

APPENDIX A: INDICATORS OF INSTITUTIONS FOR DETERMINING ECONOMIC SYSTEMS

Derivations

A	B	
<u>Product market</u>		
1	L	D Regulation of product market
2	L	P Protection of patent rights
3	L	P Good legal environment for markets
4	LS	PD Barriers to starting new businesses
5	LSX	P Social partnership of capital and labor
6	S	D Ratio of government subsidies to GDP
7	S	D Intersectoral grants for R & D
8	S	D Foreign trade barriers
9	XL	D Freedom to set prices
10	X	D Product market competition
11	X	D Effectiveness of antitrust laws
12	X	PD Presence of business clusters
<u>Labor market</u>		
1	S	D Coverage of collective bargaining agreements
2	L	D Centralization of largest peak union organizations
3	L	D Power of workplace representative
4	L	D Legal protection: workers, employment
5	L	D Legal protection: labor bargaining rights
6	X	D Coordination of wage negotiations
7	XS	D Strength of vocational training system
8	X	D Level of economy where wages bargained
<u>Production and business sector</u>		
1	S	P Widespread firm ownership
2	S	P Importance of large manufacturing firms
3	L	P Power of peak organizations
4	L	P Shareholder rights
5	L	P Creditor rights
6	L	P Significant worker role in firm's decision
<u>Government sector</u>		
1	S	PD Govt. direct share of fixed investment
2	S	D Govt. share of total consumption
3	S	D Ratio of govt. domestic transfers to GDP
4	S	P Direct govt. share of total employment
5	S	P State enterprise share of total employment
6	S	D Share of R & D in government sector
7	L	D Coverage of social security system
<u>Financial sector</u>		
1	L	D Central bank independence
2	L	PD Restriction on bank activities
3	L	D Openness of external capital flow
4	S	PD Comprehensiveness of accounting standards
5	S	P Bank concentration
6	S	D Relative size of financial system
7	S	D Stock market activity/bank activity

Notes: Sources and exact meaning of the data are discussed in Pryor (2005a). Derivations A: L = based on legal definition; S = based on statistical information; X = designation by expert opinion. Derivations B: D = based on distribution institutions; P = based on property institutions.

APPENDIX B: VARIABLES TESTED FOR CORRELATION WITH HAPPINESS

Personal/Psychological

Achievement motivation: Percentage of adults saying that the ability to achieve something is important in a job. Data from Inglehart et al. (2004), variable C018.

Alcohol use: Ratio of liters of alcohol purchased to population 15 and over, averaged for 1994-96. Data from OECD (2000 and 2007).

Belief in control versus fate: Percentage of adults in the 1990 and 2000 interview waves who believe that people have free choice and control over their lives, in contrast to those who believe that they have no real effect on what happens to them. Data from Inglehart et al. (2004), variable A173.

Importance of friendships: Percentage of adults saying having friends is very important in their lives. Data from Inglehart et al. (2004), variable A002.

Individualism: An average of two standardized (mean = 0, standard deviation = 1) measures of individualism which are significantly related to each other. The first comes from Hofstede (2001: 500), using a 1967-73 sample of executives; the second was calculated by Harry C. Triandis for the 1980s and is reported in Diener, Diener, and Diener (1995).

Intolerance: Percentage of people who would not like to have as neighbors, people of a different race, Muslims, immigrants, or Jews. Data from Inglehart et al., 2004. Variables A125, A128, A129, A133.

Materialism: Percentage of people in the 1990 and 2000 waves who were rated as having materialist orientation, based on their answers to questions relating to national policy goals. Data come from Inglehart et al. (2004), variable Y002.

Murder rate. Murders per 100,000 population, 1990 – 2000. Data from OECD (2000 and 2007). WHO (2008).

Religiousness: Average of three percentages: those who attend religious services more than once a month; those who claim to be religious; and those who believe in life after death. Data from Inglehart et al. (2004), variables F028,F034, and F051.

Social participation: Average of 1990 and 2000 waves of percentage of adults in each country carrying out unpaid voluntary work in 14 different organization. Data from Inglehart et al.(2004) and cover variables A081-A092, A094,A096.

Suicide: Suicides per 100,000 population averaged for each country from 1990 – 2000. Data from OECD (2000 and 2007).

Trust: Averages of 1990 and 2000 waves of percentage of adults in each country saying that, generally speaking, most people can be trusted. Data from Inglehart et al. (2004), variable A165.

Uncertainty avoidance: A psychological measure from Hofstede (2001: 500), who uses a sample from 1967-73.

Work values: An average of two standardized (mean = 0, standard deviation = 1) measures of work values, both from Inglehart et al. (2004), which are significantly related to each other. The first (variable C041) is the percentage of people who strongly agree or disagree with the statement “Work should always come first, even if it means less spare time.” The second (variables A003 and A005) is the percentage of people agreeing with the statement “Leisure is important in my life,” subtracted from the percentage of people agreeing with the statement “Work is important in my life.” For the six countries in

which no data were available of characteristic C041, only the second characteristic was used.

Health

Child immunization: Average percentage of children, 12-23 months, who have been immunized for measles and DPD, 1990 through 2000. Data from World Bank (2008).

Infant mortality: Average for 1993 -1997. Data from World Bank (2008).

Life expectancy at birth: Average for 1990 – 2000. Data from World Bank (2008).

Mortality of children under 5: Average for 1993 -97. Data from World Bank (2008).

Subjective health: Percentage of adult population rating current state of health as good or very good. Data from Inglehart et al. (2004), variable A009.. Greece is estimated as average of Italy, Portugal, and Spain, the other nations with the same economic system.

Demographic

Aged population: Percentage of population over 64 in 1995. Data from World Bank (2008).

Fertility: The number of children per woman averaged for each country from 1990-2000; Data from World Bank (2008).

Marriage rate: Marriages as a percentage of population aged 15 through 64 averaged for each country for 1993-1997. Data on marriages come from United Nations (2000, 1998); data on population aged 15-64 from OECD (2004).

Percentage of adult population with a university degree. Averages for 1994-96. Data from OECD (2000). .

Percentage of adult population with only a primary or secondary education: Averages for 1994-96. Data from OECD (2000).

School years expectancy: Averages for 1994-96 averages of population from 25 through 64. Data OECD (2000).

Urbanization: Data are for 1995 and come from World Bank (2008).

Economic conditions

GDP per capita: Average for 1993-97 in constant international dollars. Data from World Bank (2008).

GDP per capita average annual growth: Calculated from a regression of value per capita GDP in constant local currency for 1985-2000. Data from World Bank (2008)

GDP stability of growth: Coefficients of determination from regressions to determine average annual growth of per capita GDP for 1985-2000. Data from World Bank (2008).

Income inequality: For all but three countries, an average of the Gini coefficients of size-adjusted family disposable income from 1990-2000 from the Luxembourg Income Study (2008). For Japan and Portugal, Data from Brandolini and Smeeding (n.d.), respectively for 1992 and 2000. For New Zealand data from Blaiklock, et al. (2002). Data for Japan and Portugal are based on the same methodology as the LIS data; the New Zealand data appear roughly comparable as well.

Inflation: Average annual rise in cost of living from 1985-2000. Data for Germany (West only) from Statistisches Bundesamt (2005: 512); for all other countries, from World Bank (2008).

Pollution: Metric tons of SO₂ and NO_x per million persons per square kilometer in 1995. Pollution data from World Resources Institute (2008); population and area data calculated from population and density data from World Bank (2008).

Regulatory quality: A composite series calculated by Kaufmann, Kraay, and Mastruzzi (2003). Ratings for 1996, 1998, and 2000 are averaged with the 1996 rating given a triple weight.

Shadow economy: Ratios of the shadow economy to the GDP, calculated from six series of the shadow economy (five based on “cash approach,” one based on “electricity approach,” all for 1990-2000. Data from Schneider and Enste (2002: 35, 38). For each series, an average was calculated for the countries for which data were available for all six series, and each country was then calculated as a percent of this average. These percentages were then averaged across all six series and multiplied by the average of the average for the six series.

Strikes and lockouts: Days lost per 1000 workers for 1993-98. Data from International Labour Office (2002, Tables 2A and 9C). For Greece, the days lost were estimated from number of workers participating in strikes and lockouts and the average days lost per worker in strikes and lockouts in Italy, Portugal, and Spain, the other nations with the same economic system. For the U.S. the data were adjusted upward by 25 percent to take into account strikes and lockouts involving less than 1000 workers.

Unemployment: Average unemployment rates for 1990-2000. Data from World Bank (2008).

Political conditions

Civil rights: Average for 1990-2000 of the civil liberties scores of Freedom House <www.freedomhouse.org>, but with the scale reversed so that a high score represents high levels of civil liberties.

Confidence in government. The proportion of adults in the 1990 and 2000 interview waves who have “quite a lot” or a “great deal” of confidence in police, parliament, and government. Data from Inglehart et al. (2004), variables E074-E076, and E079.

Control of corruption: A composite series calculated by Kaufmann, Kraay, and Mastruzzi (2003). Ratings for 1996, 1998, and 2000 are averaged with the 1996 rating given a triple weight.

Federalism (in contrast to a unitary state) These data cover the period 1990-2000, with 1 designating a federal state. Data from Wikipedia <http://en.wikipedia.org/wiki/Unitary_state>.

Government effectiveness. A composite series calculated by Kaufmann, Kraay, and Mastruzzi (2003). Ratings for 1996, 1998, and 2000 are averaged with the 1996 rating given a triple weight .

Political stability. A composite series calculated by Kaufmann, Kraay, and Mastruzzi (2003). Ratings for 1996, 1998, and 2000 are averaged with the 1996 rating given a triple weight.

Proportional representation in the lower parliamentary house: Data from Persson and Tabellini (2003: 84-7).

Rule of law. A composite series calculated by Kaufmann, Kraay, and Mastruzzi (2003). Data for 1996, 1998, and 2000 are averaged with the 1996 rating given a triple weight.

Voice in, and accountability, of government. A composite series calculated by Kaufmann, Kraay, and Mastruzzi (2003). Ratings for 1996, 1998, and 2000 are averaged with the 1996 rating given a triple weight.

Social

Gender inequality: The gender empowerment measure from United Nations Development Programme (1998: 134-35) for the mid 1990s.

Ethnic heterogeneity: This series is one minus a Herfindahl index of the shares of different ethnic groups, in most cases for the 1990s. Data from Alesina et al. (2003).

Linguistic heterogeneity: One minus a Herfindahl index of the shares of people speaking different languages in 2001. Data from Alesina et al. (2003).

Religious heterogeneity. One minus a Herfindahl index of the shares of people with different religions in 2001. Data from Alesina et al. (2003).

Social/power hierarchy: A psychological measure of the distance between people with different degrees of power. Data from by Hofstede (2001: 500) using a 1967-73 sample.

Other

Historically Protestant. Percentage of Protestants in 1900 and 1970. A strongly Protestant population was rated 1; but if the population was roughly evenly split in the two years, this was counted as 0.5. Data from Barrett (1982).

Population size: Logarithm of population in 1995. Data from World Bank (2008).

Population density: People per square kilometer in 1995. Data from World Bank (2008).

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