

Comparative Welfare States Data Set, 2020
Assembled by David Brady, Evelyne Huber, and John D. Stephens

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Citation: In any work using data from this data set, please cite both the data set and, where appropriate, the original source. In most cases, the original source can simply be cited as OECD or ILO. In others, for example the union and industrial relations data from the Visser dataset, a full citation should be included. Please cite this data set as David Brady, Evelyne Huber, and John D. Stephens, Comparative Welfare States Data Set, University of North Carolina and WZB Berlin Social Science Center, 2020. Since we periodically update and correct the data, it is advisable to cite the date on which you download the data.

General Notes: All economic and financial figures are at current (i.e. market) prices unless otherwise noted. For those countries belonging to the Eurozone, all figures denoted in national currencies are expressed in euros. To convert a figure from euros to a legacy currency, use the appropriate irrevocable conversion rate (currency unit per euro): Austrian Schilling = 13.7603, Belgium Franc = 40.3399, Finnish Markka = 5.94573, French Franc = 6.55957, Deutsche Mark = 1.95583, Greek Drachma = 340.750, Irish Pound = 0.787564, Italian Lira = 1936.27, Luxembourg Franc = 40.3399, Dutch Guilder = 2.20371, Portuguese Escudo = 200.482, Spanish Peseta = 166.386. The user should be aware that the OECD and Penn World Tables are not consistent in their treatment of German data prior to 1990. Sometimes it refers to West Germany and sometimes to both East and West Germany.

id Country identification: AUL = Australia, AUS = Austria, BEL = Belgium, CAN = Canada, DEN = Denmark, FIN = Finland, FRA = France, FRG = (West) Germany, GRE = Greece, IRE = Ireland, ITA=Italy, JPN = Japan, LUX = Luxembourg, NET = Netherlands, NZL = New Zealand, NOR = Norway, POR = Portugal, SPA = Spain, SWE = Sweden, SWZ = Switzerland, UKM = United Kingdom, USA = United States.

idn Numeric country identification: 1 = Australia, 2 = Austria, 3 = Belgium, 4 = Canada, 5 = Denmark, 6 = Finland, 7 = France, 8 = (West) Germany, 9 = Greece, 10 = Ireland, 11 = Italy, 12 = Japan, 13 = Luxembourg, 14 = Netherlands, 15 = New Zealand, 16 = Norway, 17 = Portugal, 18 = Spain, 19 = Sweden, 20 = Switzerland, 21 = United Kingdom, 22 = United States.

year 1960 to 2018.

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1. WAGE, SALARY, AND INCOME DISTRIBUTION DATA

Two sets of poverty and Gini variables are provided below, one containing “pre-fisc” figures and the other containing “post-fisc” figures. The pre-fisc variables are based on income amounts prior to the payment of direct taxes and receipt of public transfers (i.e. gross or market income). The post-fisc variables are based on income amounts net of direct taxes paid and public transfers received (i.e. net or disposable income).

lisrpr_tot	Relative post-fisc poverty rate for total population, based on 50% of median-income threshold. Source: Luxembourg Income Study (LIS), <i>Key Figures</i> , http://www.lisproject.org/key-figures/key-figures.htm [accessed 24 Nov 2018]. Missing: Japan, New Zealand, and Portugal. Years: 1967-2016.
lisrpr_child	Relative post-fisc poverty rate for children (aged 17 and younger), based on 50% of median-income threshold. Source: see lisrpr_tot. Missing: Japan, New Zealand, and Portugal. Years: 1967-2016.
lisrpr_eld	Relative post-fisc poverty rate for the elderly (aged 65 and older), based on 50% of median-income threshold. Source: see lisrpr_tot. Missing: Japan, New Zealand, and Portugal. Years: 1967-2016.
lisrpr_tpf	Relative post-fisc poverty rate for children living in two-parent households, based on 50% of median-income threshold. Source: see lisrpr_tot. Missing: Japan, New Zealand, and Portugal. Years: 1967-2016.
lisrpr_smf	Relative post-fisc poverty rate for children living in single-mother households, based on 50% of median-income threshold. Source: see lisrpr_tot. Missing: Japan, New Zealand, and Portugal. Years: 1967-2016.
pct_csmf	Children living in single-mother households, as a percentage of total children. Source: see lisrpr_tot. Missing: New Zealand, and Portugal. Years: 1967-2016.
pre_tot	Relative pre-fisc poverty rate for total population, based on 50% of disposable median-income threshold. Source: Estimated from the LIS database based on household income before taxes and transfers. When pre-tax income was not available, estimates were based on pre-transfer income. Income is equivalized according to ILO guidelines, by dividing by the square root of the number of household members. Missing: Japan, New Zealand, and Portugal. Years: 1967-2016.
pre_singm	Relative pre-fisc poverty rate for children (under the age of 17) in single-mother households, based on 50% of disposable median-income threshold. Source: see pre_tot. Missing: Japan, New Zealand, and Portugal. Years: 1967-2016.

- pre_eld Relative pre-fisc poverty rate for the elderly (ages 65+), based on 50% of disposable median-income threshold. Source: see pre_tot. Missing: Japan, New Zealand, and Portugal. Years: 1969-2016.
- pre_ue Relative pre-fisc poverty rate for the unemployed, based on 50% of disposable median-income threshold. Source: see pre_tot. Missing: Japan, New Zealand, and Portugal. Years: 1967-2016.
- post_ue Relative post-fisc poverty rate for the unemployed, based on 50% of disposable median-income threshold. Source: Source: Estimated from the LIS database based on disposable household income. Income is equivalized according to ILO guidelines, by dividing by the square root of the number of household members, and top- and bottom-coded according to LIS guidelines. Missing: Japan, New Zealand, and Portugal. Years: 1967-2016.
- pregini_2559 Pre-fisc Gini index of inequality among adults aged 25-59. Source: See pre_tot. Includes only households with no elderly (60+) living in them. Missing: New Zealand, and Portugal. Years: 1969-2016.
- postgini_2559 Post-fisc Gini index of inequality among adults aged 25-59. Source: See post_ue. Includes only households with no elderly (60+) living in them. Missing: Japan, New Zealand, and Portugal. Years: 1967-2016.
- pregini_1864 Pre-fisc Gini index of inequality among adults aged 18-64. Source: See pre_tot. Includes only households with no elderly (65+) living in them. Missing: New Zealand and Portugal. Years: 1969-2016.
- postgini_1864 Post-fisc Gini index of inequality among adults aged 18-64. Source: See post_ue. Includes only households with no elderly (65+) living in them. Missing: Japan, New Zealand and Portugal. Years: 1969-2016.
- lisgini Post-fisc Gini index of inequality for the whole population. Source: See lisrpr_tot. Missing: New Zealand, Portugal. Years: 1967-2016.
- lisd9010 Percentile Ratio (90/10) of disposable household income, whole population. Source: see lisrpr_tot. Missing: New Zealand, and Portugal. Years: 1967-2016.
- lisd9050 Percentile Ratio (90/50) of disposable household income, whole population. Source: see lisrpr_tot. Missing: New Zealand, and Portugal. Years: 1967-2016.
- lisd8020 Percentile Ratio (80/20) of disposable household income, whole population. Source: see lisrpr_tot. Missing: New Zealand, and Portugal. Years: 1967-2016.
- mktmeasure LIS market income measure. Coding: 0 = pre transfer, post tax (labeled "net" by LIS); 1 = pre transfer, post some taxes, pre on other taxes (labeled "mixed" by LIS); 2 = pre tax and pre transfer (labeled "gross" by LIS). Source: Luxembourg

Income Study (LIS), data available at:
<http://www.lisdatacenter.org/frontend#/database/1/selection>. [accessed 24 February 2019]. Missing New Zealand and Portugal. Years: 1967-2016.

- postginioecd Post Taxes and Transfers Gini Coefficient, household disposable income, whole population. Source: OECD, "Income Distribution Database," at <http://www.oecd.org/social/income-distribution-database.htm> [accessed 25 January 2019]. Data up to 2011 uses OECD's income definition until 2011 and data from 2012 on uses the OECD's new income definition, with a few exceptions: Austria and Spain, only data for the new 2012 definition available; Luxembourg, new definition in not available for 2012 and 2013, so the 2011 definition is used; Netherlands, there wasn't data in 2011 based on the old definition, so the 2012 definition was used; UK, there wasn't data in 2011 based on the old 2011 definition, so 2012 definition was used instead; US, there wasn't data in 2012 for the 2012 definition, so 2011 data was used instead. Years: 1974-2016.
- preginioecd Pre Taxes and Transfers Gini Coefficient, household income, whole population. Source: see postginioecd. Years: 1975-2016.
- ginimkt_1865 Gini coefficient market income, before taxes and transfers, working age population: 18-65. Source: see postginioecd. Years: 1975-2016.
- ginidisp_1865 Gini coefficient disposable income, post taxes and transfers, working age population: 18-65. Source: see postginioecd. Years: 1974-2016.
- p9010de Percentile Ratio (90/10) of disposable household income, whole population. Source: see postginioecd. Years: 1974-2016.
- p8020de Percentile Ratio (80/20) of disposable household income, whole population. Source: see postginioecd. Years: 1974-2016.
- mgini Market (Pre-Tax-and-Transfer) GINI Coefficient. Household income, whole population. Source: Solt, Frederick. 2016. "The Standardized World Income Inequality Database." Working paper. SWIID Version 7.1, August 2018. [accessed 6 February 2019]. Years: 1960-2017.
- ngini Net (Post-Tax-and-Transfer) GINI Coefficient Household income, whole population. Source: see mgini. Years: 1960-2017.
- rred Relative Redistribution; market-income inequality minus net-income inequality, divided by market-income inequality. Household income, whole population. Source: see mgini. Years: 1975-2017.
- abred Absolute Redistribution; market-income inequality minus net-income inequality. Household income, whole population. Source: see mgini. Years: 1975-2017.

top1	The share of national income accruing to the top 1% of the income distribution (Pre-tax national income). Source: <i>World Income Database</i> https://wid.world/data/ [accessed: February 25, 2019]. Missing: Austria, Belgium, Greece, Luxembourg. Years: 1960-2015
top10	The share of national income accruing to the top 10% of the income distribution (Pre-tax national income). Source: See top1. Missing: Austria, Belgium, Greece, Luxembourg. Years: 1960-2015
mid	The share of national income accruing to the individuals between 40 th and 90 th percentile of the income distribution (Pre-tax national income). Source: Countries included: France, Germany, United Kingdom, and United States. Years: 1960-2014
bottom	The share of national income accruing to individuals in the bottom 50 percent of the income distribution (Pre-tax national income). Countries included: France, Germany, United Kingdom, and United States. Years: 1960-2014.
miwsenc	Average income of wage and salaried employees in national currency units. Source: OECD, <i>Average Annual Wages</i> (database), doi: 10.1787/data-00571-en [accessed 25 January 2019]. Years: 1990-2016.
compens	Total compensation of employees, in millions of national currency units. Source: OECD, <i>National Accounts Statistics</i> (database), doi: 10.1787/na-data-en [accessed 23 January 2019]. Years: 1960-2017.
earnprod	Average annual wages of a full-time production worker, in national currency units. Source: Scruggs, Lyle. 2013. <i>Comparative Welfare Entitlements Dataset 2</i> , Version 2017-19 (database), http://cwed2.org/ [accessed 25 January 2019]. Missing: Luxembourg. Years: 1970-2011.
wages	Wage rate index, showing the growth of average nominal wages over time relative to a base year (for Portugal: 1985 = 100, for Belgium: 1990 = 100, for all other countries: 2010 = 100). Sources: IMF, <i>International Financial Statistics</i> via IMF's eLibrary, http://data.imf.org/?sk=4C514D48-B6BA-49ED-8AB9-52B0C1A0179B&sId=1409151240976 [accessed 14 May 2019]. Years: 1960-2017.
lowpay	Incidence of low pay, defined as the percentage of workers earning less than two-thirds of the median wage. Source: OECD, <i>Labour Force Statistics</i> (database), doi: 10.1787/data-00302-en [accessed 22 Jan 2019]. Missing: Sweden and Norway. Years: 1970-2017.

Two different sets of variables for wage dispersion are included below: one set (p90p50, p50p10) is based exclusively on recent OECD data while the other (p90p50v2, p50p10v2) has been constructed using older OECD data. There is significant overlap between the two sets of

variables, but the first is likely more accurate while the second has better range. There is also an important distinction in how Germany is treated in the two sets: the first contains figures for a unified Germany while the second supplies figures for West Germany (i.e. the Federal Republic of Germany before 1991).

p90p50	Percentile Ratio (90/50) of gross earnings by worker. Source: see lowpay. Years: 1970-2017.
p50p10	Percentile Ratio (50/10) of gross earnings by worker. Source: see lowpay. Years: 1970-2017.
p90p50v2	Percentile Ratio (90/50) of gross earnings by worker. Where updated OECD data was available, it was used instead of the older OECD data. Sources: OECD, Database on Trends in Earnings Dispersion (various years); OECD, Labour Force Statistics (database), doi: 10.1787/data-00302-en [accessed 20 February 2019]. Years: 1960-2017.
p50p10v2	Percentile Ratio (50/10) of gross earnings by worker. Source: see p90p50v2. Years: 1960-2017.
p90p10	Percentile Ratio (90/10) of gross earnings by worker. Source: see lowpay. Years: 1970-2017.
sstaxes	Social security taxes collected, as a percentage of GDP. These taxes consist of compulsory social contributions paid by employers, employees, the self-employed, and the unemployed to government-established social insurance schemes. Source: OECD, <i>Revenue Statistics</i> (database), doi: 10.1787/ctpa-rev-data-en [accessed 22 January 2019]. Years: 1965-2017.
pytaxes	Payroll taxes collected, as a percentage of GDP. These taxes are paid by employers as a condition for employing workers. Unlike social security taxes, no entitlement is conferred to employees by the payment of these taxes. Payroll taxes can be assessed as a percentage of payroll or as a fixed fee per worker. Source: see sstaxes. Years: 1965-2017.
topmtax3	Top marginal tax rate. Sources: Roine, Jesper, Jonas Vlachos, and Daniel Waldenström. 2009. "The Long-Run Determinants of Inequality: What Can We Learn from Top Income Data?" <i>Journal of Public Economics</i> 93 (7-8): 974-88; OECD Tax Database [accessed 20 February 2019]. Years: 2000-2017.

2. SOCIAL SPENDING, REVENUE, AND WELFARE STATE INSTITUTIONS DATA

2.1 Social Policy

gen	Overall benefit generosity, an index where higher values indicate more generosity. This variable is equal to the sum of uegen, sickgen, and pegen and represents a slightly modified version of Gøsta Esping-Andersen's decommodification index. Source: Scruggs, Lyle. 2013. <i>Comparative Welfare Entitlements Dataset 2</i> , Version 2017-19 (database), http://cwed2.org/ [accessed 25 January 2019]. Missing: Luxembourg. Years: 1970-2011.
uegen	Unemployment benefit generosity, an index where higher values indicate more generosity. Source: see gen. Missing: Luxembourg. Years: 1971-2011.
sickgen	Sickness benefit generosity, an index where higher values indicate more generosity. Source: see gen. Missing: Luxembourg. Years: 1971-2011.
pegen	Pension benefit generosity, an index in which higher values indicate more generosity. Source: see gen. Missing: Luxembourg. Years: 1971-2010.
usucavg	Unemployment insurance replacement rate, average for single person and family with one income earner. Source: see gen. Missing: Luxembourg. Years: 1970-2011.
ssscavg	Sickness insurance replacement rate, average for single person and family with one income earner. Source: see gen. Missing: Luxembourg. Years: 1970-2011.
sstran	Public expenditure on social benefits other than social transfers in kind, as a percentage of GDP. These social benefits consist of all cash transfers, including social insurance payments and social assistance benefits, provided by government units and social security funds. Sources: OECD, <i>Historical Statistics</i> , various years; OECD, <i>National Accounts Statistics</i> (database), doi: 10.1787/na-data-en [accessed 20 May 2019]. Years: 1960-2017.
prexnc	Public current expenditure on health care, as a percentage of GDP. Source: <i>Health Data</i> (database), doi: 10.1787/health-data-en [accessed 27 January 2019]. Years: 1970-2017.
tcexnc	Total current expenditure on health care, as a percentage of GDP. Sources: see prexnc. Years: 1970-2017.
pinpat	Public current expenditure on in-patient health care, as a percentage of GDP. Sources: see prexnc. Missing: United States. Years: 1970-2017.
tinpat	Total current expenditure on in-patient health care, as a percentage of GDP. Sources: see prexnc. Years: 1970-2017.
poupat	Public current expenditure on out-patient health care, as a percentage of GDP. Sources: see prexnc. Missing: United States. Years: 1970-2017.

toupat	Total current expenditure on out-patient health care, as a percentage of GDP. Sources: see pcrexnc. Years: 1970-2017.
tmedcv	Share of population with total medical coverage, either through public programs or primary private insurance. Sources: OECD, <i>Health Data</i> (database), doi: 10.1787/health-data-en [accessed 28 January 2019]; Cohen, Robin A., Diane M. Makuc, Amy B. Bernstein, Linda T. Bilheimer, and Eve Powell-Griner. 2009. "Health Insurance Coverage Trends, 1959-2007: Estimates from the National Health Interview Survey". Missing: United States. Years: 1960-2017.
pmedcv	Share of population with total medical coverage through public programs. Sources: see tmedcv. Missing: United States. Years: 1960-2017.
inpatcv	Share of population with in-patient medical coverage through public programs. Sources: see tmedcv. Missing: United States. Years: 1960-2017.
outpatcv	Share of population with out-patient medical coverage through public programs. Sources: see tmedcv. Missing: United States. Years: 1960-2017.
daycare	Public expenditure on daycare/home-help service provision, as a percentage of GDP. Source: OECD, <i>Social Expenditure Statistics</i> (database), doi: 10.1787/data-00166-en [accessed 15 February 2019] Years: 1980-2017.
oldage_pub	Public expenditure on old-age benefits as a percentage of GDP. This variable is equal to the sum of cash and in-kind old-age benefits. The main cash benefits include standard and early retirement pensions, and the main in-kind benefits include residential care and home-help services. Source: see daycare [accessed 28 January 2019]. Years: 1980-2017.
survivor_pub	Public expenditure on survivor benefits as a percentage of GDP. This variable is equal to the sum of cash and in-kind survivor benefits. The main cash benefit consists of survivor pensions, and the main in-kind benefit consists of funeral services. Source: see daycare. Years: 1980-2017.
incap_pub	Public expenditure on incapacity-related benefits as a percentage of GDP. This variable is equal to the sum of cash and in-kind incapacity benefits. The main cash benefits include disability pensions, occupational injury insurance, and sick pay, and the main in-kind benefits include residential care, home-help services, rehabilitation services. Source: see daycare. Years: 1980-2017.
health_pub	Total public expenditure on health care, as a percentage of GDP. There is no differentiation between cash and in-kind benefits for health care, and there are not distinct sub-categories. Source: see daycare. Years: 1980-2017.

- family_pub Public expenditure on family benefits, as a percentage of GDP. This variable is equal to the sum of cash and in-kind family benefits. Source: see daycare. Years: 1980-2017.
- almp_pub Public expenditure on active labor market policies, as a percentage of GDP. This variable is equal to the sum of cash and in-kind active labor market policy benefits. Source: see daycare. Years: 1980-2017.
- unemp_pub Public spending on unemployment benefits, as a percentage of GDP. This variable is equal to the sum of cash and in-kind unemployment benefits. Source: see daycare. Years: 1980-2017.
- housing_pub Public expenditure on housing benefits, as a percentage of GDP. This variable is equal to the sum of cash and in-kind housing benefits. Source: see daycare. Years: 1980-2017.
- other_pub Public expenditure on other social benefits, as a percentage of GDP. Source: see daycare. Years: 1980-2017.
- socx_pub Total public social expenditure, as a percentage of GDP. Source: see daycare. Years: 1980-2017.
- oldage_pmp Public and mandatory private expenditure on old-age benefits, as a percentage of GDP. See oldage_pub for more details. Source: see daycare. Years: 1980-2017.
- survivor_pmp Public and mandatory private expenditure on survivor benefits, as percentage of GDP. See survivor_pub for more details. Source: see daycare. Years: 1980-2017.
- incap_pmp Public and mandatory private expenditure on incapacity-related benefits, as a percentage of GDP. See incap_pub for more details. Source: see daycare. Years: 1980-2017.
- health_pmp Public and mandatory private expenditure on health, as a percentage of GDP. See health_pub for more details. Source: see daycare. Years: 1980-2017.
- family_pmp Public and mandatory private expenditure which supports families, as a percentage of GDP. See family_pub for more details. Source: see daycare. Years: 1980-2017.
- almp_pmp Public and mandatory private expenditure on active labor market programs, as a percentage of GDP. See almp_pub for more details. Source: see daycare. Years: 1980-2017.
- unemp_pmp Public and mandatory private spending on unemployment benefits, as a percentage of GDP. See unemp_pub for more details. Source: see daycare. Years: 1980-2017.

housing_pmp	Public and mandatory private expenditure on housing, as a percentage of GDP. See housing_pub for more details. Source: see daycare. Years: 1980-2017.
other_pmp	Public and mandatory private expenditure on other social policy areas, as a percentage of GDP. Source: see daycare. Years: 1980-2017.
socx_pmp	Public and mandatory private social expenditures, as a percentage of GDP. Source: see daycare. Years: 1980-2017.
almppes	Public expenditure on public employment services and administration, as a percentage of GDP. This variable captures services related to job coaching, reference, and placement and the administration of ALMP programs and unemployment benefits. Source: OECD, “Public expenditure and participant stocks on LMP: Public expenditure of LMP by main categories (% GDP)” at https://stats.oecd.org/Index.aspx?DataSetCode=LMPEXP# [accessed 20 Jan 2019]. Years: 1985-2016.
almptain	Public expenditure on job training, as a percentage of GDP. This variable covers four categories of training: institutional, workplace, integrated, and special support for apprenticeships for the unemployed and targeted retraining for the employed. Source: see almppes. Years: 1985-2016.
almplib	Public expenditure on job rotation and job sharing, as a percentage of GDP. Source: see almppes. Years: 1985-2016.
almptincen	Public expenditure on employment incentives, as a percentage of GDP. This variable records recruitment subsidies for employers that hire unemployed persons. Source: see almppes. Years: 1985-2016.
almptrehab	Public expenditure on vocational rehabilitation and work programs, as a percentage of GDP. Source: see almppes. Years: 1985-2016.
almptdir	Public expenditure on direct job creation, as a percentage of GDP. Source: see almppes. Years: 1985-2016.
almptstart	Public expenditure on start-up incentives, as a percentage of GDP. This variable measures start-up funds provided to new businesses started by unemployed persons. Source: see almppes. Years: 1985-2016.
unemsup	Public expenditure on out-of-work income maintenance and support, as a percentage of GDP. This variable includes unemployment insurance and unemployment assistance benefits (social assistance that is explicitly targeted on the unemployed). Source: see almppes. Years: 1985-2016.

earlyretire Public expenditure on early retirement benefits, as a percentage of GDP. Source: see almpes. Years: 1985-2016.

2.2 Education

edspendtw Total public education spending as a percent of GDP. S. T. A. Wilkens, *Sorting Out the Relationship Between Education and the Welfare State*, MA thesis, Department of Sociology, University of North Carolina at Chapel Hill, 2005, Wilkens' source is World Bank, *World Development Indicators*, 2004. Data from the *World Development Indicators*, 2019 used to expand the original series through 2016, fill missing observations, and include data for Greece, Luxembourg, Portugal and Spain. (Original series unchanged). Years: 1970-2016.

edspendmb Total public education spending as a percent of GDP. Assembled by Marius Busemeyer from various OECD sources. See page 605 of the following citation for details. Marius Busemeyer, 'Determinants of public education spending in 21 OECD democracies, 1980-2001', *Journal of European Public Policy*, 14:4, 582 – 610. Additional data from the OECD's *Education at a Glance*, Busemeyer (2007)'s source for recent data, used to expand the original series through 2015 and fill missing observations. (Original series unchanged) Years: 1970-2015.

edexpub Total general (local, regional and central) government expenditure on education (current, capital, and transfers), expressed as a percentage of GDP. Source: see World Bank data, World Development Indicators (WDI) (database), <https://data.worldbank.org/indicator/SE.XPD.TOTL.GD.ZS> [accessed 11 January 2019]. Years: 1970-2016.

ed0exp Public expenditure on pre-primary education (ISCED-97 level 0), as a percentage of GDP. Source: OECD, *Education Statistics* (database), doi: 10.1787/edu-data-en [accessed 29 May 2019]. Missing; Greece. Years: 1995-2015.

ed1exp Public expenditure on primary education (ISCED-97 level 1), as a percentage of GDP. Source: see ed0exp. Years: 1995-2015.

ed2exp Public expenditure on lower-secondary education (ISCED-97 level 2), as a percentage of GDP. Source: see ed0exp. Missing: Canada. Years: 1995-2015.

ed3exp Public expenditure on upper-secondary education (ISCED-97 level 3), as a percentage of GDP. Source: see ed0exp. Years: 1995-2015.

ed4exp Public expenditure on post-secondary education (ISCED-97 level 4), as a percentage of GDP. Source: see ed0exp. Missing: Belgium, Finland, Japan, Portugal, and Spain. Years: 1995-2015.

ed56exp Public expenditure on tertiary education (ISCED-97 levels 5 and 6 and ISCED-11 levels 5-8), as a percentage of GDP. Source: see ed0exp. Years: 1995-2015.

edexp	Public expenditure on education (all levels), as a percentage of GDP. Expenditures not allocated by level are also included. Source: see ed0exp. Years: 1995-2015.
ed0ex	Total expenditure on pre-primary education (ISCED-97 level 0), as a percentage of GDP. The funding sources include: all levels of government (central, regional, and local); private firms, households, and other entities; and international sources. Source: see ed0exp. Missing: Greece. Years: 1995-2015.
ed1ex	Total expenditure on primary education (ISCED-97 level 1), as a percentage of GDP. See ed1exp and ed0ex for more details. Source: see ed0exp. Years: 1995-2015.
ed2ex	Total expenditure on lower-secondary education (ISCED-97 level 2), as a percentage of GDP. See ed2exp and ed0ex for more details. Source: see ed0exp. Missing: Canada. Years: 1995-2015.
ed3ex	Total expenditure on upper-secondary education (ISCED-97 level 3), as a percentage of GDP. See ed3exp and ed0ex for more details. Source: see ed0exp. Years: 1995-2015.
ed4ex	Total expenditure on post-secondary education (ISCED-97 level 4), as a percentage of GDP. See ed4exp and ed0ex for more details. Source: see ed0exp. Missing: Belgium, Finland, Japan, Portugal, and Spain. Years: 1995-2015.
ed56ex	Total expenditure on tertiary education (ISCED-97 levels 5 and 6 and ISCED-11 levels 5-8), as a percentage of GDP. See ed0ex for more details. Source: see ed0exp. Years: 1995-2015.
edex	Total expenditure on education (all levels), as a percentage of GDP. Expenditures not allocated by level are also included. See ed0ex for more details. Source: see ed0exp. Years: 1995-2015.

Note that the educational attainment variables listed below are structured in a somewhat unintuitive manner. The variables ednosch, ed1, ed2, and ed3 sum to 100%, and each represents the percentage of a given population with educational attainment at a particular level. For the latter three of these variables, attainment is defined as *any* education at a particular level—this includes both some and complete schooling at the level. The variables ed1comp, ed2comp, and ed3comp represent the percentages of the population with complete schooling at the respective levels. Therefore, to calculate the percentage of the population with some education at a given level, the “comp” attainment variable is subtracted from the main attainment variable for the level (e.g. ed1some = ed1 – ed1comp). Finally, it is important to remember that all these variables capture the *highest* level of attainment, meaning that those counted in ed3 are not counted in ed2 and ed1.

ednosch	Percentage of the population aged 25-65 with no schooling. Source: Barro, Robert J. and Jong-Wha Lee. 2010. <i>Barro-Lee Educational Attainment Dataset 1950-2010</i> , Harvard University, http://www.barrolee.com/ [accessed 19/Jan 2019]. Years: 1960-2010 (in 5-year intervals).
ed1	Percentage of the population aged 25 and over with any primary schooling. Source: see ednosch. Years: 1960-2010 (in 5-year intervals).
ed1comp	Percentage of the population aged 25 and over who have completed primary school. Source: see ednosch. Years: 1960-2010 (in 5-year intervals).
ed2	Percentage of the population aged 25 and over with any secondary schooling. Source: see ednosch. Years: 1960-2010 (in 5-year intervals).
ed2comp	Percentage of the population aged 25 and over with complete secondary schooling. Source: see ednosch. Years: 1960-2010 (in 5-year intervals).
ed3	Percentage of the population aged 25 and over with any tertiary schooling. Source: see ednosch. Years: 1960-2010 (in 5-year intervals).
ed3comp	Percentage of the population aged 25 and over with complete tertiary schooling. Source: see ednosch. Years: 1960-2010 (in 5-year intervals).
aveyrsed	Average years of education attained in the population aged 25 and over. Source: see ednosch. Years: 1960-2010 (in 5-year intervals).
mednosch	Percentage of the male population aged 25 and over with no schooling. Source: see ednosch. Years: 1960-2010 (in 5-year intervals).
med1	Percentage of the male population aged 25 and over with any primary schooling. Source: see ednosch. Years: 1960-2010 (in 5-year intervals).
med1comp	Percentage of the male population aged 25 and over who have completed primary school. Source: see ednosch. Years: 1960-2010 (in 5-year intervals).
med2	Percentage of the male population aged 25 and over with any secondary schooling. Source: see ednosch. Years: 1960-2010 (in 5-year intervals).
med2comp	Percentage of the male population aged 25 and over with complete secondary schooling. Source: see ednosch. Years: 1960-2010 (in 5-year intervals).
med3	Percentage of the male population aged 25 and over with any tertiary schooling. Source: see ednosch. Years: 1960-2010 (in 5-year intervals).
med3comp	Percentage of the male population aged 25 and over with complete tertiary schooling. Source: see ednosch. Years: 1960-2010 (in 5-year intervals).

maveyrse	Average years of education attained in the male population aged 25 and over. Source: see ednosch. Years: 1960-2010 (in 5-year intervals).
fednosch	Percentage of the female population aged 25 and over with no schooling. Source: see ednosch. Years: 1960-2010 (in 5-year intervals).
fed1	Percentage of the female population aged 25 and over with any primary schooling. Source: see ednosch. Years: 1960-2010 (in 5-year intervals).
fed1comp	Percentage of the female population aged 25 and over who have completed primary school. Source: see ednosch. Years: 1960-2010 (in 5-year intervals).
fed2	Percentage of the female population aged 25 and over with any secondary schooling. Source: see ednosch. Years: 1960-2010 (in 5-year intervals).
fed2comp	Percentage of the female population aged 25 and over with complete secondary schooling. Source: see ednosch. Years: 1960-2010 (in 5-year intervals).
fed3	Percentage of the female population aged 25 and over with any tertiary schooling. Source: see ednosch. Years: 1960-2010 (in 5-year intervals).
fed3comp	Percentage of the female population aged 25 and over with complete tertiary schooling. Source: see ednosch. Years: 1960-2010 (in 5-year intervals).
faveyrse	Average years of education attained in the female population aged 25 and over. Source: see ednosch. Years: 1960-2010 (in 5-year intervals).
ed0enr	Total enrollment in pre-primary education (ISCED-97 level 0), in thousands. Data for 2013 through 2016 originally reported using ISCED-2011 categories, which have been matched to corresponding ISCED-97 categories. Source: see ed0exp. Years: 1985-2016.
ed1enr	Total enrollment in primary education (ISCED-97 level 1), in thousands. Source: see ed0exp. Years: 1985-2016.
ed2enr	Total enrollment in lower-secondary education (ISCED-97 level 2), in thousands. Source: see ed0exp. Years: 1985-2016.
ed3enr	Total enrollment in upper-secondary education (ISCED-97 level 3), in thousands. Some sub-categories have moved between categories 3 and 4 under ISCED-2011. Source: see ed0exp. Years: 1985-2016.
ed4enr	Total enrollment in post-secondary, non-tertiary education (ISCED-97 level 4), in thousands. Some sub-categories have moved between categories 3 and 4 under ISCED-2011. Source: see ed0exp. Years: 1998-2016.

ed56enr	Total enrollment in tertiary education (ISCED-97 levels 5 and 6), in thousands. Source: see ed0exp. Years: 1985-2016.
edenr	Total enrollment in education programs (all levels), in thousands. Aggregate values were provided in the original source before 2013 but not subsequently. For 2013 through 2016, this value is the sum of ed0enr through ed56enr. Source: see ed0exp. Years: 1985-2016.
edexp_eurostat	Total public expenditure on education as a percentage of GDP, all levels of education combined. Source: Eurostat, v3.4.8-20181116-e29b7 [accessed 22 January 2019]. Missing: Australia, Canada, New Zealand. Years: 1991-2015.
voc_perc	The percent of students enrolled in upper-secondary education who are in vocational or technical programs (VET programs). VET allows individuals to proceed directly from education to a profession without additional training or education. Source: <i>OECD: Education at a Glance</i> https://doi.org/10.1787/19991487 . Missing: United States. Years: 1996-2015.

3. LABOR FORCE AND LABOR MARKET INSTITUTIONS DATA

ud	Union density, defined as net union membership as a percentage of employed wage and salary earners. Measured as aggregate data. Sources: Visser, Jelle. <i>Database on Institutional Characteristics of Trade Unions, Wage Setting, State Intervention and Social Pacts in 55 Countries between 1960 and 2018 (ICTWSS database, v 5.0 and v 6.0)</i> , http://uva-aias.net/en/ictwss [accessed 21 April 2019]. Years: 1960-2017.
ud_s	Union density, defined as net union membership as a percentage of employed wage and salary earners, as in national household or labor force surveys. Measured using surveys. Source: see ud. Missing: Austria, Belgium, Germany, Italy, and Japan. Years: 1973-2017.
adj_cov	Bargaining or union coverage, defined as employees covered by wage bargaining agreements as a percentage of all employees with the right to bargaining. Source: see ud. Years: 1960-2017.
unioncent	Union centralization. A summary measure, combining measures of confederal (political) control over appointment of leaders of affiliates, confederal involvement in wage agreements negotiated by its affiliate unions, confederal or joint strike fund from which member unions are reimbursed, and confederal power over strikes by affiliates. Each component is coded from 0 to 2, so the index has a scale of 0 to 8, with 0 representing minimal centralization and 8 maximum centralization. Source: see ud. Missing: Luxemburg. Years: 1960-2017.

pactstruct	Social pact, presence and nature. Coding: 0 = No pact; 1 = Pact is negotiated by government, all (mainstream) union confederations and employers peak associations; 2 = Pact is negotiated without major (mainstream) union(s); 3 = Pact is negotiated without major (mainstream) employers association(s); 4 = Pact is negotiated between unions and employers, but with heavy involvement of the government in negotiations ("shadow of hierarchy", threats, side-payments); 5 = Pact is negotiated between unions and employers, but implemented through legislation (or prepared for legislation); 6 = Pact is negotiated between unions and employers and implemented without government involvement or legislation ("autonomous agreement"). Source: see ud. Years: 1960-2017.
cent	Centralization in wage bargaining. This measure combines measures of union authority and union concentration (derived from Iversen's centralization index). Ranges from 0 to 1, with 0 representing no centralization and 1 complete centralization. Source: see ud. Missing: Luxemburg. Years: 1960-2017.
wcoord	Wage setting coordination. Codings: 1 = fragmented wage bargaining, confined largely to individual firms or plants; 2 = fixed or alternating industry- and firm level bargaining, with weak enforceability of industry agreements; 3 = industry-level bargaining with no or irregular pattern setting, limited involvement of central organizations, and limited freedoms for firm-level bargaining; 4 = mixed industry and economy-wide bargaining: a) central organizations negotiate non-enforceable central agreements (guidelines) and/or b) key unions and employers associations set pattern for the entire economy; 5 = economy-wide bargaining, based on a) enforceable agreements between the central organizations of unions and employers affecting the entire economy or entire private sector, or on b) government imposition of a wage schedule, freeze, or ceiling. Source: see ud. Years: 1960-2017.
cov_priv	Employees in the private or market sector covered by collective (wage) bargaining agreements as a proportion of all wage and salary earners in employment in the private or market sector. Source: see ud. Missing: Japan and Portugal. Years: 1960-2017.
cov_pub	Employees in the public or government sector covered by collective (wage) bargaining agreements as a proportion of all wage and salary earners in employment in the public or government sector. Source: see ud. Missing: Japan and Portugal. Years: 1960-2017.
wc_rights	Rights of work councils. Ranges from 0 to 3 with 0 indicating works councils or similar (union or non-union) based institutions or employee representation confronting management do not exist or are exceptional, 1 indicating information and consultation rights (without judicial redress), 2 indicating economic and social rights, consultation advice (with possibility of judicial redress), and 3

indicating economic and social rights, including codetermination on some issues (e.g., mergers, take-overs, restructuring, etc.). Source: see ud. Years: 1960-2017.

- wc Status of works council ranging from 0 to 2 with 0 indicating works council or similar (union or non-union) based institutions of employee representation confronting management do not exist or are exceptional, 1 indicating works councils (etc.) are voluntary, i.e. even where they are mandated by law, there are no legal sanctions for non-observance, and 2 indicating the existence and rights of works council or structure for (union and non-union-based) employee representation within firms or establishments confronting management are mandated by law or established through basic general agreement between unions and employers. Source: see ud. Years: 1960-2017.
- wc_struct Structure of works council representation ranging from 0 to 4 with 0 indicating works council or similar (union or non-union) based institutions of employee representation confronting management do not exist or are exceptional, 1 indicating single-channel works councils, union-based representation, established by local agreement, no legal provisions for representation if no union is present or recognized, 2 indicating split-channel works councils, employee elected works councils are mandatory where there is no or insufficient union representation, as a structure supplementary to the union, based on law or national agreement, 3 indicating dual-channel works councils, union dominated representation, elected by union and non-union members, based on law or national agreement, and 4 indicating single-channel works councils, union-based representation, elected by union members or established by union, based on law or national agreement. Source: see ud. Years: 1960-2017.
- wc_negot Involvement of works councils (or similar structures) in wage negotiations ranging from 0 to 4 with 0 indicating does not apply, works councils or similar (union or non-union) based institutions of employee representation confronting management do not exist or are exceptional, 1 indicating works councils are formally (by law or agreement) barred from negotiating (plant-level) agreements and involvement of works councils in negotiating (plant-level) agreements is rare, 2 indicating works councils are formally (by law or agreement) barred from negotiating (plant-level) agreements, but informally negotiate over workplace-related working conditions or 'employment pacts', including pay, 3 indicating works councils (or mandated representatives) formally negotiate (plant-level) collective agreements, if no union is present (and/or subject to ballot), and 4 indicating works councils (or mandated representatives) formally negotiate (plant-level) collective agreements, alongside or instead of trade unions. Source: see ud. Years: 1960-2017.
- nmw National minimum wage ranging from 0 to 2 with 0 indicating that there is no statutory minimum wage, 1 indicating that there is only a statutory minimum wage in some sectors (occupations, regions/states), and 2 indicating that a

statutory national (cross-sectoral or inter-occupational) minimum wage exists. Source: see ud. Years: 1960-2017.

- mws Minimum wage setting reflecting the (increasing) degree of government intervention and discretion in setting the minimum wage, or – reversely – the degree to which the government is bound in its decisions by unions and employers, and/or a fixed or pre-determined rule. This variable ranges from 0 to 9 with 0 indicating no statutory minimum wage and no sectoral or national agreements, 1 indicating minimum wages are set by (sectoral) collective agreement or tripartite wage boards in (some) sectors, 2 indicating minimum wages are set by national (cross-sectoral or inter-occupational) agreement (“autonomous agreement”) between unions and employers, 3 indicating national minimum wage is set by agreement (as in 1 or 2) but extended and made binding by law or Ministerial decree, 4 indicating national minimum wage is set through tripartite negotiations, 5 indicating national minimum wage is set by government after (non-binding) tripartite consultations, 6 indicating that minimum wage is set by judges or expert committee, as in an award-system, 7 indicates minimum wage is set by government, bound by a fixed rule (index-based minimum wage, 8 indicating minimum wage is set by government base on a fixed rule (index-based minimum wage) or target (growth, employment, poverty), but government can (and sometimes does) take a discretionary decision, and 9 indicating that minimum wage is set by government, without a fixed rule. Source: see ud. Years: 1960-2017.
- unemr Unemployment rate, the number of unemployed persons as a percentage of the civilian labour force. Source: OECD, *Annual Labor Force Statistics* (database), <https://doi.org/10.1787/997c8750-en> [accessed 22 January 2019]. Years: 1960-2017.
- hunemr Harmonized unemployment rate, the number of unemployed persons as a percentage of the civilian labour force. To improve international comparability, a uniform definition of unemployment was used in the development of this measure. According to this definition, the unemployed are persons of working age who, in the reference period: are without work; are available for work; and have taken specific steps to find work. Note: The OECD counts full time students who are looking for work as unemployed. Source: see unemr. Years: 1960-2017.
- hunemr2 Harmonized unemployment rate, the number of unemployed persons as a percentage of the civilian labour force. Note: This variable is the product of an effort to extend the harmonized unemployment series listed above using old harmonized estimates and new unharmonized estimates from the OECD. Note: The OECD counts full time students who are looking for work as unemployed. Sources: OECD. 1999. *Quarterly Labor Force Statistics*, No. 4; OECD. 2002 and 2003. *Main Economic Indicators*, Paris: OECD; see unemr. Years: 1960-2017.
- munemr Male unemployment rate. See unemr. Years: 1960-2017.

funemr	Female unemployment rate. See unemr. Years: 1960-2017.
tlabfo	Size of civilian labor force, in thousands. Source: OECD, <i>Employment and Labour Force Statistics</i> (database), doi: https://doi.org/10.1787/lfs-data-en [accessed 22 January 2019]. Years: 1960-2017.
armed	Size of armed forces, in thousands. Sources: Correlates of War Project, <i>National Material Capabilities Data</i> (database, v 5.0), http://www.correlatesofwar.org/COW2%20Data/Capabilities/nmc4.htm [accessed 22 January 2019]. Years: 1960-2012.
tcomp	Civilian employment, in thousands. Source: see tlabfo. Years: 1960-2017.
agempn	Agricultural employment, in thousands. Source: see tlabfo. Years: 1960-2017.
inempn	Industrial employment, in thousands. Source: see tlabfo. Years: 1960-2017.
srempn	Service employment, in thousands. Source: see tlabfo. Years: 1960-2017.
wagsal	Wage and salaried employees, in thousands. Source: see tlabfo. Years: 1960-2017.
empown	Employers and persons working on own account, in thousands. Source: see tlabfo. Years: 1960-2017.
unpfmw	Unpaid family workers, in thousands. Source: see tlabfo. Years: 1960-2017.
mlabfo	Male labor force, in thousands. Source: see tlabfo. Years: 1960-2017.
mcevemp	Male civilian employment, in thousands. Source: see tlabfo. Years: 1960-2017.
flabfo	Female labor force, in thousands. Source: see tlabfo. Years: 1960-2017.
fcvemp	Female civilian employment, in thousands. Source: see tlabfo. Years: 1960-2017.
tunemp	Total unemployment, in thousands. Source: see tlabfo. Years: 1960-2017.
munemp	Male unemployment, in thousands. Source: see tlabfo. Years: 1960-2017.
funemp	Female unemployment, in thousands. Source: see tlabfo. Years: 1960-2017.
ptemp_m	Part-time employment for males, all ages, as a percentage of employment. Part-time employment is based on a common 30-usual-hour cut-off in the main job. OECD, Part-time employment rate (indicator). doi: 10.1787/f2ad596c-en. [accessed 5 February 2019]. Missing: United States. Years: 1976-2017.

ptemp_f	Part-time employment for females, all ages, as a percentage of employment. Part-time employment is based on a common 30-usual-hour cut-off in the main job. Source: see ptemp_m. Missing: United States. Years: 1976-2017.
ptemp_t	Part-time employment for total population, all ages, as a percentage of employment. Part-time employment is based on a common 30-usual-hour cut-off in the main job. Source: see ptemp_m. Missing: United States. Years: 1976-2017.
tempem_m	Temporary employment for males, all ages, as a percentage of employment. Temporary employment includes wage and salary workers whose job has a pre-determined termination date. Source: <i>OECD</i> , Temporary employment (indicator). doi: 10.1787/75589b8a-en [accessed 5 February 2019] Missing: New Zealand. Years: 1980-2017.
tempem_f	Temporary employment for females, all ages, as a percentage of employment. Source: tempem_m. Missing: New Zealand. Years: 1980-2017.
tempem_t	Temporary employment for total population, all ages, as a percentage of employment. Source: tempem_m. Missing: New Zealand. Years: 1980-2017.
ep	Employment protection, an index ranging from 0 (least protection) to 2 (most protection). This series was constructed by chaining together OECD data and using interpolation to fill in missing points. Source: Nickell, William, <i>The CEP-OECD Institutions Data Set (1960-2004)</i> , http://eprints.lse.ac.uk/19789/ . Missing: Greece and Luxembourg. Years: 1960-1995.
epl	Employment protection legislation, an index of the overall strictness ranging from 0 (least strictness) to 2 (most strictness). This variable has been constructed by using the ep series above to extrapolate the OECD data on employment protection legislation (version 1). Source: see ep. Missing: Greece and Luxembourg. Years: 1960-2003.
epl_Allard	Employment protection legislation, an index of the overall strictness ranging from 0 (least strictness) to 5 (most strictness). This variable has been constructed by using a slightly modified version of the OECD's coding methodology to extend the OECD data on employment protection legislation (version 1) back in time. Source: Allard, Gayle. 2005. "Measuring Job Security Over Time: In Search of a Historical Indicator." Instituto de Empresa Working Paper WP-05. Missing: Greece and Luxembourg. Years: 1960-2003.
oecd_epl	Employment protection legislation, an index of the overall strictness ranging from 0 (least strictness) to 6 (most strictness). This variable is the unweighted average of the sub-indicators of employment protection legislation for regular contracts (permepl in this dataset) and temporary contracts (tempepl in this dataset). All of

these data come from version 1 of the OECD's EPL data. Source: OECD Labor Market Statistics database, doi: 10.1787/lfs-lfs-data-en. Years: 1985-2014.

- permepl Employment protection legislation for permanent employment, an index of the overall strictness ranging from 0 (least strictness) to 6 (most strictness). Source: see oecd_epl. Years: 1985-2014.
- tempepl Employment protection legislation for temporary employment, an index of the overall strictness ranging from 0 (least strictness) to 6 (most strictness). Source: see oecd_epl. Years: 1985-2014.
- nld Number of industrial disputes (strikes and lockouts). Notes: Australia, excludes strikes with less than 10 workdays not worked; Belgium, excludes public sector; Canada, only includes strikes lasting at least half a day with more than 10 days lost; Denmark, up to 1995, excludes strikes with less than 100 work-days lost; France, one strike represents one establishment on strike; Ireland, only strikes lasting at least one day or with at least 10 work-days lost; Japan, excludes strikes lasting less than half a day; Norway, excludes strikes lasting less than one day; New Zealand, excludes strikes with less than 10 workdays lost (from 2000, 5 workdays), includes partial strikes and lockouts, prior to 1998, excludes public sector; Spain, excludes Basque country; Sweden, strikes in which at least 8 hours not worked; Switzerland, excludes strikes lasting less than one day; UK, excludes strikes involving fewer than 10 workers or lasting less than one day if 100 or more workdays not worked; US, 1977-present, includes only those disputes involving 1000 or more workers. Sources: ILO, LABORSTA. Years: 1960-2017.
- wi Workers involved in labor disputes, in thousands. See nld. Years: 1960-2017.
- wdl Working days lost, in thousands. See nld. Years: 1960-2017.
- govemp Government employment in services, in thousands. Source: *Health Data* (database), doi: 10.1787/health-data-en [accessed 27 January 2019]. Missing: Greece, Ireland, and Portugal. Years: 1960-1997.
- cgewap Civilian government employment as a percentage of the working-age population (ages 15-64). Source: Cusack, Thomas R. 2004. *Data on Public Employment and Wages for 21 OECD countries*, WZB (Berlin Social Research Center), <http://www.wzb.eu/en/persons/thomas-r-cusack?s=5662> [accessed 3 Jul 2011]. Missing: Luxembourg and New Zealand. Years: 1960-1999.
- cgewap2 Civilian government employment as a percentage of the working-age population (ages 15-64). Note: This variable is the product of an effort to extend Cusacks' cgewap variable using ILO data on government employment and IISS data on military personnel. Sources: Cusack, Thomas R. 2004. *Data on Public Employment and Wages for 21 OECD countries*, WZB (Berlin Social Research Center), <http://www.wzb.eu/en/persons/thomas-r-cusack?s=5662> [accessed 3 Jul

2011], ILO, *LABORSTA* (database), <http://laborsta.ilo.org/> [accessed 3 Jun 2013], International Institute for Strategic Studies, *The Military Balance* (various years). Years: 1960-2010

- empe Total employees, in thousands. Source: EU KLEMS, see Appendix A. Missing: Canada, New Zealand, Norway, and Switzerland. Years: 1970-2015.
- kis1e Employees in knowledge-intensive services, in thousands (KIS-HT approach). See Appendix A for an overview of the KIA approach. Source: see empe. Missing: Canada, New Zealand, Norway, and Switzerland. Years: 1970-2015.
- kishte Persons engaged in knowledge-intensive services classified as high tech, in thousands. Source: see empe. Missing: Canada, New Zealand, Norway, and Switzerland. Years: 1970-2007.
- kis2e Persons engaged in knowledge-intensive services, in thousands (KIA approach). See Appendix A for an overview of the KIS-HT approach. Source: see empe. Missing: Canada, New Zealand, Norway, and Switzerland. Years: 1970-2007.
- emp Total persons engaged in work, in thousands. This variable includes both employees and the self-employed. Source: EU KLEMS, see Appendix A. Missing: Australia, Canada, New Zealand, Norway, and Switzerland. Years: 1970-2017.
- kis1 Total persons engaged in knowledge-intensive services, in thousands (KIS-HT approach). See Appendix A for an overview of the KIS-HT approach. Missing: Canada, New Zealand, Norway, and Switzerland. Source: see empe. Years: 1970-2015.
- kisht Employees in knowledge-intensive services classified as high tech, in thousands. Source: see empe. Missing: Canada, New Zealand, Norway, and Switzerland. Years: 1970-2007.
- kis2 Employees in knowledge-intensive services, in thousands (KIA approach). See Appendix A for an overview of the KIA approach. Source: see empe. Missing: Canada, New Zealand, Norway, and Switzerland. Years: 1970-2007.
- awtrans_eng Total persons engaged in air and water transportation (NACE 2 ISIC Rev. 4) in thousands. See Appendix A for concordance with NACE 2 ISIC Rev. 4 categories. Source: See emp. Missing: Austria, Canada, Japan Luxemburg, New Zealand, Norway, Sweden, and Switzerland. Years: 1975-2015.
- awtrans_emp Total persons employed in air and water transportation (NACE 2 ISIC Rev. 4) in thousands. See Appendix A for concordance with NACE 2 ISIC Rev. 4 categories. Source: See emp. Missing: Austria, Canada, Japan Luxemburg, New Zealand, Norway, Sweden, and Switzerland. Years: 1975-2015.

postte_eng	Total persons engaged in post and telecommunication (NACE 2 ISIC Rev. 4) in thousands. See Appendix A for concordance with NACE 2 ISIC Rev. 4 categories. Source: See emp. Missing: Austria, Canada, Japan Luxemburg, New Zealand, Norway, Sweden, and Switzerland. Years: 1975-2015.
postte_emp	Total persons employed in post and telecommunication (NACE 2 ISIC Rev. 4) in thousands. See Appendix A for concordance with NACE 2 ISIC Rev. 4 categories. Source: See emp. Missing: Austria, Canada, Japan Luxemburg, New Zealand, Norway, Sweden, and Switzerland. Years: 1975-2015.
finins_eng	Total persons engaged in finance and insurance (NACE 2 ISIC Rev. 4) in thousands. See Appendix A for concordance with NACE 2 ISIC Rev. 4 categories. Source: See emp. Missing: Austria, Canada, Japan Luxemburg, New Zealand, Norway, Sweden, and Switzerland. Years: 1975-2015.
finins_emp	Total persons employed in finance and insurance (NACE 2 ISIC Rev. 4) in thousands. See Appendix A for concordance with NACE 2 ISIC Rev. 4 categories. Source: See emp. Missing: Austria, Canada, Japan Luxemburg, New Zealand, Norway, Sweden, and Switzerland. Years: 1975-2015.
reales_eng	Total persons engaged in real estate (NACE 2 ISIC Rev. 4) in thousands. See Appendix A for concordance with NACE 2 ISIC Rev. 4 categories. Source: See emp. Missing: Austria, Canada, Japan Luxemburg, New Zealand, Norway, Sweden, and Switzerland. Years: 1975-2015.
reales_emp	Total persons employed in real estate (NACE 2 ISIC Rev. 4) in thousands. See Appendix A for concordance with NACE 2 ISIC Rev. 4 categories. Source: See emp. Missing: Austria, Canada, Japan Luxemburg, New Zealand, Norway, Sweden, and Switzerland. Years: 1975-2015.
pstas_eng	Total persons engaged in professional scientific, technical, administrative, and support service activities (NACE 2 ISIC Rev. 4) in thousands. See Appendix A for concordance with NACE 2 ISIC Rev. 4 categories. Source: See emp. Missing: Austria, Canada, Japan Luxemburg, New Zealand, Norway, Sweden, and Switzerland. Years: 1975-2015.
pstas_emp	Total persons employed in professional scientific, technical, administrative, and support service activities (NACE 2 ISIC Rev. 4) in thousands. See Appendix A for concordance with NACE 2 ISIC Rev. 4 categories. Source: See emp. Missing: Austria, Canada, Japan Luxemburg, New Zealand, Norway, Sweden, and Switzerland. Years: 1975-2015.
paddef_eng	Total persons engaged in Public administration and defense; compulsory social security (NACE 2 ISIC Rev. 4) in thousands. See Appendix A for concordance with NACE 2 ISIC Rev. 4 categories. Source: See emp. Missing: Austria,

Canada, Japan Luxemburg, New Zealand, Norway, Sweden, and Switzerland.
Years: 1975-2015.

- paddef_emp Total persons employed in Public administration and defense; compulsory social security (NACE 2 ISIC Rev. 4) in thousands. See Appendix A for concordance with NACE 2 ISIC Rev. 4 categories. Source: See emp. Missing: Austria, Canada, Japan Luxemburg, New Zealand, Norway, Sweden, and Switzerland. Years: 1975-2015.
- educ_eng Total persons engaged in education (NACE 2 ISIC Rev. 4) in thousands. See Appendix A for concordance with NACE 2 ISIC Rev. 4 categories. Source: See emp. Missing: Austria, Canada, Japan Luxemburg, New Zealand, Norway, Sweden, and Switzerland. Years: 1975-2015.
- educ_emp Total persons employed in education (NACE 2 ISIC Rev. 4) in thousands. See Appendix A for concordance with NACE 2 ISIC Rev. 4 categories. Source: See emp. Missing: Austria, Canada, Japan Luxemburg, New Zealand, Norway, Sweden, and Switzerland. Years: 1975-2015.
- healsoc_eng Total persons engaged in health and social work (NACE 2 ISIC Rev. 4) in thousands. See Appendix A for concordance with NACE 2 ISIC Rev. 4 categories. Source: See emp. Missing: Austria, Canada, Japan Luxemburg, New Zealand, Norway, Sweden, and Switzerland. Years: 1975-2015.
- healsoc_emp Total persons employed in health and social work (NACE 2 ISIC Rev. 4) in thousands. See Appendix A for concordance with NACE 2 ISIC Rev. 4 categories. Source: See emp. Missing: Austria, Canada, Japan Luxemburg, New Zealand, Norway, Sweden, and Switzerland. Years: 1975-2015.
- memor_eng Total persons engaged in Activities of membership organizations n.e.c. (NACE 2 ISIC Rev. 4) in thousands. See Appendix A for concordance with NACE 2 ISIC Rev. 4 categories. Source: See emp. Missing: Austria, Canada, Japan Luxemburg, New Zealand, Norway, Sweden, and Switzerland. Years: 1975-2015.
- memor_emp Total persons employed in Activities of membership organizations n.e.c. (NACE 2 ISIC Rev. 4) in thousands. See Appendix A for concordance with NACE 2 ISIC Rev. 4 categories. Source: See emp. Missing: Austria, Canada, Japan Luxemburg, New Zealand, Norway, Sweden, and Switzerland. Years: 1975-2015.
- rcsa_eng Total persons engaged in Recreational, cultural and sporting activities (NACE 2 ISIC Rev. 4) in thousands. See Appendix A for concordance with NACE 2 ISIC Rev. 4 categories. Source: See emp. Missing: Austria, Canada, Japan Luxemburg, New Zealand, Norway, Sweden, and Switzerland. Years: 1975-2015.
- rcsa_emp Total persons employed in Recreational, cultural and sporting activities (NACE 2 ISIC Rev. 4) in thousands. See Appendix A for concordance with NACE 2 ISIC

Rev. 4 categories. Source: See emp. Missing: Austria, Canada, Japan Luxemburg, New Zealand, Norway, Sweden, and Switzerland. Years: 1975-2015.

4. DEMOGRAPHIC DATA

pop	Population, in thousands. Source: OECD, <i>Demography and Population</i> (database), doi: 10.1787/d434f82b-en [accessed 11 October 2019]. Years covered: 1960-2018.
plt15	Population aged under 15 years, in thousands. Source: see pop. [accessed 11 October 2019]. Years covered: 1960-2018.
p1564	Population aged 15 to 64 years, in thousands. Source: see pop. [accessed 11 October 2019]. Years covered: 1960-2018.
po65	Population aged 65 and older, in thousands. Source: see pop. [accessed 11 October 2019]. Years covered: 1960-2018.
immigration	International migrant stock as a percentage of the population; additional information available at World Bank database. Source: World Bank, <i>World Development Indicators</i> (database). [accessed 15 February 2019] Years covered: 1960-2015.
lifexp	Life expectancy at birth for the total population, in years. Source: OECD, <i>Health Statistics</i> (database), doi: 10.1787/data-00540-en [accessed 04 September 2019]. Years covered: 1960-2017.
flifexp	Female life expectancy at birth, in years. Source: see lifexp. [accessed 04 September 2019]. Years covered: 1960-2017.
mlifexp	Male life expectancy at birth, in years. Source: see lifexp. [accessed 04 September 2019]. Years covered: 1960-2017.
infmort	Number of deaths among children aged 0-1 per thousand of live births. Source: see lifexp. [accessed 04 September 2019]. Years covered: 1960-2018
births	Number of births, in thousands. Source: see lifexp. [accessed 04 September 2019]. Years covered: 1960-2017.
deaths	Number of deaths. Source: see lifexp. [accessed 04 September 2019]. Years covered: 1960-2017.
tfr	Total fertility rate, births per woman. Source: World Bank database, <i>World Development Indicators</i> (WDI) (database), http://databank.worldbank.org/ [accessed 24 September 2019]. Years covered: 1960-2017.

yearlost	Potential years of life lost, all causes, ages 0-75, per 100 000 population. Note that this definition has changed; previous versions of the Comparative Welfare States Dataset used an upper age limit of 69. Source: OECD, <i>Health Statistics</i> (database), doi: 10.1787/193a2829-en [accessed September 2019]. Years covered: 1960-2017.
lifeexpf65	Female life expectancy at age 65. Source: see lifexp. [accessed September 2019]. Years covered: 1960-2017.
lifeexpm65	Male life expectancy at age 65. Source: see lifexp. [accessed September 2019]. Years covered: 1960-2017.

5. MACROECONOMIC DATA: Penn World Tables (PWT)

The Penn World Tables (PTW) provide a comprehensive series of national accounts data that are designed to be internationally comparable. The latest release, Version 9.1 from April 2019, is maintained at the University of Groningen Growth and Development Center. <https://www.rug.nl/ggdc/productivity/pwt/>

In the PWT's construction, PPP figures produced by the International Comparisons Program (ICP) are used to adjust national account figures for international price differences and convert the figures into a common currency unit. See Summers and Heston's "The Penn World Table (Mark 5):

As noted on the first page of the codebook, the PWT is inconsistent with some other sources in the treatment of Germany prior to 1990. The PWT team advises: Consistent with the statistical advice of the OECD and others, all growth rates before 1989 are for West Germany and are applied to the unified Germany level in 1989. To get West Germany figures, simply scale down GDP, population, employment, etc. to the West German level using the 1989 ratio of West Germany to unified Germany for each of these variables.

The PWT team has also made several other recommendations and cautionary statements for users of its data (from pages 42-43 of the PWT 8.0 User Guide):

1. Use GDPe and GDPo series only as a measure of the relative level across countries. For comparing GDP growth, use the series of GDP at constant national prices from the National Accounts data, RGDPNA.
2. Use GDPe when interested in comparative well-being; use GDPo when interested in an economy's productive capacity.
3. Beware that observations in PWT that are directly based on PPP benchmark data or interpolations between PPP benchmarks are more reliable than observations based on extrapolations from benchmarks and can show differences in patterns such as the Penn effect.

4. Beware that revisions to National Accounts data can have a substantial impact on the level of GDP and on GDP growth rates and that such revisions are typically the dominant reason for changing data between PWT versions.

Compared to the previous releases used in CWS (Versions 8.0 and 8.1), Versions 9.0 and 9.1 made a number of methodological and substantive adjustments, including the incorporation of new purchasing power parities (PPP's) from the 2011 International Comparison Program (ICP), the incorporation of revised and extended National Accounts data, covering the period up to 2017, and revised estimates of factor input data and labor cost shares. Please consult Feenstra, Inklaar, and Timmer (2016): "What is new in PWT 9.0?" and Inklaar and Woltjer (2019): "What is new in PWT 9.1?" for a detailed overview of the changes made.

Note that for countries in the European Union (EU) and/or OECD, the latest version no longer relies only on the ICP benchmark data, but also includes more frequent PPP benchmark comparisons; i.e. annual data for EU countries and triennial data for non-EU OECD countries. In PWT 8, EU PPP data until 2010 were used; for non-EU OECD countries the most recent PPP data were for 2008. In PWT 9.1, for 37 European and countries we incorporate PPP data up to 2017. For 10 non-European OECD countries the 2014 ICP PPPs are the most recent available (Inklaar and Woltjer (2019, pp. 1-2)).

The authors furthermore note an extension of "the PPP information for exports and imports. As in PWT 8, these trade PPPs are based on the framework introduced by Feenstra and Romalis (2014), but while trade PPPs were previously available for the period from 1984 to 2007, the trade PPP data in PWT 9.0 extend through [2017]." (ibid. p.3)

For the GDP data from the National Accounts, note that "National Accounts data in PWT8 covered the period up to 2011 and were from the version of the United Nations National Accounts Main Aggregates Database compiled in 2012. Since then, nearly all countries have revised their National Accounts data, in part because more complete source material has become available for the most recent years, but many countries have also made comprehensive revisions. A growing number of countries has shifted from the accounting rules of the 1993 edition of the System of National Accounts (SNA) to the 2008 edition, which requires capitalization of research and development (R&D) expenditure (amongst many other changes)." With the incorporation of new PPP data in the PWT 9.1, there are some changes in GDP (mostly affecting non-OECD countries).

"The changes due to the new accounting rules have led to GDP revisions for EU countries due to 'statistical improvements' of 1.4 percent for the EU-28 as a whole, but larger for individual countries: e.g. amounting to 2.6 percent of GDP in the UK and 5.9 percent in the Netherlands (Eurostat 2014)."

Version 9.0 and 9.1 made further adjustments to the sources and calculations of investment data, labor share, average hours worked, TFP, human capital, and capital. Regarding investment data, the authors compiled more data, directly taken from national accounts sources, reducing the reliance on the indirect CFM estimates. The authors also "incorporated data compiled under the new System of National Accounts, which includes investment in R&D". For labor share, version

9.0 improved methods for the detection and correction of underestimated labor share of income in nominal GDP. To calculate the average hours worked and TFP, the authors “changed the computation method to take into account the available data on average hours worked for countries and years for which these are available, by imputing missing values”. Lastly, new sources of data for Human Capital include Barro and Lee (2013) and Cohen and Leker (2014). “The precise implementation of this combination of sources is also discussed in the ‘Human capital in PWT9.0’ document on the PWT website.” The 9.1 updates to the capital data introduced new “productive capital input” measures to improve comparability of productivity across countries and time. For an overview of the new methodology for the capital, look at “What is new in PWT 9.1” (pp. 5-7).

Barro, Robert J. and Jong-Wha Lee (2013), “A new data set of educational attainment in the world, 1950-2010” *Journal of Development Economics* 104: 184–198.

Cohen, Daniel and Laura Leker (2014), “Health and Education: Another Look with the Proper Data”, mimeo Paris School of Economics.

Eurostat (2014), “ESA 2010 shifts level of EU and euro area GDP upward, growth rates almost unaffected” Eurostat News Release, <http://ec.europa.eu/eurostat/documents/42577/761078/2-17102014-BP-EN>.

rgdpe	Expenditure-side real GDP at chained PPPs, in millions of 2011 US dollars. Source: Penn World Table 9.1. Feenstra, Robert C., Robert Inklaar and Marcel P. Timmer (2015), "The Next Generation of the Penn World Table" <i>American Economic Review</i> , 105(10), 3150-3182, available for download at www.ggdc.net/pwt [accessed 28 Aug 2019]. Years covered: 1960-2017.
rgdpo	Output-side real GDP at chained PPPs, in millions of 2011 US dollars. Source: see rgdpe. [accessed 28 Aug 2019]. Years covered: 1960-2017.
rgdpecap	Real GDP per capita (based on rgdpe), in 2011 US dollars. Source: see rgdpe. [accessed 28 Aug 2019]. Years covered: 1960-2017.
poppwt	Population, in millions. Source: see rgdpe. [accessed 28 Aug 2019]. Years covered: 1960-2017.
emppwt	Persons engaged in employment, in millions. Source: see rgdpe. [accessed 28 Aug 2019]. Years covered: 1960-2017.
avh	Average annual hours worked by a person engaged in employment. Source: see rgdpe. [accessed 28 Aug 2019]. Years covered: 1960-2017.
hc	Index of human capital per person, based on years of schooling (Barro and Lee 2012) and returns to education (Psacharopoulos 1994). Source: see rgdpe. [accessed 28 Aug 2019]. Years covered: 1960-2017.

ctfp	Total factor productivity (TFP) level at current PPPs (USA=1). Source: see rgdpe. [accessed 28 Aug 2019]. Years covered: 1960-2017.
rgdpna	Real gross domestic product, in millions of 2011 US dollars at constant 2011 prices. [accessed 28 Aug 2019]. Source: see rgdpe. Years covered: 1960-2017.
rkna	Capital stock, in 2011 US dollars at constant 2011 prices. Source: see rgdpe. [accessed 28 Aug 2019]. Years covered: 1960-2017.
rtfpna	Total factor productivity (TFP) at constant national prices (2011=1). Source: see rgdpe. [accessed 28 Aug 2019]. Years covered: 1960-2017.
labsh	Labor compensation as a share of GDP at current national prices. Source: see rgdpe. [accessed 28 Aug 2019]. Years covered: 1960-2017.
cs_h_c	Household consumption as a share of GDP at current PPPs. Source: see rgdpe. [accessed 28 Aug 2019]. Years covered: 1960-2017.
cs_h_i	Gross capital formation as a share of GDP at current PPPs. Source: see rgdpe. [accessed 28 Aug 2019]. Years covered: 1960-2017.
cs_h_g	Government consumption as a share of GDP at current PPPs. Source: see rgdpe. [accessed 28 Aug 2019]. Years covered: 1960-2017.
cs_h_x	Merchandise exports as a share of GDP at current PPPs. Source: see rgdpe. [accessed 28 Aug 2019]. Years covered: 1960-2017.
cs_h_m	Merchandise imports as a share of GDP at current PPPs. Source: see rgdpe. [accessed 28 Aug 2019]. Years covered: 1960-2017.
cs_h_r	Residual trade and GDP statistical discrepancies as a share of GDP at current PPPs. Source: see rgdpe. [accessed 28 Aug 2019]. Years covered: 1960-2017.
v_c	Household consumption, in millions of national currency units at current prices. Source: see rgdpe. [accessed 28 Aug 2019]. Years covered: 1960-2017.
v_i	Investment, in millions of national currency units at current prices. Source: see rgdpe. [accessed 28 Aug 2019]. Years covered: 1960-2017.
v_g	Government consumption, in millions of national currency units at current prices. Source: see rgdpe. [accessed 28 Aug 2019]. Years covered: 1960-2017.
v_x	Merchandise exports, in millions of national currency units at current prices. Source: see rgdpe. [accessed 28 Aug 2019]. Years covered: 1960-2017.

- v_m Merchandise imports, in millions of national currency units at current prices. Source: see rgdpe. [accessed 28 Aug 2019]. Years covered: 1960-2017.
- v_gdp Gross domestic product, in millions of national currency units at current prices. Source: see rgdpe. [accessed 28 Aug 2019]. Years covered: 1960-2017.
- v_gfcf Gross fixed capital formation, in millions of national currency units at current prices. Source: see rgdpe. [accessed 28 Aug 2019]. Years covered: 1960-2017.

6. MACROECONOMIC DATA: OTHERS

6.1 Macro-Economic Data: Other Sources

- stmktcap Stock market capitalization. Market value of publicly listed stocks as a % of GDP. Data from Roine, Jesper, Jonas Vlachos, and Daniel Waldenström. 2009. “The Long-Run Determinants of Inequality: What Can We Learn from Top Income Data?” *Journal of Public Economics* 93 (7-8): 974-88 were supplemented with data for recent time points from Beck, Thorsten, Asli Demirgüç-Kunt, and Ross Levine. 2009. “Financial Institutions and Markets Across Countries and Over Time: Data and Analysis.” World Bank Policy Research Working Paper No. 4943. The World Bank. and Čihák, Martin, Asli Demirgüç-Kunt, Erik Feyen, and Ross Levine. 2012. “Benchmarking Financial Development Around the World.” World Bank Policy Research Working Paper No. 6175. World Bank. Roine, Vlachos and Waldenström (2009) interpolate the data for 1961-69 and 1971-74. Years covered: 1960-2011.
- extpi Outward portfolio investment flows (i.e., portfolio investments abroad), in millions of US dollars at current prices. A portfolio investment consists of a passive investment in a financial security (e.g., equity, bond) that does not provide a substantial or lasting management interest in the security’s issuer (i.e., a portfolio investor does not become involved in the daily operations of the enterprises issuing the security). Note: This variable is presented as positive rather than negative values, as is reported in the source data (reflecting the negative value for the balance of payments). The data for Belgium and Luxembourg are combined for the years 1975-2001 and are reported for Belgium (i.e., Luxembourg is coded as missing for these years). Source: IMF, *International Financial Statistics* via IMF’s <http://data.imf.org>. [accessed 1 Nov 2018]. The variable is referred to as “Balance of Payments, Financial account, Portfolio investment, Net acquisition of financial assets, US Dollars” in the original source. Years covered: 1960-2017.
- inwpi Inward portfolio investment flows (i.e., portfolio investments in reporting economy), in millions of US dollars at current prices. See extpi for a definition of portfolio investments. Note: The data for Belgium and Luxembourg are combined for the years 1975-2001 and are reported for Belgium (i.e. Luxembourg is coded

as missing for these years). Source: see extpi. [accessed 1 Nov 2018]. The source refers to the variable as “Balance of Payments, Supplementary Items, Portfolio Investment, Net incurrence of liabilities (excluding exceptional financing), US Dollars”. Years covered: 1960-2017.

- ofdi Outward direct investment flows (i.e., direct investment abroad), in millions of US dollars at current prices. A direct investment consists of an active investment in a new or existing enterprise that entails substantial and lasting control over the management of the enterprise. Note: This variable is presented as positive rather than negative values, as is reported in the source data (reflecting the negative value for the balance of payments). The data for Belgium and Luxembourg are combined for the years 1975-2001 and are reported for Belgium (i.e., Luxembourg is coded as missing for these years). Source: IMF, *International Financial Statistics* via IMF’s <http://data.imf.org> [accessed 1 Nov 2018]. Years covered: 1960-2017.
- ifdi Inward direct investment flows (i.e., direct investment in reporting economy), in millions of US dollars at current prices. Note: The data for Belgium and Luxembourg are combined for the years 1975-2001 and are reported for Belgium (i.e., Luxembourg is coded as missing for these years). Source: see ofdi. [accessed 1 Nov 2018]. Years covered: 1960-2017.
- kaopen Index measuring capital account openness. Source: Chinn, Menzie D. and Hiro Ito. 2008. "A New Measure of Financial Openness." *Journal of Comparative Policy Analysis* 10(3): 309-322, http://web.pdx.edu/~ito/Chinn-Ito_website.htm. [accessed 16 Feb 2019]. Missing: Luxembourg. Years covered: 1970-2017.
- mimpno Manufacturing imports from the non-OECD area. The manufacturing sector includes categories 5 through 8. Source: OECD’s International Trade by Commodity Database, SITC Rev. 2. Years covered: 1961-2017. https://www.oecd-ilibrary.org/trade/data/international-trade-by-commodity-statistics_itcs-data-en
- mimps Manufacturing imports from the Global South. The manufacturing sector includes categories 5 through 8. The Global South includes all countries outside of the non-OECD area as well as Chile, the Czech Republic, Estonia, Hungary, Korea, Mexico, Poland, the Slovak Republic, Slovenia, and Turkey. Source: see mimpno. Years covered: 1961-2017. https://www.oecd-ilibrary.org/trade/data/international-trade-by-commodity-statistics_itcs-data-en

Although the two series listed below (gdpncu and gdpnc) are measures of the same concept (GDP), their values diverge significantly for many countries and years. In particular, the IMF series is often systematically lower than the OECD series, particularly for Greece, Germany, Ireland, and Portugal and for earlier years. These differences will appear when these series are used as devisors for expenditure and revenue figures (i.e. the IMF-based percentage figures will

generally be higher than their OECD-based counterparts). Note that a third series for nominal GDP can be calculated using the Penn World Table data by multiplying ppp and tcgdp.

gdpncu	Gross domestic product, in millions of national currency units at current prices. Source: IMF, <i>International Financial Statistics</i> via IMF's eLibrary, https://data.imf.org/datasets . [accessed 19 May 2019]. Years covered: 1960-2017.
gdpnc	Gross domestic product, in millions of national currency units at current prices. Source: OECD, <i>Aggregate National Accounts</i> (database, economic reference series), doi: 10.1787/data-00001-en. [accessed 16 April 2019] Years covered: 1960-2018.
gdpncn	Gross domestic product, in millions of national currency units at constant 2010 prices. OECD, <i>Aggregate National Accounts</i> (database, economic reference series), doi: 10.1787/data-00001-en [accessed 16 May 2019]. Years covered: 1960-2017.
gdppp	Gross domestic product, in billions of US dollars at purchasing power parity. Source: see gdpncn. [accessed 16 May 2019]. Years covered: 1960-2017.
gdpusd	Gross domestic product, in millions of US dollars at current exchange rates and prices. Source: see gdpnc. [accessed 16 May 2019]. Years covered: 1960-2017.
gdppc	Gross domestic product per capita, in national currency units at current prices. Source: see gdpncn. [accessed 16 May 2019] Years covered: 1960-2017.
xcusd	Exchange rate, in national currency units per US dollar. Source: OECD, <i>National Accounts Statistics</i> (database), doi: 10.1787/na-data-en. [accessed 14 May 2019]. Years covered: 1960-2017.
ppp	Purchasing power parity for GDP, national currency units per US dollar. Source: see xcusd. [accessed 14 May 2019]. Years covered: 1960-2017.
cpi	Inflation rate, as a percentage change in consumer prices from the prior year to the current year. Source: OECD, <i>Main Economic Indicators</i> (database), doi: 10.1787/mei-data-en [accessed 8 July 2019]. Years covered: 1960-2017.
cpi2	Consumer price index, with 2015 as the base year (2015=100). [accessed 8 July 2019]. Source: see cpi. Years covered: 1960-2017.
grossk	Gross fixed capital formation, in millions of national currency units at current prices. Sources: IMF, <i>International Financial Statistics</i> via IMF's eLibrary, http://elibrary-data.imf.org [accessed 14 May 2019] and OECD, <i>National Accounts Statistics</i> (database), doi: 10.1787/na-data-en [accessed 14 May 2019]. Years covered: 1960-2017.

export	Exports of goods and services, valued in millions of national currency units at current prices. Source: IMF, <i>International Financial Statistics</i> via IMF's: http://data.imf.org [accessed 1 Nov 2018]. Years covered: 1960-2017.
import	Imports of goods and services, valued in millions of national currency units at current prices. Source: see export. [accessed 1 Nov 2018]. Years covered: 1960-2017.
tradeopen	Trade openness, defined as the sum of exports (export) and imports (import) as a percentage of GDP (gdpnc), all at current prices. Source: see export. [accessed 1 Nov 2018]. Years covered: 1960-2017.
govexp	Total general government expenditure, as a percentage of GDP at current prices. Sources: OECD, <i>National Accounts Statistics</i> (database), doi: 10.1787/na-data-en [accessed 20 May 2019]. Years covered: 1960-2017.
govrev	Total general government revenue, as a percentage of GDP at current prices. Source: see govexp. [accessed 20 May 2019]. Years covered: 1960-2017.
govdef	Net general government lending or borrowing, in millions of national currency units at current prices. A positive value for this measure represents a surplus while a negative value indicates a deficit. Source: OECD, <i>National Accounts Statistics</i> (database), doi: 10.1787/na-data-en [accessed 20 May 2019]. Years covered: 1960-2017.
govcons	General government final consumption expenditure, in millions of national currency units at current prices. Source: IMF's: http://data.imf.org [accessed 1 Nov 2018]. Years covered: 1960-2017.
cgovrev	Central government revenue, in millions of national currency units at current prices. Sources: IMF, <i>International Financial Statistics</i> and <i>Government Finance Statistics (GFS) Revenue</i> via IMF's eLibrary, http://data.imf.org/?sk=388DFA60-1D26-4ADE-B505-A05A558D9A42&sId=1479329334655 [accessed 27 May 2019] and earlier releases from 1979, 1989, and 2003; OECD, <i>National Accounts Statistics</i> (database), doi: 10.1787/na-data-en [accessed 14 May 2019]. Years covered: 1960-2017.
cgovexp	Central government expenditure, in millions of national currency units at current prices. Sources: see cgovrev. Years covered: 1960-2017.
mil	Military expenditure as a percentage of GDP. Sources: Stockholm International Peace Research Institute (SIPRI), <i>SIPRI Yearbook</i> (1975, 1982, 1985, 1988, 1992, 1995, 1999, and 2003) New York: Oxford University Press; SIPRI, <i>Military</i>

Expenditure Database, <http://www.sipri.org/research/armaments/milex/>.
[accessed 1 Nov 2018]. Years covered: 1960-2017.

debt General government gross financial liabilities as a percentage of GDP at current prices. Source: OECD, *Economic Outlook* (database), doi: 10.1787/eo-data-en. [accessed 15 May 2019]. Years covered: 1960-2017.

6.2 Central Bank Independence

cuk_ceo Bank CEO characteristics dimension of central bank independence (CBI), one of four dimensions of CBI following Cuikerman (1992) and Cuikerman, Webb and Neyapti (1992)'s coding rules for central bank legislation. Source: Garriga, Ana Carolina. 2016. Central Bank Independence in the World: A New Dataset. *International Interactions* 42 (5):849-868 doi: 10.1080/03050629.2016.1188813. Years covered: 1970-2012.

cuk_pol Policy formulation attributions dimension of central bank independence (CBI), one of four dimensions of CBI following Cuikerman (1992) and Cuikerman, Webb and Neyapti (1992)'s coding rules for central bank legislation. Source: See cuk_ceo. Years covered: 1970-2012.

cuk_obj Central bank's objectives dimension of central bank independence (CBI), one of four dimensions of CBI following Cuikerman (1992) and Cuikerman, Webb and Neyapti (1992)'s coding rules for central bank legislation. Source: See cuk_ceo. Years covered: 1970-2012.

cuk_limlen Central bank's limitations on public sector lending dimension of central bank independence (CBI), one of four dimensions of CBI following Cuikerman (1992) and Cuikerman, Webb and Neyapti (1992)'s coding rules for central bank legislation. Source: See cuk_ceo. Years covered: 1970-2012.

lvau_garriga Central bank independence, an unweighted index ranging from 0 (least independence) to 1 (most independence). This index is a summary of cuk_ceo, cuk_pol, cuk_obj and cuk_limlen. Source: See cuk_ceo. Years covered: 1970-2012.

lvaw_garriga Central bank independence, a weighted index ranging from 0 (least independence) to 1 (most independence). This index is a weighted summary of cuk_ceo, cuk_pol, cuk_obj and cuk_limlen. Source: See cuk_ceo. Years covered: 1970-2012.

6.3 Research And Development Spending

rd Expenditure on research and development by all sources, as a percentage of GDP. Source: OECD, *Science, Technology and R&D Statistics* (database), doi: 10.1787/strd-data-en [accessed 23 May 2019]. Years covered: 1981-2017.

rdbus	Expenditure on research and development by businesses, as a percentage of GDP. Source: see rd. [accessed 23 May 2019]. Years covered: 1981-2017.
rdgov	Expenditure on research and development by government (all levels), as a percentage of GDP. Source: see rd. [accessed 23 May 2019]. Years covered: 1981-2017.
rdhed	Expenditure on research and development by institutions of higher education, as a percentage of GDP. Source: see rd; calculated using gross domestic expenditure on R-D sector of performance (total intramural) and sources of funds (higher education sector). Missing: Denmark and Germany. [accessed 6 June 2019]. Years covered: 1981-2017.
rdpnp	Expenditure on research and development by private non-profit organizations, as a percentage of GDP. Source: see rd; calculated using gross domestic expenditure on R-D sector of performance (total intramural) and sources of funds (private non-profit sector). [accessed 6 June 2019]. Years covered: 1981-2017.
rdperbus	Expenditure on research and development performed by businesses, as a percentage of GDP. Source: see rd. [accessed 23 May 2019]. Years covered: 1981-2017.
rdpergov	Expenditure on research and development performed by governments (all levels), as a percentage of GDP. Source: see rd. [accessed 3 June 2019]. Years covered: 1981-2017.
rdperhed	Expenditure on research and development performed by institutions of higher education, as a percentage of GDP. Source: see rd. [accessed 23 May 2019]. Years covered: 1981-2017.
rdperpnp	Expenditure on research and development performed by private non-profit organizations, as a percentage of GDP. Source: see rd; calculated using percentage of GERD performed by the private non-profit sector. [accessed 6 June 2019]. Missing: Luxembourg. Years covered: 1981-2017.

6.4 Product Market Regulation

The following variables are the OECD indicators of regulation in energy, transport, and communications (ETCR). ETCR indicators summarize regulatory provisions in seven non-manufacturing sectors: telecoms, electricity, gas, post, rail, air passenger transport, and road freight. ETCR indicators focus on regulations that affect competitive pressures in areas where competition is economically viable and on potential costs that these regulations entail. Indicators may include information regarding barriers to entry, public ownership, market structure, vertical integration, and price controls (varies by sector). Each indicator is measured on a scale from 0 to 6, with 0 indicating the least regulation and 6 indicating the most regulation. For more

information see Conway, P. and G. Nicoletti. (2006). “Product market regulation in non-manufacturing sectors in OECD countries: measurements and highlights.” *OECD Economics Department Working Paper No. 530*. <http://www.oecd.org/eco/pmr>. Years covered: 1975-2013.

airlines	Airline industry regulation, on a scale from 0 (least regulation) to 6 (most regulation). Source: OECD Product Market Regulation Database. Years covered: 1975-2013.
telecom	Telecom industry regulation, on a scale from 0 (least regulation) to 6 (most regulation). Source: see airlines. Years covered: 1975-2013.
electric	Electricity industry regulation, on a scale from 0 (least regulation) to 6 (most regulation). Source: see airlines. Years covered: 1975-2013.
gas	Gas industry regulation, on a scale from 0 (least regulation) to 6 (most regulation). Source: see airlines. Years covered: 1975-2013.
post	Postal industry regulation, on a scale from 0 (least regulation) to 6 (most regulation). Source: see airlines. Years covered: 1975-2013.
rail	Rail industry regulation, on a scale from 0 (least regulation) to 6 (most regulation). Source: see airlines. Years covered: 1975-2013.
road	Road industry regulation, on a scale from 0 (least regulation) to 6 (most regulation). Source: see airlines. Years covered: 1975-2013.
etcragg	Total regulation in energy, transport, and communications (ECTR), on a scale from 0 (least regulation) to 6 (most regulation). This aggregate indicator is the simple mean of the seven sectoral indicators (i.e. airlines, telecom, electricity, gas, post, rail, and road) aggregated across all types of regulations. Source: see airlines. Years covered: 1975-2013.
etcrnopub	Total regulation in energy, transport, and communications (ECTR) excluding ownership regulation, on a scale from 0 (least regulation) to 6 (most regulation). This aggregate indicator is the simple mean of the seven sectoral indicators (i.e. airlines, telecom, electricity, gas, post, rail, and road) aggregated across all types of regulations except those concerning ownership. Source: see airlines. Years covered: 1975-2013.
etcrpub	Total ownership regulation (i.e. requirements of public ownership) in energy, transport, and communications (ECTR), on a scale from 0 (least regulation) to 6 (most regulation). This aggregate indicator is the simple mean of the seven sectoral indicators (i.e. airlines, telecom, electricity, gas, post, rail, and road) for public ownership. Source: see airlines. Years covered: 1975-2013.

etcrenbar Total entry regulation in energy, transport, and communications (ECTR), on a scale from 0 (least regulation) to 6 (most regulation). This aggregate indicator is the simple mean of the seven sectoral indicators (i.e. airlines, telecom, electricity, gas, post, rail, and road) for barriers to entry. Source: see airlines. Years covered: 1975-2013.

7. POLITICAL VARIABLES

vturn The total number of votes cast (valid or invalid) in the most recent election divided by the number of people registered for the election, expressed as a percentage. Sources: Mackie and Rose (1991), annual election reports and issues of the *Political Data Yearbook* published by the *European Journal of Political Research* since 1986, IDEA *Voter Turnout Database*. Years covered: 1960-2017.

For detailed information about the construction of the following variables (leftvot to rtctcum), refer to Appendix B.

leftvot Share of votes cast for parties classified as left in the most recent election. Sources: Mackie and Rose (1991), annual election reports and issues of the *Political Data Yearbook* published by the *European Journal of Political Research* since 1986, IDEA *Voter Turnout Database* – see Appendix B for further details. For elections missing from PDY, ParlGov by Döring and Manow (2018) is used. Years covered: 1960-2017.

leftseat Share of seats in parliament won by parties classified as left in the most recent election. Sources: see leftvot and Appendix B. For elections missing from PDY, ParlGov by Döring and Manow (2018) is used. Years covered: 1960-2017.

leftcab Share of seats in parliament held by leftist parties in the most recent government as a percentage of all seats held by the government. Sources: leftvot and Appendix B, as well as ParlGov for investiture dates and cabinet composition. Years covered: 1960-2017.

leftmaj Share of seats in parliament won by leftist parties in the most recent government as a percentage of seats needed for a parliamentary majority ($\frac{1}{2}$ parliamentary seats + 1). Sources: leftvot and Appendix B, as well as ParlGov for investiture dates and cabinet composition. Years covered: 1960-2017.

leftcum Cumulative leftcab score from 1946 to the year of the observation. For example, ltcabcum for Australia 1948 = leftcab 1946 + leftcab 1947 + leftcab 1948. Sources: leftvot and Appendix B. Years covered: 1960-2017.

cnvot Share of votes cast for parties classified as (secular) center in the most recent election. Sources: see leftvot and Appendix B. Years covered: 1960-2017.

cnseat	Share of seats in parliament won by parties classified as (secular) center in the most recent election. Sources: see leftvot and Appendix B. Years covered: 1960-2017.
cncab	Share of seats in parliament held by (secular) center parties in the most recent government as a percentage of all seats held by the government. Sources: leftvot and Appendix B. Years covered: 1960-2017.
cnmaj	Share of seats in parliament won by (secular) center parties in the most recent government as a percentage of seats needed for a parliamentary majority ($\frac{1}{2}$ parliamentary seats + 1). Sources: leftvot and Appendix B. Years covered: 1960-2017.
cncum	Cumulative cncab score from 1946 to the year of the observation. Sources: leftvot and Appendix B. Years covered: 1960-2017.
cncrvot	Share of votes cast for parties classified as center Christian in the most recent election. Sources: see leftvot and Appendix B. Years covered: 1960-2017.
cncrseat	Share of seats in parliament won by parties classified as center Christian in the most recent election. Sources: see leftvot and Appendix B. Years covered: 1960-2017.
cnrcab	Share of seats in parliament held by center, Christian parties in the most recent government as a percentage of all seats held by the government. Sources: leftvot and Appendix B. Years covered: 1960-2017.
cnrmaj	Share of seats in parliament won by center, Christian parties in the most recent government as a percentage of seats needed for a parliamentary majority ($\frac{1}{2}$ parliamentary seats + 1). Sources: leftvot and Appendix B. Years covered: 1960-2017.
cnrcum	Cumulative cnrcab score from 1946 to the year of the observation. Sources: leftvot and Appendix B. Years covered: 1960-2017.
cnctvot	Share of votes cast for parties classified as center Catholic in the most recent election. Sources: see leftvot and Appendix B. Years covered: 1960-2017.
cnctseat	Share of seats in parliament won by parties classified as center Catholic in the most recent election. Sources: see leftvot and Appendix B. Years covered: 1960-2017.
cnctcab	Share of seats in parliament held by center, Catholic parties in the most recent government as a percentage of all seats held by the government. Sources: leftvot and Appendix B. Years covered: 1960-2017.

cnctmaj	Share of seats in parliament won by center, Catholic parties in the most recent government as a percentage of seats needed for a parliamentary majority ($\frac{1}{2}$ parliamentary seats + 1). Sources: leftvot and Appendix B. Years covered: 1960-2017.
cnctcum	Cumulative cnctcab score from 1946 to the year of the observation. Sources: leftvot and Appendix B. Years covered: 1960-2017.
rtvot	Share of votes cast for parties classified as (secular) right in the most recent election. Sources: see leftvot and Appendix B. Years covered: 1960-2017.
rtseat	Share of seats in parliament won by parties classified as (secular) right in the most recent election. Sources: see leftvot and Appendix B. Years covered: 1960-2017.
rtcab	Share of seats in parliament held by (secular) right parties in the most recent government as a percentage of all seats held by the government. Sources: leftvot and Appendix B. Years covered: 1960-2017.
rtmaj	Share of seats in parliament won by (secular) right parties in the most recent government as a percentage of seats needed for a parliamentary majority ($\frac{1}{2}$ parliamentary seats + 1). Sources: leftvot and Appendix B. Years covered: 1960-2017.
rtcum	Cumulative rtcab score from 1946 to the year of the observation. Sources: leftvot and Appendix B. Years covered: 1960-2017.
rtervot	Share of votes cast for parties classified as right Christian in the most recent election. Sources: see leftvot and Appendix B. Years covered: 1960-2017.
rtcrseat	Share of seats in parliament won by parties classified as right Christian in the most recent election. Sources: see leftvot and Appendix B. Years covered: 1960-2017.
rtcrcab	Share of seats in parliament held by right, Christian parties in the most recent government as a percentage of all seats held by the government. Sources: leftvot and Appendix B. Years covered: 1960-2017.
rtcrmaj	Share of seats in parliament won by right, Christian parties in the most recent government as a percentage of seats needed for a parliamentary majority ($\frac{1}{2}$ parliamentary seats + 1). Sources: leftvot and Appendix B. Years covered: 1960-2017.
rtcrcum	Cumulative rtcrcab score from 1946 to the year of the observation. Sources: leftvot and Appendix B. Years covered: 1960-2017.

rtctvot	Share of votes cast for parties classified as right Catholic in the most recent election. Sources: see leftvot and Appendix B. Years covered: 1960-2017.
rtctseat	Share of seats in parliament won by parties classified as right Catholic in the most recent election. Sources: see leftvot and Appendix B. Years covered: 1960-2017.
rtctcab	Share of seats in parliament held by right, Catholic parties in the most recent government as a percentage of all seats held by the government. Sources: leftvot and Appendix B. Years covered: 1960-2017.
rtctmaj	Share of seats in parliament won by right, Catholic parties in the most recent government as a percentage of seats needed for a parliamentary majority ($\frac{1}{2}$ parliamentary seats + 1). Sources: leftvot and Appendix B. Years covered: 1960-2017.
rtctcum	Cumulative rtctcab score from 1946 to the year of the observation. Sources: leftvot and Appendix B. Years covered: 1960-2017.

The following seven variables have been used to develop measures of "constitutional structure veto points". For examples of such measures, see Huber, Ragin, and Stephens (1993) and Huber and Stephens (2001).

fed	Degree of federalism in political system: 0 = no federalism, 1 = weak federalism, 2 = strong federalism. Sources: Lijphart (1984, 1999), see Huber, Ragin, and Stephens (1993). Years covered: 1960-2017.
pres	Presence of presidentialism in political system: 0 = no, parliamentary system, 1 = yes, presidential or collegiate executive. Sources: Lijphart (1984, 1999), see Huber, Ragin, and Stephens (1993). Years covered: 1960-2017.
singmemd	0=absent; 1=mixed; 2=exclusive. Sources: Lijphart (1984, 1999), see Huber, Ragin, and Stephens (1993). Years covered: 1960-2017.
strbic	Degree of bicameralism in political system: 0 = no bicameralism (only one chamber), 1 = medium-strength or weak bicameralism (two chambers, one substantially stronger than the other), 2 = strong bicameralism (two chambers with relatively equal power). Sources: Lijphart (1984, 1999), see Huber, Ragin, and Stephens (1993). Years covered: 1960-2017.
referen	Degree to which referenda are used in national policymaking: 0 = never or infrequently, 1 = frequently. Sources: Lijphart (1984, 1999), see Huber, Ragin, and Stephens (1993). Years covered: 1960-2017.
judrev	Presence of judicial review in political system: 0 = no, judicial review absent, 1 = yes, judicial review present. Sources: Lijphart (1984, 1999), see Huber, Ragin, and Stephens (1993). Years covered: 1960-2017.

- authleg Degree of authoritarianism in political system in 1900: 0 = no authoritarianism, full democracy (cabinet responsibility vested in an elected parliament or executive, full male suffrage), 1 = partial authoritarianism, limited democracy (cabinet responsibility vested in an elected parliament or executive, limited male suffrage), 3 = full authoritarianism, no democracy (cabinet responsibility vested in an unelected body or individual, suffrage is non-existent or insignificant). Source: John D. Stephens, see Ch. 4 in Rueschemeyer, Stephens, Stephens (1992). Years covered: 1960-2017.
- fempar Share of seats in parliament held by women after the most recent election. For countries with bicameral systems, figures are for the lower chamber only. For years that had multiple entries (different months within the same year) for percentage of seats held by women in parliament, we used the average of all data within the same year. For years prior to 1990 in Germany, data represents West German Bundestag. Source: Inter-Parliamentary Union (1995, 1997, 2011, 2019). [accessed 4 October 2019]. https://data.ipu.org/compare?field=chamber%3A%3Acurrent_women_percent&structure=any__lower_chamber#map Years covered: 1960-2018.
- femparca Cumulative average in fempar from 1945 to the year of observation. Source: see fempar. [accessed 4 October 2019]. Years covered: 1960-2018.

Appendix A:

Derivation of Knowledge-Intensive Service (KIS) Variables

All of the data for these variables before the year 2008 have been derived using codes and definitions associated with NACE 1 (classifications of economic activities in the European Community) Rev. 1.1. Beginning with the 2012 Analytical Module, EU KLEMS gathered all data using codes and definitions associated with NACE 2 ISIC Rev. 4. Through correspondence tables provided by EU KLEMS for each country, it was possible to construct equivalent categories to those used in the variables *kisl* and *kisle* using new data. (The correlation between data points for which EU KLEMS produced data under NACE 1 ISIC Rev. 1.1 and NACE 2 Rev.4 is greater than .99). However, because it was not possible to recreate all categories used in the construction of *kisht(e)* and *kis2(e)* without including categories not in the original measure and Eurostat has not adjusted their categories to use only NACE2 ISIC Rev. 4 categories, those variables have only using data gathered under NACE 1 Rev. 1.1.

There are two different classification approaches used by Eurostat to aggregate service sectors by knowledge intensity—denoted here as KIS-HT and KIA. Although both approaches use the level of tertiary educational attainment of sectoral workers as their main criterion for classifying sectors, there are notable differences in their classification decisions. Some of the sectors considered to be knowledge intensive in the KIS-HT approach are not regarded as knowledge intensive in the KIA approach. These discrepancies are due to the use of a looser definition of knowledge intensity in the KIS-HT approach (education levels are the main but not sole factors considered in categorizing service sectors) and the use of different thresholds for differentiating between knowledge-intensive and less knowledge-intensive sectors in the two approaches.

Two distinct methods are also used in defining the membership of each economic sector. The first extends membership to all persons engaged—both employed and self-employed—in a particular sector while the second limits membership only to those employed in a given sector. Separate sets of aggregate figures have been generated using data associated with each of these methods.

Sources:

EU KLEMS Growth and Productivity Accounts, March 2008 and November 2009 releases, <http://www.euklems.net/> [accessed 4 April 2012].

EU KLEMS Growth and Productivity Accounts, September 2017 (Revised July 2018) release, <http://www.euklems.net/> [accessed 22 January 2019]

The 2008 release of EU KLEMS, which covers 72 industries from 1970 to 2005, is the main source for deriving the aggregate indicators for high-tech manufacturing, knowledge-intensive services, and knowledge-intensive activities. Data from the 2009 release, which covers 32 industries from 1970 to 2007, have been used to extend the range of these indicators to 2007. As part of this process, some of disaggregated sector figures have been imputed using compositional ratios from 2005. Given that some of the data for 2006 and 2007 are imputed, the indicators derived from these data should be considered less certain. The 2017 release extends these data

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for 29 countries under NACE 2 ISIC Rev. 4 from 1970, 1975, 1980, 1993, 1995, 1998, or 2000 (depending upon the country due to backwards availability of data for NACE 2 ISIC Rev. 4) through 2015.

To improve coverage of several variables in earlier years, some of the components used in calculating these variables have been imputed. Using a similar approach to the one described above, missing data for categories 91 and 92 have been estimated by multiplying the figures for the relevant top-level categories (i.e. O) by compositional ratios for nearby years.

Composition of KIS Variables						
Sectors		Variables				
Description	NACE 1 ISIC Rev. 1.1	NACE 2 ISIC Rev. 4	kis1(e)	kisht(e)	kis2(e)	
Water transport	61	H (49-52)	X			
Air transport	62	H (49-52)	X		X	
Post and telecommunications	64	J	X	X		
Financial intermediation, except insurance and pension funding	65	K	X		X	
Insurance and pension funding, except compulsory social security	66	K				
Activities auxiliary to financial intermediation	67	K				
Real estate activities	70	L	X			
Renting of machinery, equipment, and household goods	71	M-N				
Computer and related activities	72	J		X	X	X
Research and development	73	M-N		X	X	X
Other business activities	74	M-N				X
Public administration and defense; compulsory social security	75 (L)	O			X	
Education	80 (M)	P	X		X	
Health and social work	85 (N)	Q	X		X	
Activities of membership organizations n.e.c.	91	S			X*	
Recreational, cultural and sporting activities	92	R	X*		X*	
	* Imputed from top-level indicator (category O). Note that category 99 (Extra-territorial organizations and bodies) was entirely excluded due to extensive missingness.					

Appendix B: Derivation of Political Party Variables

The data for vote and seat shares have been collected from Mackie and Rose (1991), Mackie's annual election reports that appeared in *EJPR*, and the annual releases of the *Political Data Yearbook* published by *EJPR* since 1991. Where PDY data is missing, ParlGov (Döring and Manow 2018) is used. Known typographical and mathematical errors appearing in these sources have been corrected.

Data for a political party are only recorded for a particular election if it meets one of the following two criteria for inclusion: it receives at least 2.0% of the vote share in the election and at least 2.0% of the seat share in the election OR it receives at least 2.0% of the vote share in the election and at least 2.0% of the vote share in another election. If the party does not meet either of these criteria in any election, then it is completely excluded from the data set. Parties satisfying these criteria are listed in the tables below, with the years listed next to each party indicating the elections for which they satisfy one of these criteria.

Parties that meet the above criteria are also categorized as either left, center, or right, with stances on social policy being a key dimension of differentiation. Moreover, parties that are deemed centrist or right-wing may be further classified as Christian or Catholic depending on their sources of support. If a party combines both Catholic and Protestant forces, such as the German Christian Democrats (CDU/CSU), it is categorized as Christian.

Although most of the party classifications are time-invariant, some do change over time to reflect major political realignments. For example, the categorization for the Danish Liberal Party (Venstre) shifts from “Center” to “Right” around 1979 because the party adopted a platform that moved it firmly to the right.

The vote and seat shares reported for each country have been weighted to reflect electoral and government transitions. Therefore, the vote shares are weighted for years in which elections occurred and the seat shares are weighted for years in which new governments formed. The election and investiture dates used to calculate these weights are rounded to the nearest numerical month (from 0 to 12). In instances where there are two or more dates for an election, the first date is used. The data for the election and investiture dates come from the sources listed above and Woldendorp, Keman, and Budge (2000). For the year 2012 – 2017, ParlGov is used for investiture and election dates, as well as cabinet composition.

In the tables below, parties are listed using their most recent English names and most common abbreviations. Prior party names and abbreviations are provided in brackets for reference.

Australia

Left	The Greens (Greens) Labor Party (ALP)	1996 – 1943 –
Center	Australian Democrats (AD)	1977 – 2001

	Democratic Labor Party (DLP) [Anti-Communist Australian Labor Party until 1957, electoral alliance with Queensland Labor Party in 1958 and 1961]	1955 – 1972
Right	Australia Party (AP)	1972 – 1974
	Family First Party (FFP)	2004 – 2010
	Liberal Party (LIB)	1943 –
	National Party (NPA) [Country Party until 1975, National Country Party from 1975 to 1982]	1943 –
	One Nation (ON)	1998 – 2001
	United Australia Party (UAP)	1943

Austria

Left	Communist Party (KPÖ)	1945 – 1962
	The Greens – The Green Alternative (Greens) [Green Alternative until 1993]	1986 –
	Social Democratic Party (SPÖ)	1945 –
	Peter Pilz List (PILZ)	2017
Right	Alliance for the Future of Austria (BZÖ)	2006 –
	Freedom Party (FPÖ)	1945 –
	Liberal Forum (LIF)	1994 – 1999, 2008
	NEOS	2013 –
	Team Frank Stronach (FRANK)	2013
Right, Catholic	People's Party (ÖVP)	1945 –

Belgium

Left	Communist Party (KPB/PCB)	1946 – 1954, 1961 – 1981
	Ecolo (Francophone) [coded “Left” for the period from 1991 onward]	1981 –
	Francophone Socialist Party (PS)	1978 –
	Green! (Flemish) [Agalev until 2003, coded “Left” for the period from 1991 onward]	1981 –
	Socialist Party (BSP/PSB)	1946 – 1977
	Social Progressive Alternative (SP.a) [Flemish Socialist Party (SP) until 2001, electoral alliance with SPIRIT from 2002 to 2008]	1978 –
	Walloon Rally (RW)	1968 – 1978
Center	Ecolo (Francophone) [coded “Center” for the period before 1991]	1981 –
	Francophone Democratic Front (FDF) [includes	1968 – 1981

	electoral alliance with Pluralistic and Democratic Liberal Party (PLDP) in 1974]	
	Green! (Flemish) [Agalev until 2003, coded “Center” for the period from 1991 onward]	1981 –
	Liberal/Socialist cartel (LSC)	1954 – 1958
Center, Catholic	Catholic Party (CVP/PSC)	1946 – 1965
	Christian Democratic and Flemish (CD&V) [Christian People's Party (CVP) until 2001, includes electoral alliance with N-VA in 2007]	1968 –
	Humanist Democratic Center (CDH) (Francophone) [Christian Social Party (PSC) until 2002]	1968 –
Right	De Decker's List (LDD) (Flemish)	2007 -- 2010
	Flemish Interest (VB) (Flemish) [Flemish Block (VB) until 2004]	1991 –
	National Front (FN) (Francophone)	1995, 2003 –
	New Flemish Alliance (N-VA) [People's Union (VU) until 2001]	1949, 1954 – 2003, 2010 -
	Open Flemish Liberals and Democrats (VLD) [Flemish Party for Liberty and Progress (PVV) until 1992, Flemish Liberals and Democrats (VLD) from 1992 to 2007]	1971 –
	Party for Liberty and Progress (PVV/PLP) [Liberal Party (LP/PL) until 1961]	1946 – 1968
	Reform Movement (MR) (Francophone) [PLP until 1976, Party for Reforms and Freedom in Wallonia from 1976 to 1979 (PRLW), Liberal Reform Party (PRL) from 1979 to 2002, includes Brussels Liberal Party (PLB), electoral alliance with FDF since 1995 and Movement of Citizens for Change (MCC) since 1999]	1971 –

Canada

Left	Bloc Québécois (BQ)	1993 –
	Green Party (GPC)	2004 –
	New Democratic Party (NDP) [Cooperative Commonwealth Federation (CCF) until 1961]	1945 –
Center	Liberal Party (LIB)	1945 –
Right	Conservative Party (CP) [Progressive Conservative Party (PC) until 2003]	1945 –
	Canadian Alliance (CA) [Reform Party until 2000]	1988 – 2000
	Ralliement des Créditistes (RC)	1965 – 1968
	Social Credit Party (SC)	1945 – 1965, 1972 – 1979

Denmark

Left	Common Course (FK)	1987
	Communist Party (DKP)	1945 – 1957, 1973 – 1977
	Left Socialists (VS)	1975 – 1984
	Social Democrats (SD)	1945 –
	Socialist People's Party (SF)	1960 –
	Unity List [Red-Green Alliance] (EL)	1994 –
	The Alternative	2015
Center	Center Democrats (CD)	1973 – 1998
	Justice Party (DR)	1947 – 1960, 1973, 1977 – 1979
	Liberal Alliance (L) [New Alliance (NA) until 2008]	2007 –
	Liberal Center (LC)	1966
	Liberal Party [Venstre] (V) [coded “Center” for the period before 1979]	1945 –
	Radical Liberal Party [Social Liberal Party] (RV)	1945 –
Center, Christian	Christian Democrats (KD) [Christian People's Party (KrF) until 2003]	1971 – 1990, 1998 – 2001
Right	Conservative People's Party (KF)	1945 –
	Danish People's Party (DF)	1998 –
	Independents' Party (U)	1953 – 1964
	Liberal Party [Venstre] (V) [coded “Right” for the period from 1979 onward]	1945 –
	Progress Party (FrP)	1973 – 1998
Right, Christian	Danish Union (DS)	1945

Finland

Left	Democratic Alternative (DEVA)	1987
	Finnish People's Democratic Union (SKDL)	1945 – 1987
	Green League (VIHR)	1987 –
	Left-Wing Alliance (VAS)	1991 –
	Social Democratic League of Workers and Smallholders (TPSL)	1962 – 1966
	Social Democratic Party (SDP)	1945 –
Center	Center Party (KESK) [Agrarian League (ML) until 1965, includes electoral alliance with LKP in 1983]	1945 –
	Liberal People's Party (LKP) [National Progressive Party (ED) until 1951, Finnish People's Party (KP) from 1951 to 1965]	1945 – 1979
	Swedish People's Party (SFP/RKP)	1945 –

	True Finns (PS) [Rural Party (SMP) until 1995]	1962, 1970 – 1991, 2007
Right	National Coalition (KOK)	1945 –
Right, Christian	Christian Democrats (KD) [Christian League (SKL) until 2001]	1972 –
France		
Left	Communist Party (PCF)	1945 –
	Far Left (EXG)	1997 –
	The Greens (LV) [includes ecologist movement that contested elections before the party's formal creation in 1984]	1978, 1993 –
	Other Ecologists (AE)	1993 – 1997
	Other Left (DVG)	1997, 2007
	Socialist Party (PS) [includes electoral alliance with RSP from 1967 to 1968, includes electoral alliance with Left Radicals (MRG until 1996, PRS from 1996 to 1998, PRG from 1998 onward) since 1972]	1945 –
	Unified Socialist Party (PSU)	1962 – 1973
	Left Front (FDG)	2012 –
	Unbowed France (FI)	2017
Center	Center Democracy and Progress (CDP)	1973
	Democratic Center (CD)	1967 – 1968
	Democratic Movement (MoDem) [Union for French Democracy (UDF) until 2007, coded “Center” for the period from 2002 onward]	1978 –
	Radical Socialist Party (RSP) [includes electoral alliance with Democratic and Socialist Union of the Resistance (UDSR) from 1946, includes Rally of the Republican Lefts (RGR) from 1946 to 1956]	1945 – 1962
	Reformers' Movement (MR)	1973
	The Republic Onwards (REM)	2017
Center, Christian	Popular Republican Movement (MRP)	1945 – 1962
Right	Conservatives/Moderates (DVD)	1945 – 1967, 1973, 1981, 1988 –
	National Front (FN)	1986 –
	New Center (NC)	2007 –
	Republican Party (PR) [Independent Republicans (FNRI) until 1977]	1962 – 1973
	Democratic Movement (MoDem) [Union for French Democracy (UDF) until 2007, coded “Right” for the period before 2002]	1978 –
	Union for a Popular Movement (UMP) [various	1951 –

	Gaullist parties—starting with Gaullist Union (UG) in Nov. 1946—until 1976, Rally for the Republic (RPR) from 1976 until 2002, briefly called Union for the Presidential Majority in 2002]	
	Union for the Defense of Traders and Artisans [Poujadists] (UDCA)	1956
	The Republicans [LR]	2017
	Union of Democrats and Independents (UDI)	2017

Note: The data for years prior to 1993 cover Metropolitan France only, meaning that data for French departments outside Europe proper are excluded. From 1993 onward, however, all departments are included in the data.

Germany

Left	Alliance 90/The Greens (Greens) [The Greens until 1993]	1983 –
	Communist Party (KPD)	1949 – 1953
	Left Party (Left) [Party of Democratic Socialism (PDS) until 2005, Left Party/PDS from 2005 to 2007]	1990 –
	Social Democrats (SPD)	1949 –
Center	All-German Bloc/League of Expellees and Deprived of Rights (GB/BHE)	1953 – 1957
	Free Democrats (FDP) [coded “Center” for the period before 2005]	1949 –
Right	Economic Reconstruction League (WAV)	1949
	Free Democrats (FDP) [coded “Right” for the period from 2005 onward]	1949 –
	German Party (DP)	1949 – 1957
	National Democratic Party (NDP)	1965 – 1969
	Alternative for Germany (AfD)	2013 --
Right, Catholic	Bavarian Party (BP)	1949
	Center Party (DZP)	1949
Right, Christian	Christian Democratic Union/Christian Social Union (CDU/CSU)	1949 –

Note: The data for Germany are technically for the Federal Republic of Germany (FRG). Therefore, for years prior to 1990, the data are limited to West Germany. For 1990 onward, the data are for a unified Germany.

Greece

Left	Alliance of Progressive and Left-Wing Forces (APLF) [electoral alliance between KKE-es, EDA, and others]	1977
	Coalition of the Radical Left (SYRIZA) [coalition of	1989 –

	the Left and Progress (SYN) before formation of broader electoral alliance in 2004]	
	Communist Party (KKE)	1974 – 1985, 1993 –
	Communist Party, Interior (KKE-es)	1974 – 1977
	Democratic Party of Working People (DKEL)	1956 – 1958
	Democratic Social Movement (DIKKI)	1996 – 2000
	Ecologist Greens (OP)	2009 –
	Pan-Hellenic Socialist Movement (PASOK)	1974 –
	United Democratic Left (EDA) [Democratic Front (DP) until 1951, includes electoral alliance, Pandemocratic Democratic Front (PAME), with KAE in 1961]	1950 – 1977
	United Left (UL) [electoral alliance of EDA, KKE, KKE-es]	1974
	Democratic Left (DIMAR)	2012 –
	The River [To Potami] (TP)	2015 –
	Union of Centrists [Enosi Kentroon]	2015 --
	<hr/>	
Center	Democratic Union (DE) [electoral alliance between DKEL, EDA, EPEK, KAE, LF, PDE, and others]	1956
	Farmers and Workers' Party (KAE) [Farmers' and Workers' Rally (SAE) until 1956]	1950, 1956 – 1958
	Georgios Papandreou Party (KGP) [Democratic Socialist Party (DSK) until 1950]	1946 – 1951
	Liberal Democratic Union (PDE)	1956
	Liberal Party (LF)	1946 – 1958
	National Party (EKE)	1946 – 1950
	National Political Union (EPE) [electoral alliance between EEK, KGP, KVF, and others]	1946
	National Progressive Center Union (EPEK)	1950 – 1958
	National Reconstruction Front (MEA) [National Unity Party (EEK) until 1950]	1946 – 1950
	Progressive Agrarian Democratic Union (PADE) [electoral alliance between DKEL, EPEK, KAE, and KP]	1958
	Union of the Democratic Center (EDIK) [Center Union (EK) until 1967, Center Union – New Forces (EK-ND) from 1974 to 1976, includes electoral alliance with KP in 1961]	1961 – 1977
	Union of Parties (EK) [electoral alliance between EPEK, LF, and Socialist Party—Union of Popular Democracy (SK-ELD)]	1952
	Venzelist Liberal Party (KVF)	1946
	<hr/>	
Right	Greek Rally (ES)	1951 – 1952
	National Liberal Party (EFK)	1946

	National Radical Union (ERE) [includes electoral alliance with KP in 1964]	1956 – 1964
	Nationalist Party (KE) [includes electoral alliance, Independent Political Front (PAP), with Greek Renaissance Party (KEA) in 1950]	1946 – 1950
	New Democracy (ND)	1974 –
	People's Party (LK)	1946 – 1951, 1956 – 1958
	Political Spring (POLAN)	1993 – 1996
	Progressive Party (KP)	1958, 1963
	Union of the People's Parties (ELK) [electoral alliance between KE and LK]	1958
	United Patriotic Party (IPE) [electoral alliance between LK, MK, EFK, and others]	1946
	Independent Greeks (AE)	2012 –
	People's Association – Golden Dawn (LS-CA)	2012 --
Right, Christian	Popular Orthodox Rally (LAOS)	2004 –

Note: There are no data for Greece for the period from 1967 to 1973 because it was governed by a military junta during this time.

Ireland

Left	Clann na Poblachta (CNP)	1948 – 1954
	Democratic Left (DL)	1992 – 1997
	Green Party (Greens)	1997 – 2007
	Labour Party (LAB)	1944 –
	National Labour Party (NLP)	1944 – 1948
	Sinn Féin (SF) [Sinn Féin II, Sinn Féin III]	1957 – 1961, 1997 –
	United Left Alliance (ULA)	2011
	Workers' Party (WP)	1982 – 1989
	Anti-Austerity Alliance – People Before Profits [Solidarity – People Before Profit]	2016
Center	Fianna Fáil (FF)	1944 –
Right	Clann na Talmhan (CNT)	1944 – 1957
	Fine Gael (FG)	1944 –
	Progressive Democrats (PD)	1987 – 2007

Italy

Left	5 Star Movement (M5S)	2013 -
	Bonino List (LB) [Pannella List until 1999]	1994, 2001
	Communist Party (PCI) [includes electoral alliance	1946 – 1987

	with Party of Proletarian Unity for Communism (PdUP) in 1983]	
	Communist Refoundation Party (PRC)	1992 – 2006
	Democratic Party (PD)	2008 -
	Democrats of the Left (DS) [Democratic Party of the Left (PDS) until 1998]	1992 – 2001
	Federation of the Greens (Greens) [Green List until 1991, includes electoral alliance, the Sunflower, with PSDI in 2001]	1987 – 2006
	Left and Freedom [Left Ecology and Freedom]	2013
	The Olive Tree [electoral alliance between DL, DS, and others]	2006
	Party of Italian Communists (PdCI)	2006
	Popular Democratic Front (FDP) [electoral alliance between PCI and PSI]	1948
	Radical Party (PR)	1979 – 1987
	Rose in the Fist (RnP) [electoral alliance between PR and Social Democrats (SDI)]	2006
	Socialist Party (PSI) [Socialist Party of Proletarian Unity (PSIUP) until 1947]	1946 – 1963, 1972 – 1994
	Socialist Party of Proletarian Unity (PSIUP)	1968
	Unified Socialist Party (PSU)	1968
<hr/>		
Center	Civic Choice (SC)	2013
	Democratic Socialist Party (PSDI)	1948 – 1963, 1972 – 1992
	Italian Renewal/Dini List (RI)	1996
	Italy of Values/Di Pietro List (IdV)	2001 – 2008
	Republican Party (PRI) [includes Republican Democratic Concentration (CDR) in 1946]	1946 – 1948, 1968 – 1992
<hr/>		
Center, Catholic	Democratic Center Union (UDC) [Christian Democratic Center—United Christian Democrats (CCD-CDU) until 2002]	1996 –
	The Daisy [DL]	2001
	Popular Party (PPI) [Christian Democracy (DC) until 1994]	1946 – 1996
	Segni Pact (PS)	1994
<hr/>		
Right	Common Man Front (UQ)	1946
	Forza Italia (FI)	1994 – 2006
	Liberal Party (PLI) [National Democratic Union (UDN) in 1946, National Bloc (BN) in 1948]	1946 – 1972, 1983 – 1992
	Lega Nord (Northern League) (LN) [Rebranded as Lega in 2018]	1992 – 1946 – 1958
	Monarchist National Party (PNM)	1948 – 2006
	National Alliance (AN) [Italian Social Movement (MSI) until 1972, Italian Social Movement–	

National Right (MSI-DN) from 1972 to 1995]	2008 -
People of Freedom (PDL)	1958
Popular Monarchist Party (PMP)	

Note: Beginning in 1994, Italy implemented a new electoral system that combined a first-past-the-post system (used for 75% of the seats) with a proportional system (used for remaining 25% of the seats). The country eventually returned to a party-list proportional representation system in 2005. Therefore, for the elections in 1994, 1996, and 2001, the data for vote shares only reflect the results for the proportional component of the mixed electoral system while the data for seat shares represent the combined results for both components.

Japan

Left	Communist Party (JCP)	1946 – 1952, 1955 –
	Democratic Party of Japan (DP)	1996 –
	Democratic Socialist Party (DSP)	1960 – 1993
	Left-Wing Socialist Party (LWSP)	1952 – 1955
	Right-Wing Socialist Party (RWSP)	1952 – 1955
	Social Democratic Party (SDP) [Socialist Party (JSP) until 1991]	1946 – 1949, 1958 –
	Constitutional Democratic Party of Japan (KDP/CDP)	2017
Center	Clean Government Party [Komeitō] (CGP)	1967 – 1993, 2000 –
	Japan New Party (JNP)	1993
	New Sakigake Party	1993
	People's Cooperative Party (PCP) [Japan Cooperative Party (CO-OP) until 1947]	1946 – 1949
	Tomorrow Party of Japan [TPJ]	2012
Right	Hatoyama Liberal Party (HLP)	1953
	Japan Democratic Party (JDP)	1955
	Japan Renewal Party [Innovation Party] (JRP)	1993
	Japan Restoration Party [JRP]	2012
	Liberal Democratic Party (LDP)	1958 –
	Liberal Party (LP) [Japan Liberal Party until 1948, Democratic Liberal Party from 1948 to 1950]	1946 – 1955, 2000
	New Frontier (NFP)	1996
	New Liberal Club (NLC)	1976 – 1983
	Progressive Reform Party (PRP) [Japan Progressive Party (JPP) until 1947, Japan Democratic Party (JDP) from 1947 to 1950, People's Democratic Party (PDP) 1950 to 1952]	1946 – 1953
	Your Party (YP)	2009 – 2012
	Party of Hope [Kibo no To] (PH)	2017

Note: Beginning in 1994, Japan introduced a new electoral system for the lower house of the Diet. The new system combines plurality voting in single-member districts (for 300 of the seats) with regional, closed-list proportional

representation (for the remaining 200 seats, reduced to 180 seats in 2000). For elections occurring after this change, data for vote shares are based on the arithmetic means of the results for the two systems. For instance, in the 1996 election, the Communist Party (JCP) received 12.6% of the votes in the single-member districts and 13.1% of the votes in the regional proportional component. The arithmetic mean for JCP is thus $12.6 \cdot 300/500 + 13.1 \cdot 200/500$, which equals 12.8%. Data for the seat shares represent the simple sums of the results for both components of the electoral systems.

Luxembourg

Left	Communist Party (KPL)	1945 – 1989
	Green Alternative Party (GAP)	1984 – 1989
	Green List, Ecological Initiative (GLEI)	1989
	The Greens (Greens)	1994 –
	Independent Socialist Party (PSI)	1979 – 1984
	The Left (Left)	1999, 2009
	Social Democratic Party (SDP)	1974 – 1979
	Socialist Workers' Party (LSAP)	1945 –
Center	Democratic Party (DP) [Patriotic and Democratic Group (GPD) prior to 1951, Democratic Group (GDL) from 1951 to 1955]	1945 –
	Popular Independent Movement (MIP)	1964
Right	Alternative Democratic Reform Party (ADR) [Action Committee 5/6ths Pensions for Everyone until 1989, Action Committee 5/6ths from 1989 to 1992, Action Committee for Democracy and Pensions Justice from 1992 to 2006]	1989 –
	National Movement Luxembourg for the Luxembourgers (NB)	1989 – 1994
Right, Catholic	Christian Social Party (CSV)	1945 –

Netherlands

Left	Animal Rights Party [PvdD]	2017
	Communist Party (CPN)	1946 – 1972, 1981
	Democratic Socialists '70 (DS70)	1971 – 1972
	Denk	2017
	GreenLeft (GL)	1989 –
	Labour Party (PvdA)	1946 –
	Pacifist Socialist Party (PSP)	1963 – 1967, 1981 – 1982
	Radical Political Party (PPR)	1972, 1981
Socialist Party (SP)	1998 –	
Center	50Plus	2017

	Democrats '66 (D66)	1967 –
	General Association of Elderly People (AOV)	1994
Center, Catholic	Catholic People's Party (KVP)	1946 – 1972
Center, Christian	Christian Democratic Appeal (CDA)	1977 –
	Christian Historical Union (CHU)	1946 – 1972
	Christian Union (CU)	2002 –
	Reformed Political Federation (RPF)	1998
Right	Center Democrats (CD)	1994
	Farmers' Party (BP)	1963 – 1967
	List Pim Fortuyn (LPF)	2002 – 2003
	Party for Freedom (PVV)	2006
	People's Party for Freedom and Democracy (VVD)	1946 –
	[Freedom Party (PvdV) until 1948]	
	Political Reformed Party (SGP)	1946 – 1981, 2012 -
Right, Catholic	Catholic National Party (KNP)	1952
Right, Christian	Anti-Revolutionary Party (ARP)	1964 – 1972

New Zealand

Left	Alliance Party (ALL) [electoral alliance between DP, Greens, NLP, and Mana Motuhake]	1993 – 1999
	Green Party (Greens)	1999 –
	Labour Party (LAB)	1943 –
	Values Party (VP)	1972 – 1978
Center	Democratic Party (DP) [Social Credit Political League (SC) until 1982, Social Credit Party from 1982 to 1983]	1954 – 1987
	Māori Party (Māori)	2005 – 2008
	New Zealand First (NZF)	1999 –
	United Future (UF)	2002 – 2005
Right	Association of Consumers and Taxpayers (ACT)	1996 – 2002, 2008
	National Party (NP)	1943 –
	Conservative Party [New Conservative Party after 2017]	2014
Right, Christian	Christian Heritage Party (CHP) [includes electoral alliance, Christian Coalition (CC), with Christian Democrats (CD) in 1996]	1993 – 1999

Note: After winning approval in a 1993 referendum, New Zealand adopted a form of mixed-member proportional representation as its electoral system. In following elections, data for vote shares are based on the results for the party-vote component of each election.

Norway

Left	Communist Party (NKP)	1945 – 1961
	Labor Party (DnA)	1945 –
	Socialist Left Party (SV) [Socialist People's Party (SF) until 1975]	1961 –
	Environmental Party of the Greens (MDG)	2017 -
Center	Center Party (Sp) [Farmers' Party (Bp) until 1959]	1945 –
	Liberal Party (Venstre) (V)	1945 –
	Joint Non-Socialist Lists (NSL) [local electoral alliance between H, KrF, Sp, and V]	1949, 1957 – 1961, 1969 – 1981
Center, Christian	Christian People's Party (KrF)	1945 –
Right	Conservative Party [Høyre] (H)	1945 –
	Progress Party (FrP) [Anders Lange's Party (ALP) until 1977]	1973, 1981 –

Portugal

Left	Communist Party – Ecologist Party – The Greens (PCP-PEV) [Communist Party (PCP) until 1987, United Democratic Coalition (CDU) from 1987 to 1995]	1975 –
	Democratic Movement (MDP)	1975, 1979 – 1985
	Ecologist Party – The Greens (PEV)	1983 – 1985
	Left Bloc (BE)	1999 –
	Socialist Party (PS)	1975 –
	United People Alliance (APU) [electoral alliance between MDP and PCP in 1979 and 1980; electoral alliance between MDP, PCP, and PEV in 1983 and 1985]	1979 – 1985
Center	Democratic Alliance (AD) [electoral alliance between CDS-PP, PSD, and PPM in 1979 and 1980]	1979 – 1980
	Democratic Renewal Party (PRD)	1985 – 1987
	Social Democratic Party (PSD) [Popular Democratic Party (PPD) until 1976, coded “Center” for the period before 2002]	1975 –
Right	Popular Monarchist Party (PPM)	1979 – 1980
	Social Democratic Party (PSD) [Popular Democratic Party (PPD) until 1976, coded “Right” for period from 2002 onward]	1975 –
Right, Catholic	Center Social Democrats – Popular Party (CDS-PP) [Center Social Democrats (CDS) until 1993]	1975 –

Note: There are no data for Portugal prior to 1975 because the country was under authoritarian rule.

Spain

Left	Catalonian Left Republicans (ERC)	2004, 2015 -
	Socialist Party (PSOE)	1977 -
	United Left (IU) [Communist Party (PCE) before formation of broader electoral alliance in 1986]	1977 -
	Podemos [We Can] (P)	2015 -
	In Common we Can [En Comú Podem] (ECP)	2015 -
	It is Time [Compromis – Podemos – És el Moment] (EeM)	2015 -
Center	Convergence and Unity (CiU)	1979 -
	Democratic and Social Center (CDS)	1982 - 1989
	Democratic Convergence of Catalonia (CDC)	1977
	Union of the Democratic Center (UCD)	1977 - 1982
	Citizens -- Party of (C-PC)	2015 --
Right	Popular Party (PP) [Popular Alliance (AP) until 1986, Popular Coalition (CP) from 1986 to 1989]	1977 -

Note: There are no data for Spain prior to 1977 because the country was under authoritarian rule.

Sweden

Left	Green Party (MP)	1988 -
	Left Party (V) [Communist Party (K) until 1967, Left Party – Communists (VKP) from 1967 to 1990]	1944 -
	Social Democrats (S)	1944 -
Center	Center Party (C) [Farmers' League (BF) until 1957]	1944 -
	People's Party – the Liberals (FP)	1944 -
Center, Christian	Christian Democrats (KD) [Christian Democratic Unity (KDS) until 1996]	1988 -
Right	Moderate Party (M) [Rightist Party (HP) until 1969]	1944 -
	New Democracy (NyD)	1991
	Sweden Democrats (SD)	2006 -

Switzerland

Left	Communist Party (PdA/PST)	1947 – 1979
	Green Party (GPS/PES)	1987 –
	Social Democrats (SPS/PSS)	1943 –
Center	Democratic Party (DP/PD)	1943 – 1959
	Green Liberal Party (GLP/PVL)	2011-
	Independents' Party (LdU/AdI)	1943 – 1991
	Swiss People's Party (SVP/UDC) [Farmers, Traders and Citizens' Party (BGB/PAI) until 1971, coded "Center" for the period before 1991]	1943 –
Center, Catholic	Christian Democratic People's Party (CVP/PDC) [Catholic Conservative Party until 1957, Conservative Christian Social Party from 1957 to 1970, coded "Center, Catholic" for the period from 1971 onward]	1943 –
Center, Christian	Evangelical People's Party (EVP/PEV)	1971 – 1983, 2003 –
Right	Conservative Democratic Party (BDP/PBD)	2011
	Freedom Party (FPS/PSL) [Automobile Party (AP/PA) until 1994]	1987 – 1995
	Liberal Party (LPS/PLS)	1943 – 2003
	Radical Democratic Party (FDP/PRD)	1943 –
	Republican Movement (REP)	1971 – 1975
	Swiss Democrats (SD/DS) [National Action (NA/AN) until 1990]	1971 – 1975, 1983 – 1995
	Swiss People's Party (SVP/UDC) [Farmers, Traders and Citizens' Party (BGB/PAI) until 1971, coded "Right" for the period from 1991 onward]	1943 –
Right, Catholic	Christian Democratic People's Party (CVP/PDC) [Catholic Conservative Party until 1957, Conservative Christian Social Party from 1957 to 1970, coded "Right, Catholic" for the period from 1971 onward]	1943 –

Note: Data for the vote shares only reflect the results for the National Council, the lower house of the Federal Assembly. Data for the seat shares represent the combined results for both chambers of the Federal Assembly.

United Kingdom

Left	Labour Party (LAB)	1945 –
Center	Liberal Party (LIB)	1945 – 1979
	Liberal Democrats (LIB DEM) [Social Democratic	1983 –

	Party (SDP) – Liberal Alliance until 1988]	
	Scottish National Party (SNP)	1974, 1997, 2015 -
Right	Conservative Party (CON)	1945 –
	National Liberal Party (NLP)	1945 – 1950
	UK Independence Party (UKIP)	2005 - 2015

United States

Center	Democratic Party (DEM)	1944 –
Right	Republican Party (GOP)	1944 –

Note: The percentages of total votes are based on the results of presidential elections. For each mid-term election, data from the prior presidential election are used for the vote percentages. Moreover, the party that holds the presidency is considered to be the party in government. The seat shares represent the combined results for both chambers of Congress.