Government, politics and health policy: A quantitative analysis of 30 European countries

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Article history:
Received 29 January 2015
Received in revised form 26 August 2015
Accepted 27 August 2015

Keywords:
Health policy
Politics
Democracy
Government effectiveness
Population health
Europe

ABSTRACT

Rationale: Public health policies are often dependent on political decision-making, but little is known of the impact of different forms of government on countries’ health policies. In this exploratory study we studied the association between a wide range of process and outcome indicators of health policy and four groups of political factors (levels of democracy, e.g. voice and accountability; political representation, e.g. voter turnout; distribution of power, e.g. constraints on the executive; and quality of government, e.g. absence of corruption) in contemporary Europe.

Data and methods: Data on 15 aspects of government and 18 indicators of health policy as well as on potential confounders were extracted from harmonized international data sources, covering 30 European countries and the years 1990–2010. In a first step, multivariate regression analysis was used to relate cumulative measures of government to indicators of health policy, and in a second step panel regression with country fixed effects was used to relate changes in selected measures of government to changes in indicators of health policy.

Results: In multivariate regression analyses, measures of quality of democracy and quality of government had many positive associations with process and outcome indicators of health policy, while measures of distribution of power and political representation had few and inconsistent associations. Associations for quality of democracy were robust against more extensive control for confounding variables, including tests in panel regressions with country fixed effects, but associations for quality of government were not.

Conclusions: In this period in Europe, the predominant political influence on health policy has been the rise of levels of democracy in countries in the Central & Eastern part of the region. In contrast to other areas of public policy, health policy does not appear to be strongly influenced by institutional features of democracy determining the distribution of power, nor by aspects of political representation. The effect of quality of government on health policy warrants more study.

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1. Introduction

There is an increasing body of research studying the impact of political factors, broadly defined, on population health [1–4]. The main reason for this increased interest in "political epidemiology" is the growing awareness
that public health successes are often dependent on political decision-making [5]. In order to better understand the opportunities and constraints to promote public health issues in the political arena, a deepened understanding of how politics work, and what political conditions facilitate or hamper decision-making in the interest of population health is important.

The political “determinant” that has received most attention in the health literature is that of the level of democracy [4]. This is probably due to the fact that over the last 50 years the governing systems in many countries have undergone profound changes, with a clear shift from authoritarian regimes to liberal democracies [6]. However, there are many other political conditions that potentially affect population health, such as the level of popular participation in the democratic process, the political complexion of governments, and the ability of those governments to actually implement policies. In this paper we report on an exploratory study of the association between a wide range of political conditions and the differing degrees to which European countries have adopted effective health policies. By choosing specific indicators of health policies as our outcome variables, we intend to capture more directly the influence of political conditions than if we would have analyzed general indicators of population health.

We were able to do this following the conclusion of a previous study that examined progress made by European countries in developing and implementing health policies in ten key areas of health policy: tobacco control; alcohol control; food policy; fertility, pregnancy, and childbirth policy; child health policies; infectious disease control; hypertension detection and treatment; cancer screening; road traffic safety; and air pollution control. While policies in all these areas have made significant contributions to advances in population health over the past decades, we also found substantial variations between European countries in their level of adoption and implementation and resulting population health outcomes [7,8]. We were also able to show how health policies varied according to factors such as national income and societal values [7,8], but although some of our analyses covered political determinants [7–9] we have so far not systematically assessed the influence of political conditions on health policy.

In seeking to understand the political determinants of health policy we draw on the political science literature, on the basis of which we have identified four categories of political conditions that can be expected to affect health policy, and that can be operationalized and consistently measured for a large number of European countries using existing data. Because of the scarcity of studies that explicitly apply political science theory to health policy [10,11], the identification of potentially important political conditions is by necessity somewhat tentative, and as a result our study is mainly exploratory in nature. We do, however, note that these four categories of political conditions can be linked to a well-known theoretical framework for public policy, the so-called “stages heuristic”, which divides the public policy process into four stages: agenda setting, policy formulation, policy implementation, and policy evaluation [12]. Our first two categories of political conditions can be seen to shape the agenda setting process, while our second two categories mainly determine the policy implementation process.

The first category of political conditions in our analysis covers the extent to which citizens can give voice to their concerns and hold the government to account, i.e. the quality of the democratic structures and processes. This is the area that has so far been studied most extensively, typically using certain composite measures that combine several dimensions of democracy. On the basis of this existing literature [1,3,4,13–17] we hypothesize that countries scoring higher on the most commonly used measures of democracy will have made the most progress in health policies, e.g. because more democratic governments should be more likely to make decisions that reflect the public interest. We do however note that the existing evidence is not completely consistent, both in less developed countries where positive effects on mortality were found in some [18,19] but not all studies [19] and in Europe where recent democratization has coincided with diverse rapid societal changes and a temporary decrease of life expectancy [16].

The second category groups several aspects of political representation, i.e. voter turnout, female representation in parliament, and political orientation of the electorate. Voter turnout has been declining markedly in many countries in recent decades, and on the basis of the little research that exists on the relationship between voter turnout and health outcomes [2,20] we hypothesize that, where it is higher, politicians may be better connected to their electorates and thus may be more likely to adopt policies that improve their health. Equally, based on the limited research, mainly from low income countries showing that infant and under five mortality is lower in countries where either women form more than 20% of parliamentarians [21] or are more empowered according to a composite index including female parliamentary representation [22], we hypothesize that more equitable gender representation may be associated with stronger health policies. In democracies, the political orientation of the electorate determines the political complexion of their government. This in its turn will partly determine a country’s health policies, because the development of health policy demands choices about the role of the individual and the state, the redistribution of resources, the role of regulation, and the willingness to challenge corporate interests, all of which are intensely political and more commonly associated with left wing parties [2,23,24]. Although previous research has not produced entirely consistent results [1,2,9,25], we therefore hypothesize that social-democratic governments may be associated with stronger health policies.

The third category relates to the distribution of power within democracies, i.e. the extent to which political power is concentrated or dispersed. It includes factors such as the proportionality of the electoral system, the number of political parties, the dominance of the executive (or cabinet) over parliament, and the mechanisms for interest group representation. Countries differ considerably [26]. Thus, the Westminster model is seen as the archetypal version of what is termed the “majoritarian” model, where a first past the post voting system usually leads to clear parliamentary majorities for a single party, even when they win much less than 50% of the popular vote, and where the
cabinet can ensure the adoption of legislation without the need to consult with minority interests. At the other end lies “consensus democracy”, characterized by states with proportional election systems that tend to result in coalition governments, such as The Netherlands and Germany. Some research has found that this model achieves better results in areas such as economics, social welfare, environment, criminal justice, and foreign aid [26], where “kinder, gentler” traits are important. Studies relating distribution of power specifically to health policy or health outcomes are extremely scarce and have not produced clear results [27,28]. On the basis of research on other policies, we hypothesize that countries closer to the consensus democracy model will have stronger health policies.

The fourth category comprises aspects of the effectiveness of government. While the preceding political characteristics may influence the design and promulgation of policies, it is the quality of the machinery of government that will determine whether they are implemented. This captures the extent to which the policy process conforms to an ideal in which there is a professional civil service, political and institutional stability, and low levels of corruption. Institutional stability [29], lack of corruption [30] and stronger government effectiveness as a whole [8] have all been found to be associated with better health outcomes, and we therefore hypothesize that countries with more effective governments will have stronger health policies.

2. Data and methods

2.1. Data: independent variables

We identified a large number of candidate variables in each of the four categories of political factors. Our choice of variables for the analysis was guided by three criteria: measurement on an interval, not an ordinal scale; availability of data for all 30 countries and all years (1990–2010); and provenance from different scientific traditions. The latter criterion was applied in order to avoid over-reliance on one particular tradition, such as the set of World Bank Governance Indicators [31]. The selected variables, their definitions and some descriptive statistics are given in Table 1.

For the first category, the quality of democracy, we chose two summary measures: an index combining two frequently used measures based on ratings of the functioning of democracies (Freedom House and Polity2) and the World Bank index of voice and accountability (reflecting various aspects of the political process, civil liberties and political rights). These measures are based on evaluations by analysts, with review by expert panels. The evaluations use a wide range of data sources, including media reports and country visits, and judge achievement against norms, which in the case of Freedom House, are derived from the Universal Declaration on Human Rights. The responses are then summed to yield an overall score.

Within the second category, aspects of political representation, we chose measures of voter turnout (measuring the proportion of the electorate effectively participating in parliamentary elections) and the share of female members of the legislature, as well as participation by different political parties in government. For the latter we chose social-democratic and other left-wing parties as well as centre (mostly Christian-democratic) parties, because the effect of both on public policies has been extensively studied previously [32].

Within the third category, distribution of power, we chose measures of party-political fractionalization (reflecting the number of different parties in parliament), political constraints (institutional barriers preventing single actors to change government policy according to their preferences), fiscal centralization (reflecting central state power versus devolution of power to lower geographical units), and consensus democracy (Lijphart’s “executives–parties” dimension reflecting the division of power between the executive and the political parties in parliament) [26].

Within the fourth category, quality of government, we again chose a range of measures, including a summary index of quality of government, and indexes of specific aspects of governance: professionalism of the civil service, political stability, rule of law, and perceptions of corruption. Each of these can be thought of as facilitating, or setting limits to, effective policy making by governments.

All political data were extracted from two harmonized international datasets, the Quality of Government Dataset [33] and the Comparative Political Data Set [34]. Because we assumed that current health policies and their outcomes are the cumulative result of political efforts over many years, we used average values of political variables over the last two decades as our independent variables. We chose 1990 as the starting-point, because countries in Central & Eastern Europe became democratic and/or regained their independence around that point in time, and because most data on the functioning of their governments are only available since that year.

We considered as potential confounders country characteristics that may have an independent effect on health policy and its behavioural or health outcomes, and may also affect its forms of government. In our main analysis we included the following control variables: Gross Domestic Product (log transformed) [31], population size (log transformed) [26], and “east” (a dummy variable indicating whether a country has been under a communist regime in the years before 1990). In additional analyses, we also included two cultural variables (cultural values, as measured by a country’s score on Inglehart’s self-expression versus survival scale [35], and religion, as measured by the proportion of a country’s population with a Protestant religious affiliation), and replaced the variable “east” by two more nuanced geographical variables, longitude and latitude (determined on the basis of the geographical position of a country’s capital). These data are for the year 2010, or the latest available year.

2.2. Data: dependent variables

We distinguish three groups of indicators of health policy: measures indicating the degree of implementation of health policies, measures indicating the frequency of specific behaviours targeted by health policies, and measures indicating the frequency of specific health outcomes.
targeted by health policies. Whereas the first group indicates whether specific policies have been implemented and can be seen as representing ‘process’ indicators, the second and third groups measure the immediate and final ‘outcomes’ of health policies.

Our measures cover a wide range of health policies, including tobacco control (indicated by position on the tobacco control scale [36], prevalence of current male smoking and ischaemic heart disease mortality rate); alcohol control (position on the bridging the gap alcohol control scale [37]), alcohol consumption (sales in litres per capita) and mortality from liver cirrhosis; child immunizations (coverage of measles immunization); cancer screening (number of population-wide screening programmes [38], participation in cervical and breast cancer screening programmes, mortality from cervical cancer); blood pressure control (average systolic blood pressure levels [39]); road traffic safety (road safety management performance score [40], prevalence of seat belt wearing [41] and motor vehicle traffic accident mortality); child safety (child safety alliance safety grade [42]); and environmental policies (environmental performance index (http://epi.yale.edu/)). We also included one general health indicator, infant mortality.

In order to be able to compare our results with health policies as dependent variables with those reported previously for other areas of public policy, we added several other indicators: health care expenditure (as a percentage of Gross Domestic Product), income inequality (Gini index of inequality in equivalised household disposable income [33]), prevalence of poverty (proportion of population at risk of poverty or social exclusion as estimated by Eurostat (http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/People_at_risk_of_poverty_or_social_exclusion)), country credit rating (world economic forum expert assessment of the probability of sovereign debt default [33]), gender inequality index (united nations development programme measure of gender-based disadvantage in reproductive health, empowerment and the labour market [33]), and trust in politicians (world economic forum assessment of public trust in politicians [33]).

All data are for the year 2010, or the latest available year. Except as otherwise indicated these data were obtained from the WHO Health for All Database 2014 [43]. Most of these data represent updates of data used in previous papers [7–9].
2.3. Analysis

To study associations between political variables and indicators of health policy while controlling for confounders we performed a series of multivariate linear least-squares regression analyses with indicators of countries’ health policies as the dependent variable, and political variables, log Gross Domestic Product per capita, log population size, and the dummy variable “east” as independent variables. In the tables, we present standardized regression coefficients in order to increase comparability across different political variables. Analyses were performed with SPSS Statistics Version 22.

In a second stage, for the political variable(s) that showed consistent relations with indicators of health policy in these cross-sectional analyses and were available for the whole 1990–2010 period, we performed panel regression analysis with country-fixed effects. In this analysis each health policy variable (1990–2010) was modelled as a function of the political variable (1990–2010), calendar-year (continuous variable, 1990–2010), log Gross Domestic Product (1990–2010) and country dummies. We report Driscoll–Kraay standard errors allowing for cross-sectional between-country correlations [44]; analyses using other ways to create robust standard errors produced similar results (web appendix Table A2).

3. Results

Geographical patterns of political conditions are summarized in Fig. 1. This shows the strength of the correlation between scores on the 15 political variables and longitude (countries’ positions on an East–West axis) and latitude (countries’ positions on a North–South axis). Several variables related to quality of government (professional public administration, rule of law, absence of corruption, summary measure of quality of government) cluster in the upper-left quadrant of the figure, indicating that they have higher values in the North and West of the European region. The same is true for political constraints (a measure of distribution of power) and voice and accountability (a measure of the quality of democracy). Party-political fractionalization is higher in the North (but not in the West) of the region. Measures of political representation have no clear geographical pattern, as indicated by low correlations with both longitude and latitude, perhaps with the exception of women in parliament which tends to have somewhat higher values in the North and West of the European region.

The associations between these political variables and indicators of health policy, as obtained from the multivariate regression analyses, are shown in Table 2. “Positive” associations, i.e. better health policy performance at higher values of the political variable, are shown in green, and “negative” associations in red.

The two variables measuring quality of democracy have many statistically significant (p < 0.05) associations with health policy variables. Out of a total of 36 associations calculated, 11 are statistically significant and all of these are as hypothesized: countries with higher levels of democracy tend to have implemented more health policies, to have better behavioural outcomes and to have better health outcomes, in a range of areas.

More or less the same applies to the five variables measuring quality of government: out of a total of 90 associations calculated, 23 are statistically significant, and most of these are also as hypothesized: countries with a higher quality of government tend to have better policies and better outcomes, albeit with a few exceptions, particularly for the variable professional public administration.

Both level of democracy and quality of government also behave as hypothesized with other outcomes. More democratic countries spend more on health care, have less poverty and gender inequality, and, unsurprisingly perhaps, their populations have more trust in politicians. Countries with a higher quality of government tend to have lower income inequality, less poverty, higher financial credit ratings, less gender inequality, and higher trust in politicians (Table 2).

On the other hand, in the group of variables measuring distribution of power, only two (out of a total of 72) associations with health policy variables are statistically significant at the 0.05 level, or approximately what would be expected by chance. There are also rather few significant associations with measures of political representation. A higher proportion of women in parliament is associated with stronger alcohol control and road traffic.
safety policies, and less smoking and motor vehicle accident mortality. Political complexion of government, i.e. centre government, is associated with weaker alcohol and cancer screening policies and higher infant mortality rates. However, left leaning government has no statistically significant associations at all with health policy variables.

Because these analyses controlled for only a limited number of potential confounders, analyses for levels of democracy and quality of government were repeated with additional control variables. As both quality of government and levels of democracy tend to be higher in the North and West of the region (Fig. 1), the “positive” results shown in Table 2 could be confounded by other country characteristics, including cultural factors and historical legacies. These analyses (reported in web appendix Table A1) show that the associations between levels of democracy and health policy variables are generally robust against these additional controls, but this is less true for the associations between quality of government and health policy variables.

Also, when level of democracy and government effectiveness are entered stepwise into a regression model, the first clearly dominates the second; in most cases, the association between levels of democracy and health policy is stronger than that between government effectiveness and health policy. The only exception is motor vehicle traffic accident mortality, which has a stronger association with government effectiveness than with level of democracy (web appendix Table A1).

We therefore limited the panel regression analysis with country fixed effects to level of democracy (Table 3). On the outcome side, this analysis was limited to variables with “positive” associations for which data were available for (almost) the whole 1990–2010 period: alcohol consumption, measles immunization, infant mortality, cervical cancer mortality, and child injury mortality, motor vehicle traffic accident mortality. For three out of six outcomes (infant mortality, child injury mortality, and motor vehicle traffic accident mortality), the “positive” associations were also found in the panel regression.

A simplified illustration of these associations can be found in Fig. 2, which shows the bivariate correlation between average annual change in level of democracy and average annual change in these three health policy variables. Many countries in Western Europe have had stable levels of democracy, but countries in Central & Eastern Europe have seen shifts towards higher levels of democracy, whereas some Western European countries have slid backwards a little (i.e., Belgium and Italy). Fig. 1 shows that shifts towards higher levels of democracy were associated with more rapid declines of infant mortality, child injury mortality, and motor vehicle traffic accident mortality.

4. Discussion

4.1. Summary of main findings

In multivariate regression analyses, measures of quality of democracy and quality of government had many positive associations with indicators of health policy, while measures of distribution of power and political representation
had few and inconsistent associations. Associations with quality of democracy were robust following more extensive control for confounding variables, including tests in panel regressions with country fixed effects, but associations for quality of government were not.

4.2. **Strengths and limitations**

A major strength of this paper is that, in contrast to many previous studies of the relationship between politics and health, we have used a wide range of political variables, including measures from various strands of political science research. This allowed us to explore the relative importance of four groups of political variables: quality of democracy, political representation, distribution of power, and government effectiveness. The fact that, in contrast to many previous studies, we have looked at health outcomes of policies in addition to indicators of policy implementation is also noteworthy [45].

We recognize that the measures we use have certain limitations, not least because of the challenges of collecting consistent data in many different national settings. Some are derived from empirically verifiable objective data, such as the probability that two randomly chosen representatives will belong to different parties. However, others, such as voter turnout, may be subject to a degree of measurement error. Thus, if measured as the ratio of votes cast to numbers on the electoral register, the accuracy of the denominator will depend on the diligence with which the register is maintained. If measured from survey data following elections, there are systematic variations among countries due to variation in social desirability bias [46]. However, the practical impact of such problems is generally small.

Other measures depend on expert judgements. The widely used corruption index, developed by Transparency International, has been criticized as drawing too heavily on the views of elites [47]. The measures of the quality of democracy have been criticized for bias in favour of one political regime or another, but these criticisms have come to very different conclusions and seem to depend on the weighting given to particular aspects of democratization [48,49]. However, each of these measures correlates highly with other measures of democracy, often including those developed by its critics [50]. An assessment of governance indicators concluded that, even after taking margins of error into account, they permitted meaningful cross-country and over-time comparisons [51].

Another strength of our paper is that, in contrast to many previous studies, it covers a large number of outcomes related to specific health policies, and is not limited to generic health outcomes such as life expectancy, which at best have an indirect link with health policy. This allowed us to obtain a more nuanced understanding of how political factors might influence particular policies. That our study replicates previously reported associations between political conditions and other areas of public policy, such as health care spending, income inequality, poverty, gender inequality, trust in politicians and financial credit ratings, increases confidence in the robustness of our findings in relation to health policy.

Our study also has some limitations. Most obviously, it is only exploratory and, in the space available, it is impossible to examine in detail all of the associations identified. As we have done in our earlier study, published as a book [7], this requires detailed study of each association to identify and, where possible, suggest explanations for outliers. However, the findings here offer a starting point for additional analyses of this type.

Another limitation of our study is that it covers 30 European countries, mostly member states of the European Union, only. While this is likely to have had a positive effect on the availability, quality and comparability of the data, and to have reduced the risk of confounding, it also means that the variation in political measures is much less than would be obtained from a global study, and that we will have missed effects of political conditions that only become apparent outside this range of variation. For example, as noted above, other research has shown that the impact of gender equality in membership of legislatures is the greatest in the world’s most disadvantaged societies [21].

### Table 3

<table>
<thead>
<tr>
<th>Democracy</th>
<th>Coefficient</th>
<th>Standard error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol consumption</td>
<td>-0.18</td>
<td>0.18</td>
</tr>
<tr>
<td>Measles immunisation coverage</td>
<td>0.32</td>
<td>0.94</td>
</tr>
<tr>
<td>Infant mortality</td>
<td>-1.35</td>
<td>0.26</td>
</tr>
<tr>
<td>Cervical cancer mortality</td>
<td>0.20</td>
<td>0.11</td>
</tr>
<tr>
<td>Child injury mortality</td>
<td>-4.62</td>
<td>1.04</td>
</tr>
<tr>
<td>Motor vehicle accident mortality</td>
<td>-0.70</td>
<td>0.24</td>
</tr>
</tbody>
</table>

Colour codings: see Table 2. Table presents regression coefficients, obtained in panel regression of health policy indicators (1990–2010) on level of democracy (1990–2010), controlling for country (dummies), year (linear function) and log gross domestic product (1990–2010). Driscoll–Kraay standard errors allowing for cross-sectional correlations.
The main methodological challenge in studies of the relation between political variables and health policies and their outcomes is establishing causality. Randomization to a particular political condition is, of course, impossible, and one therefore has to rely on observational study designs. Any such study may suffer from ‘endogeneity problems’: levels of democracy, political representation, distribution of power and quality of government are expressions of collective human will and may therefore be accompanied by many other phenomena that affect health policy and its outcomes. Our country-fixed effects models are designed to remove unobserved confounding by time-invariant confounders like ethnic fractionalization, reliance on natural resources, history of democracy, etc. They do, however, not control for time-variant confounders not captured by our control variable national income.

Causal inference is also hampered by the possibility of reverse causality: good health outcomes may promote good governance, instead of the other way around. For example, it has been argued that setbacks in life expectancy in the former Soviet Union may have contributed to the popular dissatisfaction that provided a fertile ground for autocratic setbacks in countries like Russia and Belarus [52]. It is, however, unlikely that such reverse causality has occurred with the more specific health policy outcomes that we have used in this study.
4.3. Interpretation

Of the four groups of political variables studied in this paper, quality of democracy is the one that has most extensively been studied previously. These studies have generally concluded that higher levels of democracy are associated with higher life expectancy and/or lower mortality [1,2,4,17]. In the only detailed study focusing on the post-1990 European situation so far, we found that the process of democratization was associated with higher mortality from several causes of death and even a temporary decline in life expectancy, probably as a result of the disruptions during periods of rapid political change. However, “cumulative” democracy, i.e., the number of years a country has been governed democratically, was associated with generally lower mortality and higher life expectancy [16]. We tentatively concluded that this effect of “cumulative” democracy was mediated by beneficial health policies, and the current study, which used an equivalent of measures of cumulative democracy, appears to confirm this hypothesis.

The explanation of the greater effectiveness of democracy than autocracy in promoting public health is still open to debate. It has been argued that democratic governments can be expected to make decisions in accordance with voters’ interests, and thus to be more actively engaged in promoting the public good than authoritarian governments [53]. This advantage may be strengthened by greater public accountability, greater effectiveness in getting things done that require the active participation of the public, greater inclination towards redistributive policies, and greater ability to recruit competent and honest people [54].

The literature on political representation focuses primarily on the factors that influence the decline in voter turnout in advanced democracies in recent decades [55]. Voter turnout can conceptually be related to social capital, which Putnam and others have linked to the provision of public goods [56], and we hypothesized that higher voter turnout would be associated with stronger health policies. However, in contrast to some previous analyses that did not control for confounding [2], we did not find evidence supporting this hypothesis. In a previous study we found no effects of social-democratic government participation (accumulated over the most recent two decades) on indicators of health policy [9], and the current study confirms these findings. This is, at first sight, surprising given that left wing parties have, historically, promoted the welfare state while right wing ones have sought to limit it [25,57]. The absence of such an effect in Western Europe was interpreted as resulting from the adoption by social-democratic parties of neoliberal ideologies [32] or the slow recognition by these parties of the social problems of today (such as those given prominence by feminist and ecological advocates) [58]. For Eastern Europe the lack of associations with social-democratic participation in government may also be due to the way in which some of these parties maintained a degree of continuity with former communist parties [59], whose health policy records were very poor. Seen over a longer period, party politics do make a difference for social policy, as seen in measures of income inequality and poverty [60,61], but even then effects on health policy are weak [9]. The only variable in the category of political representation that has some statistically significant associations with health policy is the proportion of women in parliament – interestingly, a higher proportion of women in parliament is also associated with higher credit rating and greater trust in politicians (Table 2).

Distribution of power, for example as indicated by Lijphart’s scale of “consensus democracy”, was not associated with health policy and its outcomes in our analysis. This may seem surprising because, as noted above, “consensus democracy” has been reported to have a superior record in many policy areas, including economics, social welfare, environment, criminal justice, and foreign aid [26], suggesting that the inclusiveness, bargaining and compromise that are characteristic of consensus democracy, and/or the greater degree of continuity between successive governments, promote effective policy-making. However, it has also been argued that one-party majority governments are more decisive and therefore more effective policy-makers [62], and that federal countries, in which power is dispersed, have lower welfare spending because there are more opportunities for opponents of collective financing to intervene [63].

It was also surprising that, after adjustment for the quality of democracy, government effectiveness lacked explanatory power, except in relation to motor vehicle injuries which, to a greater extent than many of the other policies considered, reflect the ability of governments to enforce laws. One possible explanation for this lack of an association is that it is a consequence of the restricted range of countries included, and that this category of variables may become more important in a study that includes countries at different levels of development.

As noted in Section 1, studies that explicitly apply political science theory to health policy analysis are scarce [10,11]. Because of the lack of theorizing in this field our study was largely exploratory in nature, and the hypotheses that we specified and tested were mostly derived from previous empirical findings, not from any more general theory. Still, two of our findings may contribute to further theory development. First, the fact that a higher quality of democratic structures and processes does appear to promote more effective health policies, while the other three categories of political conditions do not, suggests that the main influence of political conditions on health policy, at least in this European setting, is at the agenda setting stage of the “stages heuristic” framework [12]. The extent to which citizens can give voice to their concerns and hold their government to account is likely to be an important determinant of whether population health issues are prioritized in the political arena. Several different theories have been developed to explain the policy process in the agenda setting stage, such as the “multiple streams theory” that explains the emergence of policy initiatives as a coalescence of three independent streams of “problems, policies and politics” [64] and the “punctuated equilibrium theory” which postulates that the policy-making process is characterized by periods of stability disrupted by bursts of rapid transformation [65]. In both, a more democratic system should allow the voices of those identifying problems
and proposing solutions to be heard. However, this might also make it easier for contrary voices to have influence, so further work seeking to explain the health policy achievements of more strictly democratic countries may benefit from guidance by these theories.

Second, the fact that neither political representation nor distribution of power appear to be important determinants of health policy, at least in a European context, suggests that, while there are some similarities, health politics is different from the politics of other areas of public policy. This has been noted before, for example drawing on the observation that countries differ less in health care spending than in spending on other areas of public policy [66]. One possible explanation is that moral claims about health are more universally accepted than moral claims about the environment, income, and other objects of public policy. Another is that health policy is strongly science and technology driven, organized in a sector partly independent of the state apparatus, and therefore less sensitive to conventional political determinants than other areas of public policy [66]. Nevertheless, countries do differ in their health policies, so it may be necessary to adapt existing political science theories to explain these differences. Eclectic approaches, borrowing elements from different theories, seem particularly promising in this regard [57].

5. Conclusions

In this period in Europe, the predominant political influence on health policy has been the rise of levels of democracy in countries in the Central & Eastern part of the region. In contrast to other areas of public policy, health policy does not appear to be strongly influenced by institutional features of democracy determining the distribution of power or aspects of political representation. The effect of quality of government on health policy warrants more study.

Appendix A. Supplementary data

Supplementary data associated with this article can be found, in the online version, at http://dx.doi.org/10.1016/j.healthpol.2015.08.017.

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