Politics and health outcomes

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The aim of this study was to examine the complex interactions between political traditions, policies, and public health outcomes, and to find out whether different political traditions have been associated with systematic patterns in population health over time. We analysed a number of political, economic, social, and health variables over a 50-year period, in a set of wealthy countries belonging to the Organisation for Economic Co-operation and Development (OECD). Our findings support the hypothesis that the political ideologies of governing parties affect some indicators of population health. Our analysis makes an empirical link between politics and policy, by showing that political parties with egalitarian ideologies tend to implement redistributive policies. An important finding of our research is that policies aimed at reducing social inequalities, such as welfare state and labour market policies, do seem to have a salutary effect on the selected health indicators, infant mortality and life expectancy at birth.

Published **Online** September 14, 2006 DOI:10.1016/S0140-6736(06)69341-0

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Very few scientific studies have analysed the consequences of the political agenda of governing parties for the health of populations (although there are some exceptions[1–3]). This scarcity of research is surprising since, in democratic countries, politics supposedly determine public policy, including health policy. Indeed, if elected political representatives were not able to influence public policy, there would be a severe crisis of democracy.

Our objective is to report an analysis of the relation between political ideologies and health policy. We investigated the mechanisms by which politics determines public policy, and therefore affects health outcomes for the population. The research focuses on selected countries within the Organisation for Economic Co-operation and Development (OECD), members of which are developed countries that accept the principles of representative democracy and a free market economy.

Our analysis grouped the North American and European member-countries of the OECD into four major political traditions that governed in these countries from 1950 (immediately after World War II) to 2000. The four traditions were delineated as follows: social democratic, Christian democratic (or conservative, in the Judeo-Christian tradition), liberal, and authoritarian conservative (dictatorships). The methodology for grouping countries by political tradition was adopted from Huber and Stephens' criteria in *Development and Crisis of the Welfare State: Parties and Policies in Global Markets*,[4] modified by the addition of a separate category, to include the countries of southern Europe formerly governed by authoritarian or totalitarian conservative regimes (see reference 2, appendix 1, for a description of the methodology).

According to Huber and Stephens' methodology, political parties were assigned to each of the four political traditions on the basis of their own identification and their implementation of redistributive policies. Allocation of countries to political traditions was based on the number of years, calculated monthly, during which they were governed by parties belonging to a given political tradition (panel). Parties within each political grouping were not uniform, of course; nor were political parties or their public policies constant over time. But parties in each political tradition display a similar level of commitment to redistribution. The four political traditions range from the most pro-redistributive (social democratic parties) to the least pro-redistributive (authoritarian or totalitarian conservative governments). The level of income distribution in each country is represented by the Gini coefficient and the Theil index (see panel for definitions of these measures).

Our aim was to find out whether the social and health policies associated with each political tradition were associated with systematic patterns in population health. Therefore, we assessed public-health outcomes in light of empirical research in political sociology that defines different patterns of social and health policies.[13–16]

Political traditions and redistributive policies

Within the group of OECD countries examined in this study, those mainly governed by social democratic parties for the majority of the period under study (1950–2000) are Sweden (for 45 years), Norway (39 years), Denmark (35 years), Finland (32 years), and Austria (31 years).[13–16] (See webpanel for a list of parties.) The social democratic parties in these countries have historically been committed to redistributive policies (the average Gini coefficient in this group over the last 10 years of the study period was 0·225).[13–17] They have also provided universal health care coverage, and social benefits to all citizens (the average public social expenditure in this group was 30% of gross domestic product (GDP), and the average public health care expenditure over the last 10 years of the study period was 7·2% of GDP).[10,13–16] The public social policies of these parties have included policies designed to encourage a high proportion of adult men and women to gain employment, generous non-means-tested social transfers and social services, including family-oriented services (such as child care and home care) aimed at facilitating the integration of women into the labour force.[13–16] (On average in this group, excluding Austria, 82% of women are in the labour force; for Austria it is 48%.) Thus, compared with the other four political traditions, the social democratic parties have tended to introduce policies that support women's health and wellbeing, such as unemployment compensation for

See **Online** for webpanel

Panel: **Variables, data sources, and definitions**

Political variables

We examined (a) voter participation (percentage of the electorate that voted) and voter partisanship (percentage of the vote that went to parties of each of the four different political traditions; and (b) time in government by political parties belonging to each tradition. The variable of time in government by each party was constructed with Huber and Stephens' criteria,[5] and was scored 1 for each year when each party governed alone; for coalition governments, it was scored as that party's seats in parliament as a fraction of all governing parties' seats.

Data

Data for parties in coalition and time in government were extracted from Müller and Strom;[6] data for time in government of parties governing alone (not in coalition) from Alcantara Saez;[7] and the data for composition of parliaments and the number of seats held by each party are from Caramani[8] and Huber, Ragin, and Stephens.[5] These same sources were used to define the political affiliation of each political party (see webpanel).

Labour market data were obtained from ILO-LABORSTA.[9] They included the percentage of the population in the labour force (working or unemployed); participation of women in the labour force; men's unemployment rate; and women's unemployment rate.

Data on welfare state policies, such as total public health expenditures, as a percentage of gross domestic product (GDP), and the percentage of public health coverage were obtained from the OECD.[10]

The health outcomes analysed as the dependent variables in this research were infant mortality and life expectancy at birth. Data were obtained from the World Health Organization, although for some variables comparable data did not exist for the entire period from 1950 to 1998. The period analysed in this study was therefore restricted to the years between 1969 and 1996, for which complete data were available.

Data analysis involved calculating bivariate Pearson correlation coefficients between independent and dependent variables using data for six cross-sectional years (1972, 1977, 1982, 1987, 1992, 1996).

Definitions

Measures of social inequality were based on the Theil index, developed as part of the University of Texas Inequality Project (UTIP).[11] The Theil index measures the discrepancies between the distribution of income and the distribution of population. It compares the income and population distribution structures by summing, across groups, the weighted logarithm of the ratio between each group's income and population share. When all groups have a share of income equal to their population share, the Theil index is 0; it is 1 for a group with a contribution of 0. The index takes on values greater than or equal to zero and increases as income inequality increases.[12]

Income distribution is represented using the Gini coefficient, which measures the extent to which income distribution in a country differs from a hypothetical uniform distribution. It ranges from 0, representing absolute income equality between individuals or households, to 1, indicating that one person or household receives all of the country's income. OECD countries, in general, have relatively egalitarian distributions of income, with Gini coefficients around 0·3.

single mothers, active labour market spending, women's labour force participation, low crime, participation of women in government, child care, early child education, paid maternity leave, and home care services.[18]

Within the scope of this investigation, the countries that have been mainly governed by Christian democratic parties, or conservative parties in the Judeo-Christian tradition, for most of the period from 1950 to 2000 are Italy (for 41 years), Netherlands (41 years), West Germany (37 years), Belgium (35 years), and France (29 years).[13–16] These parties have been less committed to redistributive policies than the social democrats, and the average Gini coefficient within this group was 0·306. However, they do provide generous social transfers to older citizens, funded mainly by payroll taxes through social security systems (the average public social expenditure was 28% of GDP, and the average public health care expenditure was 6·4% of GDP).[13–16] These parties provide universal health care services (mostly publicly funded), although they do not emphasise family-oriented services such as child care and home care; on average, only 62% of women in these countries was in the labour force.[13–16]

Countries mainly governed between 1950 and 2000 by liberal parties, or conservative parties of a liberal persuasion, are the UK (for 36 years), Ireland (for 35 years), Canada (for 31 years), and the USA (for 28 years).[13–16] The liberal parties have not traditionally had a strong commitment to redistributive policies (the group average Gini coefficient was 0·320; and the Gini coefficient for the USA was 0·372).[13–16] Neither do they provide universal social services (except universal health care, which is provided in all but the USA).[13–16] Most social services benefits in these countries are means tested, and public social expenditures are much lower than in the countries governed by social democratic and Christian democratic parties; the average public social expenditure was 24% of GDP, and the average public health care expenditure was 5·8% of GDP.[13–16]

The last group of countries was governed for most of 1950–2000 by conservative dictatorships (Spain's dictatorship lasted for 25 years during the period of this study and Portugal's for 24 years) or very authoritarian conservative regimes (Greece's regime lasted for 9 years during the period under study). Until the late 1970s, when democracy was established in these countries, they had underdeveloped welfare states with very low public transfers and poor public services, and had the most unequal income distribution of the countries under investigation (the average Gini coefficient for the group was 0·423).[13–16] Public social expenditures were very low

 Published online September 14, 2006 DOI:10.1016/S0140-6736(06)69341-0

(the average social expenditure at the end of each dictatorship, some time in the 1970s, was only 14% of GDP, and the average public health care expenditure was only 4·8% of GDP).[13–16] Since the establishment of democracy, however, the welfare states of these countries have developed considerably, especially during the periods when they were governed by social democratic parties. Current levels of public social expenditure in these countries are now close to those in countries of the liberal tradition (in 2000, the average public social expenditure was 20% of GDP, and the average public health care expenditure was 5·8% of GDP).[13–16]

Effects of political traditions on health outcomes

Once the countries were thus grouped by political tradition, we analysed the relation between cumulative years of government by each political tradition and changes in two key health outcomes—infant mortality and life expectancy at birth. This analysis was done for the years for which health indicators were available for all countries. It was also restricted to long periods of homogeneous government, since short periods of government might not have a measurable effect on populations' health outcomes. However, a major political change might have a sudden effect on population health—eg, in Germany, where health outcomes in the former East Germany changed almost immediately after reunification.[19] Nevertheless, the strongest relation between politics, policies, and health outcomes appears when considering long, cumulative years of government by political parties. In some cases parties have governed in alliance with other political forces, which have modified some of their policies—eg, in Austria, where the predominant social democratic tradition has been modified by a long-term alliance with the Christian democratic party, whose public policies have not encouraged women's participation in the labour force. Therefore, by contrast with the other countries governed by social democratic parties, Austria has a low percentage of women in the labour force.

Our findings show that redistributive policies are positively associated with health outcomes. Table 1 presents the correlation between infant mortality rate and a range of independent variables, such as political, labour market, welfare state, and economic inequality indicators, in the years for which relevant data were available. The analysis reveals a clear, robust, and significant negative correlation between, on the one hand, cumulative years of government by pro-redistributive parties and resulting level of income redistribution (measured by the Theil index) and, on the other, infant mortality. This correlation holds for all years except 1987. Thus, we have shown that long periods of government by pro-redistributive parties are associated with low infant mortality. Table 1 also shows a positive correlation between redistributive policies and infant mortality for the entire period from 1972 to 1996—ie, the implementation of policies designed to reduce social inequality was associated with low rates of infant mortality.

	Years					
	1972	1977	1982	1987	1992	1996
Power relations						
Pro–redistributive parties' cumulative years of government	−0·472*	−0·546*	−0·464*	−0·352	−0·507†	−0·747†
Votes for pro–redistributive parties	−0·525†	−0·650†	0·460*	0·225	−0·098	0·058
Voter turnout	−0·541†	−0·579†	0·076	−0·046	−0·085	−0·285
Labour market						
Active population %	−0·497*	−0·329	−0·458*	−0·292	−0·408	−0·235
Women in labour force %	−0·269	−0·312	−0·381	−0·207	−0·301	−0·454*
Unemployment rate, male	0·215	−0·064	0·097	−0·106	0·036	−0·216
Unemployment rate, female	0·813†	0·207	0·503†	0·273	0·352	0·079
Welfare state						
Public health expenditure	−0·237	−0·579†	−0·604†	−0·761†	−0·734†	−0·676†
Health care coverage	−0·541†	−0·506†	−0·061	−0·065	−0·251	−0·366
Economic inequality						
Theil index	0·739†	0·748†	0·693†	0·741†	0·790†	0·772†
GDP per head	−0·531†	−0·615†	−0·527†	−0·490†	−0·307	−0·229

*Significant at 90%. †Significant at 95%.

Table 1: **Correlation between dependent variable (infant mortality rate) and independent variables in various years**

Our analysis also showed that in the years for which there are relevant data there has been a negative correlation between income inequality and life expectancy, for both women and men (table 2). However, this correlation is weaker than that noted for infant mortality, and the results are not always statistically significant. On the basis of this statistical analysis, redistributive policies seem to be important in reducing infant mortality and, to a lesser degree, in increasing life expectancy.

Political influence over health outcomes

What are the mechanisms by which ruling political parties determine public policy, including health policy, and in turn influence health outcomes? We devised a heuristic framework (figure) involving pathways from politics, to public policy, income distribution, and the selected health indicators. According to this model, specific welfare state and labour market policies characterise each political tradition, and these are the main mechanisms by which politics acts on health outcomes. Other resources that support a governing party's policies might also affect health outcomes, such as the strength of trade unions in the case of pro-redistributive policies. We use the concept developed by Walter Korpi of the Karolinska Institute, Sweden, who defines power resources as resources used by different social agents to express their interests either through political parties or through social organisations such as trade unions[20,21] These power resources act upon the labour market and the welfare state. They affect the

	Years					
	1972	1977	1982	1987	1992	1996
Female						
Power relations						
Pro-redistributive parties' cumulative years of government	0·440*	0·355	0·103	–0·016	–0·041	0·169
Votes for pro-redistributive parties	0·408	0·569†	0·025	0·388	0·590†	0·267
Voter turnout	0·256	0·351	–0·181	0·051	0·007	0·268
Labour market						
Active population %	0·320	0·158	0·180	–0·019	–0·114	–0·332
Women in labour force %	0·058	0·147	0·175	0·044	0·036	–0·052
Unemployment rate, male	–0·305	0·220	–0·152	0·005	–0·042	0·085
Unemployment rate, female	–0·638†	0·039	–0·170	0·111	0·182	0·250
Welfare state						
Public health expenditure	0·295	0·375	0·164	0·396	0·438*	0·412
Health care coverage	0·352	0·254	–0·110	–0·079	0·063	0·228
Economic inequality						
Theil index	–0·545†	–0·462*	–0·355	–0·434*	–0·274	–0·318
GDP per capita	0·456*	0·603†	0·415*	0·404	0·304	0·081
Male						
Power relations						
Pro-redistributive parties' cumulative years of government	0·444*	0·374	0·111	0·045	0·199	0·361
Votes for pro-redistributive parties	–0·012	0·241	–0·215	0·304	0·467*	0·324
Voter turnout	–0·023	0·322	–0·116	0·220	0·315	0·530†
Labour market						
Active population %	0·247	–0·125	–0·050	–0·182	–0·032	–0·078
Women in labour force %	–0·265	–0·274	–0·195	–0·258	–0·055	–0·041
Unemployment rate, male	–0·448	0·184	–0·052	0·139	–0·001	–0·057
Unemployment rate, female	–0·656†	–0·064	–0·194	0·165	0·061	–0·017
Welfare state						
Public health expenditure	0·228	0·577†	0·386	0·557†	0·543†	0·494*
Health care coverage	0·188	0·223	–0·100	0·028	0·123	0·182
Economic inequality						
Theil index	–0·332	–0·315	–0·168	–0·258	–0·415*	–0·489*
GDP per capita	0·084	0·195	0·069	0·100	0·162	0·192

*Significant at 90%. †Significant at 95%.

Table 2: **Correlation between dependent variable (life expectancy at birth for women and men) and independent variables, in various years**

labour market through participation of men and women in the labour force, men's and women's employment and unemployment, and level of salaries and fringe benefits. Power resources also act on the welfare state through social transfers, such as pensions and social and health care services, measured by public social transfers, public health care expenditure, public health benefits coverage, public social expenditure, and percentage of the population that is educated.

Our bivariate analysis documented that cumulative years of pro-redistributive governance were statistically correlated with policies promoting full employment, highly regulated labour markets, and public health expenditure, as well as universal health and social benefits coverage that are, for the most part, non-means-tested. This correlation is particularly evident in the wealthy OECD countries that have had sustained periods of government by social democratic parties. Christian democratic parties, by contrast, have promoted some redistributive policies but have not encouraged women's participation in the labour force and have means-tested many of their social transfer programmes. Countries governed by parties in the liberal tradition have stimulated active participation in the labour force in deregulated and polarised labour markets. These governments have not promoted social transfers, although all (with the exception of the USA) provide universal health services. Countries that have had an extended period under dictatorships tend to have very low percentages of the adult population in the labour force and underdeveloped welfare states. According to our heuristic framework (figure), these government policies have affected a range of labour market and welfare state characteristics, with consequences for income distribution and health outcomes.

Do politics matter in health policy?

Our findings supplement studies in health economics on the effects of redistributive policies on health,[22,23] by adding a political component. Our analysis suggests that political parties with egalitarian ideologies tend to implement redistributive policies. But the connection between ideology, social class constituency, and

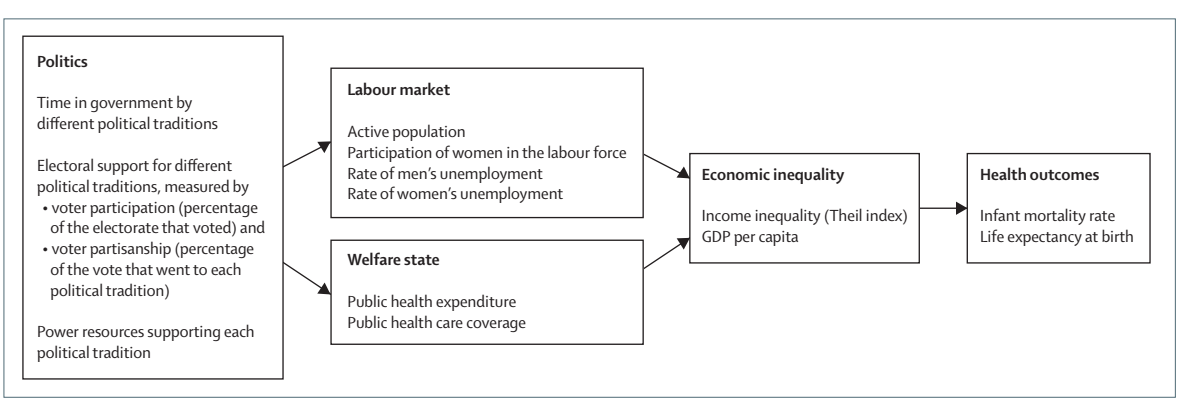

Figure: **Relations between politics, labour market and welfare state policies, economic inequality, and health indicators**

www.thelancet.com Published online September 14, 2006 DOI:10.1016/S0140-6736(06)69341-0

implementation of particular policies is complex, as can be seen from the fact that, during the past 30 years, many countries governed by social democratic parties have implemented neoliberal policies. Our analysis thus contributes to work on public health by making an empirical link between politics and policy, and emphasises a need to establish the interactions between politics, policy, and health outcomes. An important finding is that the implementation of policies aimed at reducing social inequalities seems to have a salutary effect on population health, which would explain why health indicators such as infant mortality are better in countries that have been governed by pro-redistributive political parties.

Conflict of interest statement

The authors declare that they have no conflict of interest.

Acknowledgments

We thank our collaborators M Whitehead, B Burström, G Costa, T Doran, and U Helmert.

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