

Supplementary file 9. Table of study-level characteristics and results for democracy

Serial number	Authors, publication year	Years of study	Level of analysis	Setting	Assessment of economic factors	Political exposures	Population health outcomes	Result category
Studies from 2010 review								
1	Adeyi, 1997	1989-1993	Ecological	10 former Communist countries	No	Transition from Communism to capitalist democracy	Life expectancy, infant mortality, probability of dying between 15 and 65 years	Negative
2	Alvarez-Dardet, 2006	2000	Ecological	23 former Communist countries	Yes	Democratic deficit	Life expectancy, infant mortality, maternal mortality	Positive
3	Baum and Lake, 2003	1967-1997	Ecological	128 poor and non-poor countries	Yes	Democracy (Polity III)	Female life expectancy	Positive
4	Besley and Kudamatsu, 2006	1962-2002	Ecological	Up to 160 countries transitioning to democracy	Yes	Democracy (Polity IV)	Life expectancy, infant mortality	Positive

5	Franco, 2004	1998	Ecological	170 high, medium and low-income countries	Yes	Democracy (Freedom House)	Life expectancy, infant mortality, maternal mortality	Positive
6	Frey and Al-Roumi, 1999	1970-1990	Ecological	87 developed and less-developed countries	No	Democracy (political rights index and civil liberties)	Infant mortality, life expectancy	Positive
7	Gauri and Khaleghian, 2002	1989-1997	Ecological	208 low and middle-income countries	Yes	Democracy (Polity IV)	Vaccine coverage for diphtheria, tetanus, pertussis and measles	Negative
8	Ghobareh et al, 2004	2000	Ecological	179 countries in WHO	Yes	Democracy (Polity IV, Freedom House)	Health-adjusted life expectancy	Positive
9	Gizeles, 2009	1982-2000	Ecological	117 developed and developing countries	Yes	Democracy (Polity IV), state capacity	AIDS infection rate	Positive
10	Houweling et al, 2005	1999	Ecological	43 developing countries in Asia, Africa and Latin America	Yes	Democracy (political rights index)	Under five mortality rate	Inconclusive
11	Kick et al, 1990	1970-1985	Ecological	63 developing countries	Yes	Political democracy (political rights index)	Infant mortality	Positive

12	Klomp and de Haan, 2009	2000-2005	Ecological	171 countries with a population greater than 200,000	Yes	Decree of democracy, political stability	19 national health indicators	Positive
13	Lake and Baum, 2001	1970-1992	Ecological	Up to 110 developed countries	No	Democracy (Polity III)	Life expectancy, infant mortality	Positive
14	Lena and London; 1993	1983	Ecological	Up to 84 peripheral and non-core nations	Yes	Level of democracy	Infant mortality, child mortality, life expectancy	Positive
15	London and Williams; 1990	1965-1970	Ecological	Up to 110 periphery and semi-periphery nations	Yes	Level of political democracy	Infant mortality, life expectancy	Positive
16	Moon and Dixon, 1985	1970-1975	Ecological	116 nations	Yes	Level of political democracy, political stability	Physical Quality of Life Index: life expectancy, infant mortality	Positive
17	Navia and Zweifel, 2003	1990-1997	Ecological	188 democratic or dictatorial countries	Yes	Democracy (yes or no, based on presence of elections)	Fertility, child survival	Positive
18	Pillai and Gupta, 2006	2001	Ecological	129 developing countries	No	Democracy (human rights rating, political rights, and civil liberty, political terror scales)	10 global monitoring indicators of women's reproductive health	Positive
19	Ross, 2006	1970-2000	Ecological	168 countries with a population	Yes	Democracy (Polity IV), years of	Child mortality, infant mortality	Inconclusive

				greater than 200,000		democracy since 1900		
20	Rudra and Haggard, 2005	1975-1997	Ecological	57 less developed countries	Yes	Democracy (Polity IV)	Infant mortality	Positive
21	Safaei, 2006	2003	Ecological	118 autocratic, incoherent and democratic countries	Yes	Democracy (Polity IV)	Life expectancy, mortality rate, child mortality rate	Positive
22	Shandra et al, 2004	1980-1997	Ecological	59 developing countries	Yes	Level of political democracy	Infant mortality	Positive
23	Shandra et al, 2010	1990-2005	Ecological	74 low income countries	Yes	Democracy (Polity IV)	Infant mortality	Positive
24	Stroup, 2007	1980-2000	Ecological	Up to 105 countries	Yes	Political Rights Index (Freedom House)	Life expectancy, child mortality	Positive
25	Tsai, 2006	1975-1998	Ecological	119 developing countries	Yes	Democracy (majority rule and political contention)	Life expectancy, infant mortality under one year, infant mortality under five	Inconclusive
26	Wejnert, 2008	1970-2005	Ecological	58 core and peripheral countries	Yes	Democracy (Polity IV)	Maternal care, fertility rate, maternal mortality, women life expectancy	Inconclusive
27	Zweifel and Navia, 2000	1950-1990	Ecological	138 democratic or	Yes	Democracy (yes or no, defined)	Infant mortality	Positive

				dictatorial countries		by presence of elections)		
Studies from our update								
28	Batniji et al, 2014	1980-2011	Ecological	22 Arab countries	Yes	Extent of democracy	Mortality	Inconclusive
29	Burroway, 2016	1995-2008	Individual	52 developing countries	Yes	Democracy (Polity IV)	Child diarrhoea and malnutrition	Inconclusive
30	Chuang et al, 2013	1980-2009	Ecological	46 less-developed countries	Yes	Democracy (Polity IV)	Infant mortality	Positive
31	Chuang et al, 2013	1980-2009	Ecological	46 less-developed countries	Yes	Democracy (Polity IV)	Under-5 mortality	Inconclusive
32	Dietrich and Bernhard, 2015	1980s to 2012	Ecological	88 countries that were not OECD members in 1984	Yes	Democracy (Polity IV)	Infant mortality, basic nutrition	Inconclusive
33	Doherty and Kelly, 2010	Not stated	Individual	30,816 individuals from 17 European countries	Yes	Satisfaction with democracy on 0-10 scale	Self-reported happiness on 0-10 scales	Positive
34	Fumagalli et al, 2013	1990-2007	Ecological	47 developing countries	Yes	Democracy (Polity IV), political competition	BMI	Positive
35	Hauck et al, 2012	1990-2012	Ecological	54 low-income studies	Yes	Democracy (Polity IV)	Life expectancy	Positive
36	Klenk et al, 2016	1950-2010	Ecological	64 countries from WHO	Yes	Democratization	Mortality	Positive

				mortality database				
37	Krueger et al, 2015	2002-2004	Individual	313,554 individuals from 67 countries	Yes	Democracy variable resulting from factor analysis of 7 indicators	Self-rated health	Positive
38	Kudamatsu, 2012	Up to 2004	Ecological	Sub-Saharan African countries	Yes	Democratization	Infant mortality	Positive
39	Mackenbach, 2013	1900-2008	Ecological	European countries	No	Democracy (binary)	Life expectancy	Positive
40	Mackenbach et al, 2013	1960-2008	Ecological	European countries	Yes	Democratization	Life expectancy	Positive
41	Mackenbach and McKee, 2013	1990-2009	Ecological	43 European countries	Yes	Democracy (+10 to -10)	Success in implementing effective health policies	Positive
42	Maynard, 2016	1985-2005	Ecological analysis	74 developing countries	Yes	Democracy (Freedom House)	Tuberculosis mortality	Positive
43	Minagawa, 2013	1990-2009	Ecological analysis	23 Eastern European countries	Yes	Freedom (Freedom House, Heritage Foundation)	Age-specific mortality, self-rated health	Positive
44	Witvliet et al, 2013	From 2000, end date not reported	Individual	72524 adults from 20 African countries	Yes	Transparency and freedom from corruption	Self-rated health	Positive