THE CONTENT AND NATURE OF POLITICAL COMPETITION IN EUROPE:
CONCEPTUALIZING POLITICAL SPACE AND AXIS OF PARTY COMPETITION

Jan Rovny

A thesis submitted to the faculty of the University of North Carolina at Chapel Hill in partial fulfillment of the requirements for the degree of Master of Arts in the Department of Political Science

Chapel Hill
2007

Approved By:

Gary Marks

Liesbet Hooghe

Georg Vanberg

Abstract

JAN ROVNY: The Content and Nature of Political Competition in Europe:

Conceptualizing Political Space and Axis of Party Competition

(Under the direction of Gary Marks)

This paper aims to address how political competition can be theoretically comprehended, and what accounts for the variance in the content of political competition in different European polities. To answer these questions, it builds on spatial theory of politics, and develops two additional concepts: *political space* and *axis of competition*. Political space is understood as a landscape of contested political issues, which combine into a small number of dimensions, while the axis of competition depicts the particular combination of issues disputed in a given political system. After conceptualizing these terms, the paper addresses the empirical expression of political space and axis of competition in Europe. Finally, this work analyzes individual vote choice, underlining the linkage between individual political preferences and the variation of axes of competition across the European continent.

Table of Contents

List of Tables

List of Figures

I. Introduction

European Union countries face a comparable set of socio-economic challenges: from rationalization of the welfare systems and generation of economic growth and employment, to absorption of immigrant communities and the granting of legal rights to minorities with alternate life-styles. Despite these general similarities, a striking feature of politics in Europe is the diversity of political competition present in its political systems. While in some countries political contest occurs primarily over economic policy, the political debate in others centers on issues such as protection of national culture and state sovereignty.

This paper aims to address how political competition can be theoretically comprehended, and what accounts for the variance in the content of European political contestation. To answer these questions, this paper builds on spatial theory of political competition, and develops two additional concepts: *political space* and *axis of competition* in the opening theoretical section. The second section of this work turns to the empirical expression of the axis of competition in Europe. The third section serves as a demonstration of the conceptual framework. It performs a multinomial logit analysis on individual vote choice, linking the variation of competition axes to electoral competition.

The paper argues for understanding political competition in the light of political space and axis of competition. It emphasizes that the particular content of competition stems

from the interaction of supply and demand factors, the interplay between individual preferences and party strategies. There is a connection between the nature of party competition expressed by the slope of the competition axis and the particular issues that individual voters consider when selecting a political party. Consequently, where party competition unfolds along an economic dimension, voters consider major political parties on the basis of their economic inclinations, while where political contest occurs along a social dimension, social issues play a more significant role in vote choice for major parties. Minor parties, somewhat marginalized in the political system, seek to highlight other issues, competing for votes along secondary dimensions or non-policy issues.

II. Conceptualizing Political Space and Axis of Competition

1. Political Space and Axis of Competition

A schematic systematization of political competition has been initially conceptualized by spatial theory (Hotelling 1929, Downs 1957). This theory depicts political contest in uni-dimensional terms as a single continuum on which each point denotes a specific preference position. This allows one to represent the positioning of different political actors such as individuals, social groups, party activists and political parties (Aldrich 1983, Chappel and Keetch 1986, Cox 1990, Strom 1990). It assumes that each actor has a defined utility function over the given issue, which has a single maximum ideal point, outlining the most preferred policy position. These ideal maxima of individuals can be aggregated into a distribution of ideal points (Aldrich 1983: 957). Individuals are assumed to prefer positions, which are closer to their ideal point. Political actors thus compete for the support of individuals by placing themselves on particular positions, so as to attract the greatest following possible.

While this theoretical simplification has been useful in depicting and understanding political conflict in strategic terms, it lacks the ability to address the particular ideological character of political competition. The structure of the uni-dimensional space is secondary and is merely assumed for the purposes of analyzing the strategic interaction among actors. As a result, spatial analysis places political conflict into a generic dimension commonly termed 'left-right,' without addressing its content. More

importantly, spatial theory atomizes political competition into incomparable uni-dimensional spaces. It addresses the interplay of political actors along a continuum, yet this continuum is not placed in a wider spatial context. The resulting strategic analysis may prove similar across different political systems, while concealing extensive differences in the political substance contested. This denies the capacity to compare – so central to political analysis.

To better understand the content and nature of political contestation, I propose to conceptualize political competition with the aid of two concepts: *political space* and *axis of competition*. These concepts borrow from spatial theory by assuming that politics is structured around political issues over which individuals hold particular preferences, which can be aggregated into ideal maxima, and actors such as parties compete for their support. Diverging from classical spatial theory, these concepts assume no particular distribution of ideal points, permitting skewed or bi-modal preference curves. Most importantly, these concepts relax the uni-dimensional conception of politics by allowing small-n dimensions of political competition.

Political space describes the landscape of political issues which are contested in a given society. It outlines the particular political issue-components, which arise in various political systems, and thus delimits the dimensions of the ideological arena in which political parties can position themselves and compete for support. Due to its capacity of outlining party positioning, it retains the ability to depict strategic competition among

parties, while simultaneously providing a comparable ideological backdrop by summarizing the dimensional structure in a particular political system.

The *axis of competition*[1] is the political pathway along which contending interests collide. It is a theoretical aide in the location of political competition in political space. It is a path of political conflict over the political landscape of a given society – a line of political interaction between political actors. As such it is a summary of the main fault line in a society, which anchors political competition, highlighting the structure behind spatial positioning of political parties. Parties may position themselves throughout the political space of their polities, exploiting the bounds of all possible dimensional combinations. Or, parties may seek to connect various dimensions by aligning along a particular dimensional arrangement. The axis of party competition outlines the particular correlation between the standing dimensions as political actors contest them. The competition axis is not created intentionally. It is rather a byproduct of the interaction between individual partisan ideologies and strategic considerations, leading to an unintended equilibrium. Since competition axes are expressions of the particular ideological competition structure of given societies, they can be meaningfully compared across cases.

---

[1] This concept was introduced without detailed conceptualization by Kitschelt (1994), and is developed in Marks, Hooghe, Nelson and Edwards (2006).

Figure 1. Axis of Competition in two-dimensional Political Space

In the left panel, parties position themselves in all four quadrants of two-dimensional political space. There is no correlation between dimension X and Y and no discernible axis of party competition. In the right panel, parties align along a competition axis, which depicts the correlation between dimension X and Y.
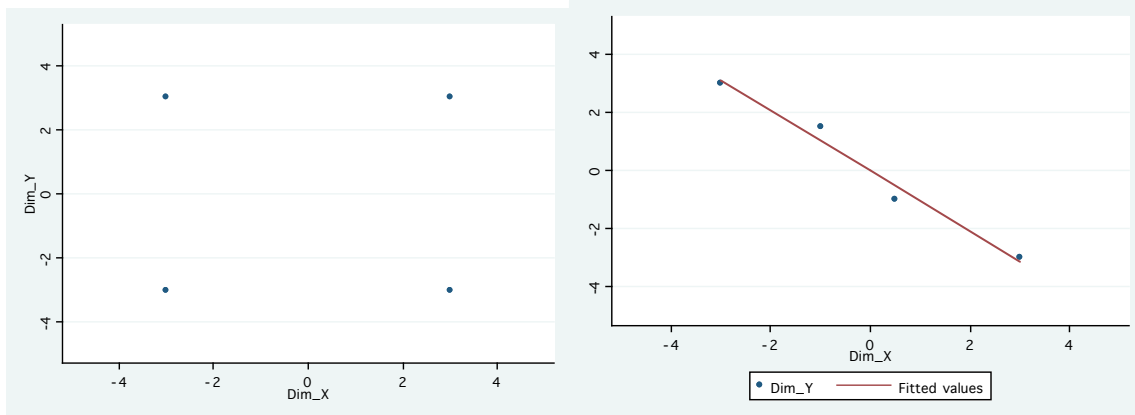
2. Political Competition and Dimensionality

Political space – the stage for political conflict – outlines the important political issues and their dimensionality in a particular society. It is in this space where parties take positions, paving the competition axis as a path of political contest. A path not collectively premeditated, but rather gradually treaded out by self-regarding actors.

It is important to inquire further into what determines the structure of political space and how particular dimensions of political conflict are created. I propose an answer which lies in the interaction between political demand and political supply. Political space and competition axis are on the one hand defined by the demand rooted in social interests and divides over political concerns. On the other hand, they are also shaped by the supply embodied in the strategic responses of political parties who represent and exploit these rifts.

All politics begins with issues – basic concerns of citizens. Theoretically speaking, there exists an almost infinite number of political issues, which concern individual members of society. These are the basic preferences determining citizens' views on particular policy options, such as: the level of taxation, severity of punishment for violent crimes, the extent of rights that various minorities get to enjoy and so on. Individuals hold varying position over these issues, and their aggregates produce various preference distributions. This emphasizes Sartori's point about the 'disjointed' nature of political space (Sartori 1976: 343), where some individuals or political actors, which have relatively proximate positioning, nevertheless, find each other's preferences unacceptable, which can be depicted by steeply changing preference distribution curves.

In addition to positioning, individuals care about different issues with different intensity.[2] Salience – measuring the importance of a given issue – is thus modeled as a weight of a particular position on the issue continuum, which can again be aggregated to derive an overall salience of a given issue. A political actor has only a finite amount of salience, which can be distributed over a number of different issues. Individuals – given their bounded cognitive capacity – can thus care about and political parties – given their finite political and financial resources – can publicize only a restricted number of issues, with the allocation of salience across these issues representing a zero-sum tradeoff.

---

[2] The concern with 'intensity' of interest on a given issue is adopted from the directional voting model (MacDonald and Rabinowitz 1989, MacDonald Listhaug and Rabinowitz 1991). Although this model proposes an entirely different conceptualization of political space, it provides a solid argument for the need to incorporate salience.

Cleavages appear on issues on which large number of individuals holds different views, while assigning relatively significant salience levels to them. Cleavages thus represent deep and long-standing rifts in society (Lipset and Rokkan 1967), which are manifested by social rootedness and political organization.[3] Daalder underlines that cleavages need not be characterized only by sharp distinctions in positioning, where two adversarial groups stand on opposing sides with a valley of empty space between them (a bi-modal distribution). On the contrary, many political divisions can and do have meaningful intermediate (centrist) positions (Daalder 1984: 104). As such, the particular distribution of aggregated individual positions on salient and divisive issues provides a panorama of social interest, representing the demand for political solutions.

Political parties respond to this political demand. Through its appeals to voters and the development of a political program, a party aggregates political interests. These are collected firstly on the basis of the party supporters' proximate positioning on individual issues, and secondly across different issues which party followers care about. This leads to the creation of coherent parcels of political values. This development of simplified political packages is synonymous with the creation of political dimensions. Dimensions – the bundles of issues on which actor positioning is more or less tightly correlated – which are the unintentional consequences of partisan struggle for political support, are thus the building blocks of political space.

The interaction between citizens' political demands based on their issue preferences, and parties seeking to represent them, leads to the creation of political space through the

---

[3] For a 'lighter' understanding of cleavages see Zielinski 2002: 189.

inadvertent development of issue dimensions. These dimensions create the political landscape in which parties position themselves to compete for votes. This positioning by which parties seek to maximize their individual utilities, potentially results in the formation of a competition axis.

Political parties, however, enjoy formative powers over the structure of political space, since they are the actors that direct the translation of political issues into dimensions. When aggregating political issues into dimensions, a political party faces an inherent tension. On the one hand, a party seeks to reflect and voice the diversity of salient political issues, which leads it to formulate an increased number of distinct and tightly associated political packages (made of very highly correlated issues), thus inducing an increase in the dimensionality of political space. This is strategically advantageous for the party since augmented dimensional complexity allows for greater ideological nuance, which enables the party to differentiate itself from other competitors, and to tap specialized interest support.

On the other hand, such disaggregation increases political complexity, leading to considerable costs to a political party. Firstly, convolution of political space through increased dimensionality entails cognitive costs to a party, which needs to track or develop positioning along multiple continua. This ultimately restrains the party's function as a political simplifier. Secondly, increased dimensionality introduces systemic instability. It provides multiple planes of party competition, making equilibrium positions increasingly difficult – if not impossible – to reach. Systems with high dimensionality can

thus be expected to be systems of greater flux, which defeats a party's aim of achieving and maintaining power. Finally, increased dimensionality introduces heightened campaign costs. Parties, like most organizations, are entities with histories, having developed their structures, identifications and reputations over time. (Marks and Steenbergen 2002: 881-2) A party is likely to be ideologically and organizationally invested in specific positioning on distinctive dimensions. The rise of a new dimension or a change in the aggregation of issues within a standing dimension leads to loss of recognition of the party's positioning, and increases costs associated with the need to divert salience to the new dimensions. Also, newly emergent dimensions my reconfigure the bundling of political issues in such a way that an incumbent party finds itself internally divided on certain issues. Clearly, if such issues carry significant salience, the unity of the party becomes seriously jeopardized. As a result, each political party – especially an established one – prefers to maintain a stable dimensional configuration of political space.

The dimensional structure of political space thus exerts varying impact on different types of political parties. A party established in a given set of dimensions benefits from the status quo. The dimensions revolve around issues on which this party has clearly articulated positions and a recognized record, which serves as a carrier of its ideological image. Such a party focuses on defining political conflict through the prisms of the standing dimensions – dimensions that provide it with stable electorates, as well as a predictable set of coalition partners (Strom 1990: 585). Conversely, a party that is marginal on the predominating set of political dimensions – thus representing infrequent

positioning on the relevant issues – endures reduced power in the system. This party musters limited number of votes and suffers from reduced bargaining capacity in the system (Strom 1990: 585). Its best strategic option is to exploit new issues on which its (mainstream) opponents might have no determined positions, or – even better – which may internally divide the opposing camps (Daalder 1984: 100).

As a result, political competition is a struggle over the dimensional configuration of political space, determining the content of political debate, as well as the political crevices in which different parties may dwell. A political party tries to manipulate the dimensional structure to its advantage.[4] Particularly, a marginal party attempts to invest salience into new issues that are orthogonal to the standing dimensions of political space (Meguid 2005). This essentially reorganizes the structure of political space, increasing its dimensionality, and thus escalating the potential for specialized parties. This relates to Sartori's 'centrifugal competition', where extreme parties seek to 'tear the system apart' (Sartori 1976: 350). Such strategies force the mainstream parties to react by either ignoring the new issue, or in case it does garner significant salience among the electorate, to try and translate it into the standing set of dimensions. The mainstream parties are thus strategically interested in adjoining the new issue into the structure of current dimensions. This is only possible if the ideal point variation on this issue is distributed in such a way that it correlates with the issues currently contained in the predominant dimensions, or, if the new issue is indeed orthogonal (and thus no correlation exists) the established parties have the strategic capacity to align this issue with the traditional dimensions forcibly. If,

---

[4] For an example from American politics see Miller and Schofield (2003).

11

however, the new issue drives a crosscutting wedge inside the mainstream parties, they

may splinter along this issue, which eventually becomes an additional dimension.

Table 1. Determinants of Political Space Dimensionality

Political Demand
Social Factors
	Individual Preference Distribution
	- Modality
	    o if more than one mode, the deeper the rift
	- Variance
	    o the greater the variance, the deeper the rift
	Issue Correlation
	- *ceteris paribus* the more issues on which individual positioning correlates, the lower the dimensionality

Political Supply
Partisan Factors
	Response to Demand
	- Preference Distribution and Correlation
	    o Parties respond to aggregate preference distribution over dimensions
	Relation to other Suppliers (parties)
	- Distance
	    o Parties aim to distinguish themselves from other competitors. They seek to distance themselves on at least one dimension
	Dimension Construction
	- the more a new issue correlates with established ones, the easier its translation into standing dimensions

III. Political Space and Axis of Competition in Europe

The structure of political conflict in Europe has been primarily theorized by Lipset and Rokkan (1967), who argue that contemporary political competition in Europe results from successive incorporations of divisive concerns stemming from national and industrial revolutions, which have occurred on the continent in the past centuries. The authors argue for the fundamental role of the cleavage splitting workers versus owners, which has had a strong homogenizing effect on European polities (Lipset and Rokkan 1967: 35, 47). In recent decades, the internationalization of production and capital markets has undermined the capacity of governments to coordinate markets and to ensure sufficient levels of national investment. This has in turn led to slowing growth and increased unemployment, placing strain on public finances and undermining the solvency of welfare systems (Huber and Stephens 2001: 318). Similarly, the changing structure of production, shifting from industrial manufacturing towards a service oriented economy, has differentiated economic stratification and altered the capacity of labour representation. De-industrialization has thus induced the re-emergence of distributional issues on the political agenda (Iversen in Pierson 2001: 78-9). Consequently, the changing structure of economic production has deepened a rift between the skilled and educated who have improved their capacity of social, as well as geographic, mobility and those with lower education and skills who face increasing socio-economic uncertainty and limited capacity of exit. Distributional conflict has thus defined the economic nature of the prime dimension of European political space.

Although few would question the central role of economic conflict in European politics, recent scholarship has outlined the growing impact of non-economic factors on political competition. Due to pervasive stabilization of political and economic regimes, leading to unprecedented levels of general affluence and increasing social 'embourgeoisement,' mobility and facilitated access to information, the tenacity of class conflict has been somewhat dulled. Post-war generations expressed increased interest in self-expression and in issues pertaining to life-quality and life-style rather than to material concerns (Dalton, Beck and Flanagan 1984: 15-18, Inglehart 1984, 1997). Recent decades have also seen the rise of threats to individual and group identity. The changing ethnic makeup of European societies resulting from persistent levels of immigration from the third world has placed emphasis on questions of national culture and identity. The visible presence of minorities and minority cultures in most Western European societies has fuelled intense debates concerning the level to which immigrant cultures should integrate into the predominant culture, polarizing the society between those favouring cosmopolitanism versus assimilation. In a different vein, ongoing European integration with its simultaneous increase of the powers of supranational institutions in Brussels while devolving some decision-making towards the regional level has engendered questions concerning the role and sovereignty of the European national state. Contemporary developments have thus ignited a virulent political rift on issues related to general social concerns, emphasizing the two-dimensional nature of European politics.

Consequently, scholars have defined contemporary European party competition in two-dimensions generally spanning from economic redistribution to market allocation on the

one hand, and from libertarian or alternative politics to authoritarian or traditional politics on the other (Kitschelt 1992, Hooghe Marks and Wilson 2002, Kitschelt 2003, Marks Hooghe Edwards and Nelson 2006). These authors further contend a linkage between these dimensions, whereby in Western Europe redistributive economic positioning corresponds with socially liberal politics – thus outlining an axis of competition. In Eastern Europe, where opposition to communist redistributive and authoritarian rule has structured post-communist politics, the same dimensions exist. The axis of competition has, however, the opposite slope, linking traditionalism and authoritarianism with the economically redistributive left (Vachudova and Hooghe 2006).

Quantitative data yields striking confirmation of the postulated relationship between the two major dimensions and the differences between the regions of Europe. The 2002 Chapel Hill Expert Survey underlines the consistent structure of party competition. Firstly, political parties do not seem to place themselves 'randomly' within the political space, but rather along discernible competition axes which link the positioning on the two dimensions. Secondly, while in Western Europe the competition axis has a negative slope, in Eastern Europe the axis runs in the opposite direction (see Marks Hooghe Edwards and Nelson 2006, Vachudova and Hooghe 2006).

Figure 2. Political Space and Axes of Party Competition in Europe
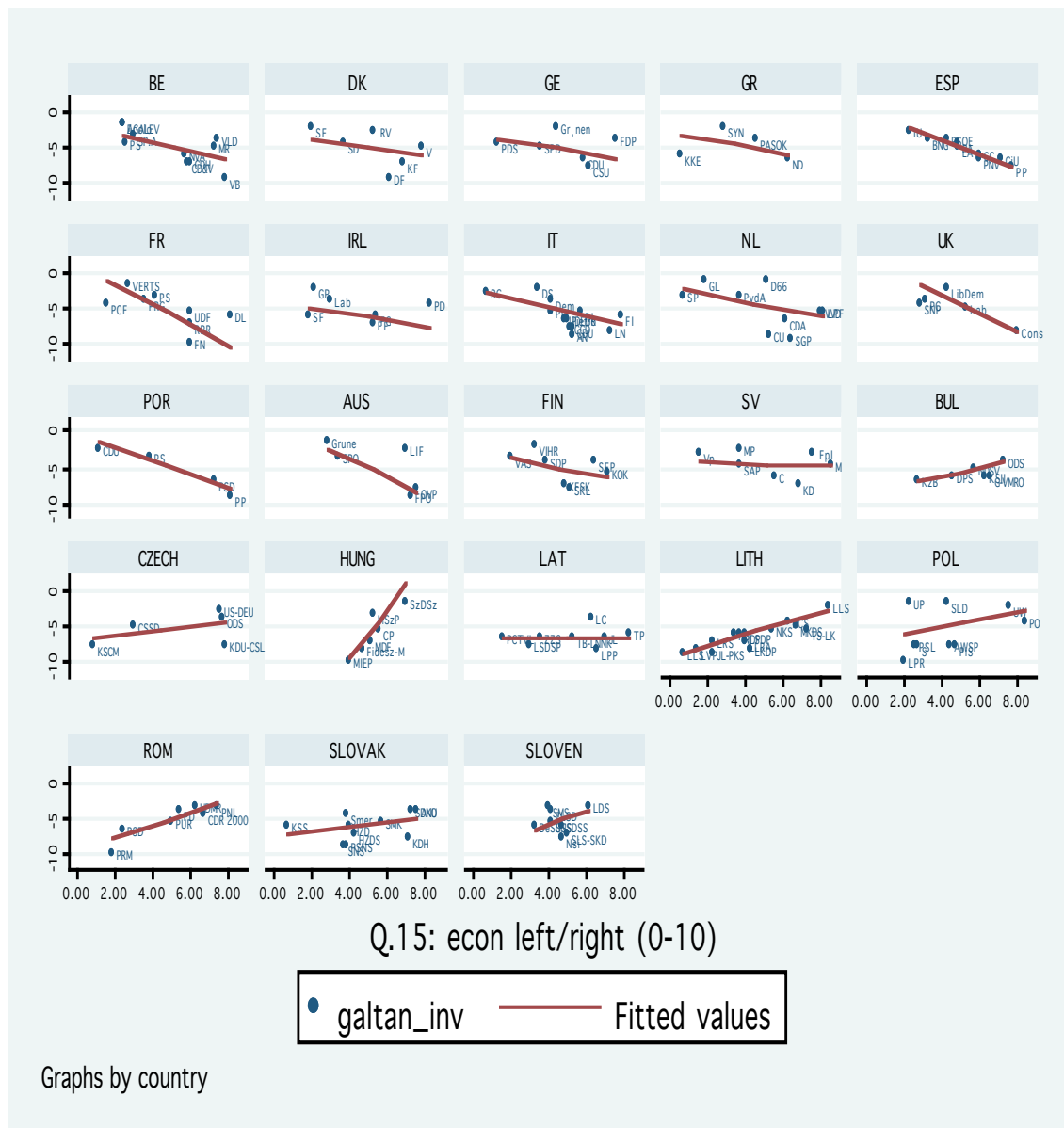
Dimension X – Economic Left-Right, Dimension Y – Green/Liberal/Alternative politics versus Traditional/Nationalist/Authoritarian (see Hooghe Marks and Wilson 2002). Line fit is based on OLS regression, weighted by party vote. This is a replication of results reported by Vachudova and Hooghe (2006).

The generalized quantitative expression of the axis of party competition emphasizes the diverse character of the political contestation in different European countries. While the Czech, Greek, Latvian and Swedish party systems seem to compete predominantly along the economic dimension (their competition axes have a flat slope), the party systems of

Austria, France, Spain, the UK and especially Hungary seem to compete predominantly along the social dimension (their competition axes have a steep slope).[5] This confirmed observation begs the question: why? The following section provides one test of explaining the slope of the competition axis.

Table 2. Slopes and Fit Measures of Competition Axes in Europe

Country	*Unweighted model*			*Model weighted by vote*		
	Adjusted R2	Slope	Root MSE	R2	Slope	Root MSE
BE	0.444	-0.792	1.864	0.390	-0.678	2.026
DK	0.174	-0.718	2.401	0.167	-0.385	2.082
GE	-0.181	-0.218	2.255	0.162	-0.425	1.782
GR	-0.482	-0.090	2.472	0.241	-0.464	1.691
ESP	0.905	-0.881	0.500	0.974	-1.041	0.359
FR	0.269	-0.724	2.186	0.598	-1.418	1.802
IRL	-0.167	-0.186	1.927	0.219	-0.445	1.489
IT	0.459	-0.802	1.513	0.402	-0.634	1.787
NL	0.209	-0.641	2.607	0.386	-0.555	1.780
UK	0.515	-0.777	1.440	0.920	-1.264	0.766
POR	0.889	-0.930	1.040	0.932	-0.977	0.793
AUS	0.357	-1.097	2.806	0.937	-1.283	0.902
FIN	0.074	-0.544	1.996	0.263	-0.526	1.714
SV	-0.067	-0.249	1.937	0.015	-0.073	1.587
BUL	0.254	0.398	0.893	0.769	0.560	0.558
CZECH	-0.073	0.313	2.386	0.229	0.290	1.954
HUNG	0.783	2.858	1.440	0.666	3.549	1.796
LAT	-0.126	0.112	1.448	0.007	0.032	1.081
LITH	0.753	0.733	0.945	0.797	0.775	0.918
POL	0.032	0.531	3.077	0.128	0.557	3.130
ROM	0.746	0.964	1.160	0.697	0.926	1.406
SLOVAK	0.007	0.313	1.946	0.141	0.338	1.781
SLOVEN	-0.152	0.241	1.920	0.270	1.002	1.729

Estimates of are obtained using OLS regression. Significance is not reported since the aim is to obtain best line fit of the positioning of the population of parties. This is a replication of results reported by Vachudova and Hooghe (2006)

---

[5] The precise expression of the 'flatness' or 'steepness' of the competition axis is the absolute value of the axis slope, where a large absolute value suggests competition along the vertical (social) axis, while a small absolute value suggests competition along the horizontal (economic) axis.

IV. Vote Choice and the Slope of Party Competition Axis

1. Propositions and Hypotheses

The nature of political competition, and thus the slope of the competition axis, is a function of political demand. Individual *preference distribution* and the *salience* of particular political issues serve as a popular level incubator for political conflict. As a result, decisions in the electoral marketplace – taken against the backdrop of the primary social cleavages – determine the pathway of political contestation. Parties respond to citizens' concerns and position themselves in the political space in such a way, as to represent the popular preference and salience distribution. The competition axis slope thus results from the popular importance assigned to and variance on political issues.

Consequently, partisan choice for the major contenders in elections is based on the predominant dimension of conflict as expressed by the axis of party competition slope. This is not to deny partial role of party identities in vote choice – that is, for example that social conservatism determines the vote for right-wing parties, whereas say positioning on issues of economic redistribution predicts the vote for the center-left. However, the particular structure of political conflict of a society – the path of political interaction depicted by the slope of the competition axis – reflects vote choice across the party system. Voters tend to support the main political parties, those competing for government control, based on the consideration of the predominant dimension along which domestic conflict runs.

These causes for party axis slope are further reinforced by *political strategies* of parties. The effects of partisan co-existence in political space are not uniform across political actors. Major mainstream parties, who are likely to have longstanding roots in the society, as well as organization apparatuses and linkages within political institutions, face much higher sunk costs of reputation and identity creation. It is these parties that strive for the Lipset-Rokkanian 'freezing' of party systems along a stable competition axis inhabited by strategically sluggish actors (see Lipset and Rokkan 1967: 50). Since these parties are likely to be the historical co-creators of the character of their domestic political space; since these parties are ideologically invested in the primary political fault lines (along which the competition axis runs); it is these parties that compete along the predominant dimensions of the political system.

> *Hypothesis 1*: The primary dimension of political conflict determines vote choice for major political parties. Where the axis of competition is steep, conflict over social issues determines the relationship between major parties and *vice versa*.

Minor parties, on the contrary, suffer from reduced impact in the standing competitive construction of their political space. While the competition axis is a conduit for political skirmishes between the major parties, secondary political parties seek to avoid being caught in the crossfire, and aim to step aside. As a result, they tend to stand further away from the axis of competition, attempting to compete on more peripheral dimensions. Given the pervasiveness of the primary conflict, these parties are unlikely to not compete along the main dimension at all, but they face strategic incentives in emphasizing the less important dimension. The source of their political identity is the differentiation from the major parties along the inferior dimensions, or along non-policy issues, such as valence or anti-systemic orientation. Minor parties thus try to increase the salience of tangential

issues, which may distract voters from the primary dimension, thus reducing the dominance of major parties.

> *Hypothesis 2*: The secondary dimension of political conflict plays a greater role in determining vote choice for minor political parties. Where the axis of competition is steep economic conflict increasingly co-determines the vote for minor parties and *vice versa*.

2. Analysis and Results

In order to test the above hypotheses, I use data from the World Value Surveys (1999-2002). They offer a useful database comprising of individual level observations, providing positioning on a large number of political issues such as the role of the state in the economy, justifiability of homosexuality or abortion, or the role of religion in society, as well as general socio-economic indicators, such as age, education, income or size of community of residence. Importantly, this data overlaps with the Chapel Hill Expert Survey data – used for the above derivation of the structure of political space – in temporal terms, making it a reasonable analytical pair. To address my propositions, I concentrate on the cases of extreme party competition axis slope on the European continent – both in Eastern and Western Europe. Due to space limitations, I constrain myself to analyzing four cases, two with a flat competition axis – Sweden and the Czech Republic, and two with a steep competition axis – Austria and Hungary.

To assess the structure of the data, I initially perform principal factor analysis. I impose orthogonality of factors by performing varimax rotation. This produces factors, which can be easily analytically categorized. In Sweden, as well as in the Czech Republic, two principle factors emerge, one 'economic' – related to the role of government in the

economy and individual responsibility – and another 'social' – related to issues of alternative lifestyles and religiosity. In Austria and Hungary three principle factors emerge, one 'economic' pertaining to similar issues of government control of the economy, and two general 'social' factors where one is specifically related to the role of religion in society and the other to social-moral issues, such as homosexuality, abortion and soft-drug use. These resulting factors are used as the predictors of interest in analyzing vote choice in the four countries. (See Appendix for factor loadings.)

To test hypotheses 1 and 2, I perform multinomial logit analysis (MNL), predicting individual party vote choice by individual positioning on the pertinent factors of the given country, while controlling for the effects of socio-economic characteristics, such as age, education, income and community size. I assess the distinctive factors behind vote choice for various major and minor parties, and to interpret these results I evaluate the change in vote probability for various parties as a function of the different factors.

The results show that the estimated models provide a reasonable explanation of vote choice, providing Likelihood-Ratio tests significant at the .001 level. Interestingly, the models for Sweden and the Czech Republic have substantially higher pseudo R^2 (.2165 and .1339) as opposed to the models for Austria and Hungary (.0969 and .0892). Despite the differences, all of these values are somewhat small, suggesting that the models explain only a limited portion of vote choice variance. Although it is surprising that issue-positioning together with socio-economic factors provide such constrained explanation, it is likely that the weakness of the model stems from the omission of non-

policy issues such as the perception of politicians' valence and subjective identification with a political party[6]. In all cases, assumption of independence of irrelevant alternatives seems to hold based on both the Hausman and the Small-Hsiao tests, suggesting the appropriateness of using a MNL model.

In the case of Sweden, I estimate an MNL model using choice for five of the larger parties of the 2002 Swedish parliamentary elections – the Moderaterna, SAP, Folkepartiet, Kristdemokraterna and Vänstrepartiet – as the dependent variable. As predictors I use individual positioning on the economic and social factors, which were derived from the factor analysis. To control for socio-economic characteristics, I add variables for age, level of education, capacity to save money in the past year, socio-economic status and income level.

---

[6] For the importance of these factors for political competition see Adams and Merrill (1999), and Adams (2001)

Table 3. Multinomial Logit – Sweden

	Vänstrep.		Folkep.		Moderat.		Kristdem.
	b/se		b/se		b/se		b/se
Economic Factor	.7276***		-0.2253		-2.047***		-.9451**
	-0.2182		-0.2872		-0.2694		-0.2981
Social Factor	.8611**		-0.0040		-0.1242		-.7955**
	-0.2628		-0.2876		-0.2206		-0.2480
Age	-0.0134		-0.0066		0.0011		0.0100
	-0.0119		-0.0128		-0.0102		-0.0127
Education Level	0.0345		.5547***		.2680**		0.1918
	-0.1071		-0.1435		-0.1003		-0.1210
Saving Money	0.0843		-0.0645		0.0764		0.1180
	-0.1921		-0.2528		-0.2054		-0.2353
Soc-Econ Status	0.2832		-.8500**		-.7640***		-0.3735
	-0.1933		-0.2781		-0.2101		-0.2371
Income	-0.0309		-0.0410		0.0045		0.0607
	-0.0728		-0.0809		-0.0686		-0.0854
Constant	-1.4389		-1.7842		-0.7082		-2.5900
	-1.1453		-1.3807		-1.1173		-1.3800
Log-likelihood	-466.9700						
Chi2	258.0704						
Pseudo R2	0.2165						
Baseline	SAP						
N	401						

*p<.05   **p<.01   *** p<.001   (two-tailed)

The substantive results of the model generally support the posited hypotheses. The choice for the two major political competitors, the social-democratic SAP and the conservative Moderaterna, is primarily determined by economic issues.[7] The probability of voting for Moderaterna decreases by over 80% as individual placement on the economic factor goes from its minimal value (economic-right) to its maximal value (economic left). Similarly, the probability of vote for the SAP increases by over 25% as the positioning on the economic factor goes from extreme right to extreme left. Furthermore, the effect of the economic factor for the choice for Moderaterna and SAP is statistically significant vis-à-vis all other possible choices, emphasizing its impact on the vote for them. On the contrary the effect of the social factor for these parties is very weak, resulting in only a

---

[7] A Wald test leads to a sound rejection of the null hypothesis that neither factor has any effect on vote choice.

small vote probability change of 2% and 11% respectively. It is also not statistically significant with respect to most other party choices (the exceptions are the Vänstrepartiet and Kristdemokraterna).

Table 4. Vote Probability Change – Sweden

	Vänstrep.	Folkep.	Moderat.	Kristdem.	SAP	Change
Economic Factor	0.622	0.016	-0.820	-0.073	0.255	0.357
Social Factor	0.311	0.025	-0.020	-0.429	0.113	0.180
Age	0.079	-0.034	0.023	0.071	0.018	0.045
Education Level	-0.058	0.209	0.154	0.038	-0.344	0.161
Saving Money	0.016	-0.028	0.028	0.030	-0.046	0.030
Soc-Econ Status	0.192	-0.147	-0.277	-0.045	0.277	0.188
Income	0.030	-0.039	0.008	0.062	-0.001	0.028

Maximum discrete probability change while other variables held at mean. Estimated by Stata's 'prchange' command

The results for the minor parties are much more varied. Some of these parties are clearly chosen for reasons of individual economic positioning. They are, however, also selected on the basis of other features – suggesting that they strive for competition on other dimensions. The radical-left Vänstrepartiet depends for its votes on individual positioning on economic issues, but placement on the social factor importantly codetermines the vote. It is statistically significant and its absolute discrete change results in 31% of vote probability change. The confessional Kristdemokraterna relies on positioning on the social factor even more clearly. It is highly statistically significant between all categories and when positioning on it decreases from extreme social liberalism to extreme social conservatism, this results in a 42% increase in vote probability. Finally, the vote for the liberal Folkepartiet is not successfully predictable by individual positioning on either factor, as both have very small substantive impact and are not statistically significant between most choice categories. The best predictor of vote choice for the Folkepartiet is age, which seems to suggest that this party markets itself more on the basis of non-policy issues such as youth-friendly dynamism.

Figure 3. Probability of Vote for Party by Factors – Sweden
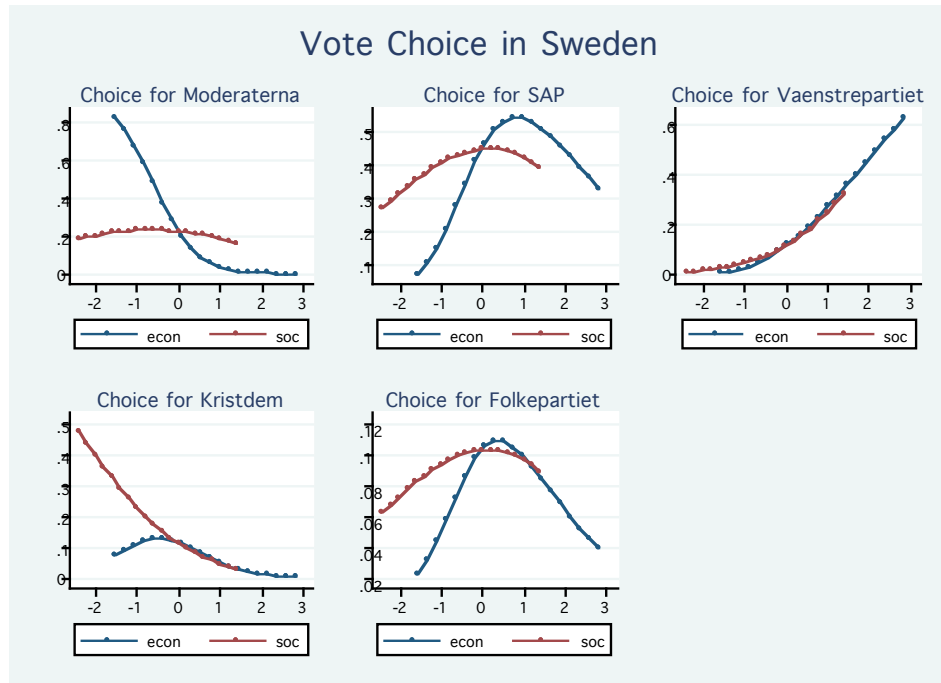
Economic factor spans from extreme right to extreme left, social factor spans from socially conservative to socially liberal. Generated with Stata's 'prgen' command.

The Czech Republic yields very similar results. I estimate an MNL model assessing the choice for the five parties represented in parliament in 2002 – ODS, ČSSD, KSČM, KDU-ČSL and US. My main predictors of interest are the social and economic factor generated by the factor analysis, and the included control variables are age, education level, socio-economic status, income and size of community inhabited.

The two major Czech parties – the conservative ODS and social-democratic ČSSD – clearly compete on economic issues. The vote choice for these parties is best explained by individual positioning on the economic factor. Total change on this factor from its maximum value (economic left) to the minimum (economic right), leads to an increased probability of voting for ODS by as much as 62%. On the contrary, the effect of the

social factor is not significant vis-à-vis other choice categories, except the Christian-democratic KDU-ČSL.

As in Sweden, the minor parties in the Czech Republic compete on a wider variety of issues. The Christian-democratic KDU-ČSL differentiates itself quite clearly on social issues, where a total increase in the positioning on the social factor (from social conservatism to social liberalism) leads to a 41% lower probability of voting for KDU-ČSL. On the contrary, the vote for the liberal US cannot be determined by issue positioning. The most significant predictor is age, where change from the oldest (87 years) to the youngest (17 years) respondent results in almost 28% increase in probability of voting for the party. This can be explained by US's concentration on valence rather than policy issues, campaigning largely against the personality and leadership style of ODS chairman, Václav Klaus, and thus also attracting younger voters eager for change in political culture. The communist KSČM is an interesting case. It competes on economic issues where a shift from the extreme economic right to extreme economic left leads to a 54% vote probability increase for the party. The reason for why KSČM competes in the main dimension, despite being a party slipping into marginality, is its original centrality in the system, the structure of which it has shaped. As the original communist monopoly party, KSČM has been the political subject around which the fledgling democratic party system – and its axis of competition – evolved.

Table 5. Multinomial Logit – Czech Republic

	KSČM	ČSSD	KDU-ČSL	US
	b/se	b/se	b/se	b/se
Social Factor	0.1829	-0.0216	-1.3074***	-0.0591
	-0.1684	-0.1281	-0.2050	-0.1532
Economic Factor	1.5893***	1.019***	0.4349	0.2290
	-0.1845	-0.1510	-0.2237	-0.1913
Age	.0501***	.0136*	0.0006	-.0276***
	-0.0091	-0.0066	-0.0094	-0.0082
Education Level	0.0108	.1578732*	0.0300	0.1470
	-0.0858	-0.0658	-0.0972	-0.0763
Soc-Econ Status	0.3884	.3806*	0.0478	0.1596
	-0.2313	-0.1778	-0.2603	-0.2081
Income	-0.0754	-0.0381	-0.0118	-0.0030
	-0.0568	-0.0407	-0.0608	-0.0464
Community Size	-0.0582	-0.0665	-0.0740	0.0854
	-0.0557	-0.0435	-0.0638	-0.0537
Constant	-3.9698***	-1.9730*	-1.6212	-1.1863
	-1.1091	-0.8177	-1.2019	-0.9212
Log-Likelihood	-1025.7660			
Chi2	317.1457			
Pseudo R2	0.1339			
Base Category	ODS			
N	790			
	*p<.05	**p<.01	***p<.001	(two-tailed)

Table 6. Vote Probability Change – Czech Republic

	KSČM	ČSSD	KDU-ČSL	ODS	US	Change
Social Factor	0.1113	0.1104	-0.4140	0.1615	0.0308	0.1656
Economic Factor	0.5442	0.2580	-0.0443	-0.6213	-0.1365	0.3209
Age	0.3685	0.0977	-0.0272	-0.1597	-0.2792	0.1864
Education Level	-0.0432	0.1831	-0.0194	-0.1871	0.0666	0.0999
Soc-Econ Status	0.0640	0.1817	-0.0287	-0.2055	-0.0114	0.0982
Income	-0.0493	-0.0485	0.0055	0.0716	0.0206	0.0391
Community Size	-0.0270	-0.0983	-0.0261	0.0555	0.0961	0.0606

Maximum discrete probability change while other variables held at mean. Estimated by Stata's 'prchange' command

Figure 4. Probability of Vote for Party by Factors – Czech Republic
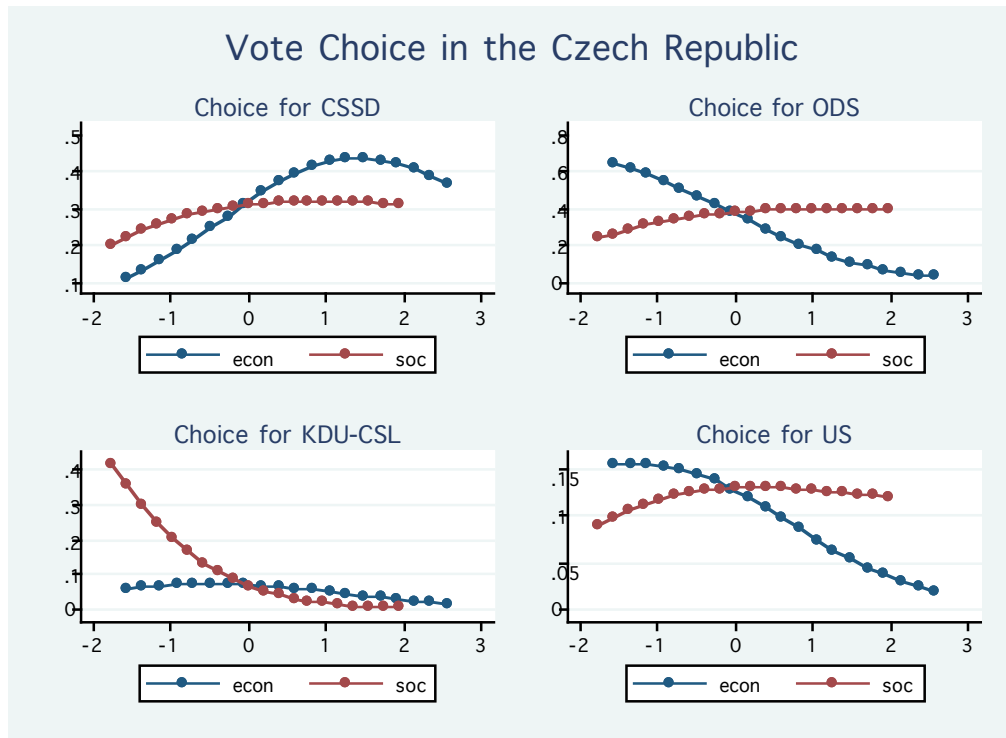
Economic factor spans from extreme right to extreme left, social factor spans from socially conservative to socially liberal. Generated with Stata's 'prgen' command.

Turning to Austria, I estimate an MNL model using choice for the four parties, which entered the Federal Council in 2002 – the SPÖ, ÖVP, FPÖ and Grünen – as the dependent variable. I concentrate on the individual positioning on the three issue factors generated by the factor analysis – social-moral, economic and religious – as the main predictors. To control for socio-economic characteristics, I include variables of age, level of education, socio-economic status, income level and size of community inhabited.

The results of the analysis are partly supportive of the hypotheses proposed. Vote choice for the two major parties – the social-democratic SPÖ and the Christian-democratic ÖVP

– is interestingly determined by all three factors: social-moral, economic and religious.[8] It thus seems that the major parties compete on all relevant issue dimensions in their system. Clearly, party family related identities play a role, as the social-moral and religious factors play a more pronounced role in the vote for the Christian-oriented ÖVP. As, for example, an individual's positioning on the religious factor increases from its minimum value (secularism) to its maximum (religious orientation), the probability of voting for the ÖVP increases by over 42%. Conversely, for the SPÖ it is positioning on economic issues that determines its selection most strongly. Change from the minimum value on the factor (economic right) to the maximum value (economic left) increases the probability of voting for the SPÖ by almost 34%. Nevertheless, the positioning on all three factors is statistically and substantively significant in the choice for these two major parties.

---

[8] A Wald test leads to a sound rejection of the null hypothesis that neither factor has any effect on vote choice.

Table 7. Multinomial Logit – Austria

	Baseline SPÖ			Baseline ÖVP		
	Grünen	**ÖVP**	**FPÖ**	**Grünen**	**SPÖ**	**FPÖ**
	b/se	b/se	b/se	b/se	b/se	b/se
Social-moral Factor	.6181**	-.8925***	-0.2300	1.510***	.8925***	.6625***
	-0.2307	-0.1617	-0.1544	-0.2447	-0.1617	-0.1767
Economic Factor	0.2329	-.4599***	-.3187*	.6928**	.4599***	0.1412
	-0.2020	-0.1360	-0.1378	-0.2128	-0.1360	-0.1509
Religious Factor	0.3478	.5413***	0.0720	-0.1935	-.5413***	-.4693**
	-0.2167	-0.1437	-0.1599	-0.2147	-0.1437	-0.1583
Age	-0.0187	-0.0050	-.0247**	-0.0138	0.0050	-.0197*
	-0.0117	-0.0073	-0.0076	-0.0120	-0.0073	-0.0080
Education Level	.4265***	0.1268	-0.0939	.2997**	-0.1268	-.2206**
	-0.1025	-0.0683	-0.0737	-0.1049	-0.0683	-0.0769
Soc-Econ Status	-0.5124	-.3953*	-0.0236	-0.1171	.3953*	.3716*
	-0.2914	-0.1624	-0.1666	-0.2991	-0.1624	-0.1795
Income	-0.0233	0.0192	-0.0017	-0.0425	-0.0192	-0.0209
	-0.0657	-0.0437	-0.0453	-0.0674	-0.0437	-0.0482
Community Size	-0.0075	-0.0491	0.0671	0.0416	0.0491	.1162*
	-0.0639	-0.0465	-0.0452	-0.0665	-0.0465	-0.0502
Constant	-1.4671	0.4171	0.8527	-1.8842	-0.4171	0.4356
	-1.2402	-0.7528	-0.7876	-1.2614	-0.7528	-0.8245
Log-likelihood	-737.388			-737.388		
Chi2	231.2421			231.2421		
Pseudo R2	0.1355			0.1355		
Base Category	SPÖ			ÖVP		
N	660			660		

***p<.001
* p<.05   ** p<.01   (two-tailed)

Table 8. Vote Probability Change in Austria

	Grünen	**ÖVP**	**FPÖ**	**SPÖ**	**Change**
Social-Moral Factor	0.224	-0.525	0.002	0.294	0.262
Economic Factor	0.231	-0.324	-0.137	0.338	0.231
Religious Factor	0.016	0.426	-0.143	-0.299	0.221
Age	-0.030	0.066	-0.255	0.218	0.142
Education Level	0.195	0.153	-0.218	-0.130	0.174
Soc-Econ Status	-0.047	-0.214	0.090	0.172	0.131
Income	-0.011	0.040	-0.013	-0.015	0.020
Community Size	-0.058	-0.107	0.117	-0.007	0.058

Maximum discrete probability change while other variables held at mean. Estimated by Stata's 'prchange' command

The two minor parties – the radical right FPÖ and the green Grünen – seem to attract votes less on policy issues measured here, but rather as a result of other concerns. Considering policy positioning, vote choice for the Grünen is most importantly determined by economic issues, where maximum change in individuals' positioning on this factor leads to 23% vote probability change. The economic factor is, however, statistically significant only when considering a vote between the Grünen and the right-wing parties – ÖVP and FPÖ). The vote choice between the SPÖ and the Grünen is more significantly determined by positioning on social-moral issues. The policy-based vote for the FPÖ is similarly determined by positioning on a combination of the economic and social-moral factors. In terms of policy positioning, voters differentiate between the FPÖ and the left-wing parties based on economic factors, while they choose to vote for the FPÖ over the SPÖ based on social-moral factors. More importantly, however, the vote choice for these minor parties is more decisively determined by non-policy issues. In the case of the Grünen, the effect of education level is substantively and statistically significant across all baseline categories. As education increases from the lowest category (incomplete elementary education) to the highest (university degree), the probability of voting for the Grünen increases by almost 20%. The impact of non-policy issues is even more striking in the case of the FPÖ. The most pronounced predictors of vote for the FPÖ are age and education level. The vote for the FPÖ seems to come more from the young and the less educated. As age increases from the lowest recorded value (18 years) to the highest (87 years), the likelihood of voting for the FPÖ decreases by over 25%. Similarly, as education level increases from the lowest category (incomplete elementary education) to the highest (university degree), vote probability for the FPÖ drops by almost 22%.

Figure 5. Probability of Vote for Party by Factors – Austria
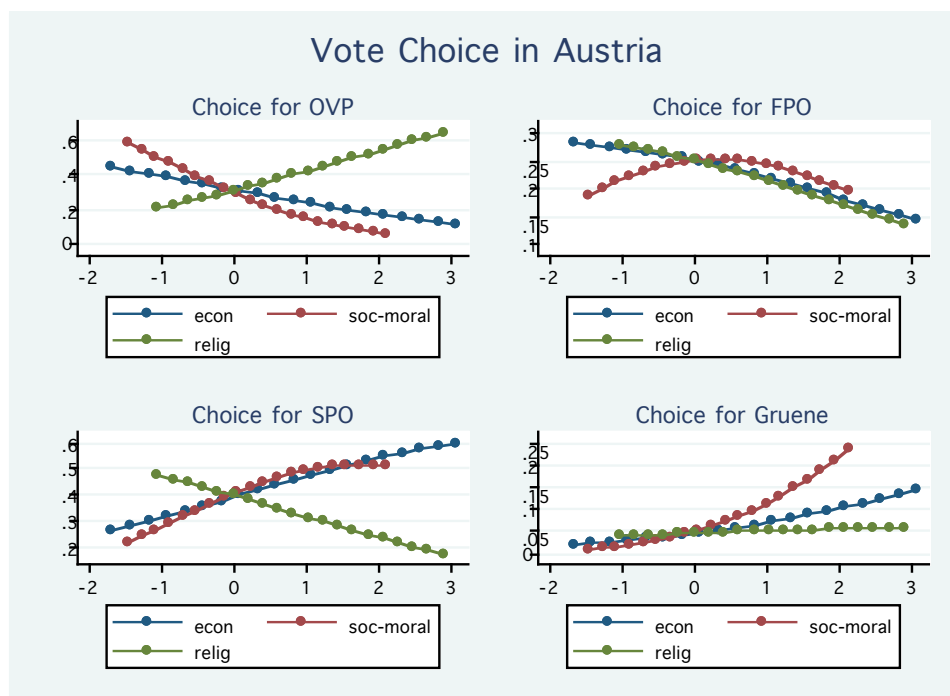
Economic factor spans from extreme right to extreme left, social-moral factor spans from social conservatism to social liberalism, religious factor spans from secular to religious. Generated by Stata's 'prgen' command.

In Hungary, the results point in a similar direction. I estimate a MNL model predicting the vote choice for the four most significant parties in the political system in 2002 – the MSZP, Fidesz-MDF, SZDSZ and FKGP. I concentrate on the positioning on the three issue factors generated by the factor analysis – social-moral, religious and economic – as the main predictors, while controlling for age, education level, socio-economic status, income and size of community inhabited.

As in Austria, the two major parties in Hungary – the social-democratic MSZP and conservative Fidesz-MDF – compete on a combination of social and economic issues, yet the two social factors are particularly significant. If, for example, the positioning on the religious factor changes from extreme secular to extreme religious, the probability of

voting for MSZP decreases by 41%, while a shift from extreme social liberalism to social conservatism on the social-moral factor increases the likelihood of voting for Fidesz-MDF by 36%.

Table 9. Multinomial Logit - Hungary

	SZDSZ	Fidesz-MDF	FKGP
	b/se	b/se	b/se
Social-Moral Factor	0.2280	-.3616*	0.0526
	-0.1991	-0.1636	-0.3334
Religious Factor	1.060***	.4231**	.5827*
	-0.2985	-0.1611	-0.2638
Economic Factor	-0.6589	-.4349*	-0.1102
	-0.3841	-0.1825	-0.3124
Age	0.0031	-0.0117	0.0111
	-0.0151	-0.0074	-0.0122
Education Level	-0.0405	0.0014	-0.0267
	-0.1534	-0.0709	-0.1332
Soc-Econ Status	-0.0738	0.0216	0.0682
	-0.3765	-0.1775	-0.3186
Income	0.1724	0.0443	-0.0205
	-0.1722	-0.0811	-0.1345
Community Size	-0.0880	-0.0217	-.5295***
	-0.1099	-0.0505	-0.1190
Constant	-2.7169	-0.0153	-0.5642
	-2.0174	-0.9371	-1.6756
Log-Likelihood	-374.9105		
Chi2	73.4407		
Pseudo R2	0.0892		
Base Category	MSZP		
N	381		

| *p<.05 | **p<.01 | ***p<.001 | (two-tailed) |

Of the two minor Hungarian parties, the vote for the liberal SZDSZ seems to be also best explained by positioning on the religious factor. However, like for minor parties in Austria, the vote for the agrarian FKGP is not predictable by issue-positioning at all. It is the size of the community inhabited that best predicts, where respondents from smaller localities are much more likely to support this party, underlining its rural character.

Table 10. Vote Probability Change - Hungary

	MSZP	SZDSZ	Fidesz-MDF	FKGP	Change
Social Moral Factor	0.1766	0.1456	-0.3616	0.0393	0.1808
Religious Factor	-0.4137	0.2073	0.1509	0.0554	0.2068
Economic Factor	0.3259	-0.0675	-0.2722	0.0138	0.1699
Age	0.1183	0.0181	-0.1899	0.0534	0.0949
Education Level	0.0097	-0.0111	0.0100	-0.0086	0.0098
Soc-Econ Status	-0.0132	-0.0106	0.0146	0.0091	0.0119
Income	-0.1015	0.0600	0.0591	-0.0175	0.0595
Community Size	0.1731	-0.0103	0.0649	-0.2277	0.1190

Maximum discrete probability change while other variables held at mean. Estimated by Stata's 'prchange' command

Figure 6. Probability of Vote for Party by Factors – Hungary
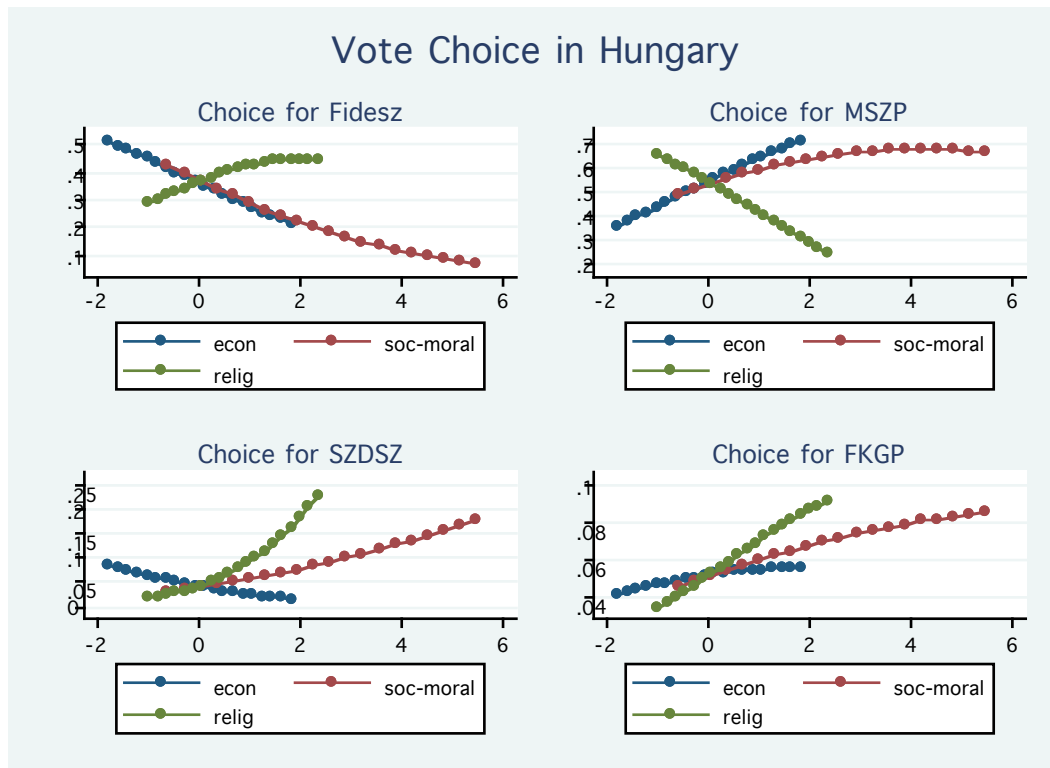
Economic factor spans from extreme right to extreme left, social-moral factor spans from social conservatism to social liberalism, religious factor spans from secular to religious. Generated by Stata's 'prgen' command.

The results for countries with steep competition axes – Austria and Hungary – are not entirely consistent with the hypotheses set out above. They may, however, be plausibly

interpreted in the light of my theoretical propositions. The somewhat indistinct results for the major parties in Austria and Hungary – which seem to compete for votes on the basis of social as well as economic issues – are sensible. Although being *relatively* steep, the Austrian and Hungarian competition axis is not close to parallel to the social dimension (which would require the slope coefficient to approach infinity). While Austria and Hungary may present empirical extremes in the European context, they do not portray a theoretical extreme of polities competing solely along the social dimension – the way that Sweden and the Czech Republic competes along the economic one. The mixed relevance of social as well as economic factors for the vote choice for major parties in Austria and Hungary is thus a realistic representation of their competition axes, which slants between the two dimensions. Furthermore, the fact that the minor parties seem to generally attract votes on the basis of non-policy rather than policy placement is also consistent. Since the major parties compete on a mixture of social and economic factors, the minor parties need to differentiate themselves on other issues. The Austrian Grünen thus strive for partially competing on being the party of the educated, while the anti-system FPÖ attracts the poorly qualified youth with bleak prospects, and the Hungarian FKGP reaches out to voters in rural areas.

V. Conclusion

This paper has argued for the usefulness of the terms *political space* and *axis of party competition* in the conceptualization of political conflict. Redressing the shortcomings of spatial theory, these concepts allow the representation of political competition in a broader ideological perspective. The content of political competition – the political space – is derived with greater nuance, not limited to a single generic dimension, but allowing for small-n dimensionality. Consequently, the main line of political conflict – the axis of competition – is contextualized within the spatial dimensionality, allowing for the quantitative expression of its characteristics (slope and fit), which can then be compared across varying cases. This understanding is useful for the study of comparative politics in that it provides a summary measure of political competition, which may be used in broader analyses.

This paper has demonstrated the applicability of these concepts by concentrating on contemporary party competition in European countries. Constructing a two-dimensional political space derived deductively from expert studies and placing political parties in it, has allowed the derivation of axes of party competition in different political systems of Europe. This exercise has subsequently outlined the broad variation on the slope of the axis of party competition, emphasizing that the nature of political conflict differs among

European countries – with some competing predominantly along an economic dimension, while others compete more along a social dimension.

Finally, this paper has addressed the variation of competition axis slope by studying the interplay between partisan and electoral politics. It has argued that where the competition axis slope is flat, main competition occurs along the economic dimension and voters chose major parties predominantly on the basis of economic considerations. Where the axis slope is steep, main competition occurs increasingly along the social dimension and major parties are more likely to be selected based on social-issue considerations. The results have broadly supported these claims. In Sweden and the Czech Republic, where the competition axes run distinctly along the economic dimension, vote choice for the major parties is rooted in economic concerns. In Austria and Hungary, where the competition axes are much steeper, vote choice for the major parties is determined jointly by social and economic issues. This result is consistent with the logic of the argument. Since the Austrian and Hungarian competition axes run between the economic and social dimension, major parties compete on both dimensions. Minor parties in all countries compete more along secondary issues. The Czech KDU-ČSL, as well as the Swedish Vänstrepartiet and Kristdemokraterna appeal to voters on social issues, while vote for the Hungarian FKGP and the Austrian FPÖ and Grünen seems to be best predicted by non-policy issues, such as age, education and community size, suggesting that these parties attract voters on the basis of their agrarian, anti-systemic and alternative identity respectively, rather than on specific policy. This emphasizes the theoretical virtue of the concepts of political space and axis of competition and illustrates their meaningful

description of political competition in Europe, allowing for differentiation and comparison. At the same time, these results highlight an important weakness of this conceptualization – its incapacity to capture party competition completely, including non-policy, as well as policy issues.

Appendix – Factor Analysis

1. Sweden

Factor analysis/correlation   Number of obs   =   700
    Method: principal factors   Retained factors =   8
    Rotation: orthogonal varimax (Horst off)   Number of params =   92

Factor	Variance	Difference	Proportion	Cumulative
Factor1	1.34102	0.17319	0.4133	0.4133
Factor2	1.16782	0.34214	0.3599	0.7732
Factor3	0.82568	0.06589	0.2545	1.0276
Factor4	0.75979	0.33550	0.2341	1.2618
Factor5	0.42429	0.36995	0.1308	1.3925
Factor6	0.05434	0.03383	0.0167	1.4093
Factor7	0.02051	0.01905	0.0063	1.4156
Factor8	0.00146	.	0.0004	1.4160

LR test: independent vs. saturated: chi2(105) = 1423.86 Prob>chi2 = 0.0000

Rotated factor loadings (pattern matrix) and unique variances

Variable	Factor1	Factor2	Factor3	Factor4	Factor5	Factor6	Factor7	Factor8	Uniqueness
b002	-0.1193	-0.0255	0.0110	0.5231	0.0169	0.0023	-0.0187	-0.0039	0.7107
b003	0.0527	0.1997	0.0960	-0.5479	-0.0803	-0.0112	-0.0144	-0.0041	0.6411
e037	0.5922	-0.0053	0.0596	-0.0984	0.0150	-0.0441	0.0363	0.0098	0.6325
e038	0.4959	0.0437	-0.0028	-0.0182	-0.2233	0.0774	0.0861	0.0023	0.6885
e039	0.5581	-0.0257	-0.0088	-0.0641	-0.0585	-0.0045	-0.0087	-0.0173	0.6799
e042	0.6086	-0.0429	0.0046	-0.0085	0.0217	0.0002	-0.0671	0.0033	0.6227
e143	-0.0804	-0.0921	-0.0155	0.2005	0.3681	0.0349	-0.0131	0.0019	0.8077
e145	-0.1741	-0.0545	-0.0730	0.1573	0.3361	0.0470	0.0489	-0.0079	0.8190
f028	0.0380	0.3189	-0.1843	0.1496	0.0393	0.0427	-0.0452	0.0277	0.8343
f103	0.0175	-0.0184	0.5995	-0.0093	0.0181	0.0164	-0.0235	0.0038	0.6387
f105	0.0223	-0.0795	0.6304	-0.0529	-0.0315	-0.0228	0.0197	-0.0035	0.5911
f118	-0.0174	0.6219	0.0119	-0.2031	-0.1139	-0.0541	-0.0002	-0.0002	0.5557
f120	-0.0175	0.6648	-0.0815	-0.0074	0.0189	0.0408	0.0030	-0.0008	0.5491
f122	-0.0663	0.3315	-0.0951	0.2003	0.0870	0.1646	0.0012	0.0020	0.8019
f126	0.0391	0.2541	-0.0233	0.0128	-0.3022	0.0923	0.0329	-0.0124	0.8321

Factor rotation matrix

```
----------------------------------------------
       | Factor1  Factor2  Factor3  Factor4  Factor5  Factor6  Factor7  Factor8
-------+--------------------------------------
Factor1 | 0.8309   0.1865   0.1485  -0.4109  -0.2889  -0.0208   0.0122  -0.0009
Factor2 |-0.2290   0.8949  -0.3437  -0.1011  -0.1185   0.0657  -0.0014   0.0042
Factor3 | 0.4454  -0.0959  -0.7270   0.4868   0.1479   0.0706  -0.0026   0.0063
Factor4 | 0.2061   0.3608   0.5749   0.6787   0.1471   0.1200  -0.0082   0.0064
Factor5 | 0.1264   0.1313   0.0270  -0.3250   0.9250  -0.0406  -0.0554   0.0122
Factor6 |-0.0176  -0.0771   0.0093  -0.1250   0.0324   0.9129   0.3771  -0.0372
Factor7 | 0.0069   0.0418  -0.0018   0.0447   0.0484  -0.3750   0.9218  -0.0592
Factor8 | 0.0042   0.0073  -0.0024   0.0054   0.0089  -0.0108  -0.0695  -0.9974
----------------------------------------------
```

2. Czech Republic

```
Factor analysis/correlation              Number of obs   =    1245
  Method: principal factors              Retained factors =    7
  Rotation: orthogonal varimax (Horst off)     Number of params =     98
    ----------------------------------------------
    Factor  |   Variance  Difference    Proportion  Cumulative
    --------+-------------------------------------
    Factor1 |   1.47256    0.16278        0.3538      0.3538
    Factor2 |   1.30978    0.06704        0.3147      0.6685
    Factor3 |   1.24274    0.42644        0.2986      0.9672
    Factor4 |   0.81631    0.37177        0.1961      1.1633
    Factor5 |   0.44454    0.21565        0.1068      1.2701
    Factor6 |   0.22890    0.09766        0.0550      1.3251
    Factor7 |   0.13123       .           0.0315      1.3566
    ----------------------------------------------
```

LR test: independent vs. saturated: chi2(136) = 3598.72 Prob>chi2 = 0.0000

Rotated factor loadings (pattern matrix) and unique variances

Variable	Factor1	Factor2	Factor3	Factor4	Factor5	Factor6	Factor7	Uniqueness
b002	0.0245	0.0574	0.0781	-0.0772	-0.4022	0.0606	0.0563	0.8154
b003	0.0754	-0.1094	-0.1722	0.0784	0.4520	0.0696	0.0602	0.7337
c035	0.1591	-0.2552	-0.1915	-0.0385	0.0976	0.2220	0.0043	0.8126
c036	-0.0650	0.6100	0.2699	-0.0211	-0.0027	-0.0630	-0.0360	0.5451
c037	-0.0617	0.4485	0.4757	0.0274	-0.1501	0.0491	-0.0117	0.5430
c038	0.1029	0.0887	0.1803	0.1300	0.0324	0.2992	0.0621	0.8377
c039	-0.0806	0.5421	0.1491	0.0759	-0.0690	0.1489	0.0238	0.6442
c042	-0.0464	0.4770	0.3001	-0.0189	0.0018	-0.1229	0.0130	0.6646
c043	-0.0222	0.2257	0.5876	-0.0025	-0.1018	-0.0266	-0.0149	0.5920
c044	-0.0058	0.2297	0.6045	0.0095	0.0193	0.0272	0.0030	0.5806
f028	0.3513	0.0158	0.1071	-0.1901	0.0021	-0.0025	-0.1854	0.7943
f103	-0.0958	0.0169	0.0086	0.6044	0.0315	0.0166	-0.0176	0.6236
f105	-0.0766	0.0119	0.0096	0.6066	0.0308	0.0054	0.0273	0.6242
f118	0.5865	-0.1213	-0.0508	-0.0169	0.1356	0.1057	0.1611	0.5830
f120	0.7136	-0.0592	-0.0274	-0.0835	-0.0423	-0.0009	-0.0165	0.4775
f122	0.5923	0.0137	-0.0026	-0.0395	0.0044	-0.0409	-0.0786	0.6396

```
    f126 |  0.2659  -0.0647  -0.0288   0.0150   0.0876   0.1527   0.2244 |    0.8427
    ─────────────────────────────────────────────────
```

Factor rotation matrix

```
    ───────────────────────────────────────
          | Factor1  Factor2  Factor3  Factor4  Factor5  Factor6  Factor7
    ──────+────────────────────────────────
    Factor1 | -0.3437  0.6710  0.6244  0.0735 -0.1816 -0.0449 -0.0359
    Factor2 |  0.8731  0.1880  0.3102 -0.3153 -0.0374  0.0724  0.0019
    Factor3 |  0.2704  0.0670  0.0791  0.8802  0.2876  0.2041  0.1306
    Factor4 | -0.0851  0.3945 -0.1859 -0.2790  0.8484  0.0197  0.0673
    Factor5 | -0.1730 -0.5691  0.6554 -0.1502  0.3247  0.2654  0.1353
    Factor6 | -0.0922  0.1733 -0.2056 -0.1416 -0.2368  0.7915  0.4654
    Factor7 | -0.0264  0.0177 -0.0360  0.0078  0.0404  0.5038 -0.8615
    ───────────────────────────────────────
```

3. Austria

```
Factor analysis/correlation                 Number of obs   =    1092
  Method: principal factors                 Retained factors =      9
  Rotation: orthogonal varimax (Horst off)     Number of params =     135

    ───────────────────────────────────────
    Factor |   Variance  Difference    Proportion  Cumulative
    ──────+────────────────────────────────
    Factor1 |   1.66060    0.13679       0.3942     0.3942
    Factor2 |   1.52381    0.53473       0.3617     0.7560
    Factor3 |   0.98908    0.28147       0.2348     0.9908
    Factor4 |   0.70760    0.28457       0.1680     1.1587
    Factor5 |   0.42304    0.07063       0.1004     1.2592
    Factor6 |   0.35241    0.21534       0.0837     1.3428
    Factor7 |   0.13707    0.10323       0.0325     1.3754
    Factor8 |   0.03384    0.00902       0.0080     1.3834
    Factor9 |   0.02481       .       0.0059   1.3893
    ───────────────────────────────────────

LR test: independent vs. saturated: chi2(171) = 3085.20 Prob>chi2 = 0.0000
```

Rotated factor loadings (pattern matrix) and unique variances

```
    ─────────────────────────────────────────────────────────────
    Variable | Factor1  Factor2  Factor3  Factor4  Factor5  Factor6  Factor7  Factor8  Factor9 |  Uniqueness
    ──────+──────────────────────────────────────────────────+───────
      b002 | -0.0518 -0.0042 -0.1432  0.4886 -0.0375  0.0432 -0.0041  0.0200  0.0032 |   0.7343
      b003 |  0.0968 -0.0632  0.1936 -0.4735  0.0530 -0.0369 -0.0144  0.0204 -0.0036 |   0.7201
      e035 |  0.1217 -0.0592  0.0665 -0.0922  0.2077  0.0986 -0.0175  0.0151  0.1330 |   0.8977
      e036 | -0.0086  0.5090  0.0556  0.0139  0.1067  0.0646 -0.0926  0.0847  0.0278 |   0.7055
      e037 |  0.0281  0.5321  0.0278  0.0112 -0.0372 -0.0421  0.1259 -0.0348 -0.0175 |   0.6947
      e038 |  0.1640  0.1912  0.0518 -0.1481  0.4357 -0.1296  0.0074  0.0045  0.0001 |   0.7052
      e039 |  0.0148  0.4656  0.1071  0.0308  0.2105  0.0614 -0.1436 -0.0312 -0.0435 |   0.6990
      e042 | -0.0714  0.5388  0.0690  0.0097 -0.0781  0.0239 -0.1118 -0.0226  0.0206 |   0.6797
      e043 |  0.0282  0.4411 -0.0418  0.0467 -0.0046 -0.0474  0.1935 -0.0034 -0.0027 |   0.7610
      e044 |  0.1691  0.4614  0.0545  0.0076  0.1173 -0.1106  0.1689  0.0186 -0.0176 |   0.7003
      e143 | -0.1425  0.0786 -0.0201  0.3400 -0.1733  0.2273 -0.0215  0.0089 -0.0457 |   0.7732
      e145 | -0.1336 -0.0106 -0.0794  0.1822 -0.0922  0.3563  0.0092  0.0026  0.0144 |   0.8068
      f028 |  0.4185  0.0235 -0.2685  0.0725 -0.0047 -0.0412  0.0470  0.1292  0.0116 |   0.7263
      f103 | -0.1216  0.0553  0.6271 -0.0578  0.0304 -0.0344 -0.0029  0.0101  0.0178 |   0.5830
```

41

```
f105 | -0.1178   0.0657   0.6298  -0.0946   0.0069   0.0056  -0.0006  -0.0088  -0.0152 |   0.5758
f118 |  0.6364  -0.0382  -0.0036  -0.1468   0.1499  -0.1294   0.0344  -0.0389   0.0142 |   0.5298
f120 |  0.6806   0.0162  -0.1606  -0.0019   0.0114   0.0070   0.0019   0.0389  -0.0110 |   0.5089
f122 |  0.5576   0.0755  -0.0617   0.0261  -0.1057   0.0868  -0.0588  -0.0491   0.0073 |   0.6543
f126 |  0.3875   0.0362   0.0292  -0.1485   0.1885  -0.3034   0.0746   0.0125  -0.0048 |   0.6923
```

Factor rotation matrix

	Factor1	Factor2	Factor3	Factor4	Factor5	Factor6	Factor7	Factor8	Factor9
Factor1	0.8688	0.2568	-0.1331	-0.2261	0.2418	-0.2178	0.0629	0.0205	0.0112
Factor2	-0.2424	0.8475	0.4459	-0.0534	0.1420	-0.0257	0.0100	-0.0114	-0.0128
Factor3	0.0486	0.4167	-0.6156	0.5923	-0.2100	0.2204	0.0203	0.0249	-0.0234
Factor4	0.4285	-0.0906	0.5936	0.3667	-0.3725	0.4080	-0.1254	-0.0174	0.0023
Factor5	-0.0057	-0.1775	0.1924	0.6552	0.6383	-0.2906	0.0872	0.0502	0.0155
Factor6	-0.0066	-0.0092	-0.1191	-0.1405	0.5291	0.6263	-0.5263	0.0302	0.1263
Factor7	-0.0048	-0.0385	0.0158	-0.0986	0.1844	0.4881	0.8294	0.0848	0.1454
Factor8	-0.0164	0.0132	0.0255	-0.0123	-0.0993	-0.0816	-0.0776	0.9471	0.2816
Factor9	0.0068	-0.0253	0.0063	-0.0428	0.0857	0.1238	0.0356	0.3016	-0.9394

4. Hungary

Factor analysis/correlation   Number of obs   =   558
 Method: principal factors   Retained factors =   6
 Rotation: orthogonal varimax (Horst off)   Number of params =   75

Factor	Variance	Difference	Proportion	Cumulative
Factor1	1.25336	0.22729	0.4361	0.4361
Factor2	1.02607	0.19552	0.3570	0.7932
Factor3	0.83054	0.38441	0.2890	1.0822
Factor4	0.44613	0.05607	0.1552	1.2374
Factor5	0.39006	0.10474	0.1357	1.3731
Factor6	0.28532	.	0.0993	1.4724

LR test: independent vs. saturated: chi2(105) = 1002.63 Prob>chi2 = 0.0000

Rotated factor loadings (pattern matrix) and unique variances

Variable	Factor1	Factor2	Factor3	Factor4	Factor5	Factor6	Uniqueness
b002	-0.0150	0.0079	0.0984	0.0322	0.0929	0.3438	0.8621
b003	0.0762	0.0450	-0.1414	-0.0509	-0.0905	-0.3127	0.8636
e037	-0.0926	0.0088	0.5695	0.0266	0.0215	0.1016	0.6555
e038	0.0859	-0.0379	0.2613	0.1004	-0.3139	-0.0373	0.8129
e039	-0.0389	0.0976	0.3139	-0.0567	-0.1037	-0.1882	0.8410
e042	-0.0979	0.0112	0.4633	-0.0328	0.1145	-0.0485	0.7591
e143	-0.2291	0.0591	0.2060	-0.0058	0.3764	0.0860	0.7525
e145	-0.2130	0.0221	0.1891	0.0700	0.3118	0.0731	0.8109
f028	0.0975	-0.2978	0.0713	0.3170	-0.0515	0.0693	0.7888
f103	-0.1139	0.6666	-0.0223	-0.0644	0.0164	-0.0219	0.5373

```
f105 |  0.0675   0.6623   0.0491  -0.0255   0.0044   0.0150 |   0.5535
f118 |  0.6836  -0.0169  -0.0820   0.0650  -0.0288  -0.0067 |   0.5205
f120 |  0.3353  -0.1512  -0.0362   0.4093   0.0383   0.0357 |   0.6931
f122 |  0.2505  -0.1167   0.0228   0.3775  -0.0401  -0.0094 |   0.7789
f126 |  0.6729  -0.0206  -0.0176   0.0538  -0.0680  -0.0129 |   0.5388
     ----------------------------------------------
```

Factor rotation matrix

```
       ----------------------------------
         | Factor1  Factor2  Factor3  Factor4  Factor5  Factor6
     --------+----------------------------------
     Factor1 |  0.7835  -0.4076  -0.2760   0.3074  -0.2182  -0.0405
     Factor2 | -0.2928  -0.7774   0.4382   0.2448   0.1577   0.1820
     Factor3 |  0.4020   0.3915   0.7897   0.2302   0.0208   0.0899
     Factor4 |  0.0816   0.1689  -0.2970   0.3079   0.6825   0.5621
     Factor5 | -0.3630   0.2183  -0.1413   0.8022  -0.3933  -0.0495
     Factor6 |  0.0187  -0.0070   0.0024   0.2330   0.5537  -0.7992
     ----------------------------------
```

Bibliography

Adams, James (2001). "A Theory of Spatial Competition with Biased Voters" *British Journal of Political Science*. 31/1

Adams, James and Samuel Merrill III. (1999) "Modeling Party Strategies and Policy Representation in Multiparty Elections" *AJPS*. 43/3

Aldrich, John (1983) "A Downsian Spatial Model with Party Activism." *APSR*. 77/4

Chapel Hill Expert Survey (2002) Available on the website of Gary Marks. http://www.unc.edu/~gwmarks/data.htm

Chappell, Henry W. and William R. Keetch (1986) "Policy Motivation and Party Difference in a Dynamic Spatial Model of Party Competition." *APSR*. 80/3

Cox, Gary W. (1990) "Centripetal and Centrifugal Incentives in Electoral Systems" *AJPS*. 34/4

Daalder, Hans (1984) "In Search of the Center in European Party Systems." *APSR*. 78/1

Dalton, Beck and Falanagan (1984) *Electoral Change in Advanced Industrial Democracies*. Princeton University Press. Princeton.

Downs, Anthony (1957) *An Economic Theory of Democracy*. Harper. New York

Hooghe, Liesbet, Gary Marks and Carol Wilson (2002) "Dies Left/Right Structure Party Positions on European Integration?" *Comparative Political Studies*. 35

Hotelling, Harold (1929) "Stability in Competition" *Economic Journal*. 39

Huber, Evelyn and John D. Stephens (2001) *Development and Crisis of the Welfare State*. University of Chicago Press. Chicago.

Inglehart, Ronald (1984) "The Changing Structure of Political Cleavages in Western Society" *Electoral Change in Advanced Industrial Democracies*. Dalton, Beck and Flanagan (eds.). Princeton University Press. Princeton.

Inglehart, Ronald (1997) *Modernization and Postmodernization*. Princeton University Press. Princeton.

Iversen, Torben (2001) "The Dynamics of Welfare State Expansion" in *The New Politics of the Welfare State*. Pierson (ed.). Oxford University Press. Oxford.

Kitschelt, Herbert (1992) "Formation of Party Systems in East Central Europe" *Politics and Society*. 20

Kitschelt, Herbert (1994) *Transformation of European Social Democracy*. Cambridge University Press. Cambridge

Kitschelt, Herbert (2003) "Diversification and Reconfiguration of Party Systems in Postindustrial Democracies" *Friedrich Ebert Stiftung*. http://www.fes.de/europolity/finalversionkitsch.PDF

Kriesi, Hanspeter, Edgar Grande, Romain Lachat, Martin Dolezal, Simon Bornschier, Tim Frey (2007). "Globalization and the Transformation of the National Political Space: Six European Countries Compared." Manuscript

Lipset, Martin Seymore and Stein Rokkan (1967) *Party Systems and Voter Alignments*. The Free Press. New York

MacDonald, Stuart Elaine and George Rabinowitz (1989). "A Directional Theory of Issue Voting." *APSR*. 83/1

MacDonald, Stuart Elaine, Ola Listhaug and George Rabinowitz (1991). "Issues and Party Support in Multiparty Systems." *APSR*. 85/4

Marks, Gary, Liesbet Hooghe, Erica Edwards and Moira Nelson (2006) "Party Competition and European Integration in the East and West: Different Structure, Same Causality." *Comparative Political Studies* 39/2

Marks, Gary and Marco Steenbergen (2002). "Understanding Political Contestation in the European Union." *Comparative Political Studies*. 35/8

Meguid, Bonnie (2005). "Competition Between Unequals: The Role of Mainstream Party Strategy in Niche Party Success." *APSR*. 99/3

Miller, Gary and Norman Schofield (2003). "Activists and Partisan Realignment in the United States." *APSR*. 97/2

Sartori, Giovanni (1976). *Parties and Party Systems*. Cambridge University Press. Cambridge.

Strom, Kaare (1990) "A Behavioral Theory of Competitive Political Parties" *AJPS*. 34/2

Vachudova, Milada Anna and Liesbet Hooghe (2006) "Euroscepticism after Communism" available at http://www.unc.edu/depts/europe/conferences/euroskepticism/papers/vachudova_hooghe.pdf

World Values Surveys (1999-2002) available at http://www.worldvaluessurvey.org/

Zielinski, Jakub (2002) "Translating Social Cleavages into Party Systems." *World Politics*. 54