

## DO LEGAL RIGHTS CORRELATE TO DEVELOPMENT?

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*As far as correlation does not mean causation, even if found a high correlation between some legal rights and economical parameters, it doesn't mean that the latter are caused by legal dimensions only. However, if strong correlations exist between some legal rights and some socioeconomic outcomes, this is a good argument for policy makers to improve situation with proper legal rights which highly correlate with their first priority, that of socioeconomic policy aims. It's important to know the real impact of improving legal rights for society to avoid overestimation or underestimation of this impact. Also, regarding the increase in the amount of different international ratings of legal rights, the question which is more reliable should be raised ("competition of ratings"). The correlation analysis shows that "economic oriented" legal rights such as like property and intellectual property are relatively more correlated with GDP per capita. On the other hand, political rights and civil freedoms such as the right not to be tortured unlawfully detained are relatively more correlated with social progress as a more complex and general socio-economic outcome. At the same time there is no high correlation observed between legal rights and life expectancy.*

*Keywords: law and economics; development; empirical methods; international ranking; human rights; civil liberties; GDP per capita; social progress; life expectancy.*

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### 1. Introduction

I'd like to give attention to some important arguments which explain why it is so important to know relationships between legal and socioeconomic dimensions:

*First*, although political rights and civil liberties are important, they can't explain some economic development issues. Free and fair elections and civil liberties are necessary conditions for democracy, but they are unlikely to be sufficient for a full and consolidated democracy if unaccompanied by transparent and at least minimally efficient government, sufficient political participation and a supportive democratic political culture... The slowing of democratisation and rising disenchantment with the results of some political liberalisations appear to have a variety of causes. The pace of democratisation was bound to slow after "the easy cases" – eager-to-liberalise east central Europe after the fall of the Berlin Wall and African regimes susceptible to outside pressure for political change. "Hard cases" such as China and Middle East autocracies were always going to be a more difficult proposition. Autocrats have also learned how better to protect themselves; many of them preside over energy-rich states and have been strengthened by sustained high oil prices... A combination of double standards in foreign policy (autocrats can be good friends as well as foes) and growing infringements of civil liberties has reduced the effectiveness of Western governments' calls for democratisation... However, the direction of causality between democracy and income is also debateable. The standard modernisation hypothesis that economic development leads to, and/or is a necessary pre-condition for democracy, is no longer universally accepted. Instead it has been argued that the primary direction of causation runs from democracy to income (Acemoglu et al., 2005).<sup>1</sup>

*Second*, it's unclear, how policies matter for economic growth. There is a significant controversy among academics and policy-makers about whether policies matter for economic growth. Recently, Acemoglu et al. and Easterly have presented strong empirical evidence showing that policies do not play a significant role in the process of economic development. Their key conclusion is that macroeconomic policies (monetary, fiscal and trade) have an explanatory power for the cross-country

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<sup>1</sup> Roberto Rigobon & Dani Rodrik, *Rule of Law, Democracy, Openness, and Income: Estimating the interrelationships*, 13(3) *The Economics of Transition* 421 (2005); *The Economist Intelligence Unit's Index of Democracy 2008*, *The Economist*, at 1–3 (Nov. 10, 2016), available at <http://graphics.eiu.com/PDF/Democracy%20Index%202008.pdf>.

variation in growth rates and income per capita only because they serve as proxies for institutions... What are the main determinants of economic growth? How can governments create an environment conducive to growth? The answers to these questions have changed fundamentally over the last decades. Traditionally, the emphasis was placed on maintaining good macroeconomic policies such as low inflation, contained budget deficits and exchange rate stability. More recently, the consensus on the determinants of growth has de-emphasized macroeconomic policies in favor of focusing on the role of institutions, in a broader sense, as drivers of economic performance.<sup>2</sup>

*Third*, it's important to understand whether democracy, some design of political institution, openness affect economic development. What are the fundamental determinants of the large income gaps that separate different regions of the world? Are high incomes the result of good institutions, or is it economic wealth that enables high-quality institutions? How does democracy affect economic development? Is openness to international trade good for development? For democracy? For the quality of institutions? What role do geographical constraints and advantages play in driving all these? What are the relative contributions to patterns of global inequality of exogenous determinants such as geography versus man-made factors such as institutions?<sup>3</sup>

*Fourth*, GDP is important but people want high quality of life not GDP as such. Money is not happiness, as was shown in the famous Bhutan example where people are poor but happy. Sometimes it's possible to have low GDP per capita but relatively high social progress. So I can't test correlations with GDP per capita only. Moreover, sometimes GDP per capita is high but the majority of the population due to the political regime. For example, Equatorial Guinea has a high GDP per capita but wealth is unevenly distributed.

It has long been accepted that material wellbeing, as measured by GDP per person, cannot alone explain the broader quality of life in a country... But the approach has faced insurmountable difficulties in assigning monetary values to the various factors and intangibles that comprise a wider measure of socio-economic wellbeing. There have been numerous attempts to construct alternative, non-monetary indices of social and economic wellbeing by combining in a single statistic a variety of different factors that are thought to influence quality of life. The main problem in all these measures is selection bias and arbitrariness in the factors that are chosen to assess quality of life and, even more seriously, in assigning weights to different indicators (measured on a comparable and meaningful scale) to come up with a single synthetic measure. GDP, despite its drawbacks, at least has a clear, substantive meaning and

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<sup>2</sup> Antonio Fatas & Ilian Mihov, *Policy Volatility, Institutions and Economic Growth*, 76(4) INSEAD and CEPR 613 (2005).

<sup>3</sup> Rigobon & Rodrik 2005, 534.

prices are the objective weights for the goods and services that make it up (although there are also very big problems in estimating the purchasing-power parities that have to be used instead of market exchange rates in order to express countries' incomes in the same currency). Some researchers have invoked the UN's Universal Declaration of Human Rights to identify the factors that need to be included in a quality-of-life measure. But, even if accepted as a starting point, that still does not point to precise indicators or how they are to be weighted. A technocratic and unsatisfying device that is sometimes used is to resort to "expert opinion."<sup>4</sup>

Harvard professor Michael Porter, who is a leading authority on company strategy and the competitiveness of nations and regions, says it is ridiculous to be measuring success purely on the idea of growth at a time when countries are facing massive social upheavals. He is also critical of previous work that seeks to integrate wellbeing and happiness into the economic agenda. He believes past indices have failed because they have tried to mix economic metrics with social metrics. The SPI only looks at social and environmental considerations and therefore gives them authority in their own right and allows them to be compared and contrasted with traditional economic measures. He says that "The Arab Spring of 2011 and the challenges in Mexico over the last decade, have illustrated the shortcomings of economic growth as a proxy for social progress... In both business and economic development, our understanding of success has been incomplete... Previous efforts to go beyond economic measurement alone have laid important groundwork, but we need a more holistic, comprehensive, and rigorous approach. The Social Progress Index is an attempt to address these gaps and opportunities... Social progress depends on the policy choices, investments, and implementation capabilities of multiple stakeholders – government, civil society, and business. Action needs to be catalysed at country level. By informing and motivating those stakeholders to work together and develop a more holistic approach to development, I am confident that social progress will accelerate."<sup>5</sup>

*Fifth*, a more precise and integrated theory of human rights is necessary. We hope that someday scholars and policymakers will pay as much attention to government respect to economic, social, and cultural human rights as they have paid to respect for rights of physical integrity. Despite the recognition of other types of human rights, in international human rights law, until recently, most international nongovernmental organizations INGOs, including Amnesty International and Human Rights Watch, have focused their reports and activities almost exclusively on identifying and remedying government violations of the physical integrity of the person. Currently,

<sup>4</sup> *The Economist Intelligence Unit's Quality-of-Life Index*, The World in 2005, The Economist, at 1 (Nov. 10, 2016), available at [https://www.economist.com/media/pdf/QUALITY\\_OF\\_LIFE.pdf](https://www.economist.com/media/pdf/QUALITY_OF_LIFE.pdf).

<sup>5</sup> *Michael Porter Unveils New Health and Happiness Index*, The Economist, April 11, 2013 (Nov. 10, 2016), available at <http://www.theguardian.com/sustainable-business/michael-porter-health-happiness-index>.

there is a movement towards an integrated human rights approach that reflects a belief in the complementarity, universality, and indivisibility of all rights.<sup>6</sup>

In one of the last UN papers related to international rankings methodology the importance of the indicators of governance, rule of law, peacebuilding, violence and conflict and human rights was underlined. Growing interest in their quantitative measures and international levels, has fostered a large number of data initiatives among official and non-official data producers. Work on standardization and harmonization of concepts and methods now underway provides a strong foundation for numerical target-setting and subsequent selection of indicators. Basic standard methodologies have been developed, for example, for victimization surveys, violence against women, homicide, mortality statistics by cause of death, human rights, rule of law, and there is considerable ongoing.<sup>7</sup>

Also I should say some words about the general difference in mentality of lawyers and politicians. Lawyers are more idealists in that for them the rule of law is of intrinsic value. At the same time politicians are more oriented towards socio-economic indicators (GDP per capita, life expectancy, unemployment, social welfare etc.). So, if the lawyers aim is to convince politicians to give more attention to legal rights, lawyers should prove to politicians that legal success indicators highly correlate with economic success if it's really so.

Also it's important that in general, politicians have much more trust in overseas rankings, considering them to be more independent. The difficulty here is that, sometimes, institutions who produce ratings do not have permanent staff worldwide so they authorize domestic experts to create ratings. So finally ratings are created by domestic experts who sometimes overestimate their country (a good example is the enormously high scores of Rwanda in the WEF Global Competitiveness Report).

## 2. Methodology of Our Research

I used correlation analysis where Y (dependent variables) are socio-economic outcomes. X (independent variables) are legal rights.

**Y: dependent variables used.** As socio-economic indicators I decided to use two objective socio-economic parameters (Nominal GDP per capita in current prices and Life expectancy) and one complex rating (Social Progress Index).

1. Nominal GDP per capita in current prices in 2012 and 2013. Data available for 204 countries. I used the World Bank data if available and the UN Statistic Division data for a very few countries where the World Bank data was unavailable.

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<sup>6</sup> David Cingranelli & David Richards, *CIRI Human Rights Data Project*, 32 Human Rights Quarterly 395, 416 (2010).

<sup>7</sup> *Statistics and Indicators for the Post-2015 Development Agenda*, UN System Task Team on the Post-2015 UN Development Agenda, The UN, at 7 (Nov. 10, 2016), available at [http://www.un.org/en/development/desa/policy/untaskteam\\_undf/UNTT\\_MonitoringReport\\_WEB.pdf](http://www.un.org/en/development/desa/policy/untaskteam_undf/UNTT_MonitoringReport_WEB.pdf).

2. Life expectancy data was taken from the World Health Statistics 2014. Part 3 World Health Indicators.<sup>8</sup> Data available for 193 countries.

3. Also I used a dependent variable: one complex Social Progress Index created in 2013 by professor Michael Porter, Harvard Business School. It measures 132 countries using combination of 52 indicators in the areas of basic human needs, foundations of wellbeing, and opportunity show the relative performance of nations. I make a reservation that Life Expectancy was a one of the indicators used for creation of this Index. However, the weight of this indicator in the common rating is minor. So, I believe that it can't significantly bias our conclusions based on separate research of correlations of the Life expectancy and Social Progress Index with the same legal indicators.

**X: independent variables used.** I decided to select for our research ranks of legal rights created by well-respected institutions/scholars. I apply the minimum representativeness conditions that data for at least 90 countries from all geographical parts of the world should be available. So I skipped both ratings based on research of less than 90 countries and/or all countries from one region. Also, I try to use ratings which include both developed and developing countries with the one exception of The Bertelsmann Stiftung's Transformation Index which measures 129 developing countries.

Finally I selected and used legal parts of the 8 following international rankings:

1. The Global Competitiveness Report 2013–2014 by the World Economic Forum.<sup>9</sup> Measures 148 countries. Based on survey of local business executives.

2. The Rule of Law Index 2014 by The World Justice Project.<sup>10</sup> Measures 97 countries. Based on a survey of 1000 random individuals in the 3 largest cities of the country (in reality 850–1152 individuals were asked in 2011–2013) plus survey of local experts, on average 24 experts per country. However, the amount of experts in each country is not disclosed.

3. The Bertelsmann Stiftung's Transformation Index (BTI) 2014.<sup>11</sup> Measures 129 developing countries. Based on a survey of 250 local experts from each country.

4. The Cingranelli and Richards (CIRI) Human Rights Dataset 2012.<sup>12</sup> Measures 192 countries. Based on analysis of information about human rights violations from

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<sup>8</sup> *World Health Statistics 2014*, The World Health Organization (Nov. 10, 2016), available at [http://www.who.int/gho/publications/world\\_health\\_statistics/2014/en/](http://www.who.int/gho/publications/world_health_statistics/2014/en/).

<sup>9</sup> *The Global Competitiveness Report 2013–2014*, The World Economic Forum (Nov. 10, 2016), available at <https://www.weforum.org/reports/global-competitiveness-report-2013-2014>.

<sup>10</sup> *WJP Rule of Law Index 2015*, The World Justice Project (Nov. 10, 2016), available at <http://worldjusticeproject.org/rule-of-law-index>.

<sup>11</sup> *Transformation Index (BTI) 2014*, The Bertelsmann Stiftung (Nov. 10, 2016), available at <http://www.bti-project.org/bti-home/>.

<sup>12</sup> *Human Rights Dataset 2012*, The Cingranelli and Richards (CIRI) Human Rights Data Project (Nov. 10, 2016), available at <http://www.humanrightsdata.com/>.

official and non-official sources such as the number of political prisoners and the number of cases of torture.

5. Democracy Index 2012 by The Economist Intelligence Unit Limited 2013.<sup>13</sup> Measures 167 countries. Based on analytical research of published information plus expert opinions. Clear information about the number and selection of experts is not found.

6. Worldwide Governance Indicators by The World Bank. The 2013 update Rule of Law subsection.<sup>14</sup> Measures 215 countries. Based on centralised analysis of 32 sources, the majority of which are ratings and indexes based on expert surveys but part of them are based on public opinion surveys.<sup>15</sup>

7. Freedom in the World 2013–2014 by Freedom House.<sup>16</sup> Measures 194 countries. Centralised team of 90 international experts was hired for the project who analysed sources related to different countries.

8. The Global Innovation Index 2014.<sup>17</sup> Measures 143 countries. Joint project of Cornell University, INSEAD, and the World Intellectual Property Organization (WIPO) and their Knowledge Partners.

Even though ratings include the majority of countries in the world, some countries are always absent. In our research I compare results of different ratings based on different samples of countries. So N (sample size, countries) differs for different combinations (Y, X) in our summarized statistic (see Table 1). As I mentioned above, to improve validity of our results I excluded from research all rankings with less than 90 countries, considering them not sufficiently representative.

Also it's worth pointing out that a new *The United Nations Rule of Law Indicators Implementation Guide and Project Tools*<sup>18</sup> appeared in 2011. It offered a new advanced methodology of quantitative estimations in the sphere of comparison of legal systems. However, it hasn't been used in practise yet. This creates a potentially interesting niche for future research and cooperation with UN.

One can compute correlations by different ways. In our research I found out that sometimes polynomial and linear  $R^2$  were approximately the same. However, in the

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<sup>13</sup> *Democracy Index 2012*, The Economist (Nov. 10, 2016), available at <http://pages.eiu.com/rs/eiu2/images/Democracy-Index-2012.pdf>.

<sup>14</sup> *Worldwide Governance Indicators*, The World Bank (Nov. 10, 2016), available at <http://info.worldbank.org/governance/wgi/index.aspx#home>.

<sup>15</sup> Daniel Kaufmann et al., *The Worldwide Governance Indicators Methodology and Analytical Issues*, World Bank Policy Research Working Paper No. 5430 (September 2010).

<sup>16</sup> *Freedom in the World 2013–2014*, Freedom House (Nov. 10, 2016), available at <https://freedomhouse.org/report/freedom-world/freedom-world-2014#.VMotKMnUdEs>.

<sup>17</sup> *The Global Innovation Index 2014*, Cornell University, INSEAD, the WIPO (Nov. 10, 2016), available at <https://www.globalinnovationindex.org/content.aspx?page=GII-Home>.

<sup>18</sup> *Rule of Law Indicators Implementation Guide and Project Tools*, The United Nations (Nov. 10, 2016), available at [http://www.un.org/en/peacekeeping/publications/un\\_rule\\_of\\_law\\_indicators.pdf](http://www.un.org/en/peacekeeping/publications/un_rule_of_law_indicators.pdf).

majority of our data massive distributions polynomial  $R^2$  was much higher than linear. At the same time, there was no single case where in the linear model correlation was higher to compare with the polynomial model. One could make a mistake if looking at low linear correlation level to make a general conclusion about the low correlation level. In many cases polynomial model could provide a correct response of medium or high level of correlation. So finally I decided to use polynomial correlation as a basis for our research.

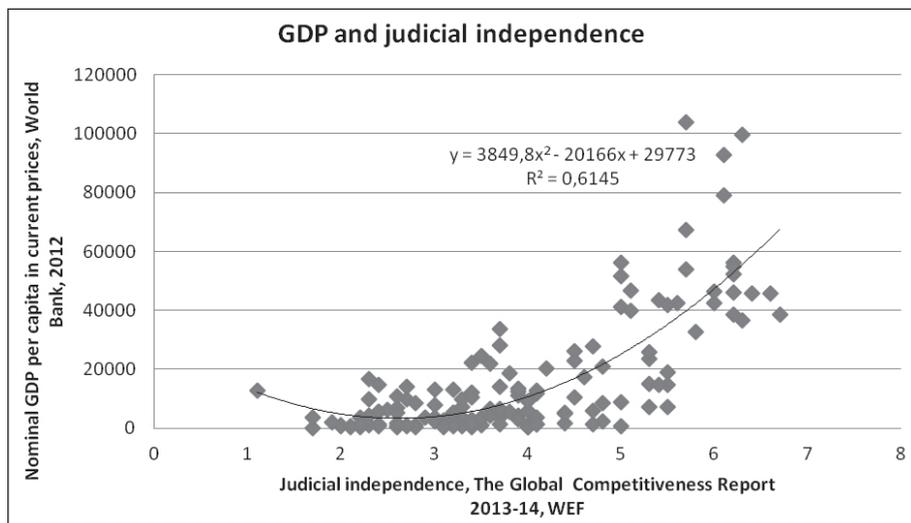
I recognize that some indices I researched are partly based on other indices which are also included in our research. For example, The Rule of Law Index is a one of 32 sources for creation of The Global Competitiveness Report. I am unable to avoid some biases caused by mutual influence of indexes to each other. But I believe that proper distortion is not significant. For example it's clear that the "contribution" of one "ingredient" to the "whole pie" is very unlikely to not be significant compared with the total contribution of the other thirty-one other ingredients and "poison a pie."

To illustrate our methodology I'll demonstrate here in detail one rank from the Global Competitiveness Report 2013–2014: judicial independence.

#### 1.06 Judicial independence

In your country, to what extent is the judiciary independent from influences of members of government, citizens or firms? [1 = heavily influenced; 7 = entirely independent]

| 2012–13 weighted average



For the polynomial function like  $Y = ax^2 + bx + c$  I always got positive "a" coefficient and  $R > 0$  (positive sign of correlation coefficient).

Each additional increase of X by one point, compared with previous one point X increase, is associated with  $2 \cdot a$  higher increase of Y. Also one can say that  $f''(x) = 2a$  as far as the second derivative measures how the rate of change of a quantity is itself changing. Unlike a linear function, it's impossible to measure an absolute change of Y associated with 1 unit change of X because it is different at each point of X. But I can measure the acceleration of change. In general, the lower difference in  $R^2$  between polynomial and linear models the lower the module of coefficient "a" in polynomial equation. Only in a very few cases I got similar  $R^2$  for linear and polynomial model. In those cases coefficient "a" is very low.

In our research I consider the following arbitrary correlations:

$R^2 > 0.5625$  high correlation (so if  $R > 0.75$ )

$0.25 < R^2 < 0.5625$  medium correlation (so if  $0.5 < R < 0.75$ )

$R^2 < 0.25$  low correlation (so if  $R < 0.5$ )

Table 1

### Summary Statistics of Correlations

	Correlation ( $R^2$ ) with Nominal GDP per capita, 2012	Correlation ( $R^2$ ) with Nominal GDP per capita, 2013	Correlation ( $R^2$ ) with Social Progress Index, Porter	Correlation ( $R^2$ ) with Life Expectancy	Summarized code of correlations of the row (H = High, M = Medium, L = Low)
<b>WORLD ECONOMIC FORUM. THE GLOBAL COMPETITIVENESS REPORT</b>					
<b>Sample size (countries)</b>	N = 147	N = 147	N = 122	N = 155	
<i>PILLAR 1 INSTITUTIONS, Aggregated</i>	0.64	0.638	0.456	0.271	HHMM
Ethical behaviour of firms	0.672	0.672	0.471	0.259	HHMM
Intellectual property protection	0.661	0.657	0.484	0.262	HHMM
Irregular payment and bribes	0.659	0.658	0.602	0.4	HHHM
Diversion of public funds	0.653	0.654	0.419	0.279	HHMM
Property rights	0.632	0.631	0.418	0.302	HHMM
Reliability of police services	0.627	0.623	0.469	0.324	HHMM
Judicial independence	0.615	0.612	0.426	0.265	HHMM
Favouritism in decisions of government officials	0.492	0.489	0.282	0.174	MMML
Efficiency of legal framework in challenging regulations	0.487	0.495	0.291	0.158	MMML

Burden of government regulation	0.481	0.481	0.265	0.139	MMML
Strength of auditing and reporting standards	0.471	0.469	0.502	0.289	MMMM
Public trust in politicians	0.468	0.466	0.167	0.122	MMLL
Efficacy of corporate boards	0.462	0.460	0.305	0.136	MMML
Protection of minority shareholders interests	0.396	0.394	0.28	0.146	MMML
Organized crime	0.389	0.390	0.297	0.206	MMML
Business cost of crime and violence	0.386	0.385	0.275	0.183	MMML
Transparency of government policymaking	0.385	0.388	0.311	0.139	MMML
Wastefulness of government spending	0.259	0.257	0.083	0.063	MMLL
Business cost of terrorism	0.141	0.143	0.295	0.104	LLML
Burden of government regulation	0.138	0.139	0.049	0.079	LLLL
Strength of investor protection (max = 10!)	0.074	0.074	0.13	0.091	LLLL
<b>WORLD JUSTICE PROJECT THE RULE OF LAW INDEX</b>					
<b>Sample size (countries)</b>	N = 98	N = 98	N = 90	N = 97	
RULE OF LAW Aggregated	0.83	0.836	0.74	0.43	HHHM
Constraints of government powers subrating	0.747	0.759	0.728	0.314	HHHM
Order and security subrating	0.813	0.818	0.434	0.418	HHMM
Absence of corruption subrating	0.755	0.756	0.729	0.496	HHHM
Open Government subrating	0.694	0.705	0.701	0.409	HHHM
Fundamental rights subrating	0.459	0.458	0.71	0.325	MMHM
Regulatory enforcement subrating	0.821	0.822	0.705	0.405	HHHM
Civil justice subrating	0.762	0.768	0.594	0.298	HHHM
Criminal justice subrating	0.777	0.784	0.609	0.322	HHHM
<b>The Bertelsmann Stiftung's Transformation Index (BTI)</b>					
<b>Sample size (countries)</b>	N = 128	N = 128	N = 106	N = 127	
Political transformation Aggregated	0.023	0.025	0.433	0.119	LLML
Stateness. Subrating of Political transformation	0.101	0.087	0.517	0.216	LLML
Political participation. Subrating of Political transformation	0.039	0.04	0.393	0.109	LLML
Rule of law. Subrating of Political transformation	0.036	0.088	0.42	0.119	LLML
Stability of democratic institutions. Subrating of Political transformation	0.063	0.066	0.374	0.123	LLML

Political and social integration. Subrating of Political transformation	0.027	0.029	0.395	0.135	LLML
<b>The Cingranelli and Richards (CIRI) Human Rights Data Project</b>					
<b>Sample size (countries)</b>	N = 190	N = 190	N = 133	N = 189	
Physical Integrity Rights Index (aggregated 4 following rows)	0.281	0.246	0.478	0.188	MLML
Government respect for disappearance	0.028	0.031	0.083	0.083	LLLL
Government respect for extrajudicial killing	0.144	0.157	0.254	0.146	LLML
Government respect for political imprisonment	0.102	0.111	0.351	0.109	LLML
Government respect for torture	0.25	0.264	0.304	0.145	MMML
Empowerment Rights Index Aggregated 7 following rights)	0.107	0.122	0.444	0.182	LLML
Assembly & Association	0.091	0.101	0.314	0.114	LLLL
Foreign Movement	0.047	0.05	0.178	0.143	LLLL
Domestic Movement	0.049	0.053	0.203	0.092	LLLL
Speech	0.013	0.016	0.14	0.067	LLLL
Electoral self-determination	0.101	0.106	0.279	0.166	LLML
Religion	0.019	0.022	0.061	0.003	LLLL
Workers' rights	0.06	0.078	0.15	0.068	LLLL
Women's Economic Rights	0.394	0.413	0.474	0.344	MMMM
Women's Political Rights	0.037	0.044	0.032	0.015	LLLL
Independence of the Judiciary	0.2	0.228	0.417	0.202	LLML
<b>THE ECONOMIST DEMOCRACY INDEX. DEMOCRACY AT A STANDSTILL</b>					
<b>Sample size (countries)</b>	N = 162	N = 162	N = 132	N = 162	
Democracy Index Aggregated	0.452	0.445	0.689	0.384	MMHM
Electoral process and pluralism. Subranking of the Democracy Index	0.235	0.232	0.607	0.338	MMHM
Functioning of Government. Subranking of the Democracy Index	0.405	0.4	0.624	0.406	MMHM
Political participation Subranking of the Democracy Index	0.377	0.378	0.422	0.25	MMMM
Political Culture Subranking of the Democracy Index	0.483	0.476	0.484	0.256	MMMM
Civil liberties. Subranking of the Democracy Index Subranking of the Democracy Index	0.276	0.273	0.655	0.374	MMHM

<b>THE WORLD BANK Worldwide Governance Indicators</b>					
<b>Sample size (countries)</b>	N = 166	N = 166	N = 132	N = 193	
Voice and Accountability participating in selecting their government, as well as freedom of expression, freedom of association, and a free media	0.403	0.373	0.708	0.364	MMHM
Political Stability and Absence of Violence/Terrorism likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including politically-motivated violence and terrorism	0.356	0.347	0.535	0.25	MMHM
Government effectiveness quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies	0.645	0.632	0.801	0.488	HHHM
Regulatory Quality ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development	0.634	0.608	0.732	0.43	HHHM
Rule of Law confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence	0.658	0.539	0.708	0.441	HHHM
Control of Corruption Reflects perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture of the state by elites and private interests"	0.623	0.603	0.662	0.426	HHHM
<b>FREEDOM HOUSE FREEDOM IN THE WORLD</b>					
<b>Sample size (countries)</b>	N = 182	N = 182	N = 133	N = 188	
Political rights	0.215	0.191	0.42	0.279	LLMM
Civil liberties	0.265	0.274	0.6	0.297	MMHM

<b>THE GLOBAL INNOVATION INDEX 2014</b>					
<b>Sample size (countries)</b>	N = 142	N = 142	N = 133	N = 142	
Regulatory quality	0.633	0.636	0.733	0.475	HHHM
Rule of law	0.716	0.721	0.69	0.434	HHHM

The Global Competitiveness Report 2013–2014 by the World Economic Forum (1 aggregated plus 21 subratings). Correlations of measured legal rights are significantly higher with GDP per capita than with Social Progress Index for 1 aggregated and 19/21 subratings. In two subrating cases the situation is opposite, however  $R^2$  is low in these cases. Correlation with life expectancy as usual is medium in cases where correlation with GDP per capita is high, but low in other cases.

The Rule of Law Index 2014 by The World Justice Project (1 aggregated plus 8 subratings). Correlations of measured legal rights are significantly higher with GDP per capita than with Social Progress Index for 1 aggregated and 6/8 subratings. In the other 2 subratings, the situation is opposite, but the difference between  $R^2$  is minimal and unlikely to be statistically significant. In the majority of cases, correlation with GDP per capita is high, with Social Progress Index and Life expectancy is medium.

The Bertelsmann Stiftung's Transformation Index (BTI) (1 aggregated plus subratings). Correlations of measured legal rights are significantly lower with GDP per capita than with Social Progress Index. All correlations with GDP per capita and life expectancy are low, all correlations with Porter Index are medium.

The Cingranelli and Richards (CIRI) Human Rights Data Project (2 aggregated which combine 11 subratings and 3 separate ratings). The picture is very similar to the Bertelsmann Stiftung's Transformation Index (BTI). Correlations of measured legal rights are significantly lower with GDP per capita than with Social Progress Index. All correlations with GDP per capita and life expectancy are low, correlations with Porter Index are low or sometimes medium. Exceptions: Government respect for torture where all correlations are medium except with life expectancy where low; Women's Economic Rights where all correlations are medium.

Democracy Index 2012 by The Economist Intelligence Unit Limited 2013 (1 aggregated plus 5 subratings). Correlations of measured legal rights are significantly lower with GDP per capita than with Social Progress Index. All correlations with GDP per capita and life expectancy are medium. Correlations with Social Progress Index are high or medium.

Worldwide Governance Indicators by The World Bank. (The 2013 update. 5 indicators). Correlations of measured legal rights are lower with GDP per capita than with Social Progress Index but not significantly. All correlations with Social Progress Index are high, all correlations with Life expectancy are medium. Correlations with GDP per capita are high or medium.

Freedom in the World 2013–2014 by Freedom House (2 aggregated ratings). Correlations of measured political rights with both GDP per capita and Social Progress Index are significantly lower compared with Civil liberties in the same ratings. All correlations with life expectancy are medium.

The Global Innovation Index 2014 (2 ratings). Correlations of measured legal rights with both GDP per capita and Social Progress Index are high and not significantly different to each other. All correlations with life expectancy are low.

Table 2

### Top 10 Correlations Between Legal Rights and Development (R<sup>2</sup> in Brackets)

Nominal GDP per capita in current prices (average of R <sup>2</sup> in 2012 and 2013)	Social Progress Index (Porter)	Life expectancy
The World Justice Project Rule of law aggregated (0.833)	The World Bank. Government Effectiveness (0.801)	The World Justice Project Absence of corruption (0.496)
The World Justice Project Order and security (0.816)	The World Justice Project Rule of law aggregated (0.74)	The World Bank Government effectiveness (0.488)
The World Justice Project The regulatory enforcement (0.822)	The Global Innovation Index. Regulatory Quality (0.733)	Global Innovation Index Regulatory quality (0.475)
The World Justice Project Absence of corruption (0.756)	The World Bank. Regulatory quality (0.732)	The World Bank. Rule of law (0.441)
The World Justice Project. Constraints of government powers (0.753)	The World Justice Project. Absence of corruption (0.729)	Global Innovation Index. Rule of law (0.434)
The World Justice Project Criminal justice (0.781)	The World Justice Project. Constraints of government powers (0.728)	The World Bank. Regulatory quality (0.43)
The World Justice Project Civil justice (0.765)	The World Justice Project. Fundamental rights (0.71)	The World Justice Project. Rule of law aggregated (0.43)
Global Innovation Index Rule of law (0.719)	The World Bank. Rule of law (0.708)	The World Bank. Control of corruption (0.426)
The World Justice Project Open Government (0.699)	The World Bank. Voice and accountability (0.708)	The World Justice Project. Order and security (0.418)
The Global Competitiveness Report. Ethical behaviour of firms (0.672)	The World Justice Project. Regulatory enforcement (0.705)	The World Justice Project. Open government (0.409)

### 3. Conclusion

In general there are no high correlations between score in legal ratings and life expectancy. Probably non-legal factors have the major impact on life expectancy. So I should avoid speaking of legal improvements as the best way to increase life expectancy. "Economic oriented" legal rights such as like property and intellectual property are relatively more correlated with GDP per capita. Political rights, civil freedoms such as the right not to be tortured or unlawfully detained are more correlated with Social Progress. Results of The Cingranelli and Richards (CIRI) Human Rights Data and the Project Transformation Index (BTI) have relatively low correlations with both GDP per capita, Porter Index and life expectancy. As far as these 2 ratings measure a lot of common parameters with other 6 ratings I researched, it's possible to make an assumption the methodological shortcomings of The Cingranelli and Richards (CIRI) Human Rights Data and the Transformation Index (BTI). In CIRI it is likely caused by use of an inappropriate scale (0-1-2 or 0-1-2-3 points are given only which leads to equal score given to significantly distinctive countries). As usual, general questions about legal dimensions, such as an estimate of the rule of law or the whole of fundamental rights, give higher correlations about more narrow legal rights.

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### References

- Cingranelli D. & Richards D. *CIRI Human Rights Data Project*, 32 Human Rights Quarterly 395 (2010).
- Fatas A. & Mihov I. *Policy Volatility, Institutions and Economic Growth*, 76(4) INSEAD and CEPR 613 (2005).
- Kaufmann D. et al. *The Worldwide Governance Indicators Methodology and Analytical Issues*, World Bank Policy Research Working Paper No. 5430 (September 2010).

Rigobon R. & Rodrik D. *Rule of Law, Democracy, Openness, and Income: Estimating the Interrelationships*, 13(3) *The Economics of Transition* 533 (2005).

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