in the equation as to the relative importance and alone accounts for more than 76 % of the total variation, all the others independent variables combined forming less than 9 %. The positive statistical relationship between political support for the urban, middle-class oriented Czechoslovak National-Social Party in 1946 and support for the Civic Forum in 1990, together with the negative statistical influence of the share of people working in agriculture, indicate the more urban than rural character of the Civic Forum. Simply put, the Civic Forum was much more successful in Bohemia than in Moravia (and Silesia) and much more in urban centres than in the rural areas.

What have become of the voting patterns of the Civic Forum successors? Most of the Civic Forum voters voted for the Civic Democratic Party in 1992. The basic outputs of the regression analysis for this party are summarised in Table 3.

Table 3.   Basic outputs of the stepwise regression analysis for the coalition of
             the Civic Democratic Party and the Christian Democratic Party in the
             1992 parliamentary elections

Independent variables	Standardised regression coefficient	R square change (in %)
MORSI	-0.74	36.1
UNIV	0.32	22.0
NONCAT	0.12	5.2
ENVI	-0.22	3.5
AGRI	-0.39	2.8
CP46	-0.19	1.8

Goodness of fit - R = 71.4

The most relevant independent variable remains the same. The MORSI variable, however, accounted for less than half of the total variation compared with the previous equation. The share of university educated people (UNIV) adds more than 20 %, while the share of non-Catholic Christians adds another 5 %. People living in badly polluted areas, agricultural districts and in regions traditionally supporting the Communist Party were less willing to support the right-oriented Civic Democratic Party. The goodness of fit of the model was also high – 71.4 %.

Independent variables indicating the ethnic structure of the society are not present in the regression equation predicting the electoral support for the Civic Democratic Alliance, a right-liberal party with a political programme similar to the previous party. The main reason for this is probably the presence of the most popular Czech politician, Vladimír Dlouhý (co-author of the economic reform strategy and current Czech Minister of Industry and Trade), on the list of candidates in the South Moravia, where most ethnic Moravians live.

Table 4.   Basic outputs of the stepwise regression analysis for the Civic
             Democratic Alliance in the 1992 parliamentary elections

Independent variables	Standardised regression coefficient	R square change (in %)
UNIV	0.71	39.9
ENVI	0.40	4.3
SAL80	-0.39	3.8
SD46	0.35	3.7
AGRI	-0.42	3.0
URB	-0.26	3.0
ABORT	-0.18	2.5

Goodness of fit - R = 60.1

The best predictor of the Civic Democratic Alliance's success thus remained the education of the population, which explained most of the variance (almost 40 %). Of the other variables entering the equation, several are worthy of mention: namely the greater the environmental pollution and the greater the traditional support for Social Democrats, the better the Civic Democratic Alliance's performance. On the other hand, people living

in agricultural regions as well as the inhabitants of the districts with above average incomes in the eighties (mostly workers working in heavy industry) tended to vote for this party less than the others. The equation's determination coefficient (R^2) is over 60 %.

The regression model (R = 56.3) ,explaining' the voting pattern of the third Civic Forum successor – the liberal Civic Movement – proved only minimally less successful.

Table 5.   Basic outputs of the stepwise regression analysis for the Civic
Movement in the 1992 parliamentary elections

Independent variables	Standardised regression coefficient	R square change (in %)
MORSI	-0.46	25.5
AGRI	-0.53	15.6
SAL80	-0.45	11.3
SD46	0.22	3.9

Goodness of fit - R = 56.3

The independent variables which entered the equation were the same as those occurring in the previous two tables. The ethnic structure indicator (MORSI) is the most relevant predictor of the Civic Movement electoral results in the individual districts. Both the share of people working in agriculture and the income level in the eighties have an important negative influence on support for the Civic Movement and, in combination, contribute significantly of the explained variation of the model. Comparing the regression equation which predicts Civic Forum electoral support in the 1990 parliamentary election with the equations for the three successor parties, rather logic results are observable. Most of the Civic Forum supporters remained loyal to some of the new parties. All of these parties continued to have less success in agricultural districts. While two of them were again less successful in Moravia, the third – the Civic Democratic Alliance – enjoyed relative success there. The new variable (UNIV – the share of university educated people) became an important predictor. While the Civic Forum voting pattern is similar to the usual spatial patterns of diffusion of any innovation (rejected much more in the peripheries and rural areas and easily accepted in the cities and centres), the voting patterns of at least both right-oriented successor parties can be explained more by structural characteristics. Educated people (who for the most part constitute the ,winners' of the transformation process) seemed more willing to support the more right-oriented parties springing from the Civic Forum. The relevance of historical political traditions were not of extraordinary importance in either the 1990 or the 1992 elections.

The second strongest political party both in 1990 and 1992 remained the Communists. There was nothing dramatic in the development of the Communist Party in this period. The only visible change was the creation of the coalition called the Left Bloc, together with the very small and wholly insignificant party, the Democratic Left, before the 1992 elections. The probable reason was to make a compromise between the party leaders and most of the membership. The leaders thus avoided presenting themselves to the public under a discredited name, while orthodox Communists retained the name connected with revolutionary traditions. The Communist political programme stressed the „danger of wild capitalism" and the need to maintain the „social securities" of the

Communist state. The parameters of the regression equation for the Communist Party electoral results in the 1990 parliamentary elections are presented in the following table.

Table 6.   Basic outputs of the stepwise regression analysis for the Communist Party of Bohemia and Moravia in 1990 parliamentary elections

Independent variables	Standardised regression coefficient	R square change (in %)
CP46	0.99	31.6
NEW	-0.42	6.9
MORSI	0.32	5.8

Goodness of fit - R = 44.3

The model's goodness of fit was not very high in comparison with the previous cases. It was rather interesting that after more than 40 years of unrestrained communist rule, perceived by the overwhelming majority of the population as a time of cross-the-board social devastation, the Communist Party did relatively well in regions where the party had been successful in the last free elections in 1946. The independent variable CP46 was by far the most important predictor of post-revolutionary Communist Party success. In other words, more than anything else the Communists can still count on the influence of old partisan traditions. The figures in Table 7 seem to support this hypothesis, even for the 1992 electoral results.

Table 7.   Basic outputs of the stepwise regression analysis for the Left Bloc (Communists) in the 1992 parliamentary elections

Independent variables	Standardised regression coefficient	R square change (in %)
CP46	0.84	21.8
SAL80	0.46	11.0
MORSI	0.44	9.5
AGRI	0.59	6.9
NEW	-0.24	5.5
SD46	0.30	4.4

Goodness of fit - R = 59.2

The Communist Party popularity in 1946 remained the best predictor of the pro-Communist vote in the most recent parliamentary elections – the variable CP46 accounting for 21.8 % of the total variation. But the importance of other (mainly structural) variables have grown. The Communists picked up relatively more votes in district, where the income levels in the eighties were higher, this being a standard indication of retrospective voting. It should be noted here that in the eighties, people working in heavy industry were, for the most part, better paid. The higher percentage of votes in regions settled by Moravians and/or in agricultural districts can be explained as an anti-government vote, since both Moravians and agriculturists expressed the least satisfaction with government activity. The vote for the Communist Party thus remains historically grounded in the growing importance of structural cleavages.

The Christian and Democratic Union (renamed between 1990 and 1992 to the Christian and Democratic Union – Czechoslovak People's Party) represented the centre-

right conservative party with a declared strong commitment to the Christian (mainly catholic) population. The party grew from the Czechoslovak People's Party which survived the Communist rule as a satellite of the Communist Party, claiming itself to be the successor of the pre-war People's Party and the defender of traditions and Christian values.

Table 8.   Basic outputs of the stepwise regression analysis for the Christian and Democratic Union in the 1990 parliamentary elections

Independent variables	Standardised regression coefficient	R square change (in %)
ROMCAT	0.55	81.2
ABORT	-0.22	2.6
CP46	-0.34	2.2
SD46	-0.29	1.5
ENVI	0.16	1.0
WORK	0.13	1.0

Goodness of fit - R = 89.5

As Table 8 shows, the percent of variability explained by the model for the 1990 parliamentary election results is extraordinary high – 89.5. The majority of the variation (81.2) can be explained by using the share of the Catholic population (ROMCAT) as the only predictor in the model. The influence of other factors was incomparably lower. Table 9, which illustrates the situation two years later, reveals an almost identical picture.

Table 9.   Basic outputs of the stepwise regression analysis for the Christian and Democratic Union – Czechoslovak People's Party in the 1992 parliamentary elections

Independent variables	Standardised regression coefficient	R square change (in %)
ROMCAT	0.68	80.1
ABORT	-0.18	4.1
MORSI	0.24	1.9
NONCAT	0.17	1.2
SD46	-0.15	1.2
ENVI	0.21	0.9
SAL80	-0.18	0.9

Goodness of fit - R = 90.4

The model's goodness of fit remained very high, explaining approximately 90 percent of the total variation. The structure of the independent variables entering the equation, as well as their relative importance, also remained about the same. This is of no surprise if the extraordinary stability of the voting pattern for this party is taken into consideration (Pearson's correlation coefficient that measured the interrelations between the voting patterns in 1990 and 1992 being $r = 0.97$!). The relative decrease in the Christian Democratic Union electoral gains (from 8.7 to 6.0 %) had the form of a uniform swing while the relationships between the catholic population (and/or the party traditions) and party's recent voting patterns remained unchanged.

Another party with an historical predecessor – the Social Democrats – have undergone quite a different development. Re-founded shortly after November 1989 with a slightly more left-oriented programme than is usual for social democratic parties in Western Europe, the party was not very successful in the 1990 elections and had no parliamentary representation until 1992. As some of the more painful consequences of the economic transformation process gradually became more evident, the Social Democrats became stronger, almost doubled their popular support and with more than 7 percent of the votes took third place in the election. The regression equation for the 1990 electoral results for the Social Democracy was quite successful, explaining almost 80 percent of the total variability (Table 10).

Table 10.   Basic outputs of the stepwise regression analysis for the
             Czechoslovak Social Democracy in the 1990 parliamentary elections

Independent variables	Standardised regression coefficient	R square change (in %)
MORSI	-0.40	56.4
ROMCAT	-0.28	10.1
ENVI	0.40	8.5
UNIV	-0.39	2.8
NONCAT	-0.13	1.6

Goodness of fit - R = 79.4

As the structure of independent variables entering the model shows, the Social Democrats were least popular in the districts with a large share of Moravians, a substantial religious population (mainly Catholics) and university educated people. On the other hand, the party did relatively well in badly polluted areas. By far the most important predictor was the variable MORSI, itself explaining more than 56 % of the variation. The output of analysis is substantially different when the 1992 elections (Table 11) are taken into consideration.

Table 11.   Basic outputs of the stepwise regression analysis for the
             Czechoslovak Social Democracy in the 1992 parliamentary elections

Independent variables	Standardised regression coefficient	R square change (in %)
CP46	0.47	22.7

Goodness of fit - R = 22.7

The goodness of fit is the worst of all the other regression equations. The only independent variable to meet the criteria for entering the regression equation was the share of votes for the Communist Party in 1946 (CP46). It is virtually impossible to identify any respectable relationship between the regions of pro-Communist political traditions and electoral support for the Social Democrats in 1992 beyond the simple fact that both Communists and Social Democrats are located on the left side of the political spectrum. Moreover, no similar connection of these variables occurred in the previous equation. Social Democrat electoral support seems to be based less on the cleavage structure of the society or political traditions than any other party under observation. This

hypothesis coincides with the Social Democrats having relatively the lowest voting pattern stability between 1990 and 1992 (r = 0.59).

Substantial electoral support for separatist and/or autonomist parties was somewhat unexpected before the first free elections in 1990. The Movement for Self-Governing Democracy – Society for Moravia and Silesia declared itself the defender of Moravian interests. (The mutual interconnection between the political interests of the inhabitants of the historical Moravian Land and the declaration of Moravian ethnicity in the 1991 population census is itself an interesting process – see [Daněk 1993]). The most important point of their political programme (indeed almost the only one) was the demand for the restoration of the historical Moravian-Silesian Land abolished by the Communist government in the course of the 1949 administrative reform. In economic terms, the party belongs to the centre-left. Turning to the regression model for the 1990 parliamentary elections (Table 12), the predictive power of the equation was high, explaining 92.7 % of the total variation.

Table 12.   Basic outputs of the stepwise regression analysis for the Movement for Self-Governing Democracy – Society for Moravia and Silesia in the 1990 parliamentary elections

Independent variables	Standardised regression coefficient	R square change (in %)
MORSI	0.90	86.5
SD46	0.25	2.7
ENVI	-0.20	2.0
SAL80	0.18	0.7
URB	0.09	0.5

Goodness of fit - R = 92.5

The positive relationship between party success and the share of the population of Moravian and Silesian ethnicity is quite dominant in the equation, accounting for most of the variability (more than 86 % on its own). All other independent variables entering the equation combined to form less then 6 %. The simple interpretation of the regression equation parameters is that the pro-Moravian autonomist party was accepted by ethnic Moravians. The figures do not change substantially when we examine Table 13.

Table 13.   Basic outputs of the stepwise regression analysis for the Movement for Self-Governing Democracy – Society for Moravia and Silesia in the 1992 parliamentary elections

Independent variables	Standardised Regression coefficient	R square change (in %)
MORSI	0.79	89.8
SD46	0.16	2.2
ROMCAT	0.16	1.6
SAL80	0.15	1.1
ENVI	-0.12	0.8
PROTEST	0.07	0.4
OLD	-0.07	0.4

Goodness of fit - R = 96.3

The regression equation presented in Table 13 was the best, with a fit of 96.3 (!). The share of people declaring themselves to be ethnic Moravians or Silesians (variable MORSI) itself explains almost 90 percent of the variability. It is interesting to note that about 13.5 % of the population declared Moravian and Silesian ethnicity while the Movement for Self-Governing Democracy – Society for Moravia and Silesia received only 4.6 % of the total votes in the 1992 parliamentary elections. Only about one third of Moravians voted for the party claiming itself to be the defender of Moravians interests. This proved to be the case on both the national and district levels. The Movement for Self-Governing Democracy – Society for Moravia and Silesia represented a pure type of ethnic party.

In order to reach the legal threshold, three smaller parties with different political programmes (but all without any parliamentary representation after the 1990 elections) created a political movement called the Liberal Social Union several weeks before the 1992 parliamentary elections. This ‚operation‘ was successful and the alliance of these political parties won several seats in the Czech Parliament, in spite of the significant political differences among them. The strongest left-wing Agricultural Party stressed the necessity of maintaining extensive state subsidies for agricultural co-operatives, the centrist Czechoslovak Socialist Party with pre-war historical roots traditionally concentrated on the urban middle class the Green Party emphasised environmental protection. The basic outputs of the regression analysis for these three parties' electoral results in 1990 as well as for the Liberal Social Union two years later are presented in the following tables.

Table 14. Basic outputs of the stepwise regression analysis for the Agricultural Party in the 1990 parliamentary elections

Independent variables	Standardised regression coefficient change	R square (in %)
AGRI	0.79	57.4
MORSI	-0.41	24.6
OLD	0.14	1.0
CP46	0.13	1.0

Goodness of fit - R = 83.9

The model's goodness of fit is high, the regression equation explaining more than 80 percent of the total variation. The most important predictor of the Agricultural Party voting support is, not surprisingly, the share of the agricultural population in the district. The influence of the share of ethnic Moravians and Silesians (variable MORSI), which contributed a further 24.6 %, is also rather significant.

The model explaining the spatial variations in the popular support for the Czechoslovak Socialist Party is based on quite a different set of independent variables (see Table 15). The most influential predictor is the variable NSP46, indicating the traditional vote for the National Social Party – the historical predecessor of the current socialists. In the 1990 elections the Czechoslovak Socialist Party also picked up relatively more votes in those districts with a low share of catholic population, or environmentally damaged districts with an older population.

Table 15.   Basic outputs of the stepwise regression analysis for the
             Czechoslovak Socialist Party in the 1990 parliamentary elections

Independent variables	Standardised regression coefficient	R square change (in %)
NSP46	0.08	43.1
ROMCAT	-0.62	12.6
ENVI	0.36	5.5
OLD	0.53	5.4
NEW	0.40	3.6
SD46	-0.49	3.5
CP46	-0.39	1.7

Goodness of fit - R = 75.4

The structure of the independent variables entering the regression equation for the Green Party (Table 16) was quite surprising.

Table 16.   Basic outputs of the stepwise regression analysis for the Green Party
             in the 1990 parliamentary elections

Independent variables	Standardised regression coefficient	R square change (in %)
CP46	0.43	59.6
MORSI	-0.27	5.5
ENVI	0.39	4.5
OLD	-0.24	3.8
SAL80	-0.25	3.3

Goodness of fit - R = 76.8

The most influential variable, itself explaining almost 60 % of the total variation, is CP46 – the share of pro-Communist voters in the 1946 elections. This variable was far more important than the share of Moravians or environmental damage in the districts. The later independent variable was expected to be particularly dominant in the equation.

The percent of the total variability explained by the model for the popular support of the Liberal Social Union (the amalgam of the three above-mentioned parties) in 1992 was also quite high - more than 75 percent (Table 17).

Table 17.   Basic outputs of the stepwise regression analysis for the Liberal
             Social Union in the 1992 parliamentary elections

Independent variables	Standardised regression coefficient	R square change (in %)
AGRI	0.69	56.5
MORSI	-0.39	12.2
OLD	0.22	4.8
ABORT	-0.15	1.7

Goodness of fit - R = 75.2

The most influential independent variable, itself accounting for 56.5 % of the total variation, is the same as in the case of the Agrarian Party in 1990. This affirms previous

studies [Kostelecký 1993; Kostelecký 1994a] pointing to the dominant position of the Agrarian Party in the Liberal Social Union.

The last party to reach the threshold in at least one of the observed elections was the Association for the Republic – the Republican Party of Czechoslovakia, an anti-system, extreme-right party with a political programme stressing the maintenance of public order, xenophobic and racist attitudes. This party, with a voters' support of about 1 % in 1990, has undergone a rather vehement increase in popularity in some parts of the country, entering parliament with more than 6 % of the votes.

Table 18.   Basic outputs of the stepwise regression analysis for the Association for the Republic – the Republican Party of Czechoslovakia in the 1992 parliamentary elections

Independent variables	Standardised regression coefficient	R square change (in %)
GYPSY	0.57	35.0
NONCAT	-0.19	3.5

Goodness of fit - R = 38.5

The regression analysis result shows that the Republicans were relatively more successful in districts with a substantial Gypsy population. This, of course, does not mean that the Republicans were supported by the Gypsies: quite the opposite. Anti-Gypsy attitudes announced more or less openly by the charismatic party leader, together with proposals to solve the ‚Gypsy question definitively‘, was probably the most important feature of the party's image, which attracted some popular support.

Conclusions

This article provides a basic insight into the relationships between the voting patterns of the most important political parties and the underlying factors explaining spatial variation. The population's structural characteristics as well as the district's contextual characteristics were used as independent variables in a set of regression models that elucidated the situation in both the 1990 and 1992 parliamentary elections. Table 19 summarised, in a somewhat more general form, the outputs of the regression analyses. The table contains frequencies in which independent variables of different types occurred in regression equations. We computed the frequencies of all the variables which entered equations separately and then frequencies for the ‚most important variables‘ individually. The most important variables were defined in two different ways: in the first variant, only those variables contributing more than 5 % of the explained variability (R square) were counted, while in the second variant, only variables with a standard regression coefficient higher than 0.30 were tallied. The final figure is an average of these two procedure results.

Although the simple frequencies of the independent variables in the regression equations do not exactly reflect the importance of the various types of independent variables (and cannot be used as anything more than ordinal measurement), their presentation contributes to the interpretation of the results. Generally, the most frequent independent variables in the equations are the variables indicating a district's political traditions, ethnicity/regionalism, the population's religious and occupational structure, retrospective voting and environmental damage. On the other hand, the population's

educational and age structure, the level of urbanisation, social pathology and the long-term stability of the population were not very effective predictors of the spatial variation of the electoral outcomes in either 1990 and 1992. Turning to the question of the change in the relative importance of individual factors, the results are interesting. The first group of independent variables consists of the indicators of political traditions both of the district and ethnicity/regionalism, which have retained a strong stable influence on voting patterns. The occupational and educational structure as well as the average personal incomes in the eighties (retrospective voting) are growing in importance. On the other hand, age structure, the long-term stability of the district population and the level of environmental damage were weakening in terms of their predictive powers. The other factors do not seem to have been very important in either the 1990 or the 1992 elections.

Table 19.   Occurrence frequencies of the independent variables characterising the different types of underlying factors in the regression equations

| Independent variables characterising | frequency in equations | | | |
| | all variables | | most important variables | |
	1990	1992	1990	1992
ethnicity/regionalism	6	6	5.5	5
religiousness	4	6	2.5	2
occupation	3	5	1	4
education	1	2	0.5	2
age	3	2	1	0
urbanisation	1	1	0	0
environmental damage	5	4	2.5	0.5
social pathology	1	3	0	0
criminality	0	0	0	0
political traditions	10	9	4.5	4
population change after W.War II	2	1	1.5	0.5
retrospective voting	3	5	0.5	2.5

Note: the term ‚most important variables‘ is defined in the text above the table

As to the hypotheses laid forth in the introduction, their validity can be established as follows: Generally, there have been changes in the importance of different kinds of ‚underlying factors‘ explaining the spatial variation of electoral preferences during the initial phases of the transformation process. But, somewhat surprisingly, the observed changes are rather moderate in comparison with the vast scope of the social transformation as a whole. The second hypothesis can only be partly confirmed: while the importance of some socio-economic factors linked with the process of replacing of the egalitarian social stratification type with a new social hierarchy (occupational structure, educational structure, retrospective voting) is evidently growing, political traditions and ethnicity/regionalism remain extremely important in determining political behaviour. It seems that the political behaviour of local and regional communities is not simply a reflection of the contemporary economic and social changes, however revolutionary they are, but has a „life of its own".

This conclusion seems to be in accordance with the findings presented by Robert Putnam in his work, „Making Democracy Work" [1993]. In spite of the fact that Putnam concentrates on the problem of the effectiveness of regional governments' performance

in Italy while this article focuses on explaining the electoral behaviour of various „regional communities" in the post-communist Czech Republic, the underlying principles are the same: traditions (civic or political), however are they created, remain one of the most important influences on the contemporary „political and social life of the regions". The validity of this notion is evidently not restricted to the two above-mentioned countries: after the break-up of the Communist regimes in Central and East Europe and a series of free elections in these countries, several articles on this topic were published [e.g. Jehlička and Sýkora 1991; Kovács 1993; Surazska 1994] in which the same conclusions were drawn. From a scientific point of view, the time-space stability of voting patterns not only remains an important feature of the Czech Republic's political map, but also a significant topic for future research.

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