



# Democratization and life expectancy in Europe, 1960–2008<sup>☆</sup>



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## ABSTRACT

Over the past five decades, two successive waves of political reform have brought democracy to, first, Spain, Portugal and Greece, and, more recently, Central and Eastern European countries. We assessed whether democratization was associated with improvements in population health, as indicated by life expectancy and cause-specific mortality rates.

Data on life expectancy at birth, age-standardized total and cause-specific mortality rates, levels of democracy and potential time-variant confounding variables were collected from harmonized international databanks. In two pooled cross-sectional time-series analyses with country-fixed effects, life expectancy and cause-specific mortality were regressed on measures of current and cumulative democracy, controlling for confounders. A first analysis covered the 1960–1990 period, a second covered the 1987–2008 period.

In the 1960–1990 period, current democracy was more strongly associated with higher life expectancy than cumulative democracy. The positive effects of current democracy on total mortality were mediated mainly by lower mortality from heart disease, pneumonia, liver cirrhosis, and suicide. In the 1987–2008 period, however, current democracy was associated with lower, and cumulative democracy with higher life expectancy, particularly among men. The positive effects of cumulative democracy on total mortality were mediated mainly by lower mortality from circulatory diseases, cancer of the breast, and external causes. Current democracy was associated with higher mortality from motor vehicle accidents in both periods, and also with higher mortality from cancer and all external causes in the second.

Our results suggest that in Europe during these two periods democratization has had mixed effects. That short-term changes in levels of democracy had positive effects in the first but not in the second period is probably due to the fact that democratization in Central and Eastern Europe was part of a complete system change which caused major societal disruptions.

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## Introduction

Over the last 50 years the governing systems of many European countries have undergone profound changes, with a clear shift from authoritarian regimes to liberal democracies (Black, English, Helmreich, Helmreich, & McAdams, 2000; Huntington, 1991; Judt, 2005). In 1960, at the peak of the Cold War, only about half of all European countries, mainly in the North and West, had liberal democracies, as defined by representative government operating through law, by regular, free and fair elections based on universal suffrage, and by respect for individual rights including freedom of

expression and association (Hague & Harrop, 2010). Many other countries still had authoritarian regimes, in which rulers had limited popular accountability, the media were controlled, and political participation was limited (Hague & Harrop, 2010). At that time, several Mediterranean countries were still under right-wing autocratic regimes, and all countries in Central and Eastern Europe were under authoritarian regimes led by communist parties.

After two successive waves of political reform, most European countries now have liberal democracies (Black et al., 2000; Huntington, 1991). In the 1970s, Spain, Portugal and Greece shed off their military dictatorships, and around 1990 the communist regimes in most Central and Eastern European countries were all replaced by more democratic forms of government, ranging from fully liberal democracies to ‘illiberal democracies’ in which elections do take place but rulers exploit their position to prevent a level playing field, for example by interfering with the rule of law and with the media (Hague & Harrop, 2010) (Table 1).

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**Table 1**

Levels of democracy, as indicated by the revised Polity2 index, in European countries, selected years in the period 1960–2008.

	1960	1970	1980	1990	2000	2008
<b>Nordic</b>						
Finland	20	20	20	20	20	20
Sweden	20	20	20	20	20	20
Norway	20	20	20	20	20	20
Iceland	20	20	20	20	20	20
Denmark	20	20	20	20	20	20
<b>Britain &amp; Ireland</b>						
United Kingdom	20	20	20	20	20	20
Ireland	20	20	20	20	20	20
<b>Continental</b>						
Netherlands	20	20	20	20	20	20
Belgium	20	20	20	20	20	18
Luxembourg	20	20	20	20	20	20
Germany (FRG)	20	20	20	20	20	20
Switzerland	20	20	20	20	20	20
Austria	20	20	20	20	20	20
<b>Mediterranean</b>						
France	15	18	18	19	19	19
Spain	3	3	19	20	20	20
Portugal	1	1	19	20	20	20
Italy	20	20	20	20	20	20
Malta			16	20	20	20
Greece	14	3	18	20	20	20
Cyprus	18	17	20	20	20	20
<b>Western Balkans</b>						
Yugoslavia	3	3	5	5		
Slovenia				5	20	20
Croatia				5	18	19
Bosnia–Herzegovina				5		
Serbia				5	17	18
Montenegro				5	17	18
TFYR Macedonia				5	16	19
Albania	1	1	1	11	15	19
<b>Centre &amp; East</b>						
Germany (GDR)	1	1	1			
Poland	3	3	4	15	19	20
Czechoslovakia	3	3	3	18		
Czech Republic					20	18
Slovakia					19	20
Hungary	3	3	3	20	20	20
Romania	3	3	2	15	18	19
Bulgaria	3	3	3	18	18	19
<b>(f) Soviet Union</b>						
USSR	3	3	3	10		
Estonia				10	19	19
Latvia				10	18	18
Lithuania				10	20	20
Belarus				10	3	3
Ukraine				10	16	17
Republic of Moldova				10	17	18
Russian Federation				10	16	14
Georgia				10	15	16
Armenia				10	15	15
Azerbaijan				10	3	3

Notes: scale from 0 (fully autocratic) to +20 (fully democratic). The original Polity2 index has been converted into an entirely positive scale. For further explanations, see [Data and methods](#) section. Germany (FRG) = Federal Republic of Germany before 1990, united Germany after 1990. Germany (GDR) = German Democratic Republic (part of united Germany in 1990 and later).

Whether democracy is more effective in promoting the public good than other forms of government is open to debate (Mulligan, Gil, & Sala-i-Martin, 2003). On the positive side, 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. 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 toward redistributive policies, and greater ability to recruit competent and honest people (Besley & Kudamatsu, 2006; Klomp & de Haan, 2009; Sen, 1999; Shandra, Nobles, London, & Williamson, 2004; Wigley & Akkoyunlu-Wigley, 2011). On the other hand, citizens in democracies may not always vote in accordance with their own interests, democratically elected politicians may have difficulty looking beyond their election horizons, and democratic governments are vulnerable to manipulation and lobbying by corporate interests that stand in the way of promoting the public good (Friedman, 1962; Hague & Harrop, 2010; Reilly & McKee, 2012).

Population health is one important area where democracy, to the extent that it does promote the public good, can be expected to make a difference. The past half century has seen an enormous growth of effective interventions to improve population health, ranging from tobacco control to road traffic safety, and from antibiotics to coronary artery bypass grafts, many of which have contributed importantly to advances in population health (Bunker, Frazier, & Mosteller, 1994; Mackenbach, 1996; Mackenbach & McKee, 2013; Ward & Warren, 2007). Implementation of these interventions has to a large extent been dependent on public policy, e.g. in the form of national health systems or universal health insurance schemes, and in the form of public health services and environmental protection programs (Mackenbach & McKee, 2013; Ward & Warren, 2007). However, the hypothesis that democratization promotes the implementation of effective health interventions, and thereby reduces mortality from conditions amenable to these interventions, has never been directly tested.

Many studies have found democratic government to be associated with higher life expectancy (Alvarez-Dardet & Franco-Giraldo, 2006; Baum & Lake, 2003; Besley & Kudamatsu, 2006; Franco, Alvarez-Dardet, & Ruiz, 2004; Iqbal, 2006; Klomp & de Haan, 2009; Li & Wen, 2005; Muntaner et al., 2011; Safaei, 2006; Wigley & Akkoyunlu-Wigley, 2011) or lower infant mortality (Gerring, Thacker, & Alfaro, 2012; Muntaner et al., 2011; Navia & Zweifel, 2003; Shandra et al., 2004; Zweifel & Navia, 2000), even after controlling for some confounding variables, but not all studies did (Houweling, Looman, & Mackenbach, 2005; Muntaner et al., 2011; Ross, 2006). Some authoritarian regimes have been very effective in improving population health: in a world-wide comparison Cuba and China stand out as autocratically governed countries with remarkably high life expectancies at birth (Navarro, 1992; Roemer, 1980), whereas the European experience shows that fascist and communist countries had very rapidly rising life expectancies in the first decades after World War II (Mackenbach, 2013; Tapia Granados, 2010). Perhaps more important than these counterexamples is the fact that most studies of the relation between democracy and population health did not apply sufficiently rigorous analytic methods (Klomp & de Haan, 2009). Also, studies looking at less aggregate health measures than life expectancy or infant mortality are lacking, and so it is as yet unclear what the intervening mechanisms are.

We will therefore exploit the abrupt changes from authoritarian to democratic rule in Europe in the 1970s (Spain, Portugal and Greece) and around 1990 (Central and Eastern Europe) to assess whether democratization is associated with improvements in population health, as indicated by higher life expectancy and lower cause-specific mortality. In a previous descriptive study we have identified this as a potentially fruitful area for studying the impact of political conditions on population health (Mackenbach, 2013). By focusing on causes of death that have become amenable to intervention we hope to find clues for the mediating role of specific

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