Politicisation and Political Interest in Europe: A Multi-Level Approach

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Editorial Note:

Abstract

Political interest of citizens usually is depicted as an individual attribute that can be explained by referring to the resources and skills of the people concerned. The analyses presented here are based on a critical assessment of the explanatory power of these approaches in cross-national and longitudinal comparisons. Instead, a contextual model is presented emphasising the relevance of distinct degrees of politicisation in different societal settings in addition to the traditional socio-demographic factors (education, age, and gender) at the micro-level. The resulting multi-level model combines both individual and contextual factors to explain the cross-national differences and changes in political involvement and apathy in Europe in the last three decades. The politicisation thesis, which states that the level of political interest among citizens is a positive and monotonous function of the relevance of societal and political arrangements in a society, is not supported by the empirical findings presented here. The most noteworthy conclusion is the remarkable disappearance of the impact of societal politicisation when the level of socio-economic development of each country is included in multi-level models. The level of political interest, then, depends on the level of socio-economic development.

Contents

1.   Introduction

In virtually each and every treatise of the problems and prospects of democratic decision making, the degree of political engagement of citizens plays a crucial role. Some level of political interest among citizens is a necessary condition for the distinction between democratic and non-democratic government. The debates focus on the degree or distribution of political interest; not on the decisive role of involvement in this kind of discussions (cf. Almond and Verba 1963: 474ff; Berelson et al. 1954: 307; Barber 1984: 117). Direct attacks on vested interests or severe social conflicts may be major incentives for political interest. However, even when their vital interests are not at stake, citizens in democratic political systems are expected to pay some attention to political phenomena. A kind of curiosity about politics should be characteristic of citizens in democratic systems regardless of their actual needs or attempts to participate in political decision-making processes.

In order to avoid confusion with related concepts, political interest must be delimited from political motivation, involvement, or participation. Political interest is defined here as the 'degree to which politics arouses a citizen's curiosity' (van Deth 1990: 278); it is the 'attentiveness to politics' (Zaller 1992:18) and the potential readiness to participate. It is not a mode of political behaviour, but a type of political commitment and involvement only. Usually, the level of political interest is explained by referring to resources and skills of individual citizens. A number of studies discloses education, age, and gender as three highly relevant predictors of political interest at the individual level: a higher level of education comes along with a higher level of political interest, older people are more interested than young people (but involvement decreases rapidly in the last phase of life), and men always show more interest in public affairs than women do. Although the strength of these correlations is frequently rather modest at best, and several other factors are related to political interest too, these results have been confirmed in many studies in many countries (cf. van Deth and Elff 2000).

Unquestionably political interest defined in terms of curiosity is an attribute of individual citizens. Based on this truism virtually each and every study available is restricted to the impact of individual resources and skills. Typical for these approaches is the dominance of psychological and socio-psychological theories, and only rarely contextual factors such as the spread of modern mass media are considered. In addition to these commonly used '*push theories*' (for instance suggesting that education instigates political interest), there are hardly any '*pull theories*' or goal-oriented theories available that rely on societal and political opportunities and circumstances (for instance suggesting that government intervention activates political interest). Since micro-level approaches only are clearly inadequate to explain cross-national and longitudinal differences in political interest (van Deth and Elff 2000), contextual factors have to be taken into account. The more relevant political arrangements are for a society, the higher the level of political interest will be.

In this paper we develop a contextual model for political interest emphasising the relevance of distinct degrees of politicisation in different societal settings in addition to the traditional socio-cultural factors (education, date of birth or age, and gender) at the micro-level. A multi-level model is presented combining both individual and contextual factors to explain the cross-national differences and changes in political involvement and apathy in Europe in the last few decades. The concept *politicisation* refers to the relevance of societal and political arrangements for a society, and four major factors at the macro-level (cleavages, state intervention, openness of the political system, and control capacity of government) are discussed. Beside, a number of indicators at the macro-level are selected to measure the degree of politicisation in Europe in the last decades.[1] Finally, a multi-level model is tested covering both individual-level factors and indicators for the degree of politicisation. This integrated approach appears to result in a satisfactory explanation of the persisting cross-national differences in political interest. The database at the micro-level consists of a combination of all Eurobarometer surveys available for the period from 1970 to 1998, compromising a total of more than 900,000 respondents in a number of European countries (see Appendix).[2] The countries included are Austria, Belgium, Denmark, Finland, France, Germany (West), Great Britain, Greece, Ireland, Italy, the Netherlands Norway, Portugal, Spain, and Sweden.

2. The Politicisation of Society

A number of studies offer information about the development of political interest in Europe, many of them suggesting an increasing level of political involvement (cf. Kaase and Marsh 1979: 36; Dalton 1988: 22 and 1996: 26). However, the trend of increasing political interest is not a universal phenomenon: it increases in several countries, decreases in other, and shows trendless fluctuations in still other countries (cf. van den Broek and Heunks 1993; Gabriel and van Deth 1995; Topf 1995; van Deth 1996; Bennett 1984: 552; van Deth 1990: 282; Miller and Shanks 1996: 107-11). Yet it is also clear that the absolute levels of political interest are still rather low, and analyses of trends show that on average only one out of every six European citizens frequently discusses politics with his or her friends, while every third citizen never touches upon this topic (cf. Inglehart 1990: 353-4; Topf 1995: 61; van Deth 1991: 204 and

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1996a: 386-7; van Deth and Elff 2000). Behind each and every summary of this kind of aggregated figures huge cross-national differences can be observed (van Deth 1996a: 387; van Deth and Elff 2000).

Since micro-level explanations only are not adequate to explain the persistent cross-national differences in the levels of political interest in Europe, the introduction of contextual factors should be considered. A relatively high level of political interest of an individual citizen can be the consequence of the apparent relevance of societal and political arrangements, while deficient performance or invisibility of these arrangements instigate less interest in politics or even political apathy (cf. Rosenberg 1954). In general terms, the *politicisation thesis* states that *the level of political interest among citizens is a positive and monotonous function of the relevance of societal and political arrangements in a society* (van Deth 1991). The persistent cross-national differences in political interest and the seemingly inconsistent trends in several countries, then, can be seen as the result of different levels of politicisation between these societies.

Several interpretations of varying degrees of politicisation in Europe are available. First of all, the relevance of societal and political arrangements is closely related to the development of several cleavages in the last few centuries. The origins of many of these cleavages go back to the combined impact of the rise of the nation-state and the industrial revolution. Cleavages are those deep-rooted divisions within a society that have structured political conflict and competition. According to the seminal work of Lipset and Rokkan (1967: 14) in this area, four main cleavages can be discerned in Europe: a denominational cleavage, a centre-periphery cleavage, an urban-rural cleavage, and an owner-worker cleavage. Despite the apparent 'defreezing' of these potential conflict lines since the 1960s, many societal and political arrangements are still based on these contrary positions. Cleavages establish a first interpretation of the politicisation thesis: the level of political interest is a positive and monotonous function of the relevance of those deep-rooted divisions within society.

In addition to direct references to long-term cleavages, political interest can be induced if people are confronted with severe societal problems and the way government handles these issues. In many countries, ongoing and increasing intervention of political decision makers in the economic process (especially dealing with aspects of macro-economic policies like inflation, employment, budgetary deficits, and the like) can be observed. Besides, state intervention increases with economic growth. As per capita real income increases, governments will spend a higher proportion of national product than before ('Wagner's Law') , and the number of distinct activities covered by government regulation, subsidising, or taxation increases as well. With each rise in government spending and with each expansion of government tasks the number of interests grows. The average citizen, then, is confronted with an ever-growing invasion of government intervention in many areas, and a continuing 'fiscalisation' of the problems he or she faces. As a consequence, the number of people exposed to political stimuli increases while, furthermore, the significance of

political conflicts becomes more evident for more people. From this line of reasoning a second interpretation of the politicisation thesis follows: the level of political interest among the populace also is a positive and monotonous function of the relevance of the role of government in society. Three aspects of this role can be distinguished: the degree of state intervention, openness of the political system, and the control capacity of the state.

The degree of state intervention refers to the significance of the state as a central agency for distributing resources and of benefits. Beside, modern states function as a major employer for substantive parts of the workforce. Political participation and political interest are directed towards decisions about the course of action of the state and towards processes and procedures leading to those decisions. Thus, state intervention should be a major incentive for political interest of individual citizens. A political system with a low degree of state intervention offers a relatively weak stimulus for citizens to show political interest (and vice versa). A certain degree of state intervention is a necessary condition for government actions to have consequences for the daily life of citizens.

With political system openness as a dimension of the relevance of the role of government we refer to the extend to which the polity offers opportunities for political participation.[3] Just as was the case with the previous aspects of politicisation, the significance of this attribute can be justified in a straightforward and rather trivial manner. Political participation – at least legitimate modes of participation – presupposes appropriate opportunities. If no potentially effective ways to influence politics are available for individual citizens, there is hardly any reason for being curious about political phenomena. In a similar way it can be expected that by offering a wide variety of easy 'entrances', the political system lures political interest. In general: the higher the degree of openness of a political system, the higher the level of political interest will be.

State intervention and openness of the political system are necessary conditions for political participation to have some effect on decision-making processes. In addition, the control capacity of government is considered to be a distinct aspect of politicisation here. With this concept we refer to the chance that the state can reach its policy goals effectively, either in the sense of protecting the *status quo* or by accomplishing social change. A high degree of state intervention does not necessarily imply that government has a high degree of control over society or over actions of agents of the state itself. State interventions create commitments for the state that cannot easily be dissolved and they may also create vested interests for groups benefiting from certain policies. Not only is there a conceptual difference between state intervention and control capacity, there are also good reasons to expect that the control capacity is relevant for the level of political interest in a society. State intervention just motivates political interest and political

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[3]　This conceptualization makes clear that we rely heavily on the work of authors dealing with the concept 'political opportunity structure' (see Eisinger 1973; Tarrow 1983; Kitschelt 1986; or Kriesi et al. 1995).

participation, because there is something at stake for citizens. Control capacity, on the other hand, guarantees that citizens indeed can get what they want and institutionalises relationships between state and society.

The two major categories (cleavages and role of the state), and the three specifications of this last group (intervention, openness, and control capacity) are used here as aspects of the degree of politicisation of society. They establish the 'pull factors' for the level of political interest and apathy of individual citizens that can be expected to contribute to the explanation of the persistent differences in political interest at the cross-national level. However, these factors should be considered as extensions of the conventional individual-level approaches; that is, an adequate model to test the available interpretations is to develop a multi-level model covering both micro- and macro-interpretations. In such a model, attention should also be paid to the possible impacts of rapid societal, economical, and political changes broadly indicated by the term modernisation. Modernisation theories view the process of socio-economic development as the prime source of societal and political change. This process comprises broad changes in the society with respect to economic productivity, changes in the division of labour, increasing urbanisation and mobilisation, and rising levels of education in a country. [4] In this perspective the persistent cross-national differences in the level of political interest in Europe can be the result of different levels of modernisation reached by respective nations. The multi-level model designed here, then, has to take general aspects of modernisation into account. Before we turn to that model the principal factors mentioned have to be operationalised first.

3. Operationalisations

For an empirical test of the politicisation thesis data covering both political interest at the individual level and the major aspects of the politicisation of society are required. The operationalisation of these factors is briefly depicted in the current section; a detailed description is presented in the Appendix at the end of this research note.

3.1 Political Involvement and Apathy

Attempts to measure psychological concepts like the degree to which politics arouses a citizen's curiosity directly present many complications related to the distinction between interest and behavioural utterances or consequences of interest (van Deth 1989). A direct question on the *frequency of political discussion* is used here as an indicator of the direct expression of political interest. The responses 'talking about politics frequently' or 'occasionally' are not easy to

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[4] See for a brief discussion of this concept and an overview of the relevant literature Riegel (1995) and especially the critical discussion by Berger (1996).

distinguish and the only unambiguous response is 'never' engaging in political discussions. Consequently, the concept political apathy can be defined in an clear-cut way. Respondents providing this answer show an evident lack of political interest and this response – and only this response – is considered to be an indicator of *political apathy* (van Deth 1991: 206; van Deth and Elff 2000). Especially the response that the respondent discusses politics 'frequently' suggests a clear level of political interest. Therefore, this response – and only this response – is considered to be an indicator of *political involvement* here (Gabriel and van Deth 1995: 396).

3.2 Politicisation

In the previous section, various aspects of the concept politicisation are distinguished: cleavage structure, state intervention, openness of the political system, and control capacity of the state. With one exception, all these dimensions of politicisation can be further decomposed in sub-dimensions, which are then operationalised by measures from various sources. In order to test the internal coherence among items used for indices for these sub-dimensions principle-

Figure 1: Operationalisation of the Concept Politicisation
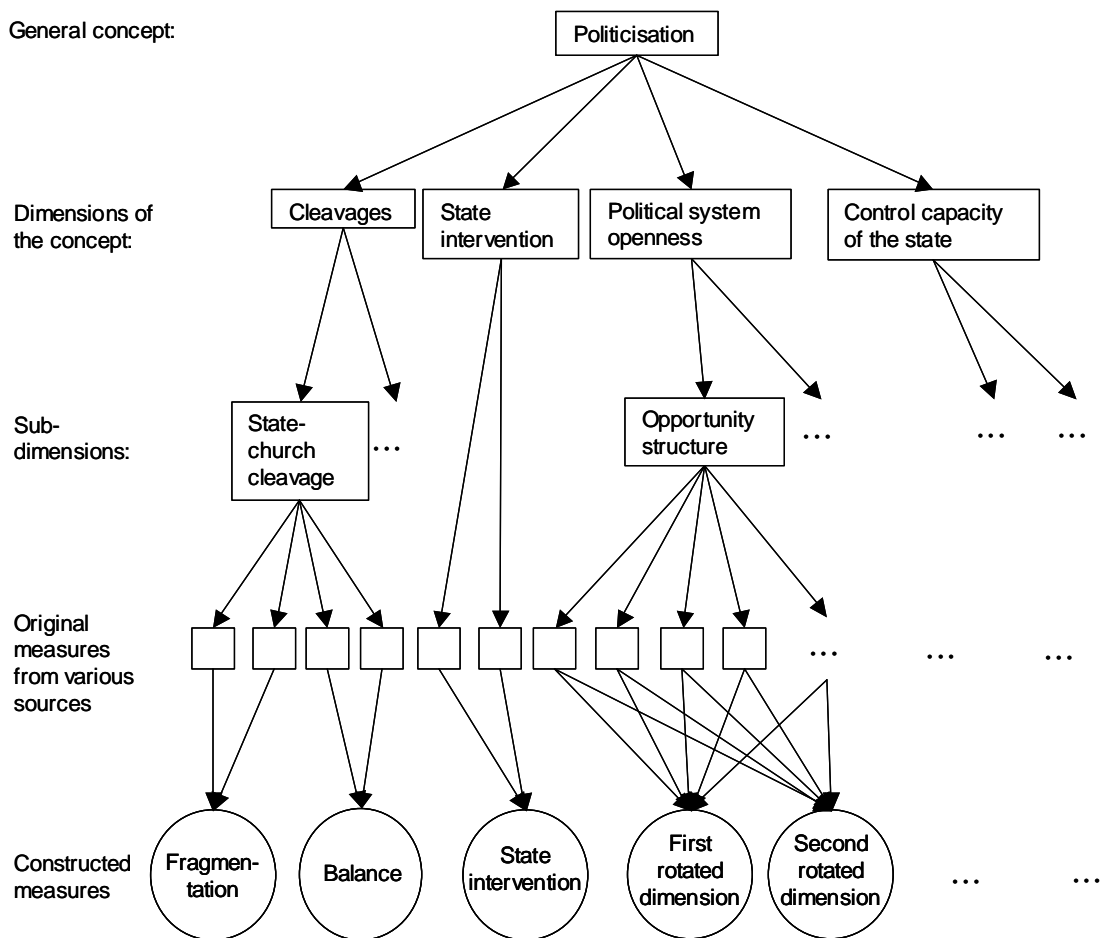
components analyses are carried out. Figure 1 provides an overview of this procedure.

3.2.1 Cleavages

Cleavages are those deep-rooted divisions within society that have structured political conflict and competition. The work of Rae and Taylor (1970) offers an interpretation of cleavages in terms of measurable features of a society, creating a concept out of a metaphor. Three attributes are of special interest when considering cleavages as an aspect politicisation: (i) the *fragmentation* of a society by a cleavage, (ii) the *crystallisation* of a cleavage in a society, and (iii) the *intensity* of the cleavage (in terms of political conflict). In addition, the *balance* of a cleavage, that is, the advantage that one of the groups involved has compared to other groups in terms of mass support can be measured.

Lipset and Rokkan (1967) mention four main lines of cleavage that emerge during the transition of West European polities into modernity. These lines of cleavage are the state-church cleavage, the center-periphery cleavage, the urban-rural cleavage, and the owner-worker cleavage. As far as possible and substantially meaningful, for each of these cleavages indices are developed to measure fragmentation, crystallisation, intensity, and balance. Thus, denominational fragmentation is the most appropriate measure of the state-church cleavage, while the proportion of Catholics, Protestants, and people without creed can be seen as alternative measures for the balance of this cleavage. Church attendance figures as an indicator for the crystallisation in this case. For the centre-periphery cleavage only measures for fragmentation and balance are available: ethnic fragmentation and the proportion of the ethnic majority of the population of a country. For the urban-rural cleavage the relative size of the agricultural sector is the only appropriate measure available. For the owner-worker cleavage we can only employ strike activity as a measure of intensity.

3.2.2 State Intervention

The concept state intervention refers to the role and position of governmental intervention. Three major aspects can be discerned: the degree to which governmental institutions extract resources from general society, the degree to which they provide benefits and services, and the proportion of the workforce employed by governmental institutions and state-owned firms. From a principle-components analysis, it follows that the indicators selected all fit in a one-dimensional latent structure. Therefore, a single index of state intervention is constructed based on the factor scores obtained from this principle-components analysis.

3.2.3 Political System Openness

Openness of a political system denotes the propensity of a political system to allow for the

expression of political demands, to be responsive to these demands, and to give opportunities for citizens' participation. Freedom of expressing political opinions is generally regarded as a basic feature of democratic polity, so only little variation is to be expected among democratic countries in this respect. The existence of institutional channels of participation however may vary according to the emphasis that the respective countries' constitutions give to political representation or to more direct forms of participation like referenda. Besides, when it comes to the politicisation aspects of a polity, the historical experience with respect to political openness may also be relevant. Responsiveness of a polity to citizens' demands, however, is an aspect of openness of the political system that is difficult, if not impossible, to measure. A measurement of responsiveness would presuppose knowledge of citizens' demands in general and of the way government's policies reflect these demands.

Three types of indicators of openness of the political system are used in the subsequent analyses: indicators based on general democracy indices, indicators based on measures for the institutional opportunity structure for mass participation in politics, and indicators based on measures for the historical record of democracy in European countries.

Although principle-components analysis does not support – at least for European countries – the notion of a single dimension underlying the various indices of democracy, we prefer the use of a single summary measure based on factor scores that taps the common features of these indices rather than the idiosyncrasies of their original construction by several authors. For the institutional opportunity structure, however, we employ two measures, since two clearly interpretable dimensions result from principle-components analysis: opportunities for participation via referenda and opportunities for influencing the composition of legislative bodies. The historical record of democracy also seems to exhibit a two-dimensional structure: a dimension relating to authoritarian interruptions of democracy and a dimension referring to the original transition to democracy. The former of these dimensions, however, seems to be more coherent than the latter. Therefore, we also employ two measures for this sub-dimension of the concept of openness of the political system.

3.2.4   Control Capacity of the State

Control capacity of government refers to the properties of a political system that determine the attainment of political goals set by governments. That is, we do not refer to the administrative skills and political determinateness of politicians acting as members of government but rather to the structural properties of a political system that restrict or facilitate their political pursuits. We measure the control capacity of a government by those properties of the political system that are relatively easy to observe: centralisation of governmental structures, the institutional constraints to (central) government, stability and effectiveness of national governments, and structures of interest mediation.

For centralisation of governmental structures and for structures of interest mediation respectively, the notion of a single dimension is supported by principle-components analyses. Therefore we use in our subsequent analyses for each centralisation and for interest mediation a single measure based on factor scores. Structures of government stability and effectiveness, however, seem to have two dimensions: a dimension that relates to government stability and a dimension that relates to government effectiveness. Thus two measures are used in this case.

3.2.5   Modernisation

In order to test the assumption that levels of political interest are less related to specific features of the political system than to the general state of socio-economic modernisation, an index of modernisation is constructed based on measures of economic productivity and the sectoral composition of the workforce. The results of the principle-components analysis clearly support a one-dimensional model of socio-economic modernisation.

4.   A Multi-level Model of Political Involvement and Political Apathy

Considerable variation in the level of political involvement and political apathy both between countries and over time can be shown in Europe in the last decades (van Deth and Elff 2000). This variation is difficult to describe in a simple way. Are cross-national differences relatively stable or are these differences overwhelmed by intra-national fluctuations? Are temporal variations nation-specific or do they occur in all countries simultaneously? These questions have to be answered before we turn to the more substantive study of contextual effects of politicisation on political involvement and political interest. Before explaining variations we need a basic multi-level model of political involvement and political apathy that makes clear what is to be explained.

4.1   The Method: Multi-level Logistic Regression

Multi-level modelling (Goldstein 1995; Snijders and Bosker 1999) is a method explicitly designed to deal with clustered data. The two main reasons to use this method are, first, to obtain correct coefficient estimates, standard errors, and test statistics, and, second, to model explicitly the degree of heterogeneity across clusters. Basically, our cross-national and longitudinal data can be regarded as clustered on the basis of nation and point in time. In general, a multi-level model should allow for at least three overlapping levels – individuals, nations, and time points – for each of the two dichotomous dependent variables. These requirements present challenge that cannot be met by conventional data analysis techniques.

Ordinary linear regression, logistic regression, Poisson regression models and other generalised linear models (see Mccullagh and Nelder 1989; Long 1997; Gill 1999) all assume that residuals are identically independently distributed. The validity of model-related tests – like likelihood-ratio tests, F-tests, Wald- and Lagrange-Multiplier tests – hinges on this assumption. In the case of clustered data this assumption is violated. Residuals of observations belonging to the same cluster are *not* independent but correlated. This correlation is due to the fact that there are some common contextual influences specific to each cluster.[5] In multi-level models these common contextual influences are represented by *random effects* (Snijders and Bosker 1999: 43), which are considered as unobserved variables that have a zero expectation over all clusters.

The main reason for using multi-level models in our study is the possibility of a decomposition of unexplained variance of a model into a component at the level of individual observations and a component at the level of unobserved contextual effects.[6] This is made possible by the assumption that random effects have a certain probability distribution (usually the normal distribution). In general the means of random effects are assumed to be zero, whereas the variances of random effects are assumed to be parameters to be estimated from the data, which are called *variance parameters*.

Consider a linear two-level model with independent variables $x_1,..., x_p$, which has the following formulation (cf. Goldstein 1995: 17f; Snijders and Bosker 1999: 38ff):

$$y_{ij}=\beta_0+\beta_1 x_1+...+\beta_p x_p + u_j + e_{ij}$$

where j is the index for clusters and i is the index for an individual observation within cluster j, u_j refers to the random effect corresponding to cluster j, and e_{ij} refers to the residual for observation i within cluster j. In such a model the unexplained variance of the dependent variable can be decomposed as follows (Goldstein 1995: 18; Snijders and Bosker 1999: 48):

$$var(y_{ij}|\beta_0,...,\beta_p,x_1,...,x_p)=var(e_{ij}) + var(u_j),$$

where $var(y|\beta_0,...,\beta_p,x_1,..., x_p)$ denotes the variance unexplained by the independent variables $x_1,..., x_p$, $var(e_{ij})$ denotes the variance of the residuals e_{ij} at the level of the individual

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[5]   If we had complete information on these contextual influences and if they are included in the model, this correlation would disappear, of course.

[6]   An alternative method for obtaining correct tests is to use conventional procedures of estimation and to construct robust standard errors (see Huber 1967; White 1982; Binder 1983). However it does not provide for a decomposition of unexplained variance.

observations, and var(u_j) denotes the variance of the random effects u_j.[7]

Another distinctive feature multi-level models is that it allows for complex structures of contextual effects: Clusters can be nested at several levels or they can be crossed. Clusters at a lower level are nested into clusters at an upper level if members of a cluster at the lower level are considered as members of one and only one cluster at the upper level. Observations are assumed to be more heterogeneous across clusters at the upper level than across clusters at the lower level. Clusters are crossed if observations belong to clusters in two ways simultaneously at the same level, but these clusters are not nested (Goldstein 1995: 113ff; Snijders and Bosker 1999: 155ff). Each of these cases corresponds to a specific structure among the random effects. For example, a hierarchical three-level model with independent variables $x_1,...,x_p$ is formulated as:

$$y_{ijk}=\beta_0+\beta_1x_1+...+\beta_px_p+u_k+v_{jk}+e_{ijk,}$$

where *j* refers to the *j*-th level-2 cluster within level-3 cluster *k* and *i* to the *i*-th individual observation within the *j*-th level-2 cluster within the *k*-th level-3 cluster, u_k refers to the value of the random effect corresponding to level-3 cluster *k*, v_{jk} refers to the value of the random effect corresponding to level-2 cluster *j* within level-3 cluster *k*, and e_{ijk} refers to the residual for observation *i* within cluster *j*. A crossed random effects model with the same independent variables and the same number of variance parameters is formulated as:

$$y_{ijk}=\beta_0+\beta_1x_1+...+\beta_px_p+u_j+v_k+e_{ijk,}$$

where *j* refers to the *j*-th cluster of one way of clustering and *k* refers to the *k*-th cluster of the other way of clustering, while *ijk* refers to the *i*-th individual observation within the *j*-th and *k*-th cluster, and u_j and v_k to the respective random effects. Whether clusters are nested or not, in a linear-normal three-level model the unexplained variance of the dependent variable can be decomposed as:

$$\text{var}(y_{ijk}|\beta_0,...,\beta_p, x_1,...,x_p)=\text{var}(e_{ijk})+\text{var}(u_j)+\text{var}(v_k).$$

where var($y_{ijk}|\beta_0,...,\beta_p,x_1,...,x_p$) denotes the variance unexplained by the independent variables $x_1,...,x_p$, var(e_{ijk}) denotes the variance of the residuals e_{ij} at the level of the individual observations, var(u_j) denotes the variance of the random effects u_j, and var(v_k) denotes the variance of the random effects v_k.

The elegant way to decompose of the unexplained variance presented in the previous

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[7]   It should be noted that this applies only to the more simple case of a *random intercept* model without cross-level interactions and *random slopes*. If cross-level interactions or *random slopes* are present in the model, the decomposition of the variance is more complex (see Goldstein 1995: 20).

paragraphs is possible only for linear multi-level models. The dependent variables in our study – political involvement and political apathy – are binary, for which a such a straightforward decomposition of unexplained variance is not possible.[8] However, if one adopts the interpretation of logistic regression as a linear regression of a continuous latent variable that is observed in dichotomised form (see e.g. Long 1997: 40ff), this problem has a solution: Instead of the variance of the binary observed value, the variance of the latent continuous variable is decomposed. Thus, variance parameters in multi-level logistic regression model can be interpreted as components of variance of a latent dependent variable (Snijders and Bosker 1999: 223). In the hierarchical three-level case a multi-level logistic regression model has the form

$$\text{logit}(P(y_{ijk}=1)) = \beta_0 + \beta_1 x_1 + ... + \beta_p x_p + v_k + u_{jk}$$

where P() denotes the probability of the event enclosed in parentheses. Its interpretation as a threshold model is as follows: Let y_{ijk} denote the value of the observed dichotomous dependent variable and y^*_{ijk} the value of the latent continuous dependent variable for individual observation i within level-2 cluster j within level-3 cluster k, then the relation between the dependent variable, the independent variables, and the random effects is as follows (Snijders and Bosker 1999: 223):

$$y^*_{ijk} = \beta_0 + \beta_1 x_1 + ... + \beta_p x_p + v_k + u_{jk} + e_{ijk} ,$$

$$P(y_{ijk} = 1) = P(y^*_{ijk} > 0),$$

where P() denotes the probability of the event denoted in parentheses. The threshold interpretation implies that the individual level residuals e_{ijk} have a standard logistic distribution with a fixed variance of $\pi^2/3 \approx 3.289$. As a consequence, the inclusion of additional predictors into the model will affect the estimates of all coefficients and variance parameters (Snijders and Bosker 1999: 227). Therefore, a better measure for the comparison of unexplained variance at contextual levels is the residual intra-class correlation coefficient (Snijders and Bosker 1999: 224; Goldstein, Browne and Rasbash 2001: 7) which is the proportion of unexplained variance that is attributed to a specific contextual level.[9] In the case of a logistic three-level model the residual intra-class coefficient at the up-most level has the form:

$$\rho = \text{var}(v_k)/(\text{var}(u_{jk}) + \text{var}(v_k) + \pi^2/3).$$

Having summarized those features of multi-level analysis relevant of our purpose we can now

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[8]   In addition there are a couple of more technical problems (see Snijders and Bosker 1999: 218f). For recent advances in this field see the excellent overview of Agresti, Booth et al. (2000).

[9]   This measure also expresses the degree to which residuals are correlated within clusters of a specific contextual level. Thus intra-cluster or intra-unit correlation would be a more appropriate name. However, we use the name that is common in the literature.

turn to the actual construction of multi-level models of political involvement and political apathy.

4.2   Models for Political Involvement and Political Apathy

Since 1973 Eurobarometer studies are conducted in regular half-year intervals, with additional studies in some of the half-years in the 1990s (see van Deth and Elff 2000: 46f). That is, each number of an Eurobarometer study reflects a different point in time in the period from 1973 to 1998. In that way we have two independent types of contextual influences on the level of political involvement and political apathy of individual citizens: (i) the societal context as indicated by country, and (ii) the temporal context as indicated by the number of the Eurobarometer study. Each country sub-sample in every Eurobarometer study thus is a cell in a two-dimensional array with Eurobarometer studies and countries as dimensions. On the basis of this structure, there are five ways in which multi-level models of political apathy and political involvement can be formulated: Two two-level models that take either country or Eurobarometer study as the only way of clustering into consideration, two three-level models, in which either countries are nested into Eurobarometer studies or Eurobarometer studies are nested into countries, and a model in which countries and Eurobarometer studies constitute crossed random-effects.

To control for individual-level impacts and compositional effects, all multi-level models contain the level of education, gender, and birth cohort membership of the respondents as predictors. Education is measured by the age at which respondents finished full-time education and is reduced to a trichotomy with the categories 'up to 15 years', '16 to 19 years', and '20 year or older'. People still studying were assigned to these categories according to their actual age. Gender is, of course, a single dichotomy. Based on the years of birth of respondents a cohort scheme is constructed with five categories. This cohort scheme is derived from van den Broek (1996) and comprises the categories 'pre-war generation' (born until 1930), 'silent generation' (born from 1931 to 1940), 'protest generation' (born from 1941 to 1955), 'lost generation' (born from 1956 to 1970), and 'pragmatic generation' (born after 1970). [10]

Consider the two-level model for political apathy or political involvement first, which is based on countries as the only clustering units. This model can be formulated as follows:

$$\text{logit}(p_{i,(country)}) = \beta_0 + \beta_1 \cdot \text{EDUC1} + \beta_1 \cdot \text{EDUC3} + \beta_1 \cdot \text{GENDER} + \beta_1 \cdot \text{PREWAR} + \beta_1 \cdot \text{SILENT} + \beta_1 \cdot \text{LOST} + \beta_1 \cdot \text{PRAGMATIC} + u_{(country)}$$

where $p_{i,(country)}$ denotes the probability that the i-th individual in a country is classified as

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[10]   See van Deth and Elff (2000: 7ff) for an extensive discussion of these factors and their operationalisation.

politically involved or politically apathetic, EDUC1, EDUC3, GENDER, PRE-WAR, SILENT, LOST, and PRAGMATIC denote the dummy variables for education, gender, and birth cohort, while $u_{(country)}$ denotes the random effects of the individual countries.[11]

Analogously, the two-level model that considers only Eurobarometer studies as clustering units has the form:

$$\text{logit}(p_{i,(eb)}) = \beta_0 + \beta_1 \cdot \text{EDUC1} + \beta_1 \cdot \text{EDUC3} + \beta_1 \cdot \text{GENDER} + \beta_1 \cdot \text{PREWAR} + \beta_1 \cdot \text{SILENT} + \beta_1 \cdot \text{LOST} + \beta_1 \cdot \text{PRAGMATIC} + u_{(eb)}$$

In this case, $p_{i,(eb)}$ denotes the probability the *i*-th individual in the Eurobarometer study denoted by the number *eb* is classified as politically involved or politically apathetic, and $u_{(eb)}$ denotes the random effect of this Eurobarometer study. These models involve only one variance parameter each, the variance of $u_{(country)}$ and $u_{(eb)}$, which are denoted by $\sigma_{(country)}$ and $\sigma_{(eb)}$, respectively. Estimates of these variance parameters are the prime interest in the following analyses, since they express the degree of variation in the level of political apathy or political involvement between countries and between time points, respectively. The first of these two-level models implies that individuals from the same country are more similar with respect to political involvement or political apathy than individuals from different countries, taken into account the effects of the three individual-level predictors. The second of these models implies that individuals interviewed in the same Eurobarometer study are more similar with respect to political involvement or political apathy than individuals interviewed in different Eurobarometer studies, taken into account the effects of the variables mentioned.

The corresponding three-level models differ from the two-level models mainly in that an additional random-effect and an additional variance parameter is involved. Thus, the model for political involvement or political apathy in which countries are assumed to be nested within Eurobarometer studies has the form:

$$\text{logit}(p_{i,(country,eb)}) = \beta_0 + \beta_1 \cdot \text{EDUC1} + \beta_1 \cdot \text{EDUC3} + \beta_1 \cdot \text{GENDER} + \beta_1 \cdot \text{PREWAR} + \beta_1 \cdot \text{SILENT} + \beta_1 \cdot \text{LOST} + \beta_1 \cdot \text{PRAGMATIC} + u_{(country,eb)} + v_{(eb)}$$

while the model for political involvement or political apathy in which Eurobarometer studies are assumed to be nested within countries is formulated as:

$$\text{logit}(p_{i,(eb,country)}) = \beta_0 + \beta_1 \cdot \text{EDUC1} + \beta_1 \cdot \text{EDUC3} + \beta_1 \cdot \text{GENDER} + \beta_1 \cdot \text{PREWAR} + \beta_1 \cdot \text{SILENT} + \beta_1 \cdot \text{LOST} + \beta_1 \cdot \text{PRAGMATIC} + u_{(eb,country)} + v_{(country)}$$

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[11] Dummy variables for education, gender, and birth cohort are effect-coded, with '16 to 19 years', 'male', and 'protest generation' as reference categories.

In these formulas, $p_{i,(country,eb)}$ denotes the probability that the *i*-th individual in country *country* that is nested in Eurobarometer study *eb* is classified as politically involved or politically apathetic, while $p_{i,(eb,country)}$ denotes the propability that the *i*-th individual nested into Eurobarometer study *eb* in country *country* is classified as politically involved or politically apathetic. The random effect of country *country* that is nested into Eurobarometer study *eb* is denoted by $u_{(country,eb)}$, while $u_{(eb,country)}$ denotes the random effect of Eurobarometer study *eb* nested into country *country*. $V_{(eb)}$ denotes the random effect of the Eurobarometer study *eb*, $V_{(country)}$ denotes the random effect of country *country*. The first of these three-level models assumes that – after controlling for the effects of education, gender, and birth cohort – there are always similarities between individuals interviewed in the same Eurobarometer study with respect to political involvement and political apathy, respectively. Similarities between individuals from the same country exist only if they are interviewed in the same Eurobarometer study. The second model assumes that, after controlling for the effects of education, gender, and birth cohort, individuals from the same country are always similar, while individuals interviewed in the same Eurobarometer study are only similar if they also belong to the same country.

The crossed random-effects models are based on the assumption that neither countries are nested into Eurobarometer studies nor Eurobarometer studies are nested into countries. An individual from a certain country shares the same random effect with any individual from the same country and, simultaneously, shares the same random effect with any individual in the same Eurobarometer study, *regardless from which country* he or she comes. That is, the crossed random-effects model implies that – taking into account the effect of the individual-level variables – temporal variations in the levels of political apathy or political involvement occur in all countries *simultaneously*. The crossed random-effects models for political involvement and political apathy are formulated as follows:

$$\text{logit}(p_{i,(eb,country)}) = \beta_0 + \beta_1 \cdot \text{EDUC1} + \beta_1 \cdot \text{EDUC3} + \beta_1 \cdot \text{GENDER} + \beta_1 \cdot \text{PREWAR} + \beta_1 \cdot \text{SILENT} + \beta_1 \cdot \text{LOST} + \beta_1 \cdot \text{PRAGMATIC} + u_{(eb)} + v_{(country)}$$

4.3 Results

In the preceding sections multi-level analysis and the models used to examine the structure of political involvement or political apathy are introduced. We now turn to the discussion of the actual estimation results of the previously developed five models, starting with the models for political involvement. Table 1 shows estimates for the five multi-level models for political involvement. There are some differences between estimates for the five models of the fixed effects, that is between the estimates of the coefficients of individual-level variables and the constant term, which may reflect the fact that the data are not balanced with respect to their clustering into countries (for some countries, data are available only since the mid-1980s).

Yet, these differences are rather modest. The estimates of the variance parameters in all models show clearly that the largest part of unexplained variance of political involvement and political apathy is located at the individual level. At the contextual level, there is more variation in the level of political involvement between countries than between Eurobarometer studies, irrespective whether Eurobarometer studies are modelled as being nested into countries or as crossed over countries. The variance parameter for country in the country-only two-level model is five times larger than the variance parameter for Eurobarometer studies in the two-level model that considers only Eurobarometer studies as units of clustering. This result is not due to mere sampling error, since the estimate of the variance parameter for countries is also more than two times larger than its standard error.

Table 1: Basic Multi-Level Models for Political Involvement

		Two-level models		Three-level models		Crossed-effects model
		Individuals within countries	Individuals within studies	Individuals within countries, countries within studies	Individuals within studies, studies within countries	Individuals within countries and studies
Coefficients at individual level						
Age when finished full time education [*]	Up to 15 years	-.486 (.006)	-.505 (.006)	-.494 (.006)	-.504 (.008)	-.491 (.006)
	20 years and more	.533 (.005)	.548 (.005)	.544 (.005)	.544 (.007)	.542 (.005)
Gender [**]		-.276 (.004)	-.274 (.004)	-.278 (.004)	-.278 (.004)	-.267 (.005)
Birth cohort [***]	Prewar	.205 (.007)	.194 (.007)	.189 (.008)	.212 (.010)	.190 (.008)
	Silent	.287 (.008)	.286 (.008)	.283 (.008)	.293 (.011)	.283 (.008)
	Lost	-.207 (.007)	-.196 (.007)	-.192 (.007)	-.188 (.010)	-.194 (.007)
	Pragmatic	-.507 (.013)	-.509 (.013)	-.495 (.013)	-.547 (.016)	-.494 (.013)
Constant		-1.869 (.078)	-1.821 (.017)	-1.872 (.017)	-1.887 (.080)	-1.819 (.006)
Variance parameters						
Individuals		3.289	3.289	3.289	3.289	3.289
Eurobarometer studies		-	.016 (.003)	$.005^{\dagger}$ (.003)	.038 (.003)	$.000^{\dagger}$ (.000)
Countries		.084 (.032)	-	.116 (.007)	.087 (.034)	.166 (.004)

Notes: Standard errors in parentheses. * Effect coded with 16 to 19 years as baseline category; ** effect coded with male as baseline category; *** effect coded with protest as baseline category; † not statistically significant; all other estimates are statistically significant at a 1% level.

These results obtained for two-level models are further supported by the three-level and crossed-effects models. In all cases the variance parameter for countries is larger than the variance parameter for Eurobarometer studies. In the three-level model assuming that countries are nested into Eurobarometer studies, the variance parameter for countries is estimated as over 20 times higher than the variance parameter for Eurobarometer studies. In the crossed-effects model, the variance parameter of countries gets an even larger estimate, while the variance parameter for studies is estimated as zero. The remarkable result obtained for the crossed-effects model (zero variance for the impact of the studies), however, might be caused by a problem of the estimation procedure.[12]

Table 2 shows the estimates for the five models discussed in the previous subsection for political apathy. As far as two-level and three-level models are concerned, we obtain the same, but even more pronounced results than for political involvement. The variance parameter for country is at least 20 times higher than the variance parameter for Eurobarometer studies, both in the two-level models and in the crossed-effects model.

In our three-level models for political involvement and for political apathy – the model in which countries are nested into Eurobarometer studies and the model in which Eurobarometer studies are nested into countries – the variance parameter of the country random-effects are almost identical. However, in the model where countries are considered as nested into Eurobarometer studies the variance parameter for Eurobarometer studies is estimated as zero, while in the other three-level model the variance parameter is small (but much larger than the corresponding standard error). What do these results tell us? The problem with comparing the models for political involvement and political apathy is that goodness-of-fit statistics hardly tell us anything about which structure of random effects is the correct one. The only way to decide which model should be the base for further analyses is to compare the estimates for the variance parameters directly.

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[12] The software MLwiN (Rasbash, Browne et al. 1998) used in these analyses is optimised for the estimation multi-level models with *nested* random effects. If random effects are nested, then the large matrices that have to be inverted during the estimation process have a typical structure, which allows for a simplification of calculations (for these simplifications see Goldstein 1995: 38ff and Longford 1993: 108). These simplifications provide for a gain in speed and precision of calculations. If assumption of a strictly nested structure of clustering is given up, these simplifications are no longer possible. Each iteration step of the estimation process then requires the inversion of a quadratic matrix that has a number of rows and columns equal to the length of the data matrix. Apart from a big loss in speed, numerical inaccuracies may occur. This problem is especially critical with the data at hand where the data matrix has a length of 17337, even if the data matrix is condensed by transforming the data into blocked format, and Greece and Eastern Germany are excluded from the analysis.

The software used has to be 'tricked' to estimate the parameters of a crossed-effects model. The random effects of at least one dimension of clustering has to be represented by dummy variables with random-coefficients. In the analyses conducted here we represented the country random-effects as dummy variables with random-coefficients. This 'trick' could also be used for the estimation of a simple two-level model. In fact, we obtained the same zero estimate of the variance parameter also in this case.

Both in the models for political involvement and political apathy, there is more variation between countries than between Eurobarometer studies. However, in most models we find that the estimate of the variance of the random effects for the Eurobarometer studies is at least twice as large as its standard error. Thus, this variance parameter is relevant and cannot be simply neglected. However, the estimate for the variance parameter for Eurobarometer studies is largest if Eurobarometer studies are nested into countries. In all other models where random effects of Eurobarometer studies are not nested into countries and thus are restricted to be the same in all countries, the variance of these random effects is much smaller or even zero. This strongly suggests that, as far as there is variation between studies, it is variation *within* countries, while countries are the primary source of heterogeneity with respect to political

Table 2: Basic Multi-Level Models for Political Apathy

		Two-level models		Three-level models		Crossed-effects model
		Individuals within countries	Individuals within studies	Individuals within countries, countries within studies	Individuals within studies, studies within countries	Individuals within countries and studies
Coefficients at individual level						
Age when finished full time education [*]	Up to 15 years	.653 (.004)	.682 (.004)	.621 (.004)	.650 (.007)	.653 (.004)
	20 years and more	-.697 (.005)	-.726 (.005)	-.666 (.005)	-.683 (.008)	-.697 (.005)
Gender [**]		.331 (.003)	.313 (.003)	.314 (.003)	.331 (.003)	.277 (.005)
Birth cohort [***]	Prewar	.038 (.005)	.014 (.005)	.035 (.005)	.045 (.010)	.041 (.005)
	Silent	-.245 (.006)	-.262 (.006)	-.232 (.006)	-.246 (.011)	-.243 (.006)
	Lost	.048 (.005)	.056 (.005)	.045 (.005)	.058 (.010)	.048 (.005)
	Pragmatic	.488 (.008)	.524 (.008)	.465 (.008)	.459 (.013)	.484 (.008)
Constant		-.959 (.020)	-.905 (.015)	-.909 (.019)	-1.054 (.128)	-.938 (.006)
Parameters						
Individuals		3.289	3.289	3.289	3.289	3.289
Eurobarometer studies		-	.013 (.002)	.000[†] (.000)	.049 (.003)	.006[†] (.073)
Countries		.261 (.014)	-	.240 (.013)	.245 (.090)	.298 (.073)

Notes: Standard errors in parentheses. * Effect coded with 16 to 19 years as baseline category; ** effect coded with male as baseline category; *** effect coded with protest as baseline category; † not statistically significant; all other estimates are statistically significant at a 1% level.

involvement or political apathy. The model that best describes the pattern of heterogeneity of political involvement and political apathy is the three-level model in which individuals are nested into Eurobarometer studies and Eurobarometer studies are nested into countries. With this model as a baseline we can now consider the explanatory power of politicisation as a contextual factor. Since most of the unexplained variance is on the country level rather than on the level of Eurobarometer studies, the main task will be the explanation of country-specific levels of political involvement and political interest.

5. The Explanatory Power of Politicisation

In Sections 3 and 4 the indicators of politicisation and the construction of a basic multi-level model of political involvement and political apathy are presented. To what extent can variations in the level of political involvement and political apathy be explained by politicisation? As it turned out in the preceding section, the main variation at the contextual level is variation between countries, while variation between points in time is rather modest. For this reason, we concentrate on the explanatory power of politicisation for variation *between countries.* Explanatory power with respect to variation between countries is conceptualised here analogously to the concept of explanatory power in single-level regression: Explanatory power at the country level refers to the relative reduction of residual variance at the level of countries.

In linear multi-level models the explanatory power could simply be measured by the relative difference of the county-level variance parameter in a model for political involvement or political apathy with an indicator of politicisation included compared to the respective base model without indicators of politicisation. Yet the validity of this measure depends, first, on the absence of variation in this indicator below country-level, and, second, on the condition that inclusion of an additional variable into the model does not have any effects on the estimates of other parameters. The first condition can be easily assured by including into the model only country-specific means of any contextual variable that is to be considered. The second condition, however, poses a more serious problem in the case of multi-level *logistic* regression. Any inclusion of a predictor into the model will increase the estimates of all other parameters (see Snijders and Bosker 1999: 227). For this reason we prefer the comparison of models in terms of their respective country-level intra-class correlation rather than in terms of their respective country-level variance parameter. To obtain the relative reduction of the country-level variance parameter we compute:

$$\text{reldiff}(\sigma_{(country)}) = (\sigma_{(country,0)} - \sigma_{(country,1)})/\sigma_{(country,0)} \,,$$

where $\sigma_{(country,0)}$ denotes the country-level variance parameter of the basic model (without country-level predictors), $\sigma_{(country,1)}$ denotes the country-level variance parameter for the model with the respective indicator of politicisation included into the model. Analogously the relative

difference of the country-level residual intra-class correlation is computed in the following way:

$$\text{reldiff}(\rho_{(country)}) = (\rho_{(country,0)} - \rho_{(country,1)})/\rho_{(country,0)}$$

Each of the dimensions of politicisation defined and operationalised in Section 3 can now be used to test their impact on the cross-national variation in the levels of political involvement and political apathy.

5.1 Cleavages

Cleavage as a factor of politicisation is operationalised as the state-church cleavage, the centre-periphery cleavage, the urban-rural cleavage, and the owner-worker cleavage. As indicators for these cleavages we employ the denominational fragmentation, the proportion of Catholics, Protestants, and Atheists and people without a creed among the population of a country, church attendance, ethnic fragmentation, the proportion of the ethnic majority, the relative size of the agricultural sector, and strike activity (see Appendix).

Table 3 presents the results of the model for political involvement. Since for the data for the size of the agricultural data is lacking for Austria and Norway, the impact of this indicator is assessed on the basis model estimations from data of the remaining countries only. As can be seen from Table 3, only the centre-periphery cleavage seems to have a considerable contextual effect on political involvement. Only for the coefficients of ethnic fragmentation and of the majority-minority balance statistically significant estimates are obtained and only the inclusion of these measures into the model of political involvement results in a reduction of the country-level variance parameter and the country-level residual intra-class correlation of at least about one fourth or one third.

The effect of the cleavage structure on political apathy, however, is more pronounced (see Table 4). In addition to the centre-periphery cleavage also the state-church cleavage shows statistically significant effects. These effects are larger than those obtained in the case of political involvement. Moreover, the relative reduction of residual variation between countries, as measured by the country-level variance parameter and the intra-class correlation is larger, too. The proportion of Catholics in a country reduces the country-level variance parameter by 50 per cent and the country-level intra-class correlation by almost 50 per cent. Although the proportion both of Catholics and Protestants, and church attendance seem to matter for the politicisation of society, the denominational fragmentation and the proportion of atheists and people and without creed do not. It is unclear how to interpret these results. Since most countries show a dominance of either Protestants or Catholics, the effect of the proportion of Protestants almost mirrors the effect of the proportion of Catholics. Besides, the rate of church attendance is strongly connected to the proportion of Catholics, since the institutional aspects of the Christian creed are more important for the Catholic denomination than for the Protestant

Table 3: Explanatory Power of Cleavages for Cross-Country Heterogeneity of Political Involvement

	Effects of contextual variable		Country level residual variation				
			Variance parameter			Intra-class correlation	
	Estimate	Standard error	Estimate	Standard error	Relative difference to base model (per cent)	Estimate	Relative difference to baseline model (per cent)
All countries							
Base model			.087**	.033		.025	
Contextual variables included							
Denominational fragmentation	.112	.076	.075**	.029	13.9	.022	13.6
Proportion of Catholics	-.097	.080	.078**	.030	8.2	.023	8.0
Proportion of Protestants	.093	.078	.079**	.030	9.4	.023	9.1
Proportion of atheists and people without a creed	.023	.082	.086**	.033	.6	.025	.6
Church attendance	-.087	.079	.080**	.031	10.0	.023	9.8
Ethnic fragmentation	-.147*	.070	.066**	.025	24.4	.019	23.9
Proportion of ethnic majority	.170**	.066	.058*	.023	33.1	.017	32.5
Strike activity	-.048	.089	.085*	.033	2.0	.025	1.9
Without Austria and Norway							
Base model			.084*	.035		.025	
Relative size of agricultural sector	-.119	.116	.078*	.032	8.1	.023	7.9

Notes: Each line in the table represents a model that contains a different contextual variable as predictor. Each model also includes education, gender, and birth cohort as individual-level predictors. The estimates of the effects of these variables as well as the estimate of the variance parameter of the Eurobarometer studies are omitted from the table because they do not differ substantially from the estimates obtained for the baseline model. Since for the data for the size of the agricultural data is lacking for Austria and Norway, the impact of this indicator is assessed on the basis model estimations from data of the remaining countries only.
** Significant at 1% level; * significant at 5% level.

Table 4: Explanatory Power of Cleavages for Cross-Country Heterogeneity of Political Apathy

	Effects of contextual variable		Country level residual variation				
			Variance parameter			Intra-class correlation	
	Estimate	Standard error	Estimate	Standard error	Relative difference to baseline model (per cent)	Estimate	Relative difference to baseline model (per cent)
All countries							
Base model			.245**	.090		.068	
Contextual variables included							
Denominational fragmentation	-.132	.128	.226**	.083	7.7	.063	7.2
Proportion of Catholics	.364**	.094	.122**	.045	50.0	.035	48.2
Proportion of Protestants	-.333**	.103	.145**	.054	40.8	.042	39.1
Proportion of atheists and people without a creed	-.121	.139	.265**	.097	-8.2	.073	-7.6
Church attendance	.268*	.115	.182**	.067	25.8	.052	24.4
Ethnic fragmentation	.308**	.106	.156**	.058	36.4	.045	34.8
Proportion of ethnic majority	-.298**	.108	.162**	.060	33.9	.046	32.3
Strike activity	.161	.126	.220**	.081	10.2	.062	9.5
Without Austria and Norway							
Base model			.210*	.083		.059	
Relative size of agricultural sector	.115	.127	.193*	.076	8.2	.055	7.8

Notes: Each line in the table represents a model that contains a different contextual variable as predictor. Each model also includes education, gender, and birth cohort as individual-level predictors. The estimates of the effects of these variables as well as the estimate of the variance parameter of the Eurobarometer studies are omitted from the table because they do not differ substantially from the estimates obtained for the baseline model. Since for the data for the size of the agricultural data is lacking for Austria and Norway, the impact of this indicator is assessed on the basis model estimations from data of the remaining countries only.
** Significant at 1% level; * significant at 5% level.

denomination. The effect of the proportion of Catholics, furthermore, is positive on political apathy, suggesting that it is Catholicism that draws people away from the secular world of politics. That is, it is probably not a politicisation effect of the state-church cleavage that matters here, but rather a depoliticisation effect of Catholicsm.

Neither the effect of ethnic fragmentation nor the relative size of the ethnic majority support the interpretation that the centre-periphery cleavage has an politicisating effect on society. Rather, a country tends to be more politicisated the more ethnic homogenous it is. This paradoxical result suggests that the effect of ethnicity is spurious rather than substantive.

5.2 State Intervention

State intervention can be regarded as an important factor for the politicisation of a society. In this section we examine the influence of state intervention on country-specific levels of political involvement and political apathy.

As can be seen from Table 5, there is no clear evidence for an effect of state intervention on political involvement. Neither is the effect coefficient of state intervention significant, nor is the relative reduction by any of these indices of the country-level variance parameter and the country-level residual intra-class correlation substantial. Nevertheless, state intervention has an statistically significant effect on political apathy (see Table 6). In addition, the direction of this effect confirms the interpretation of state intervention as a factor of politicisation of society. The effect coefficient is statistically significant and negative, reducing the country-level variance parameter by at least 20 per cent. The unambiguous conclusion then, is: The higher the level of state intervention, the lower the level of political apathy.

Table 5: Explanatory Power of State Intervention for Cross-Country Heterogeneity of Political Involvement

	Estimate	Standard error	Relative difference to baseline model (per cent)
Effects of contextual variable			
State intervention	.094	.083	
Country level residual variation			
Variance parameter	.079**	.031	8.7
Residual intra-class correlation	.023		8.5

Notes: The model also includes education, gender, and birth cohort as individual-level predictors. The estimates of the effects of these variables as well as the estimate of the variance parameter of the Eurobarometer studies are omitted from the table because they do not differ substantially from the estimates obtained for the baseline model.
** Significant at 1% level; * significant at 5% level.

Table 6: Explanatory Power of State Intervention for Cross-Country Heterogeneity of Political Apathy

	Estimate	Standard error	Relative difference to baseline model (per cent)
Effects of contextual variable State intervention	-.292**	.108	
Country level residual variation			
Variance parameter	.169**	.062	31.1
Residual intra-class correlation	.049		29.6

Notes: The model also includes education, gender, and birth cohort as individual-level predictors. The estimates of the effects of these variables as well as the estimate of the variance parameter of the Eurobarometer studies are omitted from the table because they do not differ substantially from the estimates obtained for the baseline model.
** Significant at 1% level; * significant at 5% level.

5.3   Openness of the Political System

For openness of the political system three main aspects were discerned: general democracy, opportunity structures of constitutional political participation, and historical experiences of a country with respect to democracy and authoritarian regimes. The explanatory power of these aspects for political involvement and political apathy now is tested by including them into the multi-level models.

Taking into account the large variety of indices of political system openness, their overall performance in explaining political involvement is rather poor (see Table 7). Only the effects of three indices of historical experience are nearly statistically significant; or rather, would be statistically significant if a one-sided hypothesis was used. Besides, the reduction of country-level heterogeneity by these indices is substantial. The fact that the direction of this effect is in line with the politicisation hypothesis (high scores on this index indicate a shorter democratic experience) suggests that the history of a country matters for the level of political involvement among its citizens.

With respect to political apathy, the record of the indices for political openness is generally poorer, except for the indices of democratic history (see Table 8). One of the indices of democratic history has an statistically significant effect, which also leads to a substantial reduction of country-level variation in political apathy.

The results concerning the effects of openness of the political system on political involvement and political apathy can be summarised in a straightforward way: It is not the openness of the political system that matters for the politicisation of the society, but rather the historical record of democracy. This effect, however, is not very strong.

Table 7: Explanatory Power of Political System Openness for Cross-Country Heterogeneity of Political Involvement

	Effects of contextual variable		Country level residual variation				
			Variance parameter			Intra-class correlation	
	Estimate	Standard error	Estimate	Standard error	Relative difference to baseline model (per cent)	Estimate	Relative difference to baseline model (per cent)
General democracy	.110	.077	.076**	.029	12.7	.022	12.4
Opportunity structures (first rotated component)	.040	.079	.085*	.033	1.9	.025	1.9
Opportunity structures (second rotated component)	-.024	.081	.086**	.033	.6	.025	.6
History of democracy (variant 1: first rotated component)	-.130	.072	.070**	.027	19.6	.021	19.2
History of democracy (variant 1: second rotated component)	-.055	.079	.084**	.032	3.5	.025	3.4

Notes: Each line in the table represents a model that contains a different contextual variable as predictor. Each model also includes education, gender, and birth cohort as individual-level predictors. The estimates of the effects of these variables as well as the estimate of the variance parameter of the Eurobarometer studies are omitted from the table because they do not differ substantially from the estimates obtained for the baseline model.
** Significant at 1% level; * significant at 5% level.

Table 8: Explanatory Power of Political System Openness for Cross-Country Heterogeneity of Political Apathy

	Effects of contextual variable		Country level residual variation				
			Variance parameter			Intra-class correlation	
	Estimate	Standard error	Estimate	Standard error	Relative difference to baseline model (per cent)	Estimate	Relative difference to baseline model (per cent)
General democracy	-.103	.131	.238**	.087	3.0	.066	2.7
Opportunity structures (first rotated component)	.141	.128	.227**	.083	7.4	.064	6.9
Opportunity structures (second rotated component)	-.023	.133	.247**	.091	-1.1	.069	-1.0
History of democracy (variant 1: first rotated component)	.240*	.118	.193**	.071	21.0	.055	19.9
History of democracy (variant 1: second rotated component)	-.060	.133	.245**	.090	.0	.068	.0

Notes: Each line in the table represents a model that contains a different contextual variable as predictor. Each model also includes education, gender, and birth cohort as individual-level predictors. The estimates of the effects of these variables as well as the estimate of the variance parameter of the Eurobarometer studies are omitted from the table because they do not differ substantially from the estimates obtained for the baseline model.
** Significant at 1% level; * significant at 5% level.

5.4 Control Capacity of the State

Four aspects of political systems affect control capacity of the state: centralism *vs.* federalism, institutional constraints, stability and effectiveness of governments, and structures of interest mediation. In a similar way as was done in the previous sub-sections, these four aspects are now introduced in the multi-level models for political involvement and apathy.

As can be seen from Table 9 control capacity of the state does not explain cross-country variation in the level of political involvement. None of the effect coefficients of the indices of the various aspects of control capacity shows a statistically significant estimate or a substantial reduction of the country-level variance parameter and county-level intra-class correlation. However, the results concerning political apathy look somewhat different (see Table 10). The estimate of the effect coefficient for interest mediation is statistically significant and reduces the country-level variance parameter and the country-level intra-class correlation by at least 20 per cent. The direction of the coefficient indicates that institutionalised structures of interest mediation are associated with low levels of political apathy. In addition, the effect of the second government stability and effectiveness dimension, on which only measures of cabinet durability have high loadings, would be significant if tested against a one-sided null-hypothesis. This factor, too, explains almost 20 per cent of the cross-country variation of political apathy.

As far as the control capacity of the state is concerned, the aspect of political interest that is affected by this contextual properties of countries is political apathy. Among the dimensions of control capacity it is only the dimension of structures of interest mediation that clearly has an effect on political apathy. Cabinet stability may have an effect, but it cannot be statistically assured on the basis of our sample.

5.5 The Role of the State Revisited

No general conclusions concerning the role of the state can be formulated on the basis of the analyses presented above. The level of state intervention clearly affects the level of political apathy in a country, but it does not affect political involvement. None of the other general aspects shows an effect either on political involvement or on political apathy. This is hardly astonishing, since it is very difficult to construct valid measures of *general* openness of the political system or *general* control capacity of the state. The principle-components analyses presented in the Appendix show that both openness of the political system and control capacity of the state have several sub-dimensions that vary independently. It was mainly only one of these sub-dimensions proves to be relevant for political involvement and political apathy. Thus the state does not have a politicising effect in general, but only specific aspects of the role of the state show some impact on political apathy.

Table 9: Explanatory Power of Control Capacity of the State for Cross-Country Heterogeneity of Political Involvement

	Effects of contextual variable		Country level residual variation				
			Variance parameter			Intra-class correlation	
	Estimate	Standard error	Estimate	Standard error	Relative difference to baseline model (per cent)	Estimate	Relative difference to baseline model (per cent)
Centralism/federalism	-.026	.080	.086**	.033	.8	.025	.7
Institutional constraints	.056	.080	.084**	.032	3.4	.025	3.3
Government effectiveness	.076	.079	.082**	.031	6.3	.024	6.1
Government stability	.009	.080	.087**	.033	.1	.025	.1
Interest mediation	.035	.085	.086**	.033	1.1	.025	1.1

Notes: Each line in the table represents a model that contains a different contextual variable as predictor. Each model also includes education, gender, and birth cohort as individual-level predictors. The estimates of the effects of these variables as well as the estimate of the variance parameter of the Eurobarometer studies are omitted from the table because they do not differ substantially from the estimates obtained for the baseline model.
** Significant at 1% level; * significant at 5% level.

Table 10: Explanatory Power of Control Capacity of the State Openness for Cross-Country Heterogeneity of Political Apathy

	Effects of contextual variable		Country level residual variation				
			Variance parameter			Intra-class correlation	
	Estimate	Standard error	Estimate	Standard error	Relative difference to baseline model (per cent)	Estimate	Relative difference to baseline model (per cent)
Centralism/Federalism	.139	.124	.214**	.079	12.6	.060	11.8
Institutional constraints	-.021	.129	.231**	.085	5.7	.065	5.3
Government effectiveness	-.045	.134	.248**	.091	-1.1	.069	-1.1
Government stability	-.224	.119	.197**	.073	19.5	.056	18.4
Interest mediation	-.243*	.118	.192**	.071	21.5	.054	20.4

Notes: Each line in the table represents a model that contains a different contextual variable as predictor. Each model also includes education, gender, and birth cohort as individual-level predictors. The estimates of the effects of these variables as well as the estimate of the variance parameter of the Eurobarometer studies are omitted from the table because they do not differ substantially from the estimates obtained for the baseline model.
** Significant at 1% level; * significant at 5% level.

5.6 Modernisation

The level of political interest in a country could reflect its stage in the general process of modernisation. If that were the case, the levels of political involvement increase and the levels of political apathy decline as countries develop. Before we consider the combined effect of several indicators of politicisation, the impact of modernisation on political involvement and political apathy will be tested here by introducing into the multi-level modelsan indicator for the stages of countries in this process.

The level of modernisation is so far the best predictor for country-specific levels of political involvement. The estimated effect is clearly statistically significant (see Table 11). In addition, both the country-level variance parameter and the country-level intra-class correlation are reduced by almost one third. The impact of modernisation on political apathy seems to be even stronger (see Table 12). Here the estimate for the effect coefficient is statistically significant even at a one-percent level. Both the variance parameter and the residual intra-class correlation are reduced by around 30 per cent. From these analysis it follows that the socio-economic development of European countries has to be taken into account as a substantial factor explaining cross-national differences in political involvement and political apathy. Apparently, politicisation is not to be considered as the only way to explain contextual variation in the level of political interest among citizens, since direct effects of modernisation can be traced clearly.

Table 11: Explanatory Power of Modernisation of Society for Cross-Country Heterogeneity of Political Involvement

	Estimate	Standard error	Relative difference to baseline model (per cent)
Effects of contextual variable			
Modernisation	.159*	.079	
Country level residual variation			
Variance parameter	.067*	.026	22.6
Residual intra-class correlation	.020		22.1

Notes: The model also includes education, gender, and birth cohort as individual-level predictors. The estimates of the effects of these variables as well as the estimate of the variance parameter of the Eurobarometer studies are omitted from the table because they do not differ substantially from the estimates obtained for the baseline model.
** Significant at 1% level; * significant at 5% level.

Table 12: Explanatory Power of Modernisation of Society Openness for Cross-Country Heterogeneity of Political Apathy

	Estimate	Standard error	Relative difference to baseline model (per cent)
Effects of contextual variable			
Modernisation	-.332**	.105	
Country level residual variation			
Variance parameter	.148**	.055	39.7
Residual intra-class correlation	.042		38.1

Notes: The model also includes education, gender, and birth cohort as individual-level predictors. The estimates of the effects of these variables as well as the estimate of the variance parameter of the Eurobarometer studies are omitted from the table because they do not differ substantially from the estimates obtained for the baseline model.
** Significant at 1% level; * significant at 5% level.

6. Combining Contextual Factors

In the previous sections contextual variables relevant for explaining cross-country variations in political involvement and political apathy are considered. So far we dealt with models with single contextual variables and we now turn to models with multiple contextual predictors for two reasons. First, some of the uncontrolled, direct ('zero-order') effects that turned out to be statistically significant may be spurious. Second, the explanatory power of the single contextual predictors so far was rather limited. The combination of predictors might enhance the explanatory power of the models while sorting out spurious effects.

In the search for models for political involvement and political apathy combining all relevant predictors, a stepwise approach is followed. In a first step all contextual variables that turned out as significant predictors are introduced into comprehensive models of political involvement or political apathy. In a second step, all predictors are dropped that appear to be insignificant in these comprehensive models. If the direction of certain effects does not allow a stringent interpretation, further modification of the models are applied in a third step. The result of these three steps is a final model for political involvement and a final model for political apathy. To conclude this procedure we assess the explanatory power by comparison of predicted and actual levels of political involvement and political apathy in Europe.

Collecting all predictors that show a significant effect on political involvement into a comprehensive model results in a model that contains only two country-level predictors, the level of modernisation and the proportion of ethnic majority. Both these predictors are significant in this comprehensive model (see Table 13). In addition, the variance parameter and the residual intra-class correlation are reduced by 50 per cent relative to the baseline model of political involvement. But in this comprehensive model the direction of the effect of the proportion of ethnic majority does not conform with the notion of cleavages as a factor of politicisation. We suspect that the effect of the proportion of ethnic majority is spurious because Belgium shows a low level of political involvement relative to its level of modernisation and an extremely low score on the index of ethnic homogeneity. Indeed, if the proportion of the ethnic majority is substituted by a dummy for Belgium, the loss of explained cross-country

Table 13: A Comprehensive Model for Political Involvement

	Estimate	Standard error	Relative difference to baseline model (per cent)
Effects of contextual variables			
Proportion of ethnic majority	0.154**	0.057	
Modernisation	0.142*	0.064	
Country level residual variation			
Variance parameter	0.043*	0.017	50.9
Residual intra-class correlation	0.013		50.2

Notes: The model also includes education, gender, and birth cohort as individual-level predictors. The estimates of the effects of these variables as well as the estimate of the variance parameter of the Eurobarometer studies are omitted from the table because they do not differ substantially from the estimates obtained for the baseline model.
** Significant at 1% level; * significant at 5% level.

Table 14: The Final Model for Political Involvement

	Estimate	Standard error	Relative difference to baseline model (per cent)
Effects of contextual variables			
Belgium dummy	-0.481*	0.232	
Modernisation	0.158**	0.068	
Country level residual variation			
Variance parameter	0.049*	0.019	44.4
Residual intra-class correlation	0.014		43.8

Notes: The model also includes education, gender, and birth cohort as individual-level predictors. The estimates of the effects of these variables as well as the estimate of the variance parameter of the Eurobarometer studies are omitted from the table because they do not differ substantially from the estimates obtained for the baseline model.
** Significant at 1% level; * significant at 5% level.

heterogeneity is minimal. The country-level variance parameter increases from 0.042 to 0.048, a difference that is smaller than one standard error. Besides, the residual intra-class correlation increases from 0.013 to 0.014. The reduction of unexplained variation between countries still is substantial as the relative differences of the country-level variance parameter and intra-class correlation relative to the baseline model show. Thus, the indicator for ethnic cleavages can be dropped with the result that our final model contains only one country-level predictor, the level of modernisation. In addition it only contains a dummy-variable for Belgium (see Table 14).

Does the final model explain variations across countries with respect to political involvement? A comparison between predicted and actual levels of political involvement in the countries covered by the model provides an answer to this question. Figure 2 compares observed proportions of people classified as politically involved with proportions predicted by variables at the individual level and by the complete final model developed above. Only those countries are included that are used in the estimation of the parameters of the model. So Belgium is not included in the figure since it was represented by a dummy variable. Obviously, predictions by education, gender, and birth cohort do not explain variations across countries very well. These predictions do not depart much from the overall mean of the countries. However, predictions by the complete model, that is, by education, gender, birth cohort *and* the level of modernisation, explain variations between countries much better. Although there are deviations for some countries from the model, these deviations are generally smaller than the deviations of the respective countries form the mean of all countries.

Figure 2: Observed and Predicted Proportions of Politically Involved Responents
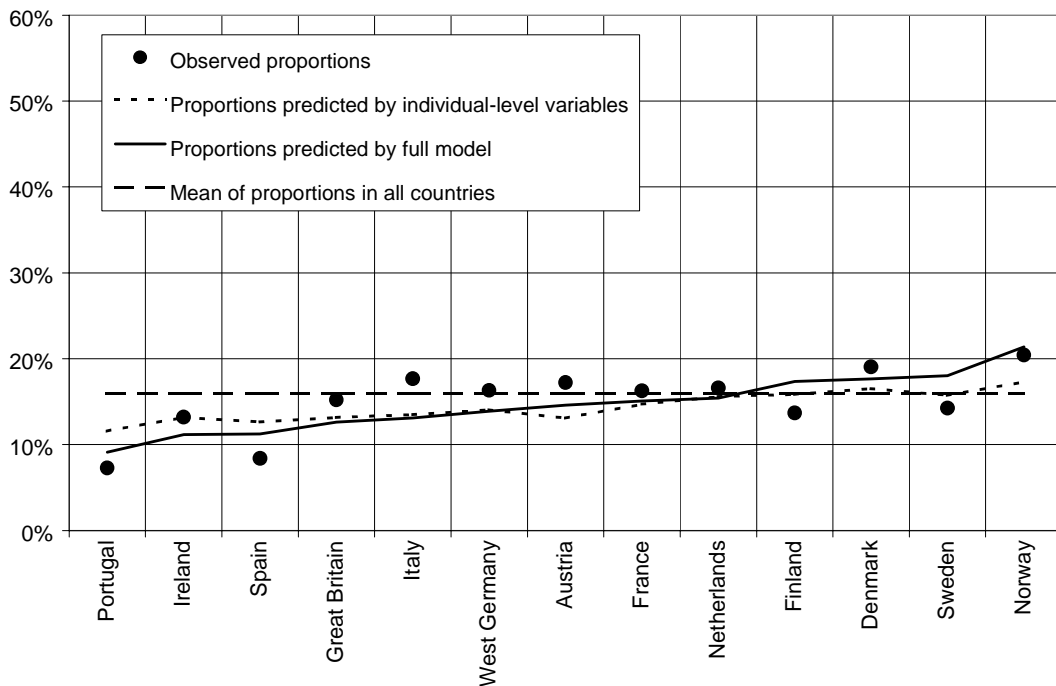
We now turn to the construction of a final model for political apathy. As turned out in Section 4, nine country-level predictors showed a statistically significant unconditional effect on political apathy. If we include all these predictors into a single model we instantly observe that several predictors are redundant (see Table 15). Three predictors are related to the state-church cleavage, but only one of them, the proportion of Catholics, is statistically significant. Therefore, only the proportion of Catholics should be retained in the model. Two predictors are related to centre-periphery cleavages, but they are both statistically insignificant. Since both predictors are strongly related, their insignificance may be the result of collinearity. Therefore we drop only one of them, ethnic fragmentation, the effect of which is smaller than that of the proportion of the ethnic majority. Interest mediation and history of democracy also do not have statistically significant effects and are dropped from the model. This results in a model that contains four country-level predictors. As Table 16 shows, all predictors of this reduced model are statistically significant and the loss of explanatory power is minimal. The country-level variance parameter increases by only one standard error while the country-level residual intra-class correlation changes hardly at all.

Nevertheless, this model still has some features that call for its modification. As we noted already above, the direction of the effect of the proportion of ethnic majority is not consistent

Table 15: A Comprehensive Model for Political Apathy

	Estimate	Standard error	Relative difference to baseline model (per cent)
Effects of contextual variables			
Proportion of Catholics	0.330**	0.115	
Proportion of Protestants	0.190	0.131	
Church attendance	0.086	0.136	
Ethnic fragmentation	0.050	0.256	
Proportion of ethnic majority	-0.225	0.249	
State intervention	0.282*	0.138	
History of democracy	0.052	0.077	
Interest mediation	-0.127	0.117	
Modernisation	-0.356*	0.138	
Country level residual variation			
Variance parameter	0.025*	0.010	89.8
Residual intra-class correlation	0.007		89.2

Notes: The model also includes education, gender, and birth cohort as individual-level predictors. The estimates of the effects of these variables as well as the estimate of the variance parameter of the Eurobarometer studies are omitted from the table because they do not differ substantially from the estimates obtained for the baseline model.
** Significant at 1% level; * significant at 5% level.

Table 16: The Comprehensive Model for Political Apathy after Deleting Variables without Significant Effects

	Estimate	Standard error	Relative difference to baseline model (per cent)
Effects of contextual variables			
Proportion of Catholics	0.264**	0.067	
Proportion of ethnic majority	-0.230**	0.054	
State intervention	0.273**	0.105	
Modernisation	-0.440**	0.098	
Country level residual variation			
Variance parameter	0.035**	0.013	85.7
Residual intra-class correlation	0.010		84.9

Notes: The model also includes education, gender, and birth cohort as individual-level predictors. The estimates of the effects of these variables as well as the estimate of the variance parameter of the Eurobarometer studies are omitted from the table because they do not differ substantially from the estimates obtained for the baseline model.
** Significant at 1% level; * significant at 5% level.

with the notion of cleavages as factors of politicisation. Again, this predictor should be substituted by a dummy variable for Belgium. Beside, the conditional effect of state intervention is *opposite* to its unconditional effect. We do not accept that this is a substantive result but assume that it is rather a side effect of a high leverage of some countries for the conditional effect of state intervention on political apathy and of collinearity of this variable with the level of modernisation. Indeed, if the effect of the proportion of the ethnic majority is substituted by a dummy variable for Belgium, the paradoxical effect of state intervention, while still being of considerable size, becomes statistically insignificant. The paradoxical effect of state intervention almost vanishes if dummy variables for Greece and West Germany are included (see Table 17).[13] Since the effect of the proportion of Catholics becomes insignificant, too, we again end up with a model that contains only one true country-level predictor, the level of modernisation and dummy variables for several countries (see Table 18).

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[13] Dummy variables for other countries did not turn out to be significant, or only in the case that state intervention was present in the model.

Table 17: The Model for Political Apathy after Substituting the Proportion of the Ethnic Majority by a Dummy Variable for Belgium and Including Dummy Variables for Greece and West Germany

	Estimate	Standard error	Relative difference to base model (per cent)
Effects of contextual variables			
Belgium dummy	0.649**	0.146	
Greece dummy	-0.839**	0.257	
West Germany dummy	-0.700**	0.141	
Proportion of Catholics	0.102	0.077	
Modernisation	-0.419**	0.071	
State intervention	0.052	0.098	
Country level residual variation			
Variance parameter	0.017*	0.007	93.1
Residual intra-class correlation	0.005		92.6

Notes: The model also includes education, gender, and birth cohort as individual-level predictors. The estimates of the effects of these variables as well as the estimate of the variance parameter of the Eurobarometer studies are omitted from the table because they do not differ substantially from the estimates obtained for the baseline model.
** Significant at 1% level; * significant at 5% level.

Table 18: The Final Model for Political Apathy

	Estimate	Standard error	Relative difference to base model (per cent)
Effects of contextual variables			
Modernisation	-0.446**	0.045	
Belgium dummy	0.714**	0.150	
Greece dummy	-1.090**	0.168	
West Germany dummy	-0.720**	0.150	
Country level residual variation			
Variance parameter	0.020**	0.008	91.9
Residual intra-class correlation	0.006		91.4

Notes: The model also includes education, gender, and birth cohort as individual-level predictors. The estimates of the effects of these variables as well as the estimate of the variance parameter of the Eurobarometer studies are omitted from the table because they do not differ substantially from the estimates obtained for the baseline model.
** Significant at 1% level; * significant at 5% level.

Obviously a model with dummy effects for certain countries will perfectly fit the levels of political apathy in these countries. But does this model offer a reasonable explanation for the variation of country-specific levels of political apathy in the set of the remaining countries? According to the estimate of the variance parameter and the residual intra-class correlation the answer should be positive. But still, a closer look may be worthwhile. Again such closer look is provided by a comparison of predicted and actual proportion of politically apathetic people in the countries covered by the model given in Figure 3. It instantly becomes clear from this figure that variations between the countries with respect to the levels of political apathy are much larger than the variations with respect to the levels of political involvement. In addition, it turns out nicely that the explanatory power of education, gender, and birth cohort does not suffice to explain these variations across countries. The impact of the single contextual variable that is present in the model serves very well in explaining these variations. Deviations of country-specific proportions of political apathetic people from the proportions predicted by education, gender, birth cohort *and* the level of modernisation are quite small relative to their full range. Thus we conclude, first, that there are variations between countries with respect to political apathy that cannot be attributed to the impact of individual-level predictors, and, second, that these variations can – with the exception of only a small set of countries, largely be accounted for by the countries' level of modernisation. If this last process is considered and the very specific circumstances in some countries are taken into account, the effects of societal politicisation disappears completely from the models developed here.

Figure 3: Observed and Predicted Predicted Proportions of Politically Apathetic Respondents
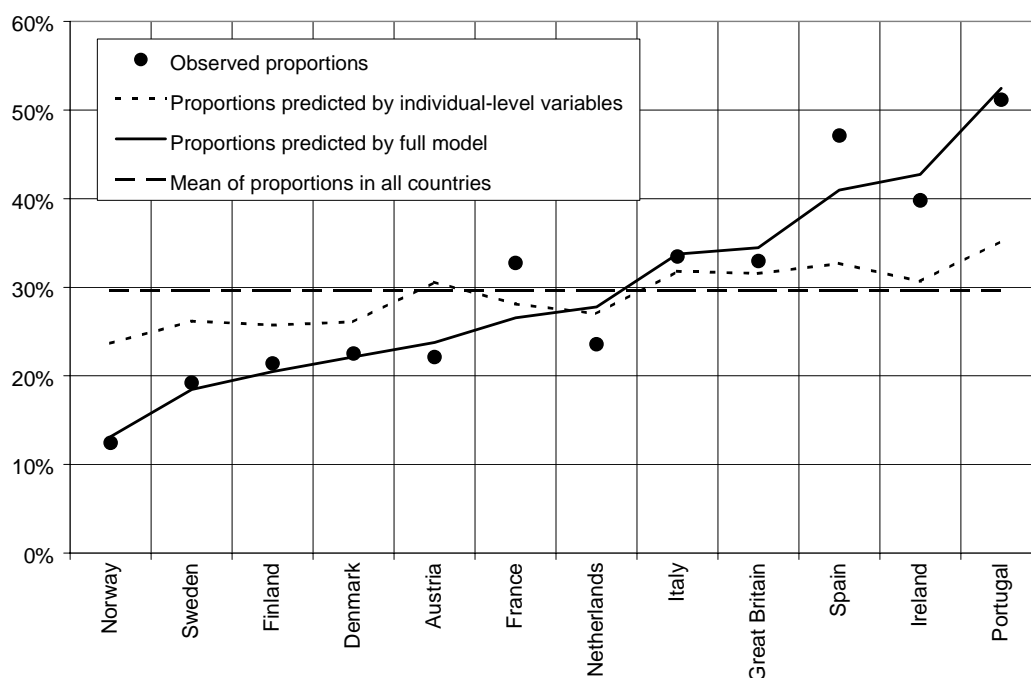
7. In Conclusion

A minimal degree of political interest among citizens is an important precondition for the stability and development of democratic political societies. Usually, political involvement and political apathy are depicted as attributes of individuals that can be explained by referring to the resources and skills of the people concerned. The analyses presented here are based on a critical assessment of these approaches in cross-national and longitudinal comparisons in Europe in the last few decades. In addition to these commonly used 'push theories' (for instance suggesting that education instigates political interest), 'pull theories' or goal-oriented theories are used here relying on the presumption that government intervention activates political interest and that contextual factors have to be taken into account. Therefore, a contextual model is presented emphasising the relevance of distinct degrees of politicisation in different societal settings in addition to the traditional socio-demographic factors (education, date of birth, and gender) at the micro-level.

The results from the application of sophisticated multi-level models to the development of political interest in Europe in the last three decades can be summarised in several points. First, the conclusion that the concepts political involvement and political apathy refer to different phenomena is confirmed once again. Not only is the level of political apathy higher than the level of political involvement in most countries, but political apathy also shows much more cross-national variation than political involvement. Moreover, macro-level indicators appear to be more relevant for political apathy than for political involvement. A second conclusion refers to the relative importance of cross-national differences as compared to longitudinal developments. The application of straightforward multi-level models based on the distinction between individuals, countries, and points in time, makes clear that cross-national differences are far more relevant than distinctions between points in time. For that reason, we concentrated the development on multi-level models of cross-national differences. The third conclusion refers to the fact that only a few entrances on the long list of indicators for politicisation actually show some impact on the level of political interest after individual factors are taken into account. In addition, not all of the indicators for politicisation that show influence on political involvement or political apathy do so in a direction in accordance with the hypothesis. Although the support for the politicisation hypothesis is limited, this does not lead to an outright rejection of the hypothesis. State intervention does have an influence on political involvement, the experience of democracy of a country as well as its structures of interest mediation have an influence on political apathy – influences as expected on the basis of the politicisation hypothesis. However, the strongest contextual-level predictor is socio-economic modernisation.

The most noteworthy conclusion from the analyses presented here is the remarkable disappearance of the impact of politicisation when the level of socio-economic development of

each country is included in our multi-level models. Although this result can only be obtained after deleting one or more 'problematic' cases (like Belgium and Greece) from the analyses, it is clear that for virtually all European societies the degree of modernisation has a clear impact on the level of political involvement and – even more stronger – on the level of political apathy. The higher the level of socio-economic development, the higher the aggregate level of political involvement and the lower the level of political apathy. Individual-level factors like education, gender, and date of birth are taken into account to arrive at this conclusion. Yet, none of the various indicators for politicisation (cleavages, state intervention, openness of the political system, control capacity of the state) play an important role in explanations of cross-national differences in political interest in Europe. In other words: The politicisation thesis, which states that the level of political interest among citizens is a positive and monotonous function of the relevance of societal and political arrangements in a society, is not supported by the empirical findings presented here.

Political interest is a basic prerequisite for the survival and further development of the democratic political system. Already in the 1950s authors like Lipset (1959) suggested that especially socio-economic development increases chances of transitions to democracy. Our results show that socio-economic development has a continuing impact even when democracy is already established.

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Appendix: Operationalisation of Politicisation

The operationalisation of politicisation involves several steps. On a more abstract level, we distinguish between cleavage structure, state intervention, openness of the political system, and control capacity of the state. Except for state intervention, all these dimensions of politicisation can be further decomposed into sub-dimensions. These sub-dimensions finally are operationalised by measures from various sources. Indices for these sub-dimensions are constructed on the base of principle-components analyses. Figure 1 (main text) provides an overview of the specification of concepts, dimensions, sub-dimensions, and indicators used.

A.   Cleavages

As indicated, cleavages are those deep-rooted divisions within society that have structured political conflict and competition. Although Lipset and Rokkan (1967) describe how overlaps and cross-cuttings of cleavages gave rise to both nation-specific and common structures of party systems and voter alignments in European democracies, no suggestions are presented how to operationalise cleavages at the individual level.[14] With the aid of the work of Rae and Taylor (1970), however, an interpretation of cleavages in terms of measurable features of a society can be established, creating a concept out of a metaphor.[15] Among the attributes of cleavages discussed by Rae and Taylor three are of special interest when considering cleavages as an aspect of politicisation. These attributes are (i) the fragmentation of a society on the basis of a cleavage, (ii) the crystallisation of a cleavage in a society, and (iii) the intensity of the cleavage (in terms of political conflict). In addition to the attributes developed by Rae and Taylor one may also measure the balance of a cleavage; that is, the advantage that one of the groups involved compared to other groups has in terms of mass support. If cleavages give rise to political conflict, they are a significant aspect of the degree of politicisation of society.

Is this way, four attributes of cleavages that allow quantitative measurement at the macro-level can be obtained. Three of these attributes – fragmenation, crystallisation, and intensity – are taken from Rae and Taylor (1970). *Fragmentation* can be defined and measured as the probability that two individuals chosen at random belong to different groups defined by a cleavage (Rae and Taylor 1990: 2). If p_1, ..., p_k represent the relative shares of these groups of a country's total population, this measure is: $F = 1 - (p_1^2 + ... + p_k^2)$ (Rae and Taylor 1990: 25). *Crystallisation* of a cleavage is measured as the proportion of the population of a country

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[14]   On the one hand, the authors refer to bodies of more or less organized and established elites that lead or embody certain segments of society, for example parliamentary groups that embody or are affiliated with certain interest groups. On the other hand, they refer to social movement originating outside the structures of established political institutions (Lipset and Rokan 1967: 33ff.).

[15]   Rae and Taylor deal mainly with political cleavages, but since they pay attention to cleavages in a formal and general way and develop concepts of attributes of cleavages, their approach can be used to obtain quantitative indices.

affected by a cleavage (Rae and Taylor 1990: 2). This measure can be constructed only if it is possible *not* to have a position on the respective cleavage. If this is the case the definition of this measure is straightforward and is simply operationalised as the proportion of people affected by the cleavage among the total population (Rae and Taylor 1990: 24). With the *intensity* of a cleavage Rae and Taylor refer to the intensity to which members of distinct groups are opposed to each other (Rae and Taylor 1990: 2). The index of intensity of a cleavage that they propose requires that there is data available on how strong individuals hold a position on a cleavage, which is at least of ordinal quality (Rae and Taylor 1990: 72). Data of this quality usually is not available for social cleavages. Therefore, we will not use the index of intensity that Rae and Taylor propose but will rely on indirect measures for a specific cleavage.

The additional fourth attribute of cleavages that we use in our analyses is their *balance*; that is, the relative support one side of the cleavage has in the population of a country as opposed to the groups on the other sides. Comparison of countries with respect to the balance of a cleavage makes sense only if some sort of equivalence can be established between certain groups in different countries. For example one may compare countries with respect to the proportion of protestants *vs.* other denominational groups in a country, or one may compare countries with respect to the proportion of the ethnic majority.

In their seminal introduction to 'Party Systems and Voter Alignments' Lipset and Rokkan (1967) mention four main lines of cleavage that emerge during the transition of West European polities into modernity. These lines are the state-church cleavage, the center-periphery cleavage, the urban-rural cleavage, and the owner-worker cleavage. For each of these four cleavages, the four attributes mentioned will be used to obtain indicators to cover this aspect of politicisation.

A.1   State-Church Cleavages

The state-church cleavage represents the oldest of the four lines of cleavage. Its emergence is connected with the building of the modern state as a sovereign political entity. State-building implied a conflict about the authority over church organisations with the centre of the Catholic church in Rome. In some countries, this conflict was resolved by the fact that, as a consequence of the Reformation, state-building elites gained power over the country's church organisation by forming an established church. In other countries this conflict about authority was resolved because state-building remained faithful to the Catholic creed and accepted at least a symbolic by the pre-eminence of Papal authority. These different historical arrangements of the relation between church and state had different implications for new conflicts related to processes of nation-building that prevail in the nineteenth century. These new conflicts focussed especially on the control over the expanding institutions of mass education. In countries with an established church, these conflicts took place between a relatively liberalised state church and non-conformist and revivalist minority churches with a more fundamentalist orientation. In

Catholic countries this conflict took place between a secularised state and the Catholic church.

The conflicts between church and state or between state-recognised and independent churches gave rise to cleavages between secular and religious parts of the population and between different denominations. Therefore, fragmentation with respect to the state-church cleavage can be operationalised as denominational fragmentation. For this purpose, various indices are available in the literature. In addition, we also constructed measures of denominational fragmentation following the suggestions of Rae and Taylor (1970). With regards to two aspects of this cleavage, several measures of balance of the cleavage can be constructed: the proportion of Catholics, the proportion of Protestants including Anglicans, the proportion of people without creed including atheists, and the proportion of people regularly attending church. The proportion of Catholics can be considered as a measure of the relative support for trans-national oriented Catholic church arrangements against more or less secular national orientations. The proportion of Protestants can be considered as a measure of the relative support for a church controlled by the state. Finally, the proportion of people without creed and the rate of church attendance can be used as measures of the potential opposition to a more or less secular state. We will deal with the construction of an indicator for each of these aspects of the church-state cleavage, starting with the construction of an indicator of denominational fragmentation. The construction of these indicators rests mainly on principle-components analyses in order to test the internal coherence among the various measures.

Table A.1 shows construction of a summary measure of denominational fragmentation. First, measures of denominational fragmentation, gathered from various sources are subjected to principle-components analysis. As becomes clear from the table a one-dimensional model comprising these measures is very well supported by the data. All loadings of the measures on the first principle component are larger than 0.9. In addition the eigenvalue corresponding to the first principle component is the only one larger than one and corresponds to a 93.9 per cent explained variance. Thus the combination of this measures into a single indicator (factor scores) is validated.

In the same way, summary measures for the other aspects of the state-church cleavage are constructed. For the measures of the proportion of Catholics (see Table A.2), for the measures of the proportion of Protestants (see Table A.3) for the proportion of atheists and people without a creed (see Table A.4) a one-dimensional solution of a principle-components analysis is clearly supported. All measures have high loadings on the first principle component, which has a very high eigenvalue corresponding to at least 99 per cent explained variance.

The construction of an index for church attendance based on factor scores is impossible since measures for church attendance are available only for a small subset of countries. Therefore, the construction of a meaningful correlation matrix of the original measures was impossible. On

Table A.1: Indicators for Fragmentation of State-Church Cleavages

a) Original measures

Variable	Source	Label	Loadings*
Confessional fragmentation mid-1970	Calculated from Barnett (1982)	CONFR70	.992
Confessional fragmentation mid-1975	Calculated from Barrett (1982)	CONFR75	.991
Confessional fragmentation mid-1980	Calculated from Barrett (1982)	CONFR80	.986
Confessional fragmentation 1960s	Calculated from Taylor and Hudson (1972) after Lane and Ersson (1995)	CONFRAG	.902
		Eigenvalue No. 1	3.754
		Percentage of variance	93.9

b) Constructed measures

Variable	Source	Label
Denominational fragmentation	Factor scores on the base of first principle component	DFRSCO

Note: * Loadings on the first unrotated principle component.

Table A.2: Indicators for Balance of State-Church Cleavages: Percentage of Catholics

a) Original measures

Variable	Source	Label	Loadings*
Percentage of Catholics among country's population mid-1970	Barrett (1982)	CATH70	.999
Percentage of Catholics among country's population mid-1975	Barrett (1982)	CATH75	.999
Percentage of Catholics among country's population mid-1980	Barrett (1982)	CATH80	.999
Percentage of Catholics among country's population 1960s	Taylor and Hudson (1972) after Lane and Ersson (1995)	CATHPERC	.999
		Eigenvalue No. 1	3.996
		Percentage of variance	99.9

b) Constructed measures

Variable	Source	Label
Proportion of Catholics	Factor scores on the base of first principle component	CTHSCO

Note: * Loadings on the first unrotated principle component.

Table A.3: Indicators for Balance of State-Church Cleavages: Percentage of Protestants

a) Original measures

Variable	Source	Label	Loadings*
Percentage of Protestants among country's population mid-1970	Barrett (1982)	PROT70	.999
Percentage of Protestants among country's population mid-1975	Barrett (1982)	PROT75	.999
Percentage of Protestants among country's population mid-1980	Barrett (1982)	PROT80	.998
Percentage Protestants among country's population 1960s	Taylor and Hudson (1972) after Lane and Ersson (1995)	PROTPERC	.991
		Eigenvalue No. 1	3.976
		Percentage of variance	99.4

b) Constructed measures

Variable	Source	Label
Proportion of Protestants	Factor scores on the base of first principle component	PRTSCO

Note: * Loadings on the first unrotated principle component.

Table A.4: Indicators for Balance of State-Church Cleavages: Percentage of Atheists and People without A Creed

a) Original measures

Variable	Source	Label	Loadings*
Percentage of atheists and persons without a creed among country's population mid-1970	Barrett (1982)	NOCR70	.991
Percentage of atheists and persons without a creed among country's population mid-1975	Barrett (1982)	NOCR75	.999
Percentage of atheists and persons without a creed among country's population mid-1980	Barrett (1982)	NOCR80	.995
		Eigenvalue No. 1	2.970
		Percentage of variance	99.0

b) Constructed measures

Variable	Source	Label
Proportion of atheists and people without a creed	Factor scores on the base of first principle component	NCRSCO

Note: * Loadings on the first unrotated principle component.

Table A.5: Indicators for Crystallisation of State-Church Cleavages: Church Attendance

a) Original measures

Variable	Source	Label
Church attendance of male persons in 1981 acc. to European Values Survey	Lane and Ersson (1995)	ECHATTM
Church attendance of female persons in 1981 acc. to European Values Survey	Lane and Ersson (1995)	ECHATTW
Female church attendance in 1971 according to Inglehart (1977)	Lane and Ersson (1995)	ICHATTW
Male church attendance between 1973 and 1976 after Political Action 8-Nation Study	Lane and Ersson (1995)	PACHATTM
Female church attendance between 1973 and 1976 after Political Action 8-Nation Study	Lane and Ersson (1995)	PACHATTW
Male church attendance in 1968 after Social Compass	Lane and Ersson (1995)	SCCHATTM
Female church attendance in 1968 after Social Compass	Lane and Ersson (1995)	SCCHATTW
Male church attendance late 1960s/early 1970s, various surveys	Lane and Ersson (1995)	VCHATTM
Female church attendance late 1960s/early 1970s, various surveys	Lane and Ersson (1995)	VCHATTW

b) Constructed measures

Variable	Source	Label
Church attendance	Mean across all variables for each country, standardised over all countries, only valid values used	CHTSCO

the other hand, for all of the countries covered in our analyses at least one of the measures is available. For these reasons, an index of church attendance is constructed as the mean of all valid measures of church attendance for each country (see Table A.5).

A.2   Centre-Periphery Cleavages

The centre-periphery cleavage also is rooted in the process of state-building and nation-building. This cleavage reflects, first of all, the fact that the establishment of a sovereign state authority in a larger geographical area presupposes the subjection of local leaders and the nobility to central structures of authority. Subsequently, this cleavage gained more momentum in the nation-building processes of the nineteenth century. Extension of mass education not only provoked conflicts over the question whether people should be educated according to principles of Christian faith, but also which cultural patterns and skills should be taught, especially which language should prevail in school. Here, the central authorities' intentions to establish a homogeneous national culture collide with the strive of people in peripheral areas to maintain

Table A.6 : Indicators for Fragmentation of Centre-Periphery Cleavages : Ethnic Fragmentation

a) Original measures

Variable	Source	Label	Loadings*
Ethnic fragmentation 1920	Calculated from Tesnière (1928) after Lane and Ersson (1995)	ETHFRG1	.929
Ethnic fragmentation 1960s	Calculated from Taylor and Hudson (1972) after Lane and Ersson (1995)	ETHFRG2	.965
Ethnic fragmentation 1970s	Calculated from data in Stephens (1976) by Lane and Ersson (1995)	ETHFRG3	.854
Ethnic fragmentation 1991	Calculated from Eurostat data reported by Boden (1993)	ETHNEUST	.942
Ethnic fragmentation 1970s	Calculated from Barrett (1982)	ETHNWCE	.953
		Eigenvalue No. 1	4.319
		Percentage of variance	86.4

b) Constructed measures

Variable	Source	Label
Ethnic fragmentation	Factor scores on the base of first principle component	ETFSCO

Note: * Loadings on the first unrotated principle component.

Table A.7: Indicators for Balance of Centre-Periphery Cleavages : The Relative Size of Ethnic Majorities

a) Original measures

Variable	Source	Label	Loadings*
Percentage of population using dominant language 1950s	Rustow (1967) after Lane and Ersson (1995)	ETHPERC1	.975
Percentage of population using dominant language 1970s	Barrett (1982) after Lane and Ersson (1995)	ETHPERC2	.975
		Eigenvalue No. 1	1.903
		Percentage of variance	95.2

b) Constructed measures

Variable	Source	Label
Share of ethnic majority	Factor scores on the base of first principle component	ETPSCO

Note: * Loadings on the first unrotated principle component.

their cultural identity. While there are always regional varieties within a certain ethnicity, conflicts of this kind are especially fierce in multi-ethnic countries, for example in France, Great Britain, and Belgium. Both France and Great Britain have a 'Celtic fringe', Brittany in the case of France, and Scotland and Wales in the case of Great Britain. Belgium has two major language groups, the Flams and the Walloons. Thus, the most plausible operationalisation of the centre-periphery cleavage is in terms of ethnic composition. One may consider the ethnic fragmentation of a country as well as the balance between a central, majoritarian ethnicity and the peripheric, minoritarian ethnicities.

In order to assess whether the combination of original measures obtained from various sources into a single summary indicator of ethnic fragmentation is valid, a principle-components analysis is carried out. As Table A.6 shows, there are good reasons for the construction of such an indicator. The loadings of all original measures on the first principle component are quite large, and the eigenvalue of the first principle component indicates that it explains more that 85 per cent of the variance of the original measures. Thus, a summary indicator for ethnic fragmentation is constructed using factor scores on this principle component.

The construction of a summary indicator for the ethnic majority's share of the total population also gets strong support from a principle-components analysis (see Table A.7). In this case, too, a summary indicator is constructed on the basis of factor scores.

A.3   Urban-Rural Cleavages

The urban-rural cleavage is an outcome of the industrial revolution. While in earlier centuries there always existed a divergence between the interests of the land-owning aristocracy and of the bourgeois merchants in towns, this divergence amounts to open political conflict in the nineteenth century. The interests of the new industrial bourgeoisie in cheap labour, which depended partly on cheap agricultural products, clashed with landed gentry's interests in high returns on the possession of land. This conflict of interests became manifest in the political

Table A.8: The Indicator for Balance of Urban-Rural Cleavages: The Relative Size of the Agricultural Sector

a) Original measures		
Variable	Source	Label
Proportion of Workforce employed in agriculture	Calculated after OECD: Annual Labour Force Statistics	EMPLAGRA
b) Constructed measures		
Variable	Source	Label
Relative size of agricultural sector	Same as above	EMPLAGRA

struggle over the maintenance of tariffs for imported agricultural products in the nineteenth century. To some degree, policy differences with respect to agricultural subsidies still are related to this cleavage. Unfortunately, only one type of measures is available for the cleavage between landed and industrial interests: the relative size of the primary sector in a economy, and even this measure is not available for Norway and Austria. The source of this single measure for urban-rural cleavages is shown in Table A.8.

A.4   Owner-Worker Cleavages

The last of the four major lines of cleavage is the owner-worker cleavage. The existence of this cleavage is also a result of the industrial revolution. In the nineteenth century large proportions of the population moved from the countryside to towns and cities, many of them loosing or abandoning their prior rural bases of subsistence. The content of conflicts between workers and owners of factories is very well known. Workers on the one hand strive for higher wages, while owners of capital try to keep wages down in order to maximize the return on capital. The political significance of this cleavage is related to the intensity of the conflicts between capital and labour. Strike activity is the most appropriate indicator for the intensity of these conflicts in a country.

Table A.9: Indicators for Intensity of Owner-Worker Cleavages: Strike Activity

a) Original measures			Principle-components analyses	
			I	II
Variable	Source	Label	Loadings*	Loadings*
Strike activity: days lost per 1000 workers, average 1973-1996	Eurostat (1998)	STRIKEDA	.875	.971
Strike activity: workers involved per 1000 workers, average 1973-1996	Eurostat (1998)	STRIKEWO	.940	.971
Index of strike activity, average 1960-1996	ILO: Yearbook of Labour Statistics after Armigeon, Beyeler et al. (1999)	STRIKE	.948	
		Eigenvalue No. 1	2.550	1.886
		Percentage of variance	85.0	94.3
b) Constructed measures				
Variable	Source			Label
Strike activity	Factor scores on the base of first principle component of analysis II			STRSCO

Note: * Loadings on the first unrotated principle component.

Three measures are available for strike activity. Whether it is valid to combine these measures into a summary indicator is examined, again, by principle-components analysis. As can be seen from Table A.9 the measures fit nicely into a one-dimensional model. However, since the strike activity index of Armigeon, Beyerler et. al (1999) lacks data for Austria, our index of strike activity is constructed on the basis of factor scores derived from a principle-components analysis of the two remaining measures of strike activity from Eurostat (1998).

B.   State Intervention

State intervention refers to the degree to which the state is involved in economic and social processes in a country. Three ways of state-involvement can be distinguished (i): the degree to which governmental institutions extract resources from general society, (ii) the degree to which they provide benefits and services, and (iii) the proportion of the workforce employed by governmental institutions and state-owned firms. A prime source for measures of state intervention are data provided by the OECD (Statistical Compendium 1999). From this source we obtain information about government receipts as a proportion of the gross national product as an indicator of the degree to which the state extracts resources from the society, government

Table A.10: Indicators for State Intervention

a) Original measures			Principle-components analyses	
			I	II
Variable	Source	Label	Loadings*	Loadings*
Government final consumption expenditure, proportion of GDP 1968-1998	Calculated after OECD: National Accounts II (OECD 1999)	GOVFEXP	.915	.902
Total government receipts, proportion of GDP 1968-1998	Calculated after OECD: National Accounts II (OECD 1999)	GOVRECPT	.863	.902
Proportion of workforce employed in government	Calculated after: OECD Business Sector Database (OECD 1999)	GOVEMP	.942	
		Eigenvalue No. 1	2.471	1.629
		Percentage of variance	82.4	81.4
b) Constructed measures				
Variable	Source			Label
State intervention	Country averages of factor scores on the base of first principle component of analysis II for the period in which the respective countries is included in the Eurobarometer series.			INTERVA

Note: * Loadings on the first unrotated principle component.

final consumption expenditure as a proportion of the gross national product as an indicator of the degree to which the state provides benefits and services, and the proportion of the workforce employed by governmental institutions and state-owned firms (see Table A.10).

Two principle-components analyses are conducted in order to assess the validity of a summary measure of state intervention. The first principle-components analysis is based on all three measures of state intervention introduced above. The result of this analysis clearly support a one-dimensional notion of state-intervention. All three loadings are quite large and the corresponding eigenvalue indicates that this component explains more than 80 per cent of the variance of the three measures. For Norway, there is no data available on the proportion of the workforce employed by governmental institution and state-owned. For this reason, a second principle-components analysis is conducted in which this measure was not included. This second analysis also supports a one dimensional solution: again we obtain large loadings and a relatively large eigenvalue for the first principle component. Factor scores of this analysis are used to construct a summary measure of state intervention.

C.   Political System Openness

Openness of a political system denotes the propensity of a political system to allow for the expression of political demands of the citizenry, to be responsive to these demands, and to offer opportunities for citizen participation. Freedom of expressing political opinions is generally regarded as a basic feature of each democratic polity, so only little variation is to be expected among democratic countries in this respect. The existence of institutional channels of participation however may vary according to the emphasis that constitutions give to political representation or to more direct forms of participation like referenda. In this respect, one may very well expect some variation between the countries covered in this study. When it comes to the politicisating aspects of a polity, the historical experience with respect to political openness may also be relevant: People who do not have much democratic experience probably also do not have much propensity to participate and to be interested in politics. Responsiveness of a polity to citizens' demands, however, is an aspect of openness of the political system that is difficult, if not impossible, to measure. A measurement of responsiveness would presuppose knowledge of citizens' demands in general and of the way government's policies reflect these demands. Both lack standard procedures of measurement.

Indicators of openness that are accessible for secondary analysis can be classified into three groups: first there is a vast array of general indices of democracy, second there are indicators that reflect more specific features of the opportunity structure of citizen political participation, and third there are indicators that reflect the historical experience of a country with respect to democracy and authoritarian leadership. We will deal with each of these sub-dimensions of political system openness in the following subsections.

Table A.11: Indicators for Democracy in General

a) Original measures

Variable	Source	Label	Loadings*
Bollen's liberal democracy index	Schmidt (1997)	BOLLEN	.664
Coppedge/Reinicke polyarchy index 1985	Schmidt (1997)	COPPEDGE	-.271
Freedom house index for 1988 as reported by Gastil (1990)	Schmidt (1997)	GASTIL	-.415
Jaggers/Gurr democracy index 1993	Schmidt (1997)	JAGGGURR	.340
Vanhanen's democracy index 1980-85	Schmidt (1997)	VANHAN1	.893
Vanhanen's democracy index 1993	Schmidt (1997)	VANHAN2	.773
		Eigenvalue No. 1	2.200
		Percentage of variance	36.6

b) Constructed measures

Variable	Source	Label
Democracy in general	Factor scores on the basis of first principal component	DEMOFAC

Note: * Loadings on the first unrotated principle component.

C.1 Indicators for Democracy in General

Among the array of general indices of democracy, as reported e.g. in Schmidt (1997), we select only those that cover all European countries that we intend to examine in our analysis (see Table A.11). The principle-components analysis does not support the hypothesis that the indices establish a single dimension. The loadings of the indices of democracy on the first principle component are not consistent with the view that a one-factor model of democracy can be built upon them. Three of the indices of democracy show quite large positive loadings, one shows a moderate positive loading, but the Coppedge/Reinicke Polyarchy Index and Gastil's Freedom House Index show negative loadings. In addition, the correlation matrix of these indices has three eigenvalues greater than one. According to the Kaiser-Guttman criterion, this suggests a three-dimensional solution. Promax rotation results in a pattern of loadings in which two different indicators have high loadings on each rotated component. All three rotated components are negatively correlated. If one would obtain a result like this from dimensional analyses of these indicators of democracy based on all countries of the world, one could not claim that all these indices would measure the same thing, that is, democracy. However, if there is something common to all these measures of democracy, it should be reflected by the first principle component. From its scores our general democracy indicator is constructed.

C.2 Opportunity Structures for Participation

With respect to institutionally provided opportunities for political participation, two types can be distinguished: opportunities for electoral participation and opportunities for direct participation by referenda. With respect to the opportunities for electoral participation we distinguish between the frequency of elections and the ways in which the electoral system transfers the electorate's choices into representative bodies. For the first aspect we employ the average number of election per year. For the second aspect, we use both the effective number of parties and Lijphart's Index of Disproportionality as measures. Three indicators for opportunities for direct participation via referenda are used: measures of the number and of the importance of referenda, and the total number of referenda since 1945.

Table A.12: Indicators for Opportunity Structures for Participation

a) Original measures

			Unr. sol.	Rotated solution	
Variable	Source	Label	U1	R1	R2
Lijphart's index of executive dominance 1971-96	Lijphart (1999)	DISPRO71	.690	.342	-.703
Effective number of parliamentary parties 1945-96	Lijphart (1999)	EFNPAR71	-.272	.216	.892
Number of election per year 1973-1998	Calculated after Lijphart (1994)	NUMELECS	-.247	-.120	.257
Number of referenda since 1945	Lane and Ersson (1995)	LEREFNUM	.842	.952	.071
Importance of referenda since 1945	Lane and Ersson (1995)	LEREFIMP	.934	.938	-.125
		Eigenvalue No. 1	2.195		
		Percentage of variance	43.9	40.9	29.5
				Correlation of dimensions	
				1.000	-.166
				-.166	1.000

b) Constructed measures

Variable	Source	Label
Opportunity structures	Factor scores on the basis of first rotated component	OPPOFAC1
Opportunity structures	Factor scores on the basis of second rotated component	OPPOFAC2

Notes: U1: Loadings on first principle component of unrotated solution. R1: Loadings on first principle component of rotated solution. R2: Loadings on second principle component of rotated solution.

Can these measures be combined into a valid summary indicator? A principle-components analysis shows that this is not the case (see Table A.12). The loadings of the index of electoral system disproportionality and the measures for referendum participation opportunities have both large positive loadings on the first principle compent, while the loadings of the measure for the frequency of election and of the effective number of parliamentary parties have small negative loadings. Since the correlation matrix of the five measures has two eigenvalues larger than one, a two-dimensional solution is suggested. The result of promax rotation of the first two principle components indicates that referendum participation opportunities and electoral participation opportunities constitute two separate, slightly negatively correlated dimensions. Therefore, we construct two separate indicators for the opportunity structure for participation based on the scores from both rotated components.

C.3   Historical Experience

Two aspects of historical experience of democracy are reflected by the indicators that we consider here. The first aspect is the initial transition from the ancient regime to democratic forms of government. The introduction of modernized leadership, and of male and of female universal suffrage mark crucial steps in this process. The corresponding measures, along with their sources, are shown in Table A.13. The other aspect is the duration of an authoritarian interlude after the initial establishment of democratic institutions and the length of time since their re-introduction. The duration of authoritarian experience reflects the length of the period in which authoritarian political structures inhibited and discouraged political participation and political interest. The date of the last re-introduction of universal suffrage expresses the length of time in which the population could recover from authoritarian experience, possibly regaining confidence in newly open opportunities for participation.

Do these features of historical development refer to a latent structure of democratic experiences? Principle-components analysis reveals that the answer is negative (see again Table A.13). Only two of the measures have high loadings on the first principle component. In addition, the correlation matrix of the indicators has two eigenvalues larger than one. Thus a two-dimensional model is clearly favoured by any criterion of component extraction. Promax rotation does not seem to change the initial solution very much. The explained variances of the rotated components are very close to the initial eigenvalues. Despite the fact that the method of rotation allows for oblique components, the rotated components are almost uncorrelated.

Table A.13: Indicators for the Historical Experience of Democracy

a) Original measures

Variable	Source	Label	Unrotated solution	Rotated solution	
			U1	R1	R2
Year of introduction of modernized leadership	Lane and Ersson (1995)	MODLEAD	.243	.135	.757
Year of first introduction of male universal suffrage	Mackie and Rose (1991); Lane, McKay, and Newton (1997); Theen and Wilson (1996); Merkel and Stiehl (1997); Inter-Parliamentary Union (1986); Petersson (1989);	FMSUFFRA	.097	.001	.667
Year of first introduction of female universal suffrage	Mackie and Rose (1991); Lane, McKay, and Newton (1997); Theen and Wilson (1996); Merkel and Stiehl (1997); Inter-Parliamentary Union (1986); Petersson (1989);	FFSUFFRA	.050	.151	-.693
Length of authoritarian experience after 1900	Lane and Ersson (1995)	AUTLEN	.969	.950	.173
Year of last introduction of universal suffrage	Mackie and Rose (1991); Lane, McKay, and Newton (1997); Theen and Wilson (1996); Merkel and Stiehl (1997); Inter-Parliamentary Union (1986); Petersson (1989);	LSUFFRAG	.915	.947	-.181

Eigenvalue No. 1	1.848		
Percentage of variance	36.9	36.8	31.3

	Correlation of dimensions	
1.000	.027
.027	1.000

b) Constructed measures

Variable	Source	Label
History of democracy	Factor scores on the basis of first principle component of rotated solution	HIST1
History of democracy	Factor scores on the basis of second principle component of rotated solution	HIST2

Notes: U1: Loadings on first principle component of unrotated solution. R1: Loadings on first principle component of rotated solution. R2: Loadings on second principle component of rotated solution.

As the patterns of loadings on the first rotated components show the two measures that are related to the experience of authoritarian leadership after 1900 are dominant. It is to be suspected, therefore, that both measures of authoritarian experience are redundant, at least in the set of countries covered in this study. The second factor shows an erratic patterns of loadings: the date of introduction of male universal suffrage and the date of introduction of female universal suffrage have loadings of opposite signs. For these reasons a second principle-components analysis is conducted in which both the date of last (re)introduction of universal suffrage and the date of the first introduction of female universal suffrage are excluded from the analysis.

The principle-components analysis on the basis of only three indicators of historical experience clearly supports a one-dimensional model. The loadings of all three indicators on the first principle component are fairly high. The corresponding eigenvalue is the only one larger than one and indicates that this principle component covers almost half of the variance of the three indicators.

Three measures of historical experience are constructed on the base of the principle-components analyses: Two measures based scores from the rotated first two components of the complete set of five original measures and one measure based on scores on the first principle component of the reduced set of three original measures.

C.4   Political System Openness as a Single Dimension?

Since we started with the idea that the factors indicated all belong to a general process of democratisation in Western European countries, the various indicators developed might be reduced even further if a latent structure can be detected. For this reason comprehensive dimensional analyses are performed to explore the relationship between the indicators for openness of the political system. Those variables that either lack data for some of the countries covered in this paper or proved to be redundant are excluded from these analyses.

The principle-components analysis of the set fourteen indicators of political system openness does not support a one-dimensional model. The correlation matrix of the indicators has six eigenvalues larger than one. The Kaiser-Guttman criterion thus suggests a six-dimensional model, while the scree criterion suggests a two-dimensional model. Since the purpose of this exercise is data reduction in addition to the results obtained in the preceding subsections, the two-dimensional solution is chosen. The promax-rotated two-dimensional solution, however, does not lead to a stringent interpretation. First, the patterns of the loadings of the indices of general democracy on both rotated components are quite heterogeneous (see Table A.14). Second, the index of disproportionality of the electoral system and the measures of the frequency and importance of referenda have large loadings with the same sign on the second component. Nevertheless, the first rotated component does allow for the interpretation as

expressing political openness, since all variables that have a large positive loading on this factor are indicators of political openness, while the duration of authoritarian experience – which is an indicator of the absence of political openness in the past – has a fairly large negative loading. For these reasons, indices for the openness of the political system are constructed from the factor scores of the two rotated component.

Table A.14: A Test of One-Dimensionality of Political System Openness

a) Original measures

Variable[*]	Label	U1
Bollen's liberal democracy index	BOLLEN	.463
Coppedge/Reinicke polyarchy index 1985	COPPEDGE	-.337
Freedom house index for 1988 as reported by Gastil (1990)	GASTIL	-.352
Jaggers/Gurr democracy index 1993	JAGGGURR	.577
Vanhanen's democracy index 1980-85	VANHAN1	.824
Vanhanen's democracy index 1993	VANHAN2	.676
Lijphart's index of executive dominance 1971-96	DISPRO71	-.593
Effective number of parliamentary parties 1945-96	EFNPAR71	.734
Number of election this year	NUMELECS	-.041
Number of referenda since 1945	LEREFNUM	-.408
Importance of referenda since 1945	LEREFIMP	-.571
Length of authoritarian experience after 1900	AUTLEN	-.299
Year of first introduction of male universal suffrage	FMSUFFRA	.246
Year of introduction of modernized leadership	MODLEAD	-.339
	Eigenvalue No. 1	3.574
	Percentage of variance	25.5

Notes: For sources of variable see preceding tables. U1: Loadings on first principle component of unrotated solution. R1: Loadings on first principle component of rotated solution. R2: Loadings on second principle component of rotated solution.

D. Control Capacity of the State

Control capacity of government refers to the properties of a political system that determine the attainment of political goals set by governments. We do not refer to the administrative skills and political determinateness of politicians acting as members of government, but rather to the structural properties of a political system that restrict or facilitate their political pursuits. An ideal way to measure control capacity of a country's government would consist of a comparison of the declared goals of the respective governments with the actual outcomes of the policies that are implemented to reach these goals. For the lack of appropriate measures of this, we have to use a more indirect way to operationalise this concept. Control capacity of a government is measured by those properties of the political system that are more easily to observe and that are plausible factors affecting the control capacity. The cases considered here are the centralisation/decentralisation of governmental structures, the institutional constraints to (central) government, and the stability and effectiveness of national governments.

Table A.15: Indicators for Centralisation

a) Original measures

Variable	Source	Label	U1
Central government's share of direct taxes and contributions	Computed after OECD: National Accounts II (OECD 1999)	DTXCENTR	.791
Central government's share of government final consumption expenditure	Calculated after OECD: National Accounts II (OECD 1999)	EXPCENTR	.670
Central government's share of government current receipts	Calculated after OECD: National Accounts II (OECD 1999)	RCPCENTR	.906
Unitary vs. federal constitution	Lijphart (1984)	FEDER71	-.817
Lijphart's index of bicameralism 1971-96	Lijphart (1999)	BICAM71	-.467
		Eigenvalue No. 1	2.784
		Percentage of variance	55.7

b) Constructed measures

Variable	Source	Label
Centralism/Federalism	Factor scores on the basis of first principle component	CENTFAC

Notes: U1: Loadings on first principle component of unrotated solution. R1: Loadings on first principle component of rotated solution. R2: Loadings on second principle component of rotated solution.

D.1   Centralism/Decentralism and Federalism

Centralisation/decentralisation of governmental structures has mainly two aspects: a fiscal one and a more institutional/constitutional one. The fiscal aspect of centralisation is the extend to which both the extraction and consumption of financial resources are either centralized in the hands of central government or dispersed over different levels of national, regional, or local governments or administrative bodies. This aspect is measured here by the central governments' share of general government current receipts, by the central governments' share of general government final expenditure, and by the central governments' share of direct taxes and contributions (see Table A.15). The institutional/constitutional aspect of centralisation/decentralisation manifests itself in a federal or unitary constitution and in a unicameral or bicameral structure of the legislature. The former is measured by Lijphart's (1999) index of federalism for the period of 1971 to 1996, the latter is measured by Lijphart's (1999) index of bicameralism for the period of 1971 to 1996.

As in preceding sections, principle-components analysis is used to assess the possibility of a single indicator of centralism/decentralism. Although the Kaiser-Guttman criterion suggests a two-dimensional solution, a one-dimensional solution is preferred here. The first eigenvalue is much larger than the second, corresponding to over 55 per cent explained variance. The loadings on the first principle component are all relatively large, except for the bicameralism indicator. The pattern of the loadings on the promax-rotated first two principle components, however, is not easy to interpret. Therefore, the indicator of centralism/decentralism is based on the scores on the first principle component.

D.2   Institutional Constraints

A second dimension of control capacity of government is the extent to which government faces institutional constraints to its authority and action. Obviously, decentralisation and federalism may very well be regarded as a type of institutional constraint. Therefore, in this context institutional constraints form a residual category beside federalism or decentralisation, which comprises bicameralism, constitutional rigidity, judicial review, and central bank independence. In addition to indicators of these features of the polity, taken from Lijphart (1999), we also use Schmidt's (1996) indices of institutional constraints, institutional pluralism and institutional structure.

For a summary indicator of institutional constraints, the indicators just mentioned should constitute a single dimension. Principle-components analysis shows that this is indeed the case. By any common extraction criterion a one-dimensional solution is supported. All factor loadings are larger than 0.5; most of them being larger than 0.7. Consequently, our summary indicator of institutional constraints is constructed on the basis of factor scores on the first and only principle component (see Table A.16).

Table A.16: Indicators for Institutional Constraints of Government Activity

a) Original measures

Variable	Source	Label	Loadings*
Lijphart's index of bicameralism 1971-96	Lijphart (1999)	BICAM71	.816
Lijphart's index of constitutional rigidity 1971-96	Lijphart (1999)	CONRIG71	.516
Lijphart's index of judicial review 1971-96	Lijphart (1999)	JUDREV71	.769
Lijphart's index of central bank independence 1971-96	Lijphart (1999)	CENBA71	.610
Insitutional constraints of central state	Schmidt (1996), after Armigeon, Beyeler et al. (1999)	INSTCONS	.870
Index of institutional pluralism	Schmidt (1996), after Armigeon, Beyeler et al. (1999)	PLURAL	.727
Index of constitutional structures	Schmidt (1996), after Armigeon, Beyeler et al. (1999)	STRUCTUR	.728
		Eigenvalue No. 1	3.716
		Percentage of variance	53.0

b) Constructed measures

Variable	Source	Label
Institutional constraints	Factor scores on the basis of first principle component	INSTFACT

Note: * Loadings on the first unrotated principle component.

D.3   Stable and Effective Governments

The presence of structures that foster stable and effective government is an essential precondition of control capacity of states and these structures form another dimension of control capacity. As indicators of the stability and effectiveness of government activities the following indicators are considered: cabinet durability (around 1975, 1980, and 1985); Lane and Ersson's party government index, and Lijphart's indices of minimal winning coalitions and of executive dominance (see Table 17).

Table A.17: Indicators for Government Stability and Effectiveness

a) Original measures

			Unr. sol.	Rotated solution	
Variable	Source	Label	U1	R1	R2
Average cabinet durability 1975-79	Lane and Ersson (1995)	CABDUR75	.694	.362	.512
Average cabinet durability 1980-84	Lane and Ersson (1995)	CABDUR80	.786	.185	.855
Average cabinet durability 1985-89	Lane and Ersson (1995)	CABDUR85	.529	-.204	.979
Party government index	Lane and Ersson (1995)	PARTGOV	.829	.870	.073
Percentage of minimal winning or one-party cabinets 1971-96	Lijphart (1999)	MINWI71	.777	.896	-.029
Lijphart's index of executive dominance 1971-96	Lijphart (1999)	EXDOM71	.752	.872	-.034
		Eigenvalue No. 1	3.241		
		Percentage of variance	54.0	47.5	39.1
			Correlation of dimensions		
			1.000	.335	
			.335	1.000	

b) Constructed measures

Variable	Source	Label
Government effectiveness	Factor scores on the basis of first rotated component	GOVFACT1
Government stability	Factor scores on the basis of second rotated component	GOVFACT2

Notes: U1: Loadings on first principle component of unrotated solution. R1: Loadings on first principle component of rotated solution. R2: Loadings on second principle component of rotated solution.

As in the case of the indicators of centralisation/decentralisation, principle-components analysis is conducted in order to explore the underlying structure. The results of this analysis, however, is ambiguous. On the one hand, the principle of parsimony and the Scree criterion of component extraction support a one-dimensional model. On the other hand, the Kaiser-Guttman criterion and the substantial interpretability of the rotated two-dimensional solution suggest a two-dimensional solution. For these reasons, for further analyses factor scores are generated both from the first principle component and from the two rotated components.

Table A.18: Indicators for Structures of Interest Mediation

a) Original measures

Variable	Source	Label	Loadings*
Consociationism index	Lane and Ersson (1995)	CONSOCIA	.543
Corporatism index	Lane and Ersson (1995)	CORPORAT	.891
Lijphart's index of interest group pluralism 1971-96	Lijphart (1999)	GRUPLU71	-.961
		Eigenvalue No. 1	2.014
		Percentage of variance	67.1

b) Constructed measures

Variable	Source	Label
Structures of interest mediation	Factor scores on the base of first principle component	MEDIFACT

Note: * Loadings on the first unrotated principle component.

D.4   Structures of Interest Mediation

Consociationalism and corporatism offer opportunities of mediation between potentially conflicting interests; between opposing political camps in case of consociationalism, and between government and powerful interest groups in case of corporatism. The consequences of the presence of opportunities for interest accommodation for control capacity, however, may be ambivalent. Interest accommodation may result in a pre-selection of government's policy options. Governments will drop policies that – after bargaining with opposition parties or with relevant interest groups – turn out to be infeasible. But this pre-selection will result in the adoption of only those policies that are feasible, thus enhancing rather than limiting the control capacity of government.

Three indicators of structures of interest mediation are available here: Lane and Ersson's (1995) indices of consociationalism and of corporatism, and Lijphart's (1999) index of interest group pluralism/corporatism (see Table A.18). These indicators clearly constitute a common dimension as a principle-components analysis shows. Therefore, we construct a summary indicator of interest mediation based on the scores on the first principle component.

D.5 Control Capacity as a Single Dimension?

In the foregoing sub-sections we considered four different sub-concepts of control capacity. After dealing with each of these sub-concepts one may very well ask whether these sub-concepts can be seen as indicators of a common latent structure for the more general concept of control capacity. An answer to this question can be obtained on the basis of a principle-components analysis of all of the indicators of control capacity so far examined.

As Table A.19 shows, not all of the loadings of the indicators of control capacity on the first principle component, which explaines just 30 percent of the total variance of the indicators, show signs that are consistent with the concept of control capacity. Based on the loadings of the

Table A.19: A Test of One-Dimensionality of Control Capacity of the State

a) Original measures

Variable[*]	Label	Loadings[**]
Central government's share of direct taxes and contributions	DTXCENTR	-.514
Central government's share of government final consumption expenditure	EXPCENTR	-.610
Central Government's share of government current receipts	RCPCENTR	-.684
Lijphart's index of federalism 1971-96	FEDER71	.937
Lijphart's index of bicameralism 1971-96	BICAM71	.588
Lijphart's index of constitutional rigidity 1971-96	CONRIG71	.559
Lijphart's index of judicial review 1971-96	JUDREV71	.575
Lijphart's index of central bank independence 1971-96	CENBA71	.766
Insitutional constraints of central state	INSTCONS	.592
Index of institutional pluralism	PLURAL	.493
Index of constitutional structures	STRUCTUR	.724
Average cabinet durability 1975-79	CABDUR75	.561
Average cabinet durability 1980-84	CABDUR80	.426
Average cabinet durability 1985-89	CABDUR85	.403
Party government index	PARTGOV	.155
Percentage of minimal winning or one-party cabinets 1971-96	MINWI71	.019
Lijphart's index of executive dominance 1971-96	EXDOM71	.556
Consociationism index	CONSOCIA	.393
Corporatism index	CORPORAT	.191
Lijphart's index of interest group pluralism 1971-96	GRUPLU71	-.396
	Eigenvalue No. 1	6.022
	Percentage of variance	30.1

Note: * For sources of variables see preceding tables.** Loadings on the first unrotated principle component.

indicators for centralisation/decentralisation and for institutional constraints, it is clear that high values on this component indicate low levels of control capacity. However, the indicators of cabinet stability have positive loadings on this component, which contradicts this interpretation. Furthermore, the loadings of the other indicators of stability and effectiveness of national governments are small or have a sign also contradicting this interpretation. The same applies to the indicators of interest mediation. Nevertheless, a principle-components analysis in which all indicators are dropped that have loadings in the 'wrong' direction leads to a result that is more consistent with a one-dimensional model of control capacity. Therefore, a summary indicator of control capacity is constructed on the base of factor scores on the first and only principle component that results from this analysis.

E.   Modernisation

Socio-economic development is usually seen as a prerequisite for democracy (see e.g. Lipset 2000). Extending this line of reasoning one may assume that levels of political interest are less related to specific features of the political system than to the general process of socio-economic modernisation. In order to be able to test this assumption, we construct an indicator of modernisation. GDP per capita at constant prices and exchange rates to the US Dollar, and GDP per capita at constant prices and purchase power parities to the US Dollar are used as measures of economic productivity as an aspect of economic modernisation. The sectoral composition of the workforce is also used as an indicator of modernisation. Since the relative sizes of the primary, secondary, and tertiary sectors sum to unity, one of these indicators is dropped from our analysis, the relative size of the industrial sector. As in the previous sections, we employ principle-components analysis to test whether these indicators form a common dimension.

The result of the principle-components analysis, which are shown in Table A.20, clearly support a one-dimensional view on modernisation. All four variables have loadings larger than 0.9 on the first principle component, which explains more than 80 per cent of the variance. However, there is no data on sectoral composition of the workforce for Norway and Austria. In order to obtain an indicator for modernisation, the principle-components analysis is repeated on the basis of the GDP measures only. A summary indicator of modernisation is constructed then from the scores on the first principle component of this analysis.

Table A.20: Indicators for Socio-Economic Modernisation

a) Original measures			Principle-components analyses	
			I	II
Variable	Source	Label	Loadings*	Loadings*
GDP per head, US $, prices and exchange rates of 1990	Calculated from OECD: National Accounts I (OECD 1999)	GDPHDSTD	.917	.975
GDP per head, US $, purchase power parities of 1990	Calculated from OECD: National Accounts I (OECD 1999)	GDPCAPPP	.957	.975
Proportion of workforce employed in agriculture	Calculated from OECD: Annual Labour Force Statistics (OECD 1999)	EMPLAGRA	-.918	
Proportion of workforce employed in the service sector	Calculated from OECD: Annual Labour Force Statistics (OECD 1999)	EMPLSERV	.919	
		Eigenvalue No. 1	3.447	1.901
		Percentage of variance	86.1	95.1
b) Constructed measures				
Variable	Source			Label
Modernisation	Country averages of factor scores on the base of first principle component of analysis II for the period in which the respective countries are included in the Eurobarometer series.			MODFACTA

Note: * Loadings on the first unrotated principle component.

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