DETERMINANTS OF PEACE: A CROSS-COUNTRY ANALYSIS

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Abstract

In this study, we discover the variables susceptible to affect the peace. To arrive there, we made resort to the analysis in cross-sectional. We find that the institutional variables are auspicious to the peace, especially the political stability. The macroeconomic variables are, on the whole, positive and statistically meaningful determinants of the peace, some of them not being robust. The war remains damaging to the peace and this in a robust manner. It is more or less the same report for the inequalities. The effects of the size of nation, the religion and the diversity are not as clear. The human capital seems favorable.

Keywords: Peace, Institution, War, Religion, Diversity, Human Capital, Determinants of peace

JEL classification: D63, D73, H56, I2, O17, P48, Z12

1. Introduction

According to empirical predictions (Gleditsch et al. 2002, Collier and Hoeffler, 2004; Hegre et al., 2002; Collier, Hoeffler and Soderbom, 2004; World Bank 2003; Hegre et al., 2013) wars will be with us for a while. Unfortunately, we tend also to a kind of concentration of these wars especially in poor countries. The probability of their occurring is high in border countries (Martin et al., 2008). In addition, it was discovered on the one hand they were due to reasons as diverse and varied (Elbadawi and Sambanis 2002; Fearon, 2005, Fearon and Laitin, 2003; Hegre et al., 2001, Reynal-Querol, 2002, Collier and Hoeffler, 2002) and secondly that they have consequences (Collier and Hoeffler, 2002) both on the short and long term.

In the short term, for example, Brück (2001) emphasizes probably the most obvious consequence of the war, namely the destruction of infrastructure. The World Bank (2003) criticizes, for its part, displacements caused by war: refugees, internally displaced persons. Hoeffler and Reynal-Querol, 2003 and Guha-Sapir and Van Panhuis, 2003 reported the impact of war on mortality. A disturbing

fact revealed by Hoeffler and Reynal-Querol is that during the five years of peace after the conflict, infant mortality remains 11% higher than it was before the war. The latter, meanwhile, found that civil wars make more victims among the civilian population, even after the conflict ended, than they make among combatants during the conflict. Moreover, the health situation is impacted (Ghobarah, Huth and Russer, 2003; Montalvo and Reynal-Querol, 2002). Elbe (2003) links the war to AIDS. And numerous case studies (Kanyama-Kalonda, 2010) confirm this relationship.

Several studies (Collier, 1999; Sambanis, 2003) highlight the fact that war causes contractions of the activity or declining growth. Also on the macroeconomic level, Collier, Hoeffler and Pattillo (2002) support the argument that "capital do not like bullet shots." In the short term, the private capital of a country affected by war is transferred elsewhere. The trend does not seem to be reversing directly, even if that country returns to normal in the long term.

Colletta and Cullen (2000) found a relationship between war and informal institutions, from practical cases. They find that the war destroyed considerable social capital, which is confirmed by Kodila-Tedika (2012) in an econometric study. The war also affects the formal institutions (Banque mondiale, 2003). In this context too, the consequences of war are harmful and are so in a sustainable manner. The same view is shared by Doyle and Sambanis (2003) and Sambanis (2000).

Another bad news is that civil wars tend to last longer on average (Collier, Hoeffler and Soderbom, 2004 Balch-Lindsay and Enterline 2000; Buhaug, Gates and Lujala, 2002, DeRouen, 2003, Elbadawi and Sambanis 2000, Fearon , 2002). And they are the most spread today.

It becomes clear that the economics of war presents us with a pessimistic perspective for poor countries. It is therefore essential to mobilize efforts to find peace, because it is important, even for development. Precisely, this study's objective is to identify potential variables that explain peace. We answer the question of the determinants of peace. In answering these questions, it will be understood, we go reverse from the movement that is preferred by the economics of war. If allowed, we are directly in the "economy of peace", as in Wagner (1993), Hartzell et al. (2001).

This perspective is innovative from a scientific point of view, to the extent that seeking to determine directly, in such an empirical way, variables that affect the peace was not yet considered, to our knowledge. Most studies, as we have noted above, tend to focus on war, and peace only secondarily, that is to say, they are more interested in war, as it is known as a variable directly affecting peace. Here again no study, to our knowledge, was previously considered. It is based on a factual observation. In this study, we go beyond this observation, and believe that peace could be studied directly instead of being considering secondary.

This paper therefore addresses the issue of what causes cross-country differences of peace, using the most recent data from the Institute for Economics and Peace and takes the endogeneity issue into account. The paper is structured as follows. Apart from this introduction, this work opens with the presentation of the methodology and data of the study. Then, we present the results of our study. Finally, we draw a conclusion.

2. Data and method

The nature of the data used and their sources of origin are included in the appendices for convenience (Annexes 1). Variables are historical (colonial origin, origin of law and the lagged variables to take into account the problems already likely to reverse causality), socio-cultural (linguistic, ethnic and religious, religion, type of religion), socio and economic (inequality, gender), politics (war democracy), demographic (population growth, urbanization) and economic (growth, inflation, openness, size of government, etc.). We have attempted to make a base as large as necessary.

We use the indicator of the Institute for Economics and Peace (IEP) and developed in consultation with an international panel of peace experts from peace institutes and think tanks with data collected and collated by the Economist Intelligence Unit. This indicator is a composite of several indicators. The Appendix 2 below shows the different indicators.

Indicators not already ranked on a 1 to 5 scale were converted by using the following formula: x=(x-Min(x))/(Max(x)-Min(x)) where Max(x) and Min(x) are the highest and lowest values for that indicator of the countries ranked in the index. The 0 to 1 scores that resulted were then converted to the 1 to 5 scale. Individual indicators were then weighted according to the research team's judgment of their importance. The scores were then tabulated into two weighted sub-indices: internal peace, weighted at 60% of a country's final score, and external peace, weighted at 40% of a country's final score. A low score corresponds to a better situation.

We will use essentially any ordinary square (OLS). For all estimates, to adjust for heteroskedasticity, we present White-corrected standard errors. We also use instrumental variables when we consider some relevant variables that could also be explained by dependent variables. Appendix 3 lists the countries included in the analysis. And Appendix 4 presents the statistical characteristics of the sample.

3. Results

Our results are divided into two sub-sections. The first sub-section presents the results considering all the regressors as exogenous variables in peace. While in the second sub-section raises the hypothesis of exogeneity of all regressors. For, indeed, some variables may cause peace can also be caused by peace. In such a circumstance, the OLS estimators are not fully effective.

3.1. Results with exogenous variables

At this level also, note that we present the general and specific results. In the specific results, we further dissect the findings of a number of potential determinants that we present in the general results.

3.1.1. General results

Table 1 shows the results of our initial regressions. In column (1), we have put most of our selected determinants. We find that information, development, inequality, openness and terms of trade are significant. The increase in inequality is significantly detrimental to peace. But important access to information, more accessible to wealthy people, more open and favorable terms of trade are statistically conducive to peace. A higher life expectancy does not appear to be essential for peace, which is not necessarily the case for other human capital variable (the average intelligence of a nation). The effect of this second variable of human capital remains positive for peace in all regressions. Life expectancy has the same result as another indicator of human capital in the remainings of regressions. These two variables are, however, not significant. Greater diversity and more religion in one country may be conducive to peace.

This is the same conclusion for the macroeconomic and institutional variables selected. The size of the state does not have a specific effect. If the geographical size and urbanization seem to be favorable, there is little evidence of the same effect population growth. No statistically positive effect of gender was found, except for column (4). Again, the magnitude of the coefficient is almost zero. War and murders significantly reduce peace in a country.

But the major weakness of this first regression is to have inserted many variables in the estimation, and few observations. And we are trying to correct this in columns (2) and (3). We note that most variables that were significant remained so. Others are also added, in the case of democracy and the size of the state, measured by government consumption on GDP. For certain variables, we find that the positive effect remains in the first four estimates, but it is the instability of the significance that is problematic.

What is quite surprising is the sign change of religion: it becomes unfavorable to peace. War, as inequalities, keeps the same sign and become more statistically significant. More information to affluent population remains essential for peace, but we cannot find any trace of the significativeness. The variable of economic growth becomes favorable to peace in the rest of the regressions and significantly so. Trust, that was positive on peace, is no longer so. This conclusion on trust remains insignificant.

Column (4) has undergone other changes. The index that we used to measure information and the level of development (number of televisions per 1000 people) has been changed by the number of persons per 1000 newspaper. The index of the opening [(Export + Import) / GDP] has been

replaced by the index of imports of goods and services to GDP. And the index of gender was also changed by the number of women in government. After this change which also serves as a robustness test, we find that diversity is conducive to peace significantly; inflation and urbanization statistically become problems for peace. Opening is not as significant in column (1). The previous conclusion on social trust remains the same, but this time significantly.

We see that only war and inequality remained robust to changes in different specifications, but to also to variations in the sample size.

Table 1 - Main regression

	(1)	(2)	(3)	(4)
EthnoLing	-.539	-.0423	.018	-.310**
	(.400)	(.191)	(.185)	(.179)
Religion	-.654	.372	.421	.063
	(.532)	(.306)	(.340)	(.316)
IQ	-.004	-.009	-.002	-.016
	(.026)	(.011)	(.009)	(.010)
Life expectancy	.023	-.003	-.010	-.008
	(.01)	(.013)	(.010)	(.013)
Inégalité	.031*	.015**	.014***	.0153***
	(.013)	(.006)	(.004)	(.005)
Information and development	-.002**	-.000	-.000	-.000
	(.001)	(.000)	(.000)	(.000)
Gender	.006	.004	.006	-.000
	(.008)	(.005)	(.004)	(.004)
Guerre	.156*	.165***	.144***	.167***
	(.053)	(.038)	(.030)	(.032)
Revc	.994*	.101		
	(.399)	(.160)		
Inflation	-.004	.002	.004	.005***
	(.003)	(.003)	(.002)	.002
Open	-.010*	-.002	-.001	.000
	(.003)	(.002)	(.002)	(.003)
Growth rate of terms of trade	-13.666*			
	(4.418)			
Ratio of liquid libialities to GDP	-.055	-.129		
	(.402)	(.237)		
Urbanization	-.008	.005	.004	.007**
	(.009)	(.004)	(.003)	(.003)
Growth population	.231	-.045	-.050	-.002
	(.185)	(.060)	(.068)	(.065)
Log Area	-.034	-.041	-.031	-.017
	(.037)	(.042)	(.035)	(.027)
Gov. consumption share of GDP	-1.343	-1.887	-1.568*	-2.234
	(2.560)	(1.054)	(.864)	(1.429)
Economic Growth	.006	-.0465	-.048*	-.0967***
	(.048)	(.036)	(.027)	(.032)
Democracy	-.037	-.0723**	-.066*	-.014
	(.038)	(.032)	(.033)	(.024)

Type of economic organization	-.006	-.007		
	(.097)	(.066)		
Social Infrastructure	2.358	.489		
	(.915)	(.437)		
Trust	-.004	.001	.002	.006*
	(.009)	(.004)	(.004)	(.003)
Obs	26	47	47	39
R²	0.99	0.88	0.87	0.92

Note: The dependent variable is generalized trust. All regressions include a constant term; *t*-statistics in parentheses are based on robust standard errors; *** denotes significance at $p <0.01$; ** at $p <0.05$; * at $p <0.10$

3.1.2. Specific result

In this section, we consider the relationship of peace with a number of variables that we considered in Table 1. It is the diversity of religion, war and institutions.

3.1.2.1. Diversity and peace

Table 2 - Peace and others variables of diversity

	(1)	(2)	(3)	(4)
Ethnicfrac	.782***		.467**	.349
	(.217)		(.188)	(.214)
Languagefrac	.254	.386**		.230
	(.234)	(.187)		(.224)
Religionfrac	-.389*	-.200	-.129	-.199
	(.225)	(.182)	(.178)	(.183)
Demo		-.064***	-.062***	-.060***
		(.015)	(.016)	(.0159)
Growth		-.011	-.006	-.006
		(.018)	(.018)	(.018)
Trust		-.008***	-.007***	-.007***
		(.002)	(.003)	(.002)
Obs	62	61	62	61
R²	0.30	0.53	0.54	0.56

Note: The dependent variable is generalized trust. All regressions include a constant term; *t*-statistics in parentheses are based on robust standard errors; *** denotes significance at $p <0.01$; ** at $p <0.05$; * at $p <0.10$.

In Table 2, we reduced the control variables but mostly we chose to go into the details of diversity, considering three different indicators: ethnic fractioning, linguistic diversity and the diversity of religions. Column (1) of this table, we crossed these three indicators. Only religious diversity has a positive effect on peace. There more there is religion, the more we would be at peace. This effect is

statistically significant. But ethnic diversity seems to be inimical to peace very significantly. In column (2), we assume that ethnic diversity is a perfect substitute for the diversity of languages. When we consider this hypothesis, the diversity of languages becomes a significant problem for peace. The diversity of religions continues to be conducive to peace, but it loses its significance. Columns (3) and (4) lead us to say the same thing. Economic growth remains positive on peace, as in previous regressions. But its effect may be due to chance. Social trust and democracy have highly significant positive signs on peace. Countries where people are in democracy and trust each other tend to be conducive to peace. The same conclusion can be supported under columns (3) and (4).

Column (3) is the opposite of (2) Diversity in the sense that we readjust our hypothesis: we consider the diversity of languages is perfect proxy for ethnic diversity. The same conclusion in column (2) persists in any point of view. In column (4), we assume that the diversity of languages is not necessarily equal to ethnic diversity. And so, we introduce two variables in the regression. We keep the same trends, except that the variables of diversity are no longer significant.

3.1.2.2 Religion and peace

Table 3 - Peace and different religions

	(1)	(2)
Catholics	.002	-.001
	(.002)	(.003)
Orthodox	-.000	-.002
	(.002)	(.003)
Muslims	.006**	.003
	(.003)	(.003)
Buddhists	-.005	-.012*
	(.005)	(.006)
Hindus	.009***	.006**
	(.002)	(.003)
Protestants	-.002	-.007 **
	(.002)	(.002)
Jew	.068	.049
	(.086)	(.077)
Obs	62	62
R²	0.24	0.30

Note: The dependent variable is generalized trust. All regressions include a constant term; *t*-statistics in parentheses are based on robust standard errors; *** denotes significance at $p < 0.01$; ** at $p < 0.05$; * at $p < 0.10$.

Judaism, Hinduism, Catholicism and Islam have a negative sign for peace. Buddhism and Protestantism are favorable in terms of these results. But only Hinduism and Islam have statistically significant effects. To test the robustness of these results, we change proxies for Islam, Catholicism and Protestantism. We link religion to the population in 1980, as does La Porta et al. (1999). Overall, the conclusion bound to the column (1) remains except for Catholicism, which is conducive to

peace. But the significance of certain variables changes. Protestantism is significant, as Buddhism. The effect of Islam is no longer statistically unfavorable peace. Only the conclusion related to Hinduism persists. It would be inimical to peace, in a statistically significant way.

3.1.2.3. War (or conflict) and peace

In column (1) from Table 3, we take the same proxy used previously. It is the Number of armed conflicts, internal and external, in which the government was involved, average of years 1995-2000, as classified by Uppsala Conflict Data Program.

Table 3 - Robustness check for war

	(1)	(2)	(3)
War	.159***	.743***	.529***
	(.057)	(.157)	(.095)
Obs	63	63	48
R²	0.14	0.22	0.39

Note: The dependent variable is generalized trust. All regressions include a constant term; t-statistics in parentheses are based on robust standard errors; *** denotes significance at $p < 0.01$; ** at $p < 0.05$; * at $p < 0.10$

In column (2) we will use the sum of ratings for Average of Uppsala Conflict Data Program of country is: extrasystemic armed conflict, armed conflict interstate, internal armed conflict, and internationalized internal armed conflict, for years 1995-2000. Ratings go from 0 (no conflict of this type), 1 (minor conflict), 2 (intermediate conflict), 3 (war). And in the last column, we use the dummy for countries that participated in at least one external war over the period 1960-1985. Whatever the proxy used, the same conclusion from Table 1 persists. War remains statistically unfavorable to peace. And table 3 shows the same magnitude in terms of significance.

3.1.2.4. Peace and institutions

In this section, we test the relationship between peace and institutions. In a first step, we will look at democracy and just after studying the effect of this meta-institution, we will look at the effect of certain dimensions of country institutions on peace. Columns (1) and (2) from Table 4 show the effect of democracy on peace.

Table 4 - Democracy and peace

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Democracy	-.083***	-.040***						
	(.018)	(.017)						
IQ		-.019***		-.028***		-.026***		-.027***
		(.006)		(.008)		(.007)		(.007)
Inequality		.009**		.008		.007		.006
		(.005)		(.005)		(.005)		(.005)
Open		-.004**		-.006***		-.006***		-.005***
		(.002)		(.002)		(.002)		(.002)
Economc		-.025		-.017		-.020		-.023
Growth		(.016)		(.021)		(.020)		(.019)
Polright			.089***	.006			-.048	-.077**
			(.024)	(.025)			(.059)	(.038)
Civillib					.134***	.036	.186**	.117**
					(.034)	(.026)	(.073)	(.047)
Obs	62	57	59	54	59	54	59	54
R²	0.36	0.69	0.17	0.65	0.26	0.66	0.27	0.69

Note: The dependent variable is generalized trust. All regressions include a constant term; *t*-statistics in parentheses are based on robust standard errors; *** denotes significance at $p < 0.01$; ** at $p < 0.05$; * at $p < 0.10$

The conclusion is clear: democracy, on the whole, is favorable to peace. Significance is strong. What is quite interesting is the explanatory power of this variable on peace (36%). This is significant. In regressions (3) and (4), we consider one dimension of democracy. This is the same exercise in (5) and (6). It can be seen in (3) that the variable political rights or political freedom is significantly inimical to peace. Once we control for other variables, it is more meaningful but it keeps the same sign. This is the same conclusion that emerges for civil liberty. By combining these two dimensions of democracy, we realize that civil liberty keeps the same sign and becomes significant. Political freedom, in turn, changes the sign to become conducive to peace. In column (7), it is not statistically significant. However, in column (8), it becomes. What remains relatively intact is the explanatory power of these variables.

In regressions (1) and (2) from Table 5, it emerges clearly that our indicator of the quality of institutions is significant. Best institutions are conducive to peace. To be sure of that, we change the proxy institutional variables in (3) and (4) of the same table. Again, the same conclusion emerges: the explanatory power of the variable of interest, the magnitude of the coefficient and the direction of the effect remains the same.

In the remaining regressions, we detail certain aspects of institutions. It is mainly political stability (Postab) and Government Effectiveness (Goveff). The first observation that emerges is the explanatory power of these variables. They can explain, alone, more than 50% of the variation of peace within a country. This is significant. The second observation is the importance of the significance of these variables. They are highly significant, as evidenced by their p-value. Finally, they are conducive to peace. A country with political stability will tend to be at peace. More it improves the more peace and intensifies in a country. This is the same conclusion for government efficiency. Governments may therefore promote peace when they are effective.

Table 5 - Institutions and peace

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Social infrastructure	-1.085*** (.153)	-.398* (.217)						
ICRG			-1.418*** (.158)	-.498** (.215)				
Polstab					-.424*** (.061)	-.373*** (.071)		
Goveff							-.350*** (.038)	-.181*** (.050)
Economic Growth		-.021 (.021)		-.018 (.022)		-.018 (.016)		-.009 (.015)
IQ		-.021*** (.007)		-.023 *** (.007)		-.007 .007		-.018*** (.006)
Inequality		.006 (.005)		.005 (.006)		.005 (.004)		.005 (.005)
Open		-.005** (.002)		-.004** (.002)		-.002 (.001)		-.005*** (.002)
Obs	59	54	50	47	62	57	62	57
R²	0.42	0.67	0.48	0.67	0.68	0.81	0.52	0.70

Note: The dependent variable is generalized trust. All regressions include a constant term; t-statistics in parentheses are based on robust standard errors; *** denotes significance at $p <0.01$; ** at $p <0.05$; * at $p <0.10$.

Moreover, it is a problem of endogeneity of these institutional variables in Table 5, mainly. Countries can easily have peace political stability, effective government or, in brief, institutions of qualities. The following sub-section will consider this problem.

3.2. Results with variables endogenous

In Table 6, we instrument only institutional variables. There, reading this table, all the institutional variables are considered conducive to peace. However, they are no longer statistically significant, except for political stability. Indeed, this variable passes all the tests of robustness. It is the variable that stands out from all the others.

Table 6 - Institutions and peace (with endogenous variables)

	(1) 2SLS	(2) 2SLS	(3) 2SLS	(4) 2SLS	(5) 2SLS
Trust	-.001 (.007)				
Social infrastructure		-.127 (.378)			
ICRG			-.298 (.667)		
Polstab				-.456** (.172)	
Goveff					-.110 (.121)
Economic Growth	-.045* (.025)	-.042* (.023)	-.036 (.023)	-.039** (.015)	-.035 (.023)
IQ	-.020*** (.007)	-.0178** (.007)	-.023*** (.007)	-.008 (.006)	-.018*** (.006)
Inequality	.005 (.005)	.005 (.004)	.003 (.005)	.0062** (.003)	.005 (.004)
Open	-.005** (.002)	-.005** (.002)	-.004* (.002)	-.000 (.002)	-.005** (.002)
Religion	.429 (.308)	.458 (.285)	.274 (.469)	-.235 (.325)	.232 (.373)
Obs	54	49	43	50	50
R²	0.71	0.71	0.71	0.85	0.73

Tust instrumented as postcommunist monarchy No Pronoun drop, Minimum temperature (Bjørnskov, 2010, 2011, 2012). Social infrastructure, ICRG, PolStab and GovEff instrumented leg_britishleg_scandivanianleg_socialistleg_french, Britcol, Frencol, Spancol, Othercol andNoncol.leg_german dropped due to collinearity. Note: The dependent variable is generalized trust. All regressions include a constant term; *t*-statistics in parentheses are based on robust standard errors; *** denotes significance at *p* <0.01; ** at *p* <0.05; * at *p* <0.10.

4. Conclusion

This study had for objective to determine what are the variables that affect the peace to the level of the countries. To this end, we kept several potential variables. And we are using the cross-sectional analysis. The paper has also taken potential endogeneity concerns into consideration.

Our findings present themselves as follows: the institutional variables are, on the whole, auspicious to peace. And of all these variables, the one that is different is political stability. The politically steadiest countries tend to have more peace. The macroeconomic variables are, on the whole, of the positive and statistically meaningful determinants to the peace, in spite of the fact that some are not robust. War remains damaging to peace and this in a robust manner. It is more or less the same report for inequalities. The effects of the size of country, religion and diversity are not as clear. Human capital seems favorable. Gender has no impact.

Variables of conflict and political stability are the strongest determinants of peace. This is not without political implications. Policies (eg, good diplomacy, effective redistributive policies) reducing conflicts are necessarily to improve national peace. In addition, political stability allows just a framework that promotes such policies. It calms down tensions and allows national cohesion, reducing instability.

Acknowledgements

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Appendix

Appendix 1 - Nature of data

Variables	Description	Sources
EthnoLing	Ethnolinguistic fractionalization, 1985, = probability that two randomly selected individuals from a given country will not be from same ethnolinguistic group,	Roeder, Philip. 2001. Ethnolinguistic fractionalization indices, 1961 and 1985, http://weber.ucsd.edu/~proeder/elf.htm, downloaded from Quality of Government Database, at Quality of Government Institute, Goteborg University.
Religion	Percentage of people estimating that the religion is important	Gallup World Poll
Monarchy	Dummy for whether the country is a monarchy	CIA (2006).
Minimum temperature	Average temperature in the coldest month of the year	World Meteorological organization; available at http://wmo.ch/pages/index_en.html
Postcommunist	Dummy of country has communist past	
No Pronoun drop	Dummy for whether the dominant language allows drop	Kashima and Kashima (1998).
Ethnicfrac	Ethnic fractionalization	Alesina et al. (2003)
Languagefrac	Linguistic fractionalization	Alesina et al. (2003)
Religionfrac	Religoius fractionalization	Alesina et al. (2003)
Catholics	Percent Catholic	World Christian Database; population from Heston et al. (2002), for Taiwan from http://www.census.gov/ipc/www/idbsum.html
Orthodox	Percent Christian Orthodox	Idem
Muslims	Percent Muslims	Idem
Buddhists	Percent Buddhists	Idem
Hindus	Percent Hindus	Idem

Jews	Percent Jews	Idem
Protestants	Percent Protestants	Idem
Britcol	Dummy former British colony	Ourselves
Frencol	Dummy former French colony.	Idem
Spanporc	Dummy former Spanish or Portuguese colony.	Idem
Othercol	Dummy former colony of state other than Britain, France, Spain, or Portugal	Idem
Noncol	Dummy Never a colony.	Idem
Trust	Share of population saying yes to the question "In general, do you think that most people can be trusted?"	Bjørnskov (2006)
GovEff	GovernmentEffectiveness	World Bank Governance indicator
PolStab	PoliticalStability	World Bank Governance indicator
leg_british	Dummy legal origin: British,	Global Development Network Growth Database, NYU, http://www.nyu.edu/fas/institute/dri/global%20development%20network%20growth%20database.htm
leg_french	Dummy legal origin: French.	Idem
leg_socialist	Dummy legal origin: Socialist.	Idem
leg_german	Dummy legal origin: German.	Idem
leg_scandivanian	Dummy legal origin: Scandinavian	Idem
Catholics	Catholics as % of population 1980	La Porta et al. 1999. "The Quality of Government," Journal of Law, Economics, and Organization, downloaded from Quality of Government Database, at Quality of Government Institute, Goteborg University.
Protestants	Protestants as % of population 1980	Idem
Muslims	Muslims as % of population 1980	Idem
Life expectancy		World Bank: World Development Indictors.
IQ	National average intelligence.	Lynn, R. and Vanhanen, T. (2006). IQ and Global Inequality. Washington Summit Publishers, Augusta, GA
WAR	Dummy for countries that participated in at least one external war 1960-85	Barro and Lee: A Data Set for a Panel of 138 Countries at http://post.economics.harvard.edu/faculty/barro/data.html
	Number of armed conflicts, external and internal, in which the government was involved, average of years 1995-2000.	Uppsala Conflict Data Program, data downloaded from Quality of Government Database, at Quality of Government Institute, Goteborg University.
	Average for sum of ratings of Uppsala Conflict Data Program of country on: extrasystemic armed conflict, interstate armed conflict, internal armed conflict, and internationalized internal armed conflict, for years 1995-2000. Ratings go from 0 (no conflict of this type), 1 (minor conflict), 2 (intermediate conflict), 3(war).	Data downloaded from Quality of Government Database, at Quality of Government Institute, Goteborg University.
Inequality	GINI coefficient	UNDP, Human Development Report, 2004; downloaded from STM103 Global Indicators Shared Dataset, Updated Fall 2005, from http://ksghome.harvard.edu/~pnorris/Data/

		Data.htm
Peace	Indice of 2008	Institute for Economics and Peace (IEP)
Urbanization	Urban population (% of total) 2002	UNDP, Human Development Report, 2004
Information and development	Television sets per 1000 inhabitants	World Bank, downloaded from STM103 Global Indicators Shared Dataset, Updated Fall 2005, from http://ksghome.harvard.edu/~pnorris/Data/Data.htm
	Newspapers per 1000 inhabitants.	World Bank World Development Indicators Interparliamentary Union, Women in Parliament, 2000, downloaded from STM103 Global Indicators Shared Dataset.
Gender	Percentage women in lower house of parliament	Updated Fall 2005, from http://ksghome.harvard.edu/~pnorris/Data/Data.htm
	Women in government at ministerial level (as %of total) 2001	(UNDP, Human Development Report, 2004), downloaded from STM103 Global Indicators Shared Dataset, Updated Fall 2005, from http://ksghome.harvard.edu/~pnorris/Data/Data.htm
REVC	Average number of revolutions and coups per year 1960-1984	Levine R. and Renelt D. A Sensitivity Analysis of Cross-Country Growth Regressions, The American Economic Review, Vol 82:4.
Inflation		FMI
Open	Exports plus Imports divided by CGDP	Penn World Tables 6.1 .
	Imports of goods and services as % GDP	World Bank World Development Indicators
Growth rate of terms of trade		King-Levine data set at http://www.worldbank.org/research/growth/ddkile93.htm
Ratio of liquid libialities to GDP		King-Levine data set at http://www.worldbank.org/research/growth/ddkile93.htm
Annual population growth		Penn World Tables 6.1.
Log Area	Country area, square kilometers	Central Intelligence Agency (2004)
Gov. consumption share of GDP		King-Levine data set at http://www.worldbank.org/research/growth/ddkile93.htm
Economic growth	Growth per capita	Penn World Tables 6.1 .
Democracy	Institutionalized democracy score (0 - 10)	Polity IV, downloaded from Quality of Government Database, at Quality of Government Institute, Goteborg University.
Polright	Political rights	Freedom House
Civillib	Civil liberties	Freedom House
Type of economic organization	Type of Economic Organization (Freedom House). Capitalist countries have a value of 4 or 5.	Robert E. Hall and Charles I. Jones, "Why Do Some Countries Produce So Much More Output per Worker than Others?" Version 4.00 March
Social Infrastructure	Index of social infrastructure	Robert E. Hall and Charles I. Jones, "Why Do Some Countries Produce So Much More

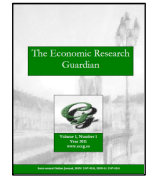|		
		Output per Worker than Others?" Version 4.00 March
ICRG	Measure of Political Environment or Property Rights from the International Country Risk Guide	Olsson and Hibbs: "Biogeography and long run economic development", Data appendix: http://www.handels.gu.se/~econdhib/DEA.pdf

Appendix 2 - Components of the indicator of peace[1]

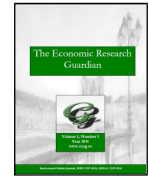| #	Indicator	Source	Year(s)	Coding
1	Number of external and internal wars fought	UCDP	2004 to 2009	Total number[2]
2	Estimated deaths due to external wars	UCDP	2010	Total number[2]
3	Estimated deaths due to internal wars	UCDP	2010	Total number[2]
4	Level of organized internal conflict	EIU	2010 to 2011	Qualitative scale, ranked 1 to 5
5	Relations with neighbouring countries	EIU	2010 to 2011	Qualitative scale, ranked 1 to 5
6	Level of perceived criminality in society	EIU	2010 to 2011	Qualitative scale, ranked 1 to 5
7	Number of refugees and displaced persons as percentage of population	UNHCR and IDMC	2009 to 2010	Refugee population by percentage of the origin country's population
8	Political instability	EIU	2010 to 2011	Qualitative scale, ranked 1 to 5
9	Level of respect for human rights (political terror scale)	Amnesty International	2009	Qualitative measure
10	Potential for terrorist acts	EIU	2010 to 2011	Qualitative scale, ranked 1 to 5
11	Number of homicides	UNCTS	2005 to 2009	Intentional homicides, including infanticide, per 100,000 people
12	Level of violent crime	EIU	2010 to 2011	Qualitative scale, ranked 1 to 5
13	Likelihood of violent demonstrations	EIU	2010 to 2011	Qualitative scale, ranked 1 to 5
14	Number of jailed persons	ICPS	2010	Persons incarcerated per 100,000 people
15	Number of police and security officers	UNCTS	2008 to 2010	Civil security officers per 100,000 people[3]
16	Military expenditure as a percentage of GDP	IISS	2009 to 2010	Cash outlays for armed forces, as a percentage of GDP[4]
17	Number of armed services personnel	IISS	2010	Full-time military personnel per 100,000 people
18	Imports of major conventional weapons	SIPRI	2009 to 2010	Imports of major conventional weapons per 100,000 people[5]
19	Exports of major conventional weapons	SIPRI	2009 to 2010	Exports of major conventional weapons per 100,000 people[5]
20	Funding for UN peacekeeping missions	IEP	2007 to 2010	Total number
21	Number of heavy weapons	IEP	2009	Weapons per 100,000 people[6]
22	Ease of access to small arms and light weapons	EIU	2010 to 2011	Qualitative scale, ranked 1 to 5
23	Military capability or sophistication	EIU	2010 to 2011	Qualitative scale, ranked 1 to 5

Source[1]: Wikipedia (http://en.wikipedia.org/wiki/Global_Peace_Index), from different reports of Institute for Economics and Peace, Economist Intelligence Unit (2011). (2) In this case, a conflict is defined as, "a contested incompatibility that concerns government and/or territory where the use of armed force between two parties, of which at least one is the government of a state, results in at least 25 battle-related deaths in a year." (3) Excludes militia and national guard forces. (4) This includes, "cash outlays of central or federal government to meet the costs of national armed forces - including strategic, land, naval, air, command, administration and support forces as well as paramilitary forces, customs forces and border guards if these are trained and equipped as a military force." (5) This includes transfers, purchases, or gifts of aircraft, armoured vehicles, artillery, radar systems, missiles, ships, engines.

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[1] We have checked with the main source. You can find the main source here: http://www.visionofhumanity.org/wp-content/uploads/PDF/2010/2010%20GPI%20Results%20Report.pdf (21 august 2012)
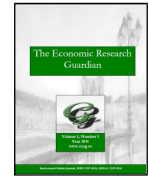
Appendix 3 - Countries included

Country	Peace	Country	Peace	Country	Peace
Algeria	2.21	India	2.42	Uganda	2.14
Argentina	1.85	Indonesia	1.85	Uruguay	1.56
Australia	1.48	Ireland	1.33	USA	2.01
Austria	1.25	Italy	1.64	Venezuela	2.38
Bangladesh	2.04	Japan	1.27	Zimbabwe	2.74
Belgium	1.36	Jordan	1.83		
Bolivia	1.99	Korea, Rep of	1.63		
Brazil	2.02	Latvia	1.77		
Canada	1.31	Mexico	2.20		
Chile	1.480	Netherlands	1.53		
China	1.92	New Zealand	1.20		
Colombia	2.654	Nicaragua	1.80		
Costa Rica	1.58	Norway	1.22		
Czech Republic	1.33	Pakistan	2.86		
Denmark	1.22	Panama	1.80		
Dominican Republic	1.89	Paraguay	1.92		
Ecuador	2.21	Peru	1.97		
Egypt	1.77	Philippines	2.33		
El Salvador	2.07	Poland	1.60		
Finland	1.32	Portugal	1.35		
France	1.578	Romania	1.59		
Germany	1.39	Slovak Republic	1.54		
Ghana	1.76	Slovenia	1.32		
United Kingdom	1.65	South Africa	2.43		
Greece	1.78	Spain	1.57		
Guatemala	2.22	Sweden	1.27		
Honduras	2.26	Switzerland	1.39		
Hungary	1.57	Taiwan	1.65		
Iceland	1.22	Turkey	2.39		

Appendix 4 - Descriptive statistics

Name	Average	Standard deviation	Observations
Peace	1.776614	.4148545	63
EthnoLing	. 3639683	.2699435	63
Ethnicfrac	.3344921	.2346343	63
Languagefrac	.2693726	.2570329	62
Religionfrac	.3901	.2323621	63
Jew	.2596802	.546675	62
Catholics	46.92967	39.21358	63
Orthodox	3.880986	15.96454	63
Muslims	11.52874	28.03505	63
Buddhists	1.888397	7.711408	63
Hindus	1.703315	10.14041	63
protestants	16.75018	25.84978	63
Catholics (La Porta et al. 1999)	48.72222	40.10821	63
Muslims (La Porta et al. 1999)	10.4973	27.58703	63
Protestants (La Porta et al. 1999)	15.31746	25.7864	63
Noncol	.2380952	.4293388	63
Britcol	.2258065	.4215255	62
Frencol	.015873	.1259882	63
Spanporc	.3278689	.4733326	61
Othercol	.1904762	3958308	63
leg_british	.220339	.418033	59
leg_french	.5254237	.5036396	59
leg_social	.0847458	.2808936	59
leg_german	.0847458	.2808936	59
leg_scandi	.0847458	.2808936	59
IQ	91.61017	9.163302	59
Life expectancy	69.80019	6.871761	62
Inequality	39.14754	10.76234	61
Television sets per 1000 inhabitants	342.2951	216.3222	61
Newspapers sets per 1000 inhabitants	149.9053	141.1462	60
Percentage women in lower house of parliament	16.09365	10.26364	63
Women in government at ministerial level (as %of total)	21.01091	14.31011	55
War	.3333333	.4763931	48
War	.3941799	.9673438	63
War	.1660053	.2636816	63
Revc	.2031481	.2494812	54

Inflation	8.792129	14.05337	62
Open	57.36205	28.98682	63
Open	37.69965	18.51049	62
Growth rate of terms of trade	-.0003286	.0161518	29
Ratio of liquid libialities to GDP	.4605494	.2816672	54
Urbanization	64.9629	18.43199	62
Annual population growth	1.265962	1.042844	63
Log Area	12.59088	1.614686	63
Gov. consumption share of GDP	.1498394	.0510658	53
Economic growth	1.751828	1.934566	63
Democracy	7.935484	2.95247	62
Polright	2.661017	1.970561	59
Civillib	2.677966	1.612886	59
Type of economic organization	3.389831	1.286762	59
Social Infrastructure	.5721571	.2490562	59
ICRG	.66616	.2075163	50
PolStab	.3015679	.8149479	62
GovEff	.4331975	.8575937	62
Trust	30.46508	15.71788	63
Religion	.6554237	.2549667	59
Monarchy	.1639344	.3732884	61
Minimum temperature	8.654098	9.713935	61
Postcommunist	.1147541	.32137	61
No Pronoun drop	1.377049	.4886694	61