Methodology O

Methodology

The WJP Rule of Law Index is the first attempt to systematically and comprehensively quantify the rule of law around the world, and remains unique in its operationalization of rule of law dimensions into concrete questions. The WJP Rule of Law Index 2014 report presents information on nine composite indicators (or factors) further disaggregated into 47 specific indicators (or sub-factors) (see Table 1). In attempting to present an image that accurately portrays the rule of law as experienced by ordinary people, each score of the Index is calculated using a large number of questions drawn from two original data sources collected by the World Justice Project in each country: a General Population Poll (GPP) and a series of Qualified Respondents' Questionnaires (QRQs).

These two data sources collect up-to-date firsthand information that is not available at the global level, and constitute the world's most comprehensive data set of its kind. They capture the experiences and perceptions of ordinary citizens and in-country professionals concerning the performance of the state and its agents and the actual operation of the legal framework in their country. The country scores and rankings presented in this report are built from more than five hundred variables drawn from the assessments of more than 100,000 citizens and legal experts in 99 countries and jurisdictions, making it the most accurate portrayal of the factors that contribute to shaping up the rule of law in a nation.

TABLE 4: THE INDICATORS OF THE WORLD JUSTICE PROJECT'S RULE OF LAW INDEX®

The World Justice Project's Rule of Law Index® comprises 47 outcomes indicators (or sub-factors) organized around nine dimensions (or factors). The following table presents a summary of the concepts underlying each of these subfactors. A more detailed description of the variables used

to calculate the Index scores is available in Botero, J and Ponce, A. (2012) "Measuring the Rule of Law". WJP Working Paper No. 2, available online at www.worldjusticeproject.org/ publications.



Factor 1: Constraints on Government Powers

1.1 Government powers are effectively limited by the legislature

Measures whether the legislative body as a whole, as well as its individual members, and the political parties, enjoy in practice the capacity to exercise effective checks and oversight of the government.

1.2 Government powers are effectively limited by the judiciary

Measures whether the judiciary as a whole, and the members of the high courts, enjoy in practice the capacity to exercise effective checks and oversight of the government. This includes the necessary judicial independence to halt unconstitutional government actions or violations.

1.3 Government powers are effectively limited by independent auditing and review

Measures whether independent comptrollers or auditors, as well as national human rights institutions and ombudsman agencies, enjoy in practice the capacity to exercise effective checks and oversight of the government.

1.4 Government officials are sanctioned for misconduct

Measures whether government officials at various levels in the executive branch, legislature, judiciary, and the police are investigated, prosecuted, and punished for official misconduct and other violations.

1.5 Government powers are subject to non-governmental checks

Measures whether people, civil society organizations, and political parties are free to express opinions about government policies or actions, either individually or in peaceful association with others; and whether the freedom of the media is respected in practice, including exercising oversight of the government without fear of retaliation.

1.6 Transition of power is subject to the law

Measures whether government officials at various levels are elected or appointed in accordance with the rules and procedures set forth in the constitution. In democratic societies, it also measures the integrity of the electoral process, including voter freedom and public scrutiny of election results.



Factor 2: Absence of Corruption

2.1 Government officials in the executive branch do not use public office for private gain

Measures the prevalence of bribery, informal payments, and other inducements in the delivery of public services and the enforcement of regulations. It also measures whether government procurement and public works contracts are awarded through an open and competitive bidding process, and whether government officials at various levels of the executive branch refrain from embezzling public funds.

2.2 Government officials in the judicial branch do not use public office for private gain

Measures whether judges and judicial officials refrain from soliciting and accepting bribes to perform duties or expedite processes; and whether the judiciary and judicial rulings are free of improper influence from the government, private interests, and criminal organizations.

2.3 Government officials in the police and the military do not use public office for private gain

Measures whether police officers and criminal investigators refrain from soliciting and accepting bribes to perform basic police services or to investigate crimes; and whether government officials in the police and the military are free from improper influence by private interests or criminal organizations.

2.4 Government officials in the legislative branch do not use public office for private gain

Measures whether members of the legislature refrain from soliciting or accepting bribes or other inducements in exchange for political favors or favorable votes on legislation.



3.1 The laws are publicized and accessible

Measures whether basic laws and information on legal rights are publicly available, presented in plain language, and are made accessible in all languages used by significant segments of the population. It also measures if administrative regulations and high court decisions are accessible to the public in a timely manner.

3.2 The laws are stable

Measures whether commercial, labor, public health, and criminal laws and regulations are sufficiently stable to allow the people and corporations subject to these regulations to ascertain what conduct is permitted and prohibited.

3.3 Right to petition the government and public participation

Measures whether people can - in practice - get together with others to share ideas, voice concerns, or to make complaints about public officials or public services to various government officers and members of the legislature. It also measures whether local government agencies effectively consult the community and provide sufficient information and advance notice about decisions that affect the community.

3.4 Official information is available on request

Measures whether drafts of legislation and administrative decisions at the national and local levels are available to the public on a timely basis; whether legislative proceedings are broadcast by radio or TV; and whether relevant records such as budget figures of government agencies, government contracts, transcripts of administrative proceedings, disclosure records of government officials, ombudsman reports, and information relative to community projects - are accessible to the public upon request.



Factor 4: **Fundamental Rights**

4.1 Equal treatment and absence of discrimination

Measures whether individuals are free from discrimination - based on socio-economic status, gender, ethnicity, religion, national origin, or sexual orientation - in their interactions with the police and public health services, or in court proceedings, public employment, and criminal investigations.

4.2 The right to life and security of the person is effectively guaranteed

Measures whether the police inflict physical harm or fatal physical injury upon criminal suspects during arrest and interrogation; and whether political dissidents are subject to searches or placed in detention centers without warrant, or are killed. It also measures whether the police or criminal organizations threaten, imprison, or punish members of the media.

4.3 Due process of law and rights of the accused

Measures whether the basic rights of criminal suspects are respected, including the presumption of innocence and the freedoms from arbitrary arrest and unreasonable pre-trial detention. It also measures whether criminal suspects are able to access and challenge evidence used against them; whether they are subject to torture or abusive treatment; and whether they are provided with adequate legal assistance. It also measures if the basic rights of prisoners are respected once convicted.

4.4 Freedom of opinion & expression is effectively guaranteed

Measures whether people, civil society organizations, and political parties are free to express opinions about government policies or actions, either individually or in peaceful association with others; and whether the freedom of the media is respected in practice, including exercising oversight of the government without fear of retaliation.

4.5 Freedom of belief and religion is effectively guaranteed

Measures whether religious minorities can freely and publicly observe their holy days and events, and whether non-adherents to a religion are required to submit to religious laws.

4.6 Freedom from arbitrary interference with privacy is effectively guaranteed

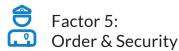
Measures whether the police detain people or search their homes without warrants, and whether government officials intercept private telephone or electronic communications of regular citizens or political opponents without judicial authorization.

4.7 Freedom of assembly and association is effectively guaranteed

Measures whether people can freely attend community meetings, join political organizations, hold public non-violent demonstrations, sign petitions, and express opinions against government policies and actions without fearing retaliation.

4.8 Fundamental labor rights are effectively guaranteed

Measures the effective enforcement of fundamental labor rights, including freedom of association and the right to collective bargaining; elimination of discrimination with respect to employment; and effective abolition of forced labor and child labor.



5.1 Crime is effectively controlled

Measures the prevalence of common crimes, including homicide, kidnapping, burglary and theft, armed robbery, and extortion, as well as people's general perceptions of safety in their communities.

5.2 Civil conflict is effectively limited

Measures whether people are protected from armed conflict and terrorism, as reflected by the number of battle related deaths and casualties from one-sided violence and terrorist bombings (source: Uppsala Conflict Data Program and Center for Systemic Peace).

5.3 People do not resort to violence to redress personal grievances

Measures whether people resort to intimidation or violence to resolve civil disputes amongst themselves, or to seek redress from the government; and whether people are free from mob violence.



Factor 6: Regulatory Enforcement

6.1 Government regulations are effectively enforced

Measures whether labor, environmental, public health, commercial, and consumer protection regulations are effectively enforced.

6.2 Government regulations are applied and enforced without improper influence

Measures whether the enforcement of regulations is subject to bribery or improper influence by private interests; and whether public services, such as the issuance of permits and licenses and the administration of public health services, are provided without bribery or other inducements.

6.3 Administrative proceedings are conducted without unreasonable delay

Measures whether administrative proceedings at the national and local levels are conducted without unreasonable delay.

6.4 Due process is respected in administrative proceedings

Measures whether the due process of law is respected in administrative proceedings conducted by national and local authorities in areas such as the environment, taxes, and labor.

6.5 The government does not expropriate without adequate compensation

Measures whether the government respects the property rights of people and corporations, refrains from the illegal seizure of private property, and provides adequate compensation when property is legally expropriated.

Factor 7:

7.1 People can access and afford civil justice

Measures the accessibility and affordability of civil courts, including whether people are aware of available remedies. can access and afford legal advice and representation, and can access the court system without incurring unreasonable fees, encountering unreasonable procedural hurdles, or experiencing physical or linguistic barriers.

7.2 Civil justice is free of discrimination

Measures whether the civil justice system discriminates in practice against users based on socio-economic status, gender, ethnicity, religion, national origin, or sexual orientation.

7.3 Civil justice is free of corruption

Measures whether the civil justice system is free of bribery and improper influence by powerful private interests.

7.4 Civil justice is free of improper government influence

Measures whether the civil justice system is independent from political influence, and whether the government unduly affects the outcome of cases.

7.5 Civil justice is not subject to unreasonable delay

Measures whether civil justice proceedings are conducted and judgments are produced in a timely manner without unreasonable delay.

7.6 Civil justice is effectively enforced

Measures the effectiveness and timeliness of the enforcement of civil justice decisions and judgments in practice.

7.7 Alternative dispute resolution mechanisms are accessible impartial, and effective

Measures whether alternative dispute resolution mechanisms (ADRs) are affordable, efficient, enforceable, and free from corruption.

Factor 8: Criminal Justice

8.1 Criminal investigation system is effective

Measures whether perpetrators of crimes are caught and indicted. It also measures whether the judicial police, investigators, and prosecutors have adequate resources, are free of corruption, and perform their duties competently.

8.2 Criminal adjudication system is timely and effective

Measures whether perpetrators of crimes are prosecuted and punished. It also measures whether criminal judges and other judicial officers are competent and produce speedy decisions, without abuse of pre-trial detention.

8.3 Correctional system is effective in reducing criminal behavior

Measures whether correctional institutions are secure, respect prisoners' rights, and aid in the prevention of recidivism.

8.4 Criminal system is impartial

Measures whether the police and criminal judges are impartial and do not discriminate against suspects based on socio-economic status, gender, ethnicity, religion, national origin, or sexual orientation.

8.5 Criminal system is free of corruption

Measures whether the police, prosecutors, and judges are free from the influence of bribery and improper influence from criminal organizations.

8.6 Criminal system is free of improper government influence

Measures whether the criminal justice system is independent from political influence, including whether the government unduly affects the outcome of cases.

8.7 Due process of law and rights of the accused

Measures whether the basic rights of criminal suspects are respected, including the presumption of innocence and the freedoms from arbitrary arrest and unreasonable pre-trial detention. It also measures whether criminal suspects are able to access and challenge evidence used against them, whether they are subject to torture or abusive treatment, and whether they are provided with adequate legal assistance. It also measures if basic rights of prisoners are respected once convicted.

DATA SOURCES

Every year the WJP collects data from representative samples of the general public (the General Population Polls or GPPs) and legal professionals (the Qualified Respondents' Questionnaires or QRQs) to compute the Index scores and rankings. The GPP surveys provide firsthand information on the experiences and the perceptions of ordinary people regarding a range of pertinent rule of law information, including their dealings with the government, the ease of interacting with State bureaucracy, the extent of bribery and corruption, the availability of dispute resolution systems, and the prevalence of common crimes to which they are exposed. The GPP questionnaire includes 87 perceptionbased questions and 56 experience-based questions, along with socio-demographic information on all respondents. The questionnaire is translated into local languages, adapted to common expressions, and administered by leading local polling companies using a probability sample of 1,000 respondents in the three largest cities of each country.¹ Depending on the particular situation of each country, three different polling methodologies are used: Face-toface, Telephone, or Online. The GPPs are carried out in each country every other year. The polling data used in this year's report was collected during the spring of 2011 (for 16 countries), the spring of 2012 (for 34 countries), and the fall of 2013 (for 49 countries). Detailed information regarding the cities covered, the polling companies contracted to administer the questionnaire, and the polling methodology employed in each of the 99 countries is presented in Table 5.

The Qualified Respondents' Questionnaires (QRQs) complement the polling data with assessments from incountry professionals with expertise in civil and commercial law, criminal justice, labor law, and public health. These questionnaires gather timely input from practitioners who frequently interact with state institutions, including information on the efficacy of courts, the strength of regulatory enforcement, and the reliability of accountability mechanisms. The questionnaires contain close-ended perception questions and several hypothetical scenarios with highly detailed factual assumptions aimed at ensuring comparability across countries. The QRQ surveys are conducted annually, and the questionnaires are completed by respondents selected from directories of law firms, universities and colleges, research organizations, and nongovernmental organizations (NGOs), as well as through referrals from the WJP global network of practitioners, and vetted by WJP staff based on their expertise. The expert

surveys are administered in three languages. The QRQ data for this report includes a total of 2,423 surveys, which represents an average of 24 respondents per country. These data were collected from July 2013 through December 2013.

DATA CLEANING AND SCORE COMPUTATION

Once collected, the data are carefully processed to arrive at country-level scores. As a first step, the respondent-level data are edited to exclude partially-completed surveys, suspicious data, and outliers (which are detected using the Z-score method). Individual answers are then mapped onto the 47 sub-factors of the Index (or onto the intermediate categories that make up each sub-factor), codified so that all values fall between 0 (least rule of law) and 1 (most rule of law), and aggregated at the country level using the simple (or un-weighted) average of all respondents. To allow for aggregation, the resulting scores are normalized using the Min-Max method. These normalized scores are then successively aggregated from the variable level all the way up to the factor level to produce the final country scores and rankings. In most cases, the GPP and QRQ questions are equally weighted in the calculation of the scores of the intermediate categories (sub-factors and sub-sub-factors). A full picture of how questions are mapped onto indicators and how they are weighted is presented in Botero and Ponce (2012).

DATA VALIDATION

As a final step, data are validated and cross-checked against qualitative and quantitative third-party sources to provide an additional layer of analysis and to identify possible mistakes or inconsistencies within the data. The third-party data sources used to cross-check the Index scores are described in Botero and Ponce (2012).

METHODOLOGICAL CHANGES TO THIS YEAR'S REPORT

Every year, the WJP reviews the methods of data collection to ensure that the information produced is valid, useful, and continues to capture the status of the rule of law in the world. To maintain consistency with previous editions and to facilitate tracking changes over time, the 2014 questionnaires and data maps are closely aligned with those administered in the past, with only three minor changes. First, sub-factors 5.1 "Crime is effectively controlled", 8.1 "Criminal investigation system is effective", and 8.2 "Criminal adjudication system is timely and effective" include new data from two experienced-based questions of the general population poll. Second, in the construction of sub-factors 3.1 "The laws are publicized and stable", 8.6 "Criminal system is free of improper government influence", and 7.4 "Civil system is free of improper

¹ In the case of online surveys, samples are not probability samples, as they are drawn from convenience samples such as access panels. In those cases, however, quota controls are used to ensure that the structure of the sample is balanced to the country's population figures in terms of income (or socio-economic status), gender, and city based on census data.

TABLE 5: CITY COVERAGE AND POLLING METHODOLOGY IN THE 99 INDEXED COUNTRIES & TERRITORIES

OUNTRY/TERRITORY	CITIES COVERED	POLLING COMPANY	METHODOLOGY	SAMPLE	
fghanistan	Kabul, Herat, Kandahar	ACSOR Surveys, a subsidiary of D3 Systems, Inc.	Face-to-face	1014	20
bania gentina	Tirana, Durres, Shkodra Buenos Aires, Cordoba, Rosario	Market Research & Polls - EURASIA (MRP-EURASIA) Statmark Group	Face-to-face Face-to-face	1000 1000	20
ustralia	Sydney, Melbourne, Brisbane	Survey Sampling International	Online	1000	20
stria	Vienna, Graz, Linz	Market Institut	Online	1000	20
ngladesh Iarus	Dhaka, Chittagong, Khulna Minsk, Gomel, Mogilev	Org-Quest Research Market Research & Polls - EURASIA (MRP-EURASIA)	Face-to-face Face-to-face	1000 1000	20
lgium	Antwerp, Ghent, Charleroi	Survey Sampling International	Online	1000	20
olivia	La Paz, Santa Cruz, Cochabamba	Prime Consulting	Face-to-face	1201	20
	Sarajevo, Banja Luka, Tuzla	Market Research & Polls - EURASIA (MRP-EURASIA)	Face-to-face	1000	20
otswana razil	Gaborone, Francistown, Molepolole São Paulo, Rio de Janeiro, Belo Horizonte	SIS International Research Fine Research Mi	Face-to-face xed (Face-to-face & Telephone)	1045) 850	20
ulgaria	Sofia, Plovdiv, Varna	Alpha Research	Face-to-face	1027	20
urkina Faso	Ouagadougou, Bobo-Dioulasso, Dedougou	TNS-RMS Cameroun Ltd.	Face-to-face	1007	20
ambodia	Phnom Penh, Battambang, Kampong Cham	Indochina Research Ltd	Face-to-face	1006	20
ameroon anada	Douala, Yaounde, Bamenda Toronto, Montreal, Vancouver	Liaison Marketing Survey Sampling International	Face-to-face Online	997 1000	20
hile	Santiago, Valparaíso, Concepcion	Fine Research	Telephone	850	20
nina	Shanghai, Beijing, Guangzhou	IBI Partners	Face-to-face	1002	20
olombia	Bogota, Medellin, Barranquilla	Statmark Group	Face-to-face	1017	20
te d'Ivoire	Abidjan, Bouake, San Pedro	TNS-RMS Cameroun Ltd.	Face-to-face	1013	20
oatia zech Republic	Zagreb, Split, Rijeka Prague, Brno, Ostrava	Market Research & Polls - EURASIA (MRP-EURASIA) Survey Sampling International	Face-to-face Online	1000 1001	20
enmark	Copenhagen, Aarhus, Odense	Survey Sampling International	Online	1000	20
ominican Republic	Santo Domingo, Distrito Nacional, Santiago	CID-Gallup	Face-to-face	1000	20
uador	Quito, Guayaquil, Cuenca	Prime Consulting	Face-to-face	1152	20
gypt Salvador	Cairo, Alexandria, Giza	WJP in collaboration with local partner	Face-to-face	1000	20
Salvador tonia	San Salvador, San Miguel, Santa Ana Tallinn, Tartu, Narva	CID-Gallup Survey Sampling International	Face-to-face Online	1009 1000	2
hiopia	Addis Ababa, Dire Dawa, Mek'ele	Research Solutions Limited	Face-to-face	1019	2
nland	Helsinki, Tampere, Turku	Survey Sampling International	Online	1000	2
ance	Paris, Lyon, Marseille	Survey Sampling International	Online	1001	2
orgia rmany	Tbilisi, Kutaisi, Batumi Berlin, Hamburg, Munich	ACT Marketing Research & Consulting Survey Sampling International	Face-to-face Online	1000 1000	2
rmany ana	Accra, Kumasi, Sekondi-Takoradi	FACTS International Ghana Limited	Face-to-face	1005	2
eece	Athens, Salonica, Patras	Centrum S.A.	Telephone	1000	2
atemala	Guatemala City, Quetzaltenango, Escuintla	CID-Gallup	Face-to-face	1026	2
ng Kong SAR, China	Hong Kong	IBI Partners	Face-to-face	1006	2
ingary dia	Budapest, Debrecen, Miskolc Mumbai, Delhi, Bangalore	SIS International Research Ipsos Public Affairs	Face-to-face Face-to-face	1000 1047	2
lonesia	Jakarta, Surabaya, Bandung	MRI-Marketing Research Indonesia	Face-to-face	1067	2
n	Teheran, Mashhad, Isfahan	WJP in collaboration with local partner	Face-to-face	1045	2
ly	Rome, Milan, Naples	Survey Sampling International	Online	1000	2
naica	Kingston, Portmore, Spanish Town	Statmark Group	Face-to-face	1000 1002	2
oan rdan	Tokyo, Yokohama, Osaka Amman, Irbid, Zarqa	IBI Partners WJP in collaboration with local partner	Face-to-face Face-to-face	1002	2
zakhstan	Almaty, Astana, Shymkent	VCIOM	Face-to-face	1002	2
nya	Nairobi, Mombasa, Nakuru	TNS-RMS	Face-to-face	1003	2
rgyzstan	Bishkek, Osh, Jalalabad	VCIOM	Face-to-face	1000	2
banon peria	Beirut, Tripoli, Sidon Monrovia, Kakata, Gbarnga	WJP in collaboration with local partner FACTS International Ghana Limited	Face-to-face Face-to-face	1001 1000	2
cedonia, FYR	Skopje, Bitola, Kumanovo	Market Research & Polls - EURASIA (MRP-EURASIA)	Face-to-face	1000	2
dagascar	Antananarivo, Antsirabe, Toamasina	DCDM Research	Face-to-face	1002	2
lawi	Lilongwe, Blantyre, Mzuzu	SIS International Research	Face-to-face	1001	2
llaysia exico	Kuala Lumpur, Ipoh, Johor Bahru Mexico City, Guadalajara, Monterrey	IBI Partners On Target	Face-to-face Telephone	1006 1000	2
ldova	Chisinau, Balti, Cahul	Market Research & Polls - EURASIA (MRP-EURASIA)	Face-to-face	1000	2
ngolia	Ulaanbaatar, Erdenet, Darkhan	Sant Maral	Face-to-face	1000	2
rocco	Casablanca, Rabat, Marrakesh	Ipsos Public Affairs	Face-to-face	1000	2
anmar	Mandalay, Naypyidaw, Yangon	IBI Partners	Face-to-face	1004	_ 2
pal therlands	Kathmandu, Morang, Rupandehi Amsterdam, Rotterdam, The Hague	Ipsos Survey Sampling International	Face-to-face Online	1015 1000	2
w Zealand	Auckland, Wellington, Christchurch	IBI Partners	Telephone	1006	2
aragua	Managua, León, Esteli	Statmark Group	Face-to-face	1000	2
geria	Lagos, Oyo, Kano	Marketing Support Consultancy	Face-to-face	1048	2
rway cistan	Oslo, Bergen, Trondheim Karachi, Lahore, Faisalabad	Survey Sampling International Gallup Pakistan (member of Gallup International)	Online Face-to-face	1005 1902	2
nama	Panama City, Colón, David Chiriquí	Statmark Group	Face-to-face	1000	2
u	Lima, Trujillo, Arequipa	Prime Consulting	Face-to-face	1231	2
lippines	Manila, Davao, Cebu	IBI Partners	Face-to-face	1000	2
and	Warsaw, Lodz, Cracow	Market Research & Polls - EURASIA (MRP-EURASIA) Survey Sampling International	Face-to-face	1000	- 2
tugal oublic of Korea	Lisbon, Porto, Braga Seoul, Busan, Incheon	IBI Partners	Online Face-to-face	1000 1004	2
mania	Bucharest, Cluj-Napoca, Timisoara	Market Research & Polls - EURASIA (MRP-EURASIA)	Face-to-face	1004	2
ssia	Moscow, Saint Petersburg, Novosibirsk	VCIOM	Face-to-face	1000	2
negal	Dakar, Thies, Saint-Louis	Liaison Marketing	Face-to-face	1000	2
bia rra Leone	Belgrade, Novi Sad,Nis Freetown, Kenema, Makeni	Market Research & Polls - EURASIA (MRP-EURASIA) TNS-RMS Cameroun Ltd.	Face-to-face Face-to-face	1000 1005	2
gapore	Singapore	Survey Sampling International	Online	1005	2
venia	Ljubljana, Maribor, Celje	SIS International Research	Face-to-face	1000	2
ıth Africa	Johannesburg, Cape Town, Durban	Quest Research Services	Face-to-face	1000	2
in Lanka	Madrid, Barcelona, Valencia	Survey Sampling International	Online Face to face	1000	2
Lanka eden	Colombo, Negombo, Kandy Stockholm, Gothenburg, Malmo	Ipsos Survey Sampling International	Face-to-face Online	1020 1000	2
eden Izania	Dar es Salaam, Mwanza, Shinyanga	Consumer Options Ltd.	Face-to-face	1000	2
ailand	Bangkok, Nonthaburi, Pak Kret	IBI Partners	Face-to-face	1008	2
nisia	Tunis, Sfax, Sousse	WJP in collaboration with local partner	Face-to-face	1000	2
key	Istanbul, Ankara, Izmir	TNS Turkey	Face-to-face	1003	- 2
anda raine	Kampala, Mbarara, Mbale Kiev, Kharkiv, Odesa	TNS-RMS Market Research & Polls - EURASIA (MRP-EURASIA)	Face-to-face Face-to-face	1002 1000	2
ited Arab Emirates	Dubai, Sharjah, Abu-Dhabi	WJP in collaboration with local partner	Face-to-face	1011	2
ited Kingdom	London, Birmingham, Glasgow	Survey Sampling International	Online	1000	2
ited States	New York, Los Angeles, Chicago	Survey Sampling International	Online	1000	2
uguay	Montevideo, Salto, Paysandu	Statmark Group	Telephone	1000	2
bekistan nezuela	Fergana, Samarkand, Tashkent Caracas, Maracaibo, Barquisimeto	Market Research & Polls - EURASIA (MRP-EURASIA) WJP in collaboration with local partner	Face-to-face Face-to-face	1000 1000	2
nezuera etnam	Ho Chi Minh City, Ha Noi, Hai Phong	Indochina Research Ltd	Face-to-face	1000	2
mbia	Lusaka, Kitwe, Ndola	SIS International Research	Face-to-face	1004	2
mbabwe	Harare, Bulawayo, Chitungwiza	SIS International Research	Face-to-face	1005	2

government influence", several questions were removed (five questions in the first case, and one question in the second and third cases). Finally, in the construction of sub-factor 5.2 "Civil conflict is effectively limited", the categorical coding of the variables "battle deaths", "one-sided casualties", "terrorism deaths", and "terrorism events" was revised.

In addition, in order to improve the accuracy of the QRQ results and reduce respondent burden, pro-active dependent interviewing techniques were used to remind respondents who participated in last year's survey of their responses in the previous year.

TRACKING CHANGES OVER TIME

This year's report introduces a measure to illustrate whether the rule of law in a country, as measured through the factors of the WJP Rule of Law Index, changed over the course of the past year. This measure is presented in the form of arrows and represents a summary of rigorous statistical testing based on the use of bootstrapping procedures (see below). For each factor, this measure takes the value of zero (no arrow) if there was no statistically significant change in the score since last year; a positive value (upward arrow) if there was a change leading to a statistically significant improvement in the score; and a negative value (downward arrow) if there was a change leading to a statistically significant deterioration in the score. This measure complements the numerical scores and rankings presented in this report, which benchmark each country's current performance on the factors and sub-factors of the Index against that of other countries.

The measure of change over time is constructed in four steps:

- 1. First, to allow for comparisons across the 2012 and 2013 data, the country-level raw values of each variable are mapped onto the 47 sub-factors (using the 2012 data map) and then normalized on a scale of 0-1 using the Min-Max method, so the maximum and minimum values of each variable over the two years equal one and zero, respectively.
- 2. The normalized variables are aggregated to yield country scores for each of the factors and sub-factors of the Index for each year. Last year's scores are then subtracted from this year's to obtain, for each country and each factor, the annual difference in scores.
- **3.** To test whether the annual changes are statistically significant, a bootstrapping procedure is used to estimate standard errors. To calculate these errors, 100 samples of respondent-level observations (of equal size to the original sample) are randomly selected with replacement for each country from the

- pooled set of respondents for 2012 and 2013. These samples are used to produce a set of 100 country-level scores for each factor and each country, which are utilized to calculate the final standard errors. These errors - which measure the uncertainty associated with picking a particular sample of respondents - are then employed to conduct pair-wise t-tests for each country and each factor.
- 4. Finally, to illustrate the annual change, a measure of change over time is produced based on the value of the annual difference and its statistical significance (at the 95 percent level).

STRENGTHS AND LIMITATIONS

The Index methodology displays both strengths and limitations. Among its strengths is the inclusion of expert and household surveys to ensure that the findings reflect the conditions experienced by the population. Another strength is that it approaches the measurement of rule of law from various angles by triangulating information across data sources and types of questions. This approach not only enables accounting for different perspectives on the rule of law, but it also helps to reduce possible bias that might be introduced by any one particular data collection method. Finally, it relies on statistical testing to determine the significance of the changes in the factor scores over the last year.

With the aforementioned methodological strengths come a number of limitations. First, the data shed light on rule of law dimensions that appear comparatively strong or weak, but are not specific enough to establish causation. Thus, it will be necessary to use the Index in combination with other analytical tools to provide a full picture of causes and possible solutions. Second, the methodology has been applied only in three major urban areas in each of the indexed countries. This year, the WJP is piloting the application of the methodology to rural areas. Third, given the rapid changes occurring in some countries, scores for some countries may be sensitive to the specific points in time when the data were collected. To address this, next year the WJP will pilot test methods of moving averages to account for short-term fluctuations. Fourth, the QRQ data may be subject to problems of measurement error due to the limited number of experts in some countries, resulting in less precise estimates. To address this, the WJP works constantly to expand its network of incountry academic and practitioner experts who contribute their time and expertise to this endeavor. Finally, due to the limited number of experts in some countries (which implies higher standard errors) and the fact that the GPPs are carried out in each country every other year (which implies that for some countries, some variables do not change from one year to another),² it is possible that the test described above fails to detect small changes in a country's situation over time.

OTHER METHODOLOGICAL CONSIDERATIONS

A detailed presentation of the methodology, including a description of the more than five hundred variables used to construct the Index scores, are available in Botero, J and Ponce, A. (2012) "Measuring the Rule of Law". WJP Working Paper No. 2, available online at www.worldjusticeproject.org.

² While the QRQ surveys are administered annually in every country, the GPP surveys are administered annually in approximately half of the countries in the Index country sample (meaning GPPs are conducted every other year in any given country).

Data Tables O

RANKINGS BY INCOME

COUNTRY/TERRITORY	CONSTRAINTS ON GOVERNMENT POWERS	ABSENCE OF CORRUPTION	OPEN GOVERNMENT	FUNDAMENTAL RIGHTS	ORDER & SECURITY	REGULATORY ENFORCEMENT	CIVIL JUSTICE	CRIMIN JUSTIC
Australia	8/30	8/30	12/30	10/30	12/30	7/30	12/30	11/30
Austria Belgium	6/30 11/30	10/30 13/30	6/30 18/30	5/30 9/30	9/30 14/30	6/30 19/30	7/30 19/30	5/30 20/30
Canada	13/30	14/30	3/30	16/30	13/30	9/30	13/30	15/30
Croatia Czech Republic	29/30 22/30	30/30 27/30	28/30 25/30	29/30 11/30	26/30 22/30	30/30 22/30	29/30 20/30	27/30 19/30
Denmark	1/30	1/30	5/30	2/30	3/30	2/30	4/30	3/30
Estonia	12/30	18/30	15/30	12/30	20/30	13/30	15/30	13/3
Finland France	5/30 14/30	6/30 20/30	11/30 16/30	4/30 18/30	7/30 23/30	11/30 14/30	8/30 18/30	1/30 21/3
Germany	9/30	12/30	14/30	8/30	11/30	16/30	3/30	16/3
Greece	26/30	29/30	26/30	26/30	27/30	29/30	24/30	30/3
Hong Kong SAR, China Hungary	23/30 28/30	9/30 25/30	10/30 27/30	27/30 28/30	4/30 17/30	15/30 28/30	16/30 30/30	10/3 28/3
Italy	24/30	26/30	29/30	21/30	28/30	27/30	28/30	23/3
Japan	15/30	11/30	8/30	20/30	1/30	12/30	11/30	18/3
Netherlands New Zealand	7/30 4/30	7/30 3/30	7/30 2/30	6/30 7/30	18/30 10/30	4/30 5/30	2/30 9/30	9/30 12/3
Norway	2/30	2/30	1/30	3/30	16/30	1/30	1/30	4/30
Poland	21/30	24/30	23/30	23/30	21/30	24/30	21/30	17/3
Portugal Republic of Korea	18/30 16/30	23/30 16/30	22/30 13/30	17/30 22/30	29/30 6/30	25/30 17/30	22/30 10/30	25/3 8/3
Singapore	20/30	5/30	20/30	24/30	2/30	8/30	6/30	2/30
Slovenia	27/30	28/30	21/30	13/30	25/30	26/30	26/30	26/3
Spain Sweden	25/30 3/30	22/30 4/30	24/30 4/30	14/30 1/30	24/30 5/30	23/30 3/30	23/30 5/30	24/3 6/3
United Arab Emirates	30/30	17/30	30/30	30/30	8/30	21/30	27/30	7/30
United Kingdom	10/30	15/30	9/30	15/30	19/30	10/30	14/30	14/3
United States Uruguay	19/30 17/30	21/30 19/30	17/30 19/30	25/30 19/30	15/30 30/30	20/30 18/30	25/30 17/30	22/3 29/3
Argentina	20/29	14/29	17/29	3/29	23/29	26/29	8/29	24/2
Belarus	28/29	7/29	26/29	25/29	6/29	9/29	4/29	11/2
Bosnia & Herzegovina Botswana	13/29 2/29	18/29 2/29	10/29 2/29	4/29 16/29	11/29 3/29	14/29 1/29	16/29 3/29	5/2° 1/2°
Brazil	3/29	12/29	7/29	6/29	18/29	6/29	14/29	23/2
Bulgaria	14/29	22/29	16/29	7/29	8/29	19/29	12/29	15/2
Chile China	1/29 26/29	1/29 15/29	1/29 24/29	1/29 28/29	15/29 4/29	2/29 28/29	2/29 25/29	2/2 ¹ 12/2
Colombia	10/29	21/29	8/29	18/29	26/29	15/29	15/29	26/2
Dominican Republic	19/29	26/29	11/29	14/29	25/29	27/29	17/29	21/2
Ecuador Iran	23/29 25/29	17/29 10/29	25/29 28/29	19/29 29/29	27/29 21/29	17/29 8/29	24/29 7/29	27/2 19/2
Jamaica	4/29	16/29	18/29	12/29	19/29	3/29	18/29	13/2
Jordan	17/29	4/29	21/29	22/29	2/29	4/29	1/29	4/29
Kazakhstan	27/29 9/29	20/29	27/29 19/29	21/29 11/29	7/29 10/29	22/29 24/29	19/29 22/29	17/2 14/2
Lebanon Macedonia, FYR	15/29	25/29 6/29	3/29	8/29	12/29	10/29	9/29	8/2
Malaysia	12/29	3/29	9/29	26/29	1/29	13/29	6/29	6/2
Mexico	11/29 22/29	27/29 19/29	6/29 5/29	17/29	29/29	16/29 18/29	27/29 21/29	28/2
Panama Peru	6/29	28/29	20/29	13/29 5/29	16/29 22/29	20/29	26/29	20/2 22/2
Romania	8/29	9/29	12/29	2/29	5/29	11/29	5/29	3/2
Russia	24/29	23/29	22/29	24/29	20/29	25/29	20/29	25/2
Serbia South Africa	18/29 5/29	24/29 13/29	13/29 4/29	9/29 10/29	14/29 24/29	23/29 7/29	23/29 11/29	16/2 10/2
Thailand	16/29	8/29	15/29	15/29	13/29	21/29	28/29	7/29
Tunisia	7/29	11/29	14/29	20/29	9/29	12/29	10/29	9/29
Turkey Venezuela	21/29 29/29	5/29 29/29	23/29 29/29	23/29 27/29	17/29 28/29	5/29 29/29	13/29 29/29	18/2 29/2
Albania	12/24	17/24	12/24	5/24	9/24	10/24	8/24	14/2
Bangladesh	18/24	22/24	20/24	20/24	17/24	22/24	20/24	23/2
Bolivia Cameroon	22/24 21/24	18/24 24/24	18/24 22/24	17/24 18/24	19/24 18/24	21/24 23/24	24/24 23/24	24/2 21/2
Cote d'Ivoire	16/24	10/24	21/24	16/24	20/24	7/24	9/24	10/2
Egypt	15/24	5/24	13/24	22/24	13/24	14/24	17/24	8/2
El Salvador Georgia	11/24 9/24	6/24 1/24	19/24 5/24	3/24 6/24	15/24 2/24	6/24 1/24	11/24 1/24	19/2 1/2
Ghana	1/24	7/24	3/24	1/24	11/24	4/24	2/24	6/2
Guatemala	10/24	14/24	10/24	9/24	21/24	19/24	21/24	22/2
India Indonesia	4/24 2/24	12/24 15/24	2/24 1/24	10/24 11/24	22/24 7/24	16/24 5/24	18/24 12/24	5/2- 12/2
Moldova	17/24	19/24	11/24	13/24	6/24	15/24	14/24	17/2
Mongolia	7/24	11/24	23/24	4/24	5/24	12/24	4/24	3/2
Morocco Nicaragua	6/24 23/24	9/24 13/24	6/24 8/24	19/24 14/24	8/24 16/24	3/24 13/24	6/24 19/24	16/2 15/2
Nigeria Nigeria	13/24	23/24	15/24	21/24	23/24	13/24	7/24	20/2
Pakistan	14/24	20/24	24/24	23/24	24/24	24/24	22/24	11/2
Philippines Senegal	5/24 3/24	3/24 4/24	9/24 14/24	12/24 2/24	10/24 14/24	9/24 2/24	16/24 3/24	13/2 7/2
Senegal Sri Lanka	8/24	2/24	4/24	8/24	12/24	11/24	15/24	2/2
Ukraine	19/24	21/24	7/24	7/24	3/24	18/24	5/24	18/2
Uzbekistan	24/24	16/24	17/24	24/24	1/24	8/24	10/24	9/2
Vietnam Afghanistan	20/24 10/16	8/24 16/16	16/24 11/16	15/24 12/16	4/24 16/16	20/24 15/16	13/24 16/16	4/2 16/1
Burkina Faso	9/16	1/16	4/16	2/16	7/16	1/16	2/16	5/1
Cambodia	15/16	11/16	8/16	10/16	3/16	13/16	15/16	15/1
Ethiopia Kenya	14/16 7/16	2/16 14/16	13/16 9/16	14/16 9/16	9/16 10/16	10/16 7/16	12/16 7/16	3/1/ 10/1
Kyrgyzstan	8/16	15/16	6/16	6/16	2/16	3/16	8/16	11/1
Liberia	4/16	10/16	10/16	3/16	15/16	14/16	14/16	12/1
Madagascar Malawi	13/16 6/16	9/16 4/16	3/16 7/16	8/16 4/16	1/16 8/16	8/16 6/16	10/16 1/16	9/1 1/1
Myanmar	12/16	3/16	14/16	15/16	5/16	12/16	13/16	14/1
Nepal	1/16	6/16	1/16	1/16	4/16	2/16	9/16	4/1
Sierra Leone	2/16	8/16	15/16	5/16	13/16	9/16	5/16	13/1
Tanzania Uganda	3/16 11/16	7/16 12/16	5/16 12/16	7/16 13/16	14/16 12/16	5/16 11/16	4/16 3/16	2/1d 6/1d
Zambia	5/16	5/16	2/16	11/16	6/16	4/16	6/16	8/1
Zimbabwe	16/16	13/16	16/16	16/16	11/16	16/16	11/16	7/16

RANKINGS BY REGION

COUNTRY/TERRITORY	CONTRAINTS ON GOVERNMENT POWERS	ABSENCE OF CORRUPTION	OPEN GOVERNMENT	FUNDAMENTAL RIGHTS	ORDER & SECURITY	REGULATORY ENFORCEMENT	CIVIL JUSTICE	CRIMINA JUSTICE
Austria Belgium	5/24 9/24	6/24 8/24	5/24 13/24	5/24 8/24	4/24 7/24	5/24 12/24	6/24 12/24	4/24 13/24
Bulgaria	24/24	24/24	24/24	23/24	19/24	24/24	22/24	24/24
Canada Croatia	11/24 22/24	9/24 22/24	2/24 21/24	14/24 24/24	6/24 21/24	6/24 23/24	8/24 23/24	9/24 21/24
	16/24	19/24	18/24	9/24	15/24	14/24	13/24	12/24
Denmark Estonia	1/24 10/24	1/24 11/24	4/24 10/24	2/24 10/24	1/24 13/24	2/24 9/24	4/24 10/24	2/24 7/24
Denmark Estonia Finland France Commany	4/24	4/24	8/24	4/24	3/24	8/24	7/24	1/24
France	12/24 7/24	12/24 7/24	11/24 9/24	16/24 7/24	16/24 5/24	10/24 11/24	11/24 3/24	14/24 10/24
Germany Greece	19/24	21/24	19/24	21/24	22/24	21/24	17/24	23/24
Hungary Litaly Netherlands	21/24	17/24	20/24	22/24	10/24	20/24	24/24	22/24
⊋ <u>Italy</u> Netherlands	17/24 6/24	18/24 5/24	22/24 6/24	17/24 6/24	23/24 11/24	19/24 4/24	21/24 2/24	16/24 6/24
	2/24	2/24	1/24	3/24	9/24	1/24	1/24	3/24
Norway Poland Portugal Romania	15/24 13/24	16/24 15/24	16/24 15/24	18/24 15/24	14/24 24/24	16/24 17/24	14/24 15/24	11/24 18/24
Romania	23/24	23/24	23/24	19/24	17/24	22/24	20/24	20/24
Slovenia	20/24 18/24	20/24 14/24	14/24 17/24	11/24 12/24	20/24 18/24	18/24 15/24	19/24 16/24	19/24 17/24
Spain Sweden	3/24	3/24	3/24	1/24	2/24	3/24	5/24	5/24
United Kingdom	8/24	10/24	7/24	13/24	12/24	7/24	9/24	8/24
United States Australia	14/24 2/15	13/24 3/15	12/24 4/15	20/24 2/15	8/24 7/15	13/24 2/15	18/24 5/15	15/24 4/15
Cambodia	15/15	15/15	13/15	12/15	13/15	15/15	15/15	15/15
China Hong Kong SAR, Chir	14/15 na 6/15	10/15 4/15	11/15 3/15	14/15 6/15	8/15 3/15	12/15 5/15	11/15 6/15	11/15 3/15
Indonesia Japan Malaysia	7/15	14/15	7/15	9/15	11/15	7/15	9/15	12/15
Japan	3/15	5/15	2/15	3/15	1/15	4/15	4/15	6/15
Malaysia Mongolia	9/15 10/15	7/15 13/15	8/15 14/15	13/15 7/15	6/15 10/15	8/15 11/15	7/15 8/15	7/15 9/15
Myanmar	12/15	12/15	15/15	15/15	15/15	14/15	13/15	14/15
New Zealand Philippines	1/15 8/15	1/15 9/15	1/15 10/15	1/15 10/15	5/15 14/15	1/15 9/15	2/15 12/15	5/15 13/15
Republic of Korea	4/15	6/15	5/15	4/15	4/15	6/15	3/15	2/15
Singapore	5/15	2/15	6/15	5/15	2/15	3/15	1/15	1/15
Thailand Vietnam	11/15 13/15	8/15 11/15	9/15 12/15	8/15 11/15	12/15 9/15	10/15 13/15	14/15 10/15	8/15 10/15
A I In a set a	5/13	10/13	7/13	4/13	11/13	8/13	6/13	9/13
Albania Belarus Bosnia & Herzegovin	12/13 a 1/13	4/13 5/13	12/13 3/13	12/13 1/13	4/13 7/13	3/13 5/13	1/13 7/13	4/13 1/13
Georgia	2/13	1/13	2/13	5/13	2/13	1/13	2/13	2/13
Bosnia & Herzegovin Georgia Kazakhstan Kyrgyzstan	11/13	6/13	13/13	9/13	5/13	7/13	9/13	7/13
X Kyigyzstali	6/13 3/13	13/13 3/13	10/13 1/13	7/13 2/13	10/13 8/13	11/13 4/13	12/13 3/13	13/13 3/13
Moldova	8/13	11/13	6/13	8/13	6/13	12/13	13/13	11/13
Russia Z Serbia	10/13 4/13	7/13 8/13	8/13 4/13	11/13 3/13	13/13 9/13	10/13 9/13	10/13 11/13	10/13 5/13
Z Serbia Turkey Ukraine	7/13	2/13	9/13	10/13	12/13	2/13	4/13	8/13
2 Ukraine Uzbekistan	9/13 13/13	12/13 9/13	5/13 11/13	6/13 13/13	3/13 1/13	13/13 6/13	5/13 8/13	12/13 6/13
Egypt Iran	6/7	5/7	5/7	6/7	6/7	7/7	7/7	5/7
~ ······	7/7	3/7	7/7	7/7	7/7	4/7	3/7	6/7
	5/7 3/7	2/7 7/7	6/7 4/7	4/7 1/7	2/7 4/7	2/7 6/7	1/7 6/7	2/7 4/7
Morocco	4/7	6/7	1/7	5/7	5/7	3/7	5/7	7/7
Tunisia United Arab Emirates	1/7 s 2/7	4/7 1/7	2/7 3/7	2/7 3/7	3/7 1/7	5/7 1/7	4/7 2/7	3/7 1/7
Argentina	11/16	4/16	9/16	3/16	10/16	12/16	3/16	8/16
Bolivia	14/16	15/16	14/16	15/16	9/16 5/16	15/16	15/16 4/16	15/16
Brazil Chile Colombia Dominican Republic	3/16 1/16	3/16 2/16	5/16 1/16	5/16 2/16	1/16	4/16 2/16	2/16	7/16 1/16
Colombia	6/16	9/16	6/16	12/16	12/16	5/16	5/16	10/16
	10/16 13/16	12/16 6/16	7/16 13/16	9/16 13/16	11/16 13/16	13/16 8/16	6/16 10/16	5/16 11/16
El Salvador	9/16	7/16	15/16	6/16	4/16	7/16	7/16	12/16
Guatemala Jamaica	8/16 4/16	11/16 5/16	10/16 11/16	10/16 7/16	14/16 7/16	14/16 3/16	14/16 8/16	13/16 3/16
Jamaica Jamaica Mexico Nicaragua Panama Peru	7/16	13/16	4/16	11/16	16/16	6/16	12/16	14/16
Nicaragua	15/16	10/16	8/16	14/16	6/16	11/16	13/16	9/16
Panama Peru	12/16 5/16	8/16 14/16	3/16 12/16	8/16 4/16	2/16 8/16	9/16 10/16	9/16 11/16	4/16 6/16
Uruguay	2/16	1/16	2/16	1/16	3/16	1/16	1/16	2/16
Venezuela Botswana	16/16 1/18	16/16 1/18	16/16 1/18	16/16 6/18	15/16 1/18	16/16 1/18	16/16 1/18	16/16 1/18
Burkina Faso	12/18	4/18	7/18	4/18	5/18	3/18	5/18	9/18
Cameroon	16/18	18/18	14/18	13/18	10/18	16/18	18/18	18/18
Cote d'Ivoire Ethiopia	13/18 17/18	9/18 5/18	13/18 16/18	10/18 17/18	13/18 8/18	6/18 14/18	8/18 16/18	8/18 4/18
Ghana	2/18	6/18	3/18	1/18	3/18	5/18	3/18	6/18
Ghana Kenya	10/18	16/18	11/18	12/18 5/18	9/18 17/18	10/18 17/18	13/18	14/18 15/18
Liberia Madagascar	7/18 15/18	13/18 12/18	12/18 5/18	5/18 11/18	17/18 2/18	17/18 11/18	17/18 14/18	13/18
Malawi	9/18	7/18	10/18	7/18	6/18	9/18	2/18	2/18
Nigeria Senegal	11/18 3/18	17/18 3/18	9/18 6/18	15/18 2/18	18/18 7/18	12/18 2/18	7/18 4/18	17/18 7/18
Sierra Leone	5/18	11/18	17/18	8/18	15/18	13/18	11/18	16/18
Journ Arrica	4/18	2/18	2/18	3/18	14/18	4/18	6/18	5/18
Tanzania Uganda	6/18 14/18	10/18 14/18	8/18 15/18	9/18 16/18	16/18 12/18	8/18 15/18	10/18 9/18	3/18 10/18
Zambia	8/18	8/18	4/18	14/18	4/18	7/18	12/18	12/18
Zimbabwe Afghanistan	18/18 5/6	15/18 6/6	18/18 5/6	18/18 5/6	11/18 5/6	18/18 6/6	15/18 6/6	11/18 6/6
Bangladesh	6/6	5/6	4/6	4/6	3/6	4/6	4/6	5/6
India	1/6	2/6	1/6	3/6	4/6	3/6	3/6	2/6
Nepal Pakistan	2/6 4/6	3/6 4/6	3/6 6/6	1/6 6/6	1/6 6/6	1/6 5/6	1/6 5/6	3/6 4/6
	., -	., -		-, -	-, -			., .

FACTOR 1: CONSTRAINTS ON GOVERNMENT POWERS

OUNTRY/TERRITORY GO	CONSTRAINTS ON OVERNMENT POWERS	1.1 LIMITS BY LEGISLATURE	1.2 LIMITS BY JUDICIARY	1.3 INDEPENDENT AUDITING	1.4 SANCTIONS FOR OFFICIAL MISCONDUCT	1.5 NON- GOVERNMENTAL CHECKS	1.6 LAWFUL TRANSIT OF POWER
fghanistan	0.43	0.61	0.38	0.24	0.30	0.60	0.44
lbania 	0.47 0.47	0.58 0.41	0.49 0.35	0.38 0.44	0.33	0.55 0.63	0.51
rgentina ustralia	0.47	0.41	0.85	0.83	0.81	0.86	0.67 0.94
ıstria	0.86	0.90	0.81	0.77	0.78	0.92	0.99
ingladesh	0.41	0.55	0.45	0.41	0.27	0.40	0.41
elarus elgium	0.34 0.81	0.27 0.84	0.28 0.75	0.39 0.78	0.50 0.76	0.27 0.82	0.34 0.88
olivia	0.38	0.33	0.24	0.41	0.36	0.45	0.46
snia & Herzegovina	0.54	0.62	0.51	0.49	0.42	0.57	0.63
tswana	0.69	0.72	0.74	0.46 0.49	0.69 0.40	0.76 0.74	0.77 0.83
azil Ilgaria	0.63 0.53	0.72 0.65	0.62 0.41	0.49	0.40	0.74	0.62
ırkina Faso	0.45	0.40	0.41	0.38	0.40	0.51	0.59
mbodia	0.34	0.43	0.26	0.23	0.38	0.40	0.37
meroon nada	0.39	0.33 0.77	0.30	0.47 0.80	0.43 0.75	0.46 0.80	0.34
ile	0.76	0.77	0.65	0.79	0.65	0.76	0.91
ina	0.35	0.58	0.40	0.37	0.45	0.08	0.23
lombia	0.55	0.59	0.52	0.48	0.46	0.59	0.68
te d'Ivoire oatia	0.44	0.44	0.37 0.45	0.44	0.45 0.56	0.44 0.61	0.49
ech Republic	0.72	0.78	0.65	0.70	0.59	0.76	0.84
nmark	0.94	0.90	0.92	0.95	0.94	0.95	0.98
minican Republic	0.48	0.52	0.36	0.31	0.35	0.67	0.67
uador ypt	0.40 0.45	0.36 0.51	0.27 0.44	0.37 0.44	0.37 0.50	0.51 0.43	0.50 0.39
Salvador	0.49	0.61	0.42	0.34	0.30	0.62	0.64
tonia	0.80	0.76	0.81	0.76	0.81	0.79	0.88
niopia	0.35	0.39	0.35	0.38	0.47	0.26	0.28
iland ince	0.88 0.79	0.85 0.80	0.83	0.85 0.74	0.88 0.76	0.90 0.82	0.95 0.94
orgia	0.53	0.50	0.42	0.50	0.58	0.64	0.55
rmany	0.83	0.83	0.84	0.70	0.78	0.90	0.95
ana	0.68	0.79	0.65	0.51	0.55	0.80	0.80
eece atemala	0.66 0.52	0.63	0.56 0.44	0.58 0.37	0.52 0.35	0.75 0.64	0.90 0.73
ong Kong SAR, China	0.72	0.87	0.81	0.69	0.81	0.50	0.62
ingary	0.61	0.52	0.61	0.40	0.58	0.72	0.83
dia	0.61	0.69	0.67	0.52	0.39	0.68	0.74
donesia In	0.64	0.76 0.48	0.59 0.47	0.51 0.24	0.57 0.32	0.74 0.23	0.68
ly	0.69	0.72	0.67	0.65	0.58	0.72	0.78
maica	0.62	0.67	0.66	0.54	0.43	0.68	0.72
pan	0.76	0.81	0.81	0.60	0.76	0.80	0.79
rdan zakhstan	0.50 0.35	0.38	0.48	0.69 0.37	0.59 0.45	0.46 0.34	0.39
nya	0.51	0.65	0.52	0.41	0.42	0.58	0.48
rgyzstan	0.47	0.64	0.38	0.28	0.39	0.61	0.51
banon	0.57	0.72	0.46	0.49	0.47	0.76	0.54
oeria acedonia, FYR	0.53 0.52	0.68	0.49	0.23 0.52	0.35 0.46	0.74 0.52	0.70 0.70
adagascar	0.41	0.44	0.35	0.43	0.40	0.42	0.41
alawi	0.52	0.58	0.56	0.42	0.44	0.58	0.52
alaysia	0.55	0.70	0.58	0.52	0.56	0.37	0.57
exico oldova	0.55 0.43	0.70 0.51	0.50 0.32	0.47 0.37	0.32	0.65 0.51	0.68 0.55
ongolia	0.53	0.61	0.44	0.46	0.45	0.63	0.60
orocco	0.56	0.61	0.55	0.37	0.54	0.55	0.71
anmar .	0.41	0.58	0.38	0.30	0.53	0.30	0.39
pal therlands	0.56 0.86	0.61 0.85	0.57 0.85	0.49 0.83	0.42 0.84	0.68 0.89	0.60 0.91
w Zealand	0.88	0.89	0.90	0.81	0.85	0.91	0.93
caragua	0.31	0.36	0.25	0.24	0.23	0.48	0.31
geria	0.47	0.63	0.49	0.28	0.39	0.55	0.49
rway kistan	0.90 0.46	0.92 0.53	0.91 0.53	0.74 0.28	0.94 0.28	0.94 0.65	0.96 0.50
nama	0.45	0.34	0.32	0.38	0.27	0.58	0.82
ru	0.60	0.63	0.45	0.62	0.42	0.69	0.78
ilippines	0.59	0.72	0.60 0.74	0.56 0.69	0.47	0.66	0.54
land rtugal	0.73 0.74	0.79 0.75	0.74	0.69	0.59 0.61	0.68 0.79	0.89 0.94
public of Korea	0.76	0.77	0.78	0.72	0.70	0.75	0.86
mania	0.58	0.62	0.56	0.45	0.48	0.67	0.69
ssia	0.36	0.40	0.30	0.35	0.35	0.38	0.37
negal rbia	0.63 0.49	0.60 0.56	0.51	0.63	0.57 0.34	0.68	0.76 0.74
rra Leone	0.55	0.61	0.42	0.48	0.51	0.64	0.64
igapore	0.73	0.67	0.69	0.81	0.89	0.51	0.83
venia	0.65	0.69	0.54	0.66	0.52	0.69	0.80
uth Africa ain	0.61 0.68	0.66 0.67	0.60	0.50 0.60	0.47 0.58	0.72 0.74	0.71 0.89
Lanka	0.53	0.52	0.53	0.55	0.47	0.62	0.51
eden	0.90	0.81	0.84	0.92	0.86	0.96	0.99
izania	0.54	0.65	0.51	0.43	0.48	0.58	0.57
ailand nisia	0.50 0.58	0.62 0.66	0.53 0.55	0.36 0.54	0.44 0.48	0.60 0.62	0.48
rkey	0.46	0.47	0.44	0.42	0.47	0.40	0.56
anda	0.41	0.43	0.38	0.43	0.48	0.35	0.42
raine	0.41	0.59	0.25	0.29	0.32	0.51	0.49
ited Arab Emirates ited Kingdom	0.58 0.81	0.52 0.83	0.63 0.79	0.75 0.76	0.74 0.78	0.33 0.82	0.50 0.90
ited States	0.74	0.83	0.79	0.68	0.68	0.82	0.76
uguay	0.75	0.73	0.69	0.64	0.69	0.80	0.94
bekistan	0.29	0.07	0.23	0.43	0.42	0.14	0.42
nezuela etnem	0.17 0.40	0.23	0.16	0.04	0.10 0.55	0.28 0.35	0.20
etnam mbia	0.40	0.30 0.51	0.26 0.38	0.43 0.62	0.55	0.35	0.48 0.62
	0.25	0.34	0.26	0.02	0.35	0.16	0.15

FACTOR 2: ABSENCE OF CORRUPTION

COUNTRY/TERRITORY ABSE	NCE OF CORRUPTION 2	.1 NO CORRUPTION IN THE 2. EXECUTIVE BRANCH	2 NO CORRUPTION IN TH JUDICIARY	E 2.3 NO CORRUPTION IN THE 2 POLICE/MILITARY	.4 NO CORRUPTION IN THE LEGISLATURE
Afghanistan	0.24	0.32	0.11	0.37	0.17
Albania	0.34	0.45	0.25	0.37	0.29
Argentina Australia	0.49 0.86	0.49 0.84	0.56 0.94	0.61 0.92	0.31 0.74
Austria	0.84	0.82	0.88	0.91	0.74
Bangladesh	0.27	0.35	0.29	0.19	0.27
Belarus Belgium	0.53 0.81	0.51 0.82	0.56 0.86	0.64 0.92	0.40 0.66
Bolivia	0.32	0.62	0.23	0.30	0.33
Bosnia & Herzegovina	0.45	0.40	0.52	0.62	0.27
Botswana	0.73	0.73	0.75	0.68	0.75
Brazil Bulgaria	0.50 0.43	0.49 0.39	0.64 0.46	0.64 0.56	0.22 0.30
Burkina Faso	0.45	0.43	0.54	0.52	0.33
Cambodia	0.33	0.38	0.22	0.19	0.51
Cameroon Canada	0.26 0.81	0.29 0.77	0.31 0.89	0.24 0.86	0.20 0.69
Chile	0.73	0.76	0.75	0.86	0.55
China	0.48	0.46	0.34	0.62	0.49
Colombia Cote d'Ivoire	0.43 0.41	0.50 0.41	0.49 0.36	0.56 0.52	0.18 0.34
Croatia	0.54	0.52	0.56	0.67	0.42
Czech Republic	0.60	0.58	0.71	0.80	0.32
Denmark Dominican Republic	0.96 0.37	0.94 0.42	0.95 0.46	0.97 0.46	0.98 0.14
cuador	0.47	0.42	0.46	0.58	0.38
Egypt	0.46	0.48	0.50	0.48	0.39
El Salvador	0.46	0.50	0.46	0.59	0.29
Estonia Ethiopia	0.78 0.45	0.76 0.43	0.90 0.35	0.90 0.48	0.58 0.54
inland	0.90	0.43	0.90	0.96	0.81
rance	0.78	0.78	0.83	0.87	0.63
Georgia	0.71	0.70	0.59	0.86	0.71
Germany Ghana	0.83 0.44	0.80 0.48	0.93 0.56	0.91 0.41	0.67 0.32
Greece	0.56	0.53	0.64	0.77	0.31
Guatemala	0.37	0.43	0.39	0.48	0.20
Hong Kong SAR, China	0.85 0.64	0.80 0.61	0.87 0.69	0.91 0.78	0.81 0.48
lungary ndia	0.39	0.39	0.46	0.78	0.48
ndonesia	0.36	0.49	0.34	0.37	0.22
ran	0.50	0.48	0.51	0.60	0.42
taly Iamaica	0.60 0.48	0.58 0.51	0.76 0.60	0.82 0.61	0.24 0.20
apan	0.84	0.81	0.82	0.91	0.81
ordan	0.57	0.59	0.69	0.69	0.31
(azakhstan	0.43 0.28	0.44 0.36	0.40 0.39	0.49 0.23	0.39 0.13
Kenya Kyrgyzstan	0.27	0.36	0.22	0.23	0.15
ebanon	0.40	0.39	0.46	0.50	0.24
iberia	0.34	0.34	0.44	0.34	0.24
Macedonia, FYR Madagascar	0.53 0.34	0.56 0.39	0.43 0.36	0.71 0.37	0.44 0.23
Malawi	0.43	0.38	0.57	0.43	0.32
Malaysia	0.64	0.59	0.66	0.69	0.64
Mexico	0.37	0.47	0.36	0.31	0.33
Moldova Mongolia	0.32	0.39 0.39	0.24 0.47	0.41 0.55	0.23 0.15
Morocco	0.43	0.49	0.37	0.49	0.38
Myanmar	0.43	0.53	0.17	0.54	0.48
Nepal Netherlands	0.38 0.88	0.52 0.86	0.35 0.90	0.44 0.94	0.21 0.84
New Zealand	0.91	0.89	0.90	0.95	0.92
Nicaragua	0.38	0.49	0.28	0.48	0.26
Nigeria	0.26	0.28	0.46	0.22	0.09
Norway Pakistan	0.94	0.95 0.35	0.92 0.41	0.95 0.25	0.94 0.16
Panama	0.44	0.51	0.42	0.62	0.22
Peru	0.36	0.51	0.35	0.38	0.19
Philippines Poland	0.50 0.66	0.52 0.63	0.41 0.78	0.58 0.81	0.47 0.41
Portugal	0.69	0.67	0.73	0.84	0.50
Republic of Korea	0.79	0.78	0.80	0.91	0.68
Romania	0.50	0.49	0.59	0.66	0.29
Russia Genegal	0.42 0.48	0.44 0.49	0.41 0.43	0.50 0.55	0.35 0.45
Serbia	0.41	0.40	0.41	0.53	0.32
Sierra Leone	0.35	0.39	0.32	0.32	0.36
Singapore	0.90	0.89	0.84	0.88	0.99
Blovenia Bouth Africa	0.60 0.49	0.55 0.47	0.69 0.61	0.63 0.54	0.53 0.36
Spain	0.69	0.69	0.73	0.88	0.47
ri Lanka	0.53	0.50	0.56	0.68	0.37
Sweden	0.91 0.38	0.88	0.96 0.38	0.95 0.38	0.85 0.37
「anzania 「hailand	0.38	0.40 0.49	0.38	0.38	0.37
Tunisia	0.50	0.52	0.52	0.50	0.47
Turkey	0.55	0.54	0.62	0.65	0.39
Jganda Jkraine	0.30 0.28	0.27 0.25	0.42 0.41	0.25 0.34	0.25 0.11
Jnited Arab Emirates	0.79	0.83	0.79	0.78	0.11
Jnited Kingdom	0.80	0.83	0.85	0.89	0.66
	0.75	0.75	0.81	0.87	0.58
Inited States	0.70				
Jruguay	0.78	0.82	0.78	0.80	0.73
Jruguay Jzbekistan	0.78 0.35 0.30	0.82 0.29 0.36	0.78 0.40 0.24	0.80 0.37 0.39	0.73 0.34 0.21
Jruguay	0.35	0.29	0.40	0.37	0.34

FACTOR 3: OPEN GOVERNMENT

OUNTRY/TERRITORY	OPEN GOVERNMENT	3.1 ACCESSIBLE LAWS	3.2 STABLE LAWS	3.3 RIGHT TO PETITION/ PARTICIPATION	3.4 RIGHT TO INFORMATION
fghanistan	0.34	0.57	0.25	0.48	0.06
Ibania	0.44	0.52	0.47	0.35	0.43
rgentina .ustralia	0.45 0.75	0.50 0.70	0.49 0.79	0.45 0.69	0.37 0.82
ustria	0.78	0.82	0.89	0.83	0.58
angladesh	0.36	0.48	0.29	0.41	0.27
elarus elgium	0.39 0.67	0.51 0.65	0.43 0.79	0.33 0.65	0.28 0.59
olivia	0.38	0.42	0.32	0.45	0.33
osnia & Herzegovina	0.48	0.55	0.50	0.42	0.44
otswana razil	0.61 0.50	0.66 0.46	0.60 0.48	0.80 0.45	0.40 0.59
Julgaria	0.46	0.46	0.44	0.48	0.47
urkina Faso	0.41	0.32	0.46	0.44	0.44
ambodia ameroon	0.38 0.33	0.46 0.42	0.43 0.33	0.40 0.31	0.21 0.27
anada	0.82	0.78	0.86	0.81	0.84
hile	0.65	0.52	0.84	0.48	0.76
hina olombia	0.41 0.49	0.69 0.42	0.48 0.45	0.24 0.52	0.23 0.57
ote d'Ivoire	0.34	0.24	0.39	0.42	0.32
roatia	0.49	0.51	0.54	0.38	0.55
zech Republic	0.52 0.79	0.53 0.72	0.55 0.87	0.46 0.76	0.52 0.82
enmark ominican Republic	0.48	0.72	0.58	0.76	0.42
cuador	0.40	0.48	0.31	0.47	0.36
gypt	0.44	0.52	0.43	0.51	0.28
l Salvador stonia	0.37 0.71	0.41 0.66	0.42 0.77	0.41 0.66	0.25 0.73
thiopia	0.32	0.54	0.18	0.35	0.22
inland	0.76	0.74	0.83	0.69	0.79
rance eorgia	0.70 0.48	0.62 0.51	0.68 0.44	0.74 0.46	0.78 0.51
ermany	0.73	0.68	0.80	0.72	0.71
hana	0.50	0.42	0.58	0.57	0.42
reece uatemala	0.50 0.45	0.39 0.42	0.49 0.52	0.41 0.46	0.73 0.40
ong Kong SAR, China	0.43	0.42	0.90	0.56	0.75
ungary	0.50	0.63	0.49	0.48	0.40
dia	0.53	0.59	0.50	0.58	0.45
donesia an	0.54 0.34	0.60 0.42	0.53 0.44	0.63 0.28	0.38 0.22
aly	0.49	0.46	0.53	0.42	0.56
ımaica	0.44	0.40	0.53	0.41	0.43
ipan ordan	0.77 0.43	0.81 0.55	0.78 0.45	0.70 0.39	0.81 0.34
azakhstan	0.45	0.52	0.43	0.25	0.27
enya	0.38	0.38	0.37	0.40	0.35
yrgyzstan	0.41 0.44	0.48 0.44	0.45 0.55	0.34 0.37	0.38 0.40
ebanon beria	0.44	0.44	0.55	0.49	0.40
acedonia, FYR	0.60	0.74	0.65	0.52	0.49
adagascar	0.42	0.47	0.66	0.31	0.26
alawi alaysia	0.39 0.48	0.38 0.65	0.38	0.50 0.46	0.29 0.21
exico	0.52	0.49	0.61	0.45	0.53
oldova	0.44	0.54	0.37	0.36	0.51
ongolia orocco	0.33 0.48	0.39 0.54	0.35 0.40	0.26 0.53	0.30 0.43
yanmar	0.31	0.48	0.24	0.24	0.27
epal	0.44	0.49	0.39	0.46	0.44
etherlands ew Zealand	0.78 0.83	0.70 0.84	0.86	0.76 0.77	0.78 0.86
icaragua	0.45	0.57	0.85 0.47	0.53	0.23
igeria	0.40	0.41	0.46	0.45	0.29
orway	0.85	0.75	0.90	0.75	0.98
ıkistan ınama	0.32 0.52	0.31 0.52	0.30 0.66	0.37 0.43	0.30 0.49
eru	0.44	0.32	0.47	0.44	0.53
nilippines	0.45	0.59	0.44	0.44	0.35
oland ortugal	0.56 0.59	0.55 0.53	0.53 0.52	0.53 0.61	0.62 0.69
public of Korea	0.74	0.85	0.75	0.65	0.71
mania	0.47	0.48	0.50	0.43	0.49
issia negal	0.43 0.42	0.52 0.36	0.52 0.49	0.28 0.48	0.40 0.33
rbia	0.42	0.51	0.49	0.42	0.46
erra Leone	0.29	0.36	0.16	0.42	0.23
ngapore ovenia	0.64 0.60	0.75 0.66	0.81 0.56	0.57 0.50	0.44 0.69
uth Africa	0.60	0.66	0.56	0.50	0.69
ain	0.55	0.55	0.56	0.53	0.56
i Lanka	0.48	0.54	0.57	0.51	0.31
veden nzania	0.82 0.41	0.73 0.41	0.88 0.30	0.77 0.58	0.89 0.36
iailand	0.47	0.58	0.40	0.54	0.35
nisia	0.47	0.51	0.61	0.41	0.36
rkey	0.42	0.46	0.55	0.35	0.34
ganda Kraine	0.33 0.46	0.25 0.51	0.31 0.53	0.42 0.36	0.34 0.44
nited Arab Emirates	0.46	0.61	0.66	0.41	0.17
nited Kingdom	0.77	0.73	0.74	0.77	0.83
nited States Tuguay	0.70 0.65	0.66 0.61	0.75 0.71	0.71 0.64	0.68
uguay bekistan	0.89	0.61	0.71	0.64	0.83
enezuela	0.30	0.46	0.23	0.34	0.18
etnam ambia	0.39	0.56	0.45	0.40	0.17
	0.43	0.46	0.37	0.49	0.40

FACTOR 4: FUNDAMENTAL RIGHTS

OUNTRY/TERRITORY FO	RIGHTS	. 4.1 EQUAL TREATMENT/ NO DISCRIMINATION	4.2 RIGHT TO LIFE 4 AND SECURITY	.3 DUE PROCESS OF LAW	4.4 FREEDOM OF EXPRESSION	4.5 FREEDOM OF RELIGION	4.6 RIGHT TO PRIVACY	4.7 FREEDOM OF ASSOCIATION	4.8 LAB
fghanistan	0.39	0.28	0.31	0.31	0.61	0.36	0.34	0.65	0.22
Ibania	0.58	0.67	0.65	0.44	0.56	0.77	0.40	0.66	0.52
rgentina ustralia	0.67 0.82	0.66 0.65	0.82 0.89	0.47 0.76	0.64	0.80	0.70 0.90	0.67 0.89	0.56
ustria	0.87	0.74	0.92	0.86	0.92	0.84	0.94	0.92	0.70
angladesh	0.43	0.55	0.22	0.30	0.41	0.56	0.26	0.55	0.57
elarus	0.46	0.71	0.44	0.43	0.27	0.63	0.24	0.39	0.54
elgium	0.83	0.79	0.95	0.77	0.82	0.80	0.82	0.86	0.82
olivia osnia & Herzegovina	0.48 0.67	0.47 0.68	0.45 0.77	0.35	0.45 0.58	0.64	0.45 0.67	0.53 0.67	0.52
otswana	0.57	0.51	0.53	0.58	0.76	0.60	0.29	0.72	0.5
razil	0.66	0.66	0.61	0.37	0.74	0.81	0.66	0.76	0.65
ulgaria	0.65	0.70	0.75	0.47	0.67	0.80	0.54	0.74	0.57
urkina Faso	0.58	0.72	0.51	0.37	0.52	0.79	0.43	0.72	0.59
ambodia ameroon	0.46 0.46	0.55 0.50	0.46 0.42	0.38	0.40	0.52 0.61	0.36	0.47 0.60	0.51
anada	0.77	0.62	0.85	0.74	0.80	0.84	0.78	0.85	0.65
hile	0.74	0.60	0.83	0.61	0.77	0.83	0.84	0.80	0.63
hina	0.31	0.53	0.39	0.46	0.08	0.20	0.36	0.17	0.32
olombia ote d'Ivoire	0.55 0.50	0.54 0.66	0.54 0.26	0.43	0.59 0.46	0.67 0.86	0.55 0.32	0.63	0.48
oatia	0.64	0.68	0.65	0.59	0.62	0.72	0.40	0.75	0.74
ech Republic	0.80	0.77	0.92	0.78	0.76	0.80	0.87	0.82	0.68
enmark	0.90	0.83	0.96	0.93	0.95	0.85	0.90	0.94	0.85
ominican Republic	0.60	0.60	0.49	0.46	0.68	0.75	0.51	0.72	0.53
uador	0.54	0.56	0.56	0.42	0.52	0.73	0.42	0.59	0.54
ypt Salvador	0.39	0.54 0.60	0.33 0.76	0.28 0.46	0.43	0.23 0.75	0.32 0.61	0.60 0.63	0.40
tonia	0.82	0.85	0.78	0.46	0.79	0.75	0.61	0.80	0.6
hiopia	0.36	0.51	0.30	0.39	0.26	0.61	0.21	0.31	0.3
nland	0.89	0.87	1.00	0.90	0.90	0.77	1.00	0.90	0.8
nce	0.76	0.66	0.78	0.71	0.82	0.84	0.70	0.90	0.7
orgia rmanv	0.58 0.84	0.76 0.78	0.58 0.89	0.55 0.78	0.64	0.60 0.85	0.35 0.79	0.66 0.91	0.5
rmany ana	0.66	0.78	0.89	0.78	0.90	0.85	0.79	0.91	0.8
eece	0.69	0.64	0.74	0.52	0.76	0.73	0.74	0.80	0.5
atemala	0.56	0.44	0.58	0.45	0.64	0.67	0.63	0.68	0.3
ng Kong SAR, China	0.68	0.77	0.81	0.77	0.50	0.71	0.71	0.55	0.6
ngary lia	0.68	0.58	0.83	0.49	0.73	0.62 0.72	0.73 0.50	0.75 0.67	0.7
lonesia	0.54	0.56 0.51	0.49	0.38	0.74	0.45	0.48	0.71	0.4
n .	0.23	0.46	0.14	0.34	0.23	0.13	0.08	0.21	0.2
ly	0.73	0.61	0.92	0.66	0.73	0.74	0.81	0.80	0.5
naica	0.61	0.66	0.47	0.39	0.69	0.83	0.59	0.75	0.5
pan	0.75	0.78	0.81	0.67	0.79	0.70	0.77	0.77	0.7
rdan zakhstan	0.47 0.48	0.66	0.46	0.50 0.45	0.47 0.35	0.46	0.33	0.49 0.42	0.4
nya	0.46	0.48	0.28	0.33	0.59	0.68	0.26	0.69	0.3
rgyzstan	0.52	0.56	0.48	0.33	0.61	0.62	0.36	0.68	0.5
banon	0.62	0.51	0.68	0.44	0.77	0.55	0.71	0.82	0.4
peria	0.57	0.48	0.51	0.34	0.75	0.79	0.54	0.73	0.4
icedonia, FYR idagascar	0.63 0.48	0.70 0.67	0.70 0.23	0.55 0.38	0.52 0.43	0.79	0.57 0.26	0.71 0.53	0.5
ilawi	0.55	0.58	0.55	0.33	0.59	0.75	0.56	0.66	0.4
laysia	0.45	0.70	0.42	0.50	0.38	0.23	0.45	0.34	0.5
xico	0.55	0.43	0.40	0.30	0.65	0.68	0.55	0.73	0.6
Idova	0.51	0.62	0.53	0.35	0.51	0.60	0.43	0.66	0.4
ngolia	0.61	0.62	0.67	0.43	0.64	0.68	0.56	0.73	0.5
rocco	0.45 0.30	0.61 0.41	0.32 0.22	0.30 0.27	0.55	0.48	0.19	0.58 0.33	0.5
pal	0.59	0.60	0.54	0.40	0.69	0.74	0.52	0.72	0.5
therlands	0.85	0.79	0.93	0.83	0.89	0.86	0.86	0.89	0.7
w Zealand	0.84	0.80	0.92	0.82	0.92	0.89	0.81	0.84	0.7
aragua	0.51	0.58	0.44	0.36	0.48	0.73	0.40	0.53	0.5
geria rway	0.42 0.90	0.53 0.87	0.24 0.94	0.22 0.91	0.56 0.94	0.49	0.34	0.62 0.93	0.4
rway kistan	0.38	0.87	0.94	0.91	0.66	0.43	0.92	0.63	0.8
nama	0.60	0.66	0.69	0.38	0.58	0.71	0.60	0.64	0.5
ru	0.66	0.55	0.77	0.53	0.70	0.78	0.72	0.73	0.4
lippines	0.52	0.56	0.32	0.38	0.66	0.64	0.39	0.68	0.4
land rtugal	0.72 0.76	0.71 0.71	0.84 0.83	0.64 0.65	0.68 0.79	0.66	0.75 0.71	0.76 0.87	0.6
public of Korea	0.73	0.70	0.86	0.77	0.75	0.63	0.70	0.73	0.6
mania	0.71	0.73	0.85	0.62	0.68	0.78	0.66	0.78	0.5
ssla	0.46	0.59	0.45	0.37	0.39	0.54	0.38	0.44	0.5
negal	0.63	0.61	0.56	0.43	0.69	0.83	0.58	0.80	0.5
bia rra Leone	0.62	0.66 0.54	0.63 0.54	0.57 0.36	0.61 0.65	0.75 0.79	0.40	0.75 0.62	0.5
gapore	0.55	0.80	0.86	0.81	0.51	0.79	0.43	0.47	0.4
venia	0.79	0.69	0.93	0.77	0.70	0.81	0.82	0.81	0.8
ıth Africa	0.62	0.52	0.60	0.45	0.72	0.76	0.56	0.77	0.5
nin	0.78	0.73	0.85	0.78	0.74	0.78	0.87	0.81	0.7
Lanka	0.56	0.62	0.39	0.45	0.62 0.96	0.74	0.38	0.68	0.5
eden Izania	0.91 0.51	0.77 0.59	0.99 0.42	0.91 0.37	0.96	0.92 0.61	0.99 0.47	0.96 0.60	0.8
ailand	0.51	0.59	0.55	0.42	0.60	0.69	0.57	0.64	0.5
nisia	0.54	0.63	0.51	0.41	0.62	0.53	0.44	0.62	0.5
key	0.47	0.58	0.56	0.50	0.40	0.51	0.30	0.44	0.4
anda	0.37	0.45	0.22	0.31	0.35	0.63	0.17	0.45	0.4
raine	0.56	0.62	0.56	0.38	0.52	0.63	0.52	0.69	0.5
ited Arab Emirates	0.49 0.78	0.58	0.68 0.87	0.66 0.77	0.33 0.82	0.35 0.86	0.63	0.24 0.84	0.4
ited Kingdom Ited States	0.78	0.71 0.56	0.87	0.77	0.82	0.86	0.71	0.84	0.6
ited States uguay	0.76	0.69	0.83	0.54	0.80	0.93	0.89	0.89	0.6
bekistan	0.36	0.65	0.30	0.33	0.15	0.55	0.20	0.25	0.4
nezuela	0.42	0.59	0.25	0.24	0.28	0.74	0.27	0.45	0.5
etnam mbia	0.50	0.62	0.66	0.48	0.35	0.39	0.72	0.30	0.5
	0.43	0.49	0.37	0.33	0.43	0.54	0.48	0.42	0.4

FACTOR 5: ORDER & SECURITY

OUNTRY/TERRITORY	ORDER & SECURITY	5.1 ABSENCE OF CRIME	5.2 ABSENCE OF CIVIL CONFLICT	5.3 ABSENCE OF VIOLENT REDR
fghanistan	0.42	0.68	0.26	0.31
bania	0.74	0.85	1.00	0.36
rgentina	0.61	0.53	1.00	0.29
ustralia ustria	0.86 0.88	0.89	1.00 1.00	0.69 0.70
angladesh	0.64	0.73	1.00	0.19
elarus	0.79	0.87	1.00	0.51
elgium	0.85	0.85	1.00	0.71
olivia	0.61	0.66	1.00	0.17
osnia & Herzegovina otswana	0.76 0.82	0.84 0.79	1.00 1.00	0.44 0.67
razil	0.66	0.58	1.00	0.41
ulgaria	0.79	0.86	1.00	0.50
urkina Faso	0.69	0.77	1.00	0.29
ambodia ameroon	0.73 0.63	0.85 0.61	1.00 1.00	0.35 0.28
anada	0.86	0.88	1.00	0.69
nile	0.71	0.81	1.00	0.32
nina	0.81	0.78	1.00	0.65
olombia	0.58	0.51	0.94	0.31
ote d'Ivoire Toatia	0.60 0.77	0.65 0.94	0.75 1.00	0.41 0.38
ech Republic	0.82	0.83	1.00	0.61
enmark	0.90	0.90	1.00	0.82
minican Republic	0.59	0.61	1.00	0.18
uador	0.57	0.46	1.00	0.26
ypt Salvador	0.67 0.66	0.84 0.57	0.92 1.00	0.26 0.42
saivador tonia	0.84	0.57	1.00	0.42
hiopia	0.66	0.65	0.94	0.38
nland	0.89	0.84	1.00	0.82
ance	0.81	0.86	1.00	0.56
orgia rmany	0.85 0.87	0.99	1.00 1.00	0.57 0.70
ermany Jana	0.87	0.78	1.00	0.70
eece	0.74	0.82	1.00	0.40
ıatemala	0.54	0.43	1.00	0.21
ong Kong SAR, China	0.90	0.93	1.00	0.78
ingary	0.84 0.51	0.88 0.71	1.00 0.51	0.66 0.33
dia donesia	0.51	0.71	1.00	0.33
in .	0.63	0.54	0.92	0.44
ily	0.74	0.80	1.00	0.42
maica	0.65	0.78	1.00	0.17
pan	0.92	0.91	1.00	0.84
rdan zakhstan	0.85 0.79	0.92 0.83	1.00 1.00	0.63 0.55
nya	0.63	0.72	1.00	0.17
rgyzstan	0.74	0.81	1.00	0.41
banon	0.76	0.87	1.00	0.42
peria	0.54	0.56	0.83	0.24
acedonia, FYR adagascar	0.75 0.76	0.84	1.00 1.00	0.42 0.57
alawi	0.67	0.62	1.00	0.39
alaysia	0.87	0.85	1.00	0.75
exico	0.47	0.42	0.75	0.24
oldova	0.77	0.84	1.00	0.48
ongolia orocco	0.78 0.76	0.76 0.83	1.00 0.92	0.56 0.54
/anmar	0.72	0.89	0.69	0.57
pal	0.73	0.87	1.00	0.31
therlands	0.84	0.89	1.00	0.64
w Zealand	0.87	0.88	1.00	0.74
caragua geria	0.66	0.71 0.34	1.00 0.31	0.28 0.42
rway	0.85	0.91	0.92	0.73
kistan	0.30	0.53	0.09	0.27
nama	0.71	0.71	1.00	0.42
ru ilinnines	0.63 0.73	0.54 0.72	1.00 0.88	0.35 0.58
ilippines land	0.73	0.72	1.00	0.56
rtugal	0.72	0.82	1.00	0.35
public of Korea	0.89	0.89	1.00	0.78
mania	0.81	0.86	1.00	0.56
ssia negal	0.64 0.67	0.81 0.80	0.68 1.00	0.44
rbia	0.87	0.80	1.00	0.20
rra Leone	0.59	0.34	1.00	0.43
igapore	0.91	0.91	1.00	0.82
ovenia	0.78	0.88	1.00	0.45
uth Africa ain	0.60 0.79	0.48 0.87	1.00 1.00	0.33 0.51
Lanka	0.79	0.90	0.87	0.31
eden	0.89	0.90	1.00	0.77
nzania	0.57	0.50	1.00	0.22
ailand	0.75	0.86	0.81	0.57
nisia -kov	0.77	0.84	1.00	0.47
rkey anda	0.67 0.61	0.86 0.71	0.73 0.92	0.43 0.19
raine	0.82	0.71	1.00	0.19
ited Arab Emirates	0.89	0.96	1.00	0.69
ited Kingdom	0.84	0.88	1.00	0.65
ited States	0.85	0.87	1.00	0.68
uguay	0.69	0.72	1.00	0.36
bekistan nezuela	0.90 0.53	0.91 0.35	1.00 1.00	0.77 0.23
etnam	0.80	0.92	0.93	0.55

FACTOR 6: REGULATORY ENFORCEMENT

	REGULATORY OF STREET	6.1 EFFECTIVE REGULATORY ENFORCEMENT	6.2 NO IMPROPER INFLUENCE	6.3 NO UNREASONABLE DELAY	6.4 RESPECT FOR DUE PROCESS	6.5 NO EXPROPRIATION W/OU ADEQUATE COMPENSATION
.fghanistan	0.33	0.34	0.31	0.23	0.34	0.44
Ibania	0.45	0.51	0.40	0.38	0.40	0.55
rgentina ustralia	0.43 0.80	0.41 0.78	0.57 0.92	0.36 0.77	0.39 0.78	0.43 0.78
ustria	0.81	0.78	0.89	0.72	0.78	0.86
angladesh	0.37	0.37	0.25	0.37	0.40	0.47
elarus elgium	0.53 0.71	0.59 0.77	0.59	0.60 0.50	0.45 0.65	0.41 0.77
olivia	0.38	0.34	0.45	0.39	0.34	0.38
osnia & Herzegovina	0.51	0.50	0.44	0.46	0.59	0.56
otswana	0.68	0.74 0.59	0.79 0.70	0.51 0.29	0.58 0.53	0.78 0.57
razil Sulgaria	0.47	0.57	0.44	0.43	0.42	0.49
urkina Faso	0.55	0.50	0.58	0.49	0.54	0.64
Cambodia Cameroon	0.36	0.38 0.40	0.37 0.36	0.47 0.15	0.25 0.39	0.31 0.51
Canada	0.79	0.73	0.83	0.69	0.85	0.82
Chile	0.68	0.61	0.79	0.70	0.53	0.76
China	0.41	0.46	0.54	0.51	0.26	0.29
Colombia Cote d'Ivoire	0.50 0.47	0.44 0.38	0.60 0.48	0.33 0.43	0.45 0.41	0.68 0.62
roatia	0.49	0.58	0.53	0.28	0.49	0.55
zech Republic	0.63	0.68	0.77	0.48	0.54	0.66
Denmark Dominican Republic	0.84	0.87 0.37	0.92 0.53	0.81	0.80 0.36	0.83 0.51
cuador	0.48	0.50	0.57	0.42	0.43	0.49
gypt	0.42	0.47	0.46	0.20	0.42	0.56
I Salvador stonia	0.49 0.75	0.43 0.83	0.55 0.89	0.54 0.67	0.47 0.62	0.45 0.74
thiopia	0.38	0.41	0.56	0.28	0.18	0.46
inland	0.78	0.78	0.87	0.70	0.81	0.73
rance	0.75	0.73	0.84	0.66	0.71 0.34	0.80
Georgia Germany	0.57 0.74	0.62 0.74	0.84	0.50 0.50	0.34	0.53 0.80
Shana	0.53	0.53	0.56	0.42	0.47	0.66
ireece	0.54	0.53	0.46	0.50	0.52	0.67
Guatemala Hong Kong SAR, China	0.39 0.74	0.34 0.67	0.51 0.86	0.31 0.78	0.33 0.73	0.49 0.66
lungary	0.57	0.72	0.75	0.35	0.53	0.51
ndia	0.40	0.34	0.38	0.24	0.47	0.58
ndonesia	0.52	0.47 0.57	0.50 0.55	0.51 0.51	0.50 0.49	0.61 0.55
ran taly	0.59	0.67	0.73	0.34	0.49	0.60
amaica	0.56	0.57	0.75	0.39	0.54	0.57
apan	0.78	0.73	0.88	0.69	0.77	0.81
ordan Cazakhstan	0.54 0.46	0.49 0.60	0.56 0.47	0.37 0.47	0.60 0.28	0.67 0.47
Čenya	0.41	0.51	0.44	0.24	0.33	0.52
Zyrgyzstan	0.44	0.48	0.34	0.52	0.49	0.36
ebanon iberia	0.44	0.46 0.37	0.38	0.43 0.16	0.45 0.35	0.49 0.49
facedonia, FYR	0.53	0.47	0.53	0.55	0.50	0.59
1adagascar	0.40	0.42	0.41	0.29	0.36	0.51
1alawi 1alaysia	0.41 0.51	0.36 0.49	0.40 0.61	0.33 0.52	0.40 0.57	0.58 0.37
1exico	0.50	0.45	0.50	0.45	0.52	0.57
1oldova	0.41	0.54	0.45	0.45	0.23	0.39
Mongolia Managan	0.43	0.49	0.38	0.44	0.43 0.48	0.42
lorocco Iyanmar	0.54	0.55 0.27	0.58 0.49	0.41 0.41	0.36	0.66 0.34
lepal	0.47	0.45	0.50	0.46	0.48	0.48
letherlands	0.82	0.78	0.86	0.83	0.77	0.88
lew Zealand licaragua	0.81	0.82 0.48	0.90 0.55	0.74 0.37	0.82 0.31	0.77 0.45
ligeria	0.40	0.38	0.37	0.29	0.44	0.53
lorway	0.87	0.85	0.95	0.83	0.84	0.89
akistan 'anama	0.35 0.48	0.27 0.50	0.34 0.62	0.30 0.38	0.40 0.38	0.44 0.51
anama eru	0.46	0.40	0.51	0.35	0.46	0.51
hilippines	0.46	0.46	0.59	0.36	0.44	0.47
oland	0.59	0.60	0.62	0.45	0.64	0.67
ortugal epublic of Korea	0.59 0.74	0.67 0.66	0.73 0.78	0.42 0.84	0.53 0.72	0.61 0.68
omania	0.52	0.53	0.50	0.50	0.47	0.60
ussia	0.44	0.55	0.47	0.46	0.37	0.37
enegal erbia	0.55 0.45	0.52 0.39	0.52 0.46	0.47 0.45	0.58 0.39	0.68 0.56
ierra Leone	0.39	0.45	0.40	0.24	0.36	0.48
ingapore	0.79	0.85	0.94	0.71	0.81	0.65
lovenia	0.59	0.50	0.59	0.61	0.56	0.68
outh Africa pain	0.53	0.53 0.68	0.58 0.77	0.33 0.49	0.55 0.58	0.68 0.61
ri Lanka	0.44	0.55	0.50	0.34	0.30	0.49
weden	0.83	0.83	0.91	0.86	0.74	0.83
anzania hailand	0.43 0.46	0.40 0.43	0.34 0.54	0.33 0.38	0.53 0.51	0.56 0.44
nanana unisia	0.46	0.43	0.53	0.38	0.51	0.66
urkey	0.54	0.57	0.55	0.52	0.43	0.61
ganda	0.37	0.33	0.22	0.25	0.54	0.52
kraine	0.40	0.41	0.34	0.44	0.45	0.36
nited Arab Emirates nited Kingdom	0.66 0.78	0.78 0.76	0.88	0.58 0.65	0.51 0.85	0.54 0.77
nited States	0.67	0.69	0.84	0.52	0.68	0.60
ruguay	0.73	0.78	0.83	0.54	0.65	0.86
zbekistan	0.47 0.28	0.68	0.49	0.51	0.42 0.15	0.23
'enezuela 'ietnam	0.28	0.45 0.54	0.43 0.28	0.17 0.38	0.15	0.22 0.33
letnam						

FACTOR 7: CIVIL JUSTICE

OUNTRY/TERRITORY CI		7.1 ACCESSIBILITY ND AFFORDABILITY	7.2 NO DISCRIMINATION	7.3 NO CORRUPTION	7.4 NO IMPROPER 7.5 GOV. INFLUENCE	NO UNREASONABL DELAY	E 7.6 EFFECTIVE ENFORCEMENT	7.7 IMPARTIAL. EFFECTIVE AI
fghanistan	0.27	0.28	0.08	0.12	0.31	0.48	0.26	0.38
bania	0.50	0.58	0.56	0.37	0.42	0.43	0.51	0.59
rgentina	0.54	0.59	0.75	0.59	0.37	0.33	0.53	0.63
ustralia ustria	0.73 0.75	0.48	0.54 0.68	0.93 0.86	0.92 0.81	0.60 0.71	0.79 0.88	0.83 0.71
angladesh	0.36	0.36	0.35	0.30	0.37	0.39	0.36	0.41
elarus	0.60	0.52	0.77	0.59	0.29	0.74	0.64	0.67
elgium	0.69	0.58	0.78	0.82	0.75	0.46	0.68	0.75
olivia	0.34	0.40	0.45	0.27	0.18	0.28	0.30	0.52
osnia & Herzegovina otswana	0.48	0.49 0.53	0.69 0.47	0.54 0.79	0.49 0.60	0.34 0.58	0.22 0.64	0.64 0.64
razil	0.51	0.53	0.69	0.67	0.60	0.30	0.25	0.52
ulgaria	0.53	0.50	0.69	0.49	0.48	0.39	0.47	0.68
urkina Faso	0.54	0.35	0.57	0.55	0.54	0.58	0.48	0.70
ambodia	0.34	0.33	0.32	0.24	0.17	0.41	0.30	0.60
ameroon	0.34 0.72	0.39 0.54	0.52	0.31 0.86	0.27	0.33 0.55	0.11 0.80	0.48 0.80
anada nile	0.72	0.59	0.65 0.65	0.88	0.88 0.75	0.55	0.80	0.66
nina	0.41	0.49	0.49	0.33	0.17	0.67	0.33	0.39
olombia	0.49	0.53	0.59	0.53	0.55	0.23	0.37	0.66
ote d'Ivoire	0.48	0.39	0.55	0.40	0.37	0.57	0.48	0.62
oatia	0.52	0.60	0.66	0.54	0.52	0.17	0.42	0.75
rech Republic	0.65	0.64	0.78	0.68	0.70	0.34	0.67	0.72
enmark ominican Republic	0.82 0.48	0.72 0.50	0.91 0.67	0.94 0.45	0.94 0.38	0.63 0.45	0.79 0.36	0.79 0.55
uador	0.41	0.48	0.48	0.37	0.26	0.27	0.33	0.67
ypt	0.39	0.45	0.39	0.56	0.48	0.35	0.13	0.39
Salvador	0.47	0.50	0.66	0.50	0.34	0.43	0.40	0.46
tonia	0.72	0.57	0.87	0.89	0.83	0.54	0.65	0.69
hiopia	0.39	0.32	0.39	0.37	0.26	0.46	0.37	0.58
nland	0.75	0.60	0.93 0.71	0.87 0.77	0.84 0.74	0.62 0.60	0.77 0.72	0.62 0.69
ance eorgia	0.59	0.60	0.64	0.77	0.42	0.69	0.72	0.67
ermany	0.82	0.63	0.88	0.89	0.86	0.77	0.92	0.80
nana	0.59	0.48	0.68	0.56	0.69	0.51	0.49	0.70
eece	0.61	0.62	0.84	0.66	0.59	0.30	0.48	0.81
ıatemala	0.36	0.31	0.46	0.45	0.40	0.22	0.16	0.55
ong Kong SAR, China	0.72 0.49	0.59 0.50	0.79 0.46	0.84 0.82	0.74 0.45	0.74 0.40	0.62 0.22	0.71 0.60
ingary dia	0.49	0.30	0.48	0.82	0.60	0.40	0.22	0.40
donesia	0.47	0.51	0.51	0.36	0.58	0.56	0.29	0.45
in	0.56	0.50	0.52	0.54	0.40	0.63	0.65	0.70
ıly	0.58	0.60	0.54	0.72	0.69	0.35	0.48	0.66
maica	0.47	0.43	0.44	0.67	0.64	0.34	0.27	0.49
pan	0.73	0.48	0.81	0.90	0.73	0.65	0.76	0.79
rdan Izakhstan	0.62 0.47	0.50 0.39	0.78 0.38	0.79 0.42	0.63 0.27	0.43 0.71	0.62 0.58	0.62 0.53
enya	0.44	0.37	0.41	0.40	0.49	0.42	0.46	0.54
rgyzstan	0.42	0.46	0.49	0.28	0.32	0.53	0.39	0.50
banon	0.45	0.51	0.48	0.45	0.39	0.31	0.48	0.52
beria	0.39	0.39	0.25	0.40	0.47	0.46	0.35	0.42
acedonia, FYR	0.54	0.58	0.67	0.44	0.45	0.43	0.59	0.62
adagascar alawi	0.41	0.30 0.53	0.61 0.62	0.31 0.54	0.35 0.71	0.32 0.47	0.33 0.56	0.65 0.73
alaysia	0.57	0.39	0.61	0.73	0.42	0.64	0.51	0.68
exico	0.39	0.36	0.36	0.39	0.48	0.40	0.30	0.45
oldova	0.41	0.47	0.57	0.28	0.35	0.39	0.37	0.45
ongolia	0.52	0.46	0.62	0.50	0.45	0.68	0.41	0.51
orocco	0.50	0.42	0.60	0.47	0.46	0.58	0.46	0.52
yanmar	0.39 0.42	0.40 0.31	0.38 0.49	0.24	0.24 0.48	0.48 0.46	0.46 0.37	0.55 0.46
etherlands	0.84	0.69	0.92	0.94	0.85	0.69	0.95	0.80
w Zealand	0.74	0.59	0.75	0.96	0.78	0.75	0.70	0.70
caragua	0.37	0.45	0.47	0.32	0.18	0.34	0.31	0.55
geria	0.50	0.47	0.66	0.49	0.48	0.37	0.45	0.59
rway	0.86	0.76	0.91	0.88	0.96	0.84	0.81	0.85
kistan nama	0.36 0.45	0.40 0.52	0.28 0.58	0.41 0.44	0.47 0.38	0.31 0.32	0.19 0.34	0.47 0.58
nama ru	0.45	0.52	0.58	0.44	0.38	0.32	0.34	0.58
ilippines	0.40	0.48	0.42	0.48	0.42	0.25	0.26	0.45
land	0.62	0.51	0.77	0.79	0.73	0.41	0.47	0.66
rtugal	0.62	0.64	0.87	0.71	0.71	0.42	0.30	0.68
public of Korea	0.74	0.52	0.68	0.83	0.67	0.67	0.84	0.93
mania ssia	0.59 0.46	0.57 0.49	0.74 0.52	0.62 0.46	0.54 0.30	0.44 0.54	0.52 0.35	0.68 0.53
ssia negal	0.55	0.49	0.66	0.46	0.41	0.63	0.59	0.53
rbia	0.45	0.48	0.74	0.40	0.37	0.37	0.31	0.46
rra Leone	0.47	0.51	0.64	0.30	0.42	0.50	0.44	0.49
gapore	0.77	0.56	0.93	0.82	0.67	0.89	0.85	0.67
venia	0.61	0.61	0.74	0.64	0.70	0.39	0.38	0.79
uth Africa	0.53 0.62	0.43 0.68	0.47 0.78	0.61 0.71	0.57 0.64	0.48 0.38	0.53 0.41	0.65 0.71
ain Lanka	0.62	0.88	0.78	0.71	0.44	0.38	0.41	0.71
eden	0.78	0.68	0.79	0.92	0.89	0.63	0.90	0.67
nzania	0.48	0.40	0.62	0.36	0.48	0.41	0.50	0.57
ailand	0.39	0.47	0.38	0.62	0.35	0.47	0.13	0.29
nisia	0.54	0.48	0.71	0.49	0.52	0.56	0.44	0.56
rkey	0.52	0.54	0.60	0.60	0.43	0.41	0.40	0.67
anda raine	0.48 0.52	0.46 0.51	0.53 0.74	0.37 0.40	0.49 0.28	0.37 0.62	0.50 0.43	0.63 0.64
raine ited Arab Emirates	0.52	0.51	0.74	0.40	0.59	0.82	0.43	0.60
ited Kingdom	0.72	0.54	0.74	0.87	0.80	0.69	0.65	0.77
ited States	0.61	0.46	0.51	0.82	0.68	0.56	0.53	0.71
uguay	0.70	0.70	0.78	0.79	0.74	0.58	0.67	0.64
bekistan	0.48	0.45	0.56	0.40	0.29	0.69	0.47	0.53
nezuela	0.33	0.47	0.65	0.31	0.07	0.19	0.11	0.48
etnam	0.42 0.47	0.38	0.60	0.34	0.20 0.44	0.56 0.46	0.34	0.55
mbia		0.41	0.53	0.45			0.49	0.50

FACTOR 8: CRIMINAL JUSTICE

COUNTRY/TERRITORY	CRIMINAL JUSTICE	8.1 EFFECTIVE INVESTIGATIONS	8.2 TIMELY & EFFECTIVE ADJUDICATION	8.3 EFFECTIVE CORRECTIONAL SYSTEM	8.4 NO DISCRIMINATION	8.5 NO CORRUPTION	8.6 NO IMPROPER GOV. INFLUENCE	8.7. DUE PROCES OF LAW
fghanistan	0.28	0.44	0.37	0.14	0.18	0.25	0.23	0.31
Ibania	0.36	0.47	0.42	0.34	0.34	0.32	0.17	0.44
rgentina ustralia	0.37 0.73	0.18	0.32 0.71	0.27 0.64	0.44	0.46 0.86	0.43 0.99	0.47 0.76
ustria	0.73	0.84	0.85	0.79	0.68	0.85	0.84	0.83
angladesh	0.29	0.24	0.33	0.25	0.39	0.26	0.27	0.30
elarus	0.43 0.67	0.35 0.52	0.57 0.62	0.32 0.47	0.61	0.50 0.85	0.24 0.87	0.43 0.77
elgium olivia	0.87	0.52	0.62	0.47	0.81	0.85	0.87	0.77
osnia & Herzegovina	0.54	0.44	0.57	0.36	0.63	0.57	0.56	0.64
otswana	0.63	0.62	0.62	0.53	0.67	0.83	0.60	0.58
razil ulgaria	0.37 0.41	0.22 0.32	0.32 0.44	0.15 0.34	0.28 0.43	0.57 0.38	0.67 0.52	0.37 0.47
urkina Faso	0.38	0.43	0.51	0.23	0.45	0.43	0.23	0.37
ambodia	0.29	0.23	0.41	0.27	0.42	0.21	0.10	0.38
ameroon	0.31	0.33	0.36	0.16	0.46	0.28	0.24	0.31
anada hile	0.72 0.57	0.73 0.42	0.69	0.66 0.32	0.49 0.55	0.81 0.73	0.89	0.74 0.61
hina	0.43	0.46	0.45	0.50	0.44	0.53	0.19	0.46
olombia	0.35	0.20	0.35	0.13	0.40	0.45	0.50	0.43
ote d'Ivoire roatia	0.40 0.55	0.29 0.75	0.54 0.51	0.28 0.36	0.51 0.47	0.42 0.57	0.45 0.58	0.33
zech Republic	0.67	0.49	0.61	0.56	0.79	0.68	0.82	0.78
enmark	0.84	0.71	0.80	0.82	0.74	0.96	0.92	0.93
ominican Republic	0.37	0.38	0.42	0.16	0.38	0.41	0.42	0.46
cuador gypt	0.33 0.41	0.28 0.41	0.37	0.16 0.28	0.31 0.41	0.47 0.53	0.30	0.42 0.28
l Salvador	0.31	0.15	0.34	0.03	0.28	0.44	0.47	0.46
stonia	0.72	0.57	0.61	0.68	0.68	0.83	0.91	0.77
thiopia	0.45	0.55	0.47	0.42	0.51	0.47	0.33	0.39
nland ance	0.85 0.65	0.74 0.57	0.82	0.80 0.45	0.80	0.92 0.82	0.98	0.90 0.71
eorgia	0.51	0.48	0.57	0.35	0.58	0.72	0.32	0.55
ermany	0.71	0.60	0.62	0.69	0.61	0.85	0.82	0.78
hana	0.44	0.40	0.32	0.35	0.40	0.43	0.75	0.41
reece uatemala	0.46	0.32	0.45 0.21	0.23 0.11	0.33	0.63 0.41	0.72 0.44	0.52 0.45
ong Kong SAR, China	0.73	0.69	0.77	0.70	0.64	0.84	0.73	0.43
ungary	0.53	0.45	0.54	0.46	0.43	0.76	0.62	0.49
dia	0.44	0.43	0.36	0.40	0.40	0.52	0.63	0.38
idonesia an	0.37 0.38	0.31	0.46	0.20 0.42	0.35 0.32	0.38 0.53	0.52	0.35 0.34
aly	0.63	0.49	0.55	0.46	0.65	0.75	0.87	0.66
nmaica	0.42	0.21	0.37	0.19	0.44	0.56	0.76	0.39
apan	0.69	0.64	0.60	0.62	0.64	0.86	0.76	0.67
ordan azakhstan	0.56 0.40	0.46 0.38	0.56 0.56	0.53 0.43	0.59 0.24	0.62 0.45	0.66	0.50 0.45
enya	0.33	0.36	0.31	0.25	0.31	0.28	0.49	0.33
yrgyzstan	0.33	0.40	0.51	0.31	0.28	0.28	0.22	0.33
ebanon	0.42	0.29	0.45	0.14	0.52	0.54	0.52	0.44
beria Jacedonia, FYR	0.33	0.37 0.58	0.35	0.20 0.49	0.27 0.65	0.38 0.54	0.39	0.34 0.55
ladagascar	0.35	0.35	0.51	0.32	0.40	0.29	0.21	0.38
lalawi	0.48	0.53	0.57	0.17	0.53	0.44	0.81	0.33
lalaysia	0.53	0.53	0.63	0.44	0.51	0.69	0.42	0.50
lexico Ioldova	0.25 0.33	0.15 0.40	0.24 0.47	0.16 0.29	0.19 0.34	0.29 0.30	0.39	0.30
longolia	0.48	0.36	0.55	0.50	0.58	0.45	0.52	0.43
lorocco	0.35	0.50	0.47	0.18	0.29	0.50	0.21	0.30
lyanmar	0.32	0.33	0.37	0.24	0.27	0.43	0.33	0.27
epal etherlands	0.43 0.75	0.30	0.44	0.30 0.72	0.54 0.70	0.44	0.57 0.91	0.40 0.83
ew Zealand	0.72	0.55	0.66	0.66	0.61	0.94	0.83	0.82
icaragua	0.35	0.47	0.48	0.16	0.46	0.38	0.17	0.36
igeria	0.31	0.34	0.34	0.20	0.39	0.27	0.41	0.22
orway akistan	0.83 0.37	0.60	0.72 0.40	0.85 0.27	0.84 0.36	0.93 0.35	0.97 0.54	0.91 0.27
anama	0.37	0.26	0.31	0.10	0.68	0.48	0.43	0.38
eru	0.37	0.29	0.21	0.25	0.48	0.32	0.54	0.53
hilippines	0.36	0.40	0.32	0.18	0.28	0.56	0.42	0.38
oland ortugal	0.69 0.59	0.69 0.51	0.62 0.44	0.56 0.50	0.76 0.49	0.72 0.72	0.87 0.82	0.64 0.65
epublic of Korea	0.76	0.62	0.82	0.75	0.68	0.88	0.82	0.77
omania	0.56	0.60	0.54	0.39	0.63	0.57	0.58	0.62
ussia	0.36	0.30	0.44	0.34	0.44	0.40	0.22	0.37
enegal erbia	0.42 0.41	0.48 0.51	0.45 0.37	0.22 0.31	0.40 0.41	0.52 0.41	0.40	0.43 0.57
erra Leone	0.41	0.50	0.34	0.10	0.41	0.30	0.39	0.36
ngapore	0.85	0.80	0.88	0.93	0.82	0.89	0.79	0.81
ovenia	0.58	0.60	0.54	0.43	0.52	0.58	0.63	0.77
uth Africa ain	0.45 0.61	0.34 0.48	0.46	0.25 0.63	0.49 0.55	0.54 0.72	0.61	0.45 0.78
i Lanka	0.49	0.25	0.40	0.83	0.71	0.68	0.55	0.78
veden	0.78	0.61	0.72	0.70	0.69	0.91	0.92	0.91
ınzania	0.46	0.50	0.49	0.33	0.38	0.42	0.69	0.37
nailand	0.51	0.46	0.61	0.54	0.39	0.65	0.52	0.42
inisia Irkey	0.45 0.39	0.44 0.41	0.52 0.27	0.33 0.37	0.44	0.52 0.60	0.49	0.41
ganda	0.37	0.32	0.33	0.43	0.42	0.28	0.46	0.31
kraine	0.33	0.37	0.43	0.28	0.46	0.26	0.15	0.38
nited Arab Emirates	0.78	0.84	0.80	0.86	0.75	0.78	0.77	0.66
nited Kingdom nited States	0.72 0.65	0.62 0.65	0.76 0.70	0.61 0.49	0.59 0.47	0.81	0.88	0.77 0.62
nited States ruguay	0.65	0.65	0.70	0.49	0.47	0.80	0.80	0.62
zbekistan	0.41	0.54	0.55	0.48	0.38	0.32	0.28	0.33
enezuela	0.16	0.20	0.11	0.08	0.19	0.28	0.00	0.24
letnam ambia	0.47 0.36	0.37 0.41	0.54 0.40	0.54 0.15	0.60 0.41	0.53 0.38	0.26 0.40	0.48 0.33

JRC Statistical Audit of the OWJP Rule of Law Index 2014

JRC Statistical Audit of the WJP Rule of Law Index® 2014

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SUMMARY

The JRC analysis suggests that the conceptualized multi-level structure of the WJP Rule of Law Index 2014 is statistically sound in terms of coherence and balance: the overall Index, as well as the eight dimensions, are determined by all underlying components. Furthermore, the analysis has offered statistical justification for the use of equal weights and arithmetic averaging at the various levels of aggregation. Country ranks are also fairly robust to methodological changes related to the estimation of missing data, weighting or aggregation rule (less than \pm 3 positions shift with respect to the simulated median in 96% of the cases). The added value of the Rule of Law Index and its dimensions, lays in the ability to summarize different aspects of rule of law in a more efficient and parsimonious manner than would be possible with a collection of almost 500 survey questions taken separately. In fact, the Rule of Law Index, presented this year for the first time as an overall aggregate, has a very high reliability of 0.97 - without being redundant – and captures the single latent phenomenon underlying the eight main dimensions of rule of law.

The WJP Rule of Law Index is intended for a broad audience of policy-makers, civil society, practitioners and academics, and aims at identifying strengths and weaknesses in each country under review and at encouraging policy choices that advance the rule of law. In this respect, the assessment of conceptual and statistical coherence of the Index, and the estimation of the impact of modeling choices on a country's performance are fundamental. They add to the transparency and reliability of the Index, and build confidence in the narratives supported by the measure.

The Econometrics and Applied Statistics Unit at the European Commission Joint Research Centre (JRC) in Ispra, Italy, was invited for a fourth consecutive year by the World Justice Project (WJP) to conduct a thorough statistical assessment of the Index. Fine-tuning suggestions made by the JRC to past releases of the Index were already taken on board by the WJP. The request for a new JRC audit was driven by some re-structuring of the framework, the introduction of the ninth dimension on Informal Justice—measured for the first time this year—and the final aggregation of the eight dimensions into an overall index. The WJP Rule of Law Index was assessed along two main avenues: the statistical coherence of the structure, and the impact of key modeling choices on the Rule of Law Index scores and ranks.

The JRC analysis complements the country rankings for the Rule of Law Index and the underlying dimensions with confidence intervals, in order to better appreciate the robustness of these ranks to the computation methodology. In addition, for the first time this year, the JRC analysis includes an assessment of potential redundancy of information in the Rule of Law framework, and a suggestion on how to monitor changes in the rule of law both in a quantitative and qualitative manner.

¹ The JRC analysis was based on the recommendations of the OECD (2008) Handbook on Composite Indicators, and on more recent academic research from the JRC. The JRC auditing studies of composite indicators are available at http://composite-indicators.jrc.ec.europa.eu/.

² The ninth dimension on Informal Justice was presented as part of the conceptual framework for the rule of law but had not been populated with data in past releases of the report. We remind the reader that Informal Justice is not included in the calculation of the overall Index but only used for within country comparisons.

CONCEPTUAL AND STATISTICAL COHERENCE IN THE WJP RULE OF LAW FRAMEWORK

The World Justice Project (WJP), in the fourth release of the 2014 Rule of Law Index, attempts to summarize complex and versatile concepts across 99 countries around the globe with differing social, cultural, economic, and political systems. Modeling the cultural and subjective concepts underlying rule of law at a national scale around the globe raises practical challenges related to the combination of these concepts into a set of numbers and finally into an overall index. Indeed, extending what Saltelli and Funtowisz (2014) argue for models in general, stringent criteria of transparency must be adopted when composite indicators are used as a basis for policy assessments. Failure to open up the black box of composite indicator development is likely to lead only to greater erosion of the credibility and legitimacy of these measures as tools for improved policymaking.

The analysis of conceptual and statistical coherence of an index can be undertaken along four main steps: (a) the consideration of the underlying conceptual framework with respect to the existing literature; (b) the preliminary data quality checks including data coverage, missing values, reporting errors, existence of outliers; (c) the assessment of the statistical coherence through a set of correlation-based analyses, followed by robustness tests about estimation of missing data, weighting schemes and aggregation methods; (d) and finally the qualitative confrontation with the expert bodies in order to get suggestions and reviews about the decisions undertaken in the previous stages of analysis (Saisana, 2011). The WJP team already undertook the first and last steps that are mostly related to the conceptual issues. The JRC audit herein focuses on the second and third steps on the statistical soundness of the Rule of Law Index framework.

DATA CHECKS

The WJP Rule of Law framework builds on nine dimensions, or factors, that are further disaggregated into 47 sub-factors. The scores of these sub-factors are built from almost 500 survey questions drawn from assessments of the general public and local legal experts. Figure 1 illustrates the structure of the 2014 WJP Rule of Law Index.

Country data delivered to the JRC were average scores across experts or individuals along the survey questions (henceforth variables) for 99 countries. These variables are not affected by outliers or skewed distributions³, except for 14 variables spread across six dimensions in the WJP Rule

of Law Index.⁴ Given the high number of variables combined in building a dimension, the skewed distributions of those variables do not bias the results.

A further data quality issue relates to data availability. The 2014 dataset is characterized by excellent data coverage (98% in a matrix of 541 variables × 99 countries). Data availability per dimension and country is also very good or excellent. The WJP, for reasons of transparency and simplicity, calculated sub-factor scores using only available information for each country. This choice, which is common in relevant contexts, might discourage countries from reporting low data values. We tested the implications of 'no imputation' versus the use of the expectation-maximization method for the estimation of missing data and discuss this in the second part of the assessment together with other modeling choices. We anticipate here that some caution is needed in the *Informal* Justice, whereby 24 countries miss values on three or more survey questions (total of eight questions). For most of those countries, the overall score on *Informal Justice* will turn out to be sensitive to the missing data.

PRINCIPAL COMPONENT ANALYSIS AND RELIABILITY ANALYSIS

Principal component analysis (PCA) was used to assess whether the conceptual framework is confirmed by statistical approaches and to identify eventual pitfalls. The analysis confirms the presence of a single statistical dimension in each dimension of the rule of law (one component with eigenvalue greater than 1.0) that captures between 58% (D5: Order and Security) up to 88% (D2: Absence of Corruption) of the total variance in the underlying sub-factors (Table 1). A more detailed analysis of the correlation structure confirms the expectation that the sub-factors are more correlated to their own dimension than to any other dimension and all correlations are strong and positive. The statistical reliability, measured by the Cronbach-alpha (or c-alpha), is very high at 0.90 (up to 0.95) for seven of the nine dimensions, which is well above the 0.7 threshold for a reliable aggregate (see Nunnally, 1978). Instead, reliabilities are low for Order and Security (c-alpha = .62), and Informal Justice (c-alpha = .36). Nevertheless, once excluding a specific sub-factor from either dimension (#5.2: civil conflict is effectively limited from Order and Security and #9.1: informal justice is timely and effective from *Informal Justice*), the reliabilities of the two dimensions enter within the recommended limits (0.70 or slightly above, see Table 1).

Overall, the conceptual grouping of sub-factors into dimensions is statistically supported by the data for seven

³ Groeneveld and Meeden (1984) set the criteria for absolute skewness above 1 and kurtosis above 3.5. The skewness criterion was relaxed to 'above 2' to account for the small sample (99 countries).

⁴ In the WJP Rule of Law Index 'sub-factors' are equivalent to sub-dimensions.

FIGURE 1. SCHEMATIC REPRESENTATION OF THE 2014 RULE OF LAW FRAMEWORK AND INDEX.



Source: Saisana and Saltelli, European Commission Joint Research Centre; WJP Rule of Law Index 2014. Notes: Rearranged from the information provided on the WJP Rule of Law Index 2014 main report.

dimensions of the rule of law, whilst a careful revision is needed for Order and Security and Informal Justice.

Furthermore, the analysis suggests that the eight dimensions (D1 to D8) share a single latent factor that captures 83% of the total variance and their aggregate has a reliability of 0.97. Instead, the *Informal Justice* (D9) is almost orthogonal

(not related) either to any of the eight dimensions or to the overall index. The revision suggested above for this dimension (i.e. to exclude #9.1: informal justice is timely and effective), whilst sufficient to render the dimension a reliable average, it does not suffice to render it coherent to the other eight dimensions.

TABLE1: STATISTICAL COHERENCE IN THE 2014 RULE OF LAW INDEX

DUI E OE LAW DIMENSIONS	VARIANCE	CALDUA	C-ALPHA WHEN EXCLUDING ONE COMPONENT									
RULE OF LAW DIMENSIONS	EXPLAINED	C-ALPHA	#.1	#.2	#.3	#.4	#.5	#.6	#.7	#.8		
Rule of Law Index	83	.97	.96	.96	.96	.97	.97	.96	.96	.96		
1:Constraints on Government Powers	83	.95	.94	.93	.94	.95	.94	.94	•••••	•••••		
2: Absence of Corruption	88	.96	.92	.94	.93	.95	•	•	•••••	•		
3: Open Government	78	.89	.89	.84	.87	.87	•	•	•	•		
4: Fundamental Rights	73	.95	.94	.93	.93	.93	.94	.93	.94	.94		
5: Order and Security	58	.62	.30	.73	.44	•			•	•		
6: Regulatory Enforcement	79	.93	.91	.90	.92	.91	.92		-	-		
7: Civil Justice	66	.91	.90	.89	.87	.88	.91	.88	.89	•••••		
8: Criminal Justice	77	.95	.94	.93	.93	.94	.93	.95	.93	•••••		
9: Informal Justice	69	.37	.69	.00	.04	••••••	••••••	•••••••	•••••	••••••		

Source: Saisana and Saltelli, European Commission Joint Research Centre; WJP Rule of Law Index 2014.

Notes: (1) Column "Variance explained" shows the amount of total variance explained by the first principal component across the eight dimensions of the Index, or the sub-factors in the case of the dimensions. (2) c-alpha or Cronbach-alpha is a measure of statistical reliability (values greater than 0.7 are recommended for good reliability). (3) Informal Justice is not included in the calculation of the Rule of Law Index but only in the framework of rule of law. Concluding, the results from this analysis could be used as a statistical justification for the WJP choice to aggregate further the eight dimensions into a single index by using an arithmetic average, and not to include *Informal Justice* in the index calculation, but to used it instead only for within country comparisons.

WEIGHTS AND IMPORTANCE

Next, tests focused on identifying whether the Rule of Law dimensions and the overall Index are statistically wellbalanced in the underlying components. In the present context given that all dimensions are built as simple arithmetic averages (i.e. equal weights for the relative sub-factors), and the index as a simple average of the eight dimensions, our analysis answers the question: 'are the subfactors — or the dimensions — really equally important?' We used an importance measure (henceforth S.), most known as correlation ratio, which is the non-linear equivalent to the classical Pearson correlation coefficient (Saltelli et al., 2008). The **S**, describes 'the expected reduction in the variance of the eight dimension scores that would be obtained if a given sub-factor could be fixed'. As discussed in Paruolo et al., 2013, we can take this as a measure of importance⁵; thus if sub-factors are supposed to be equally important their S. values should not differ too much. Results are reassuring: all sub-factors are important in classifying countries within each dimension, though some sub-factors are slightly more important than others (Table 2). Although still acceptable, the least coherent results are: under Fundamental Rights dimension, the contribution of the sub-factor 4.1 (equal treatment and absence of discrimination) and 4.5 (freedom of belief and religion is effectively guaranteed) compared to the remaining sub-factors on the basis of the lower importance. Similarly, sub-factors 5.2 (civil conflict is effectively limited), sub-factor 7.5 (civil justice is not subject to unreasonable delays) and sub-factor 9.1 (informal justice is timely and effective) have a lower contribution to the variance of the respective dimension compared to the other underlying sub-factors. Finally, all eight dimensions are roughly equally important in determining the variation in the Index scores, though Order and Security (D5) is slightly less influential. All together the degree of coherence of the Index is remarkable, i.e. all dimensions and the overall index appear to be balanced and coherent.

ASSESSING POTENTIAL REDUNDANCY OF INFORMATION IN THE RULE OF LAW DIMENSIONS

A very high statistical reliability may be the result of redundancy of information in an aggregate. This is not the case in the Rule of Law Index. The high statistical reliability (c-alpha = 0.97) of the simple average of the eight dimensions is a sign of a sound composite indicator that brings additional information on the rule of law issues in the countries around the world. This is shown in Table 3, which presents, for all pairwise comparisons between the Index and the dimensions, the Spearman rank correlation coefficients (above the diagonal) and the percentage of countries that shift 10 positions or more (below the diagonal). In fact, of the 99 countries included this year, for almost 30% (up to 53%) of the countries, the Index ranking and any of the eight dimension rankings differ by 10 positions or more. This is a desired outcome because it evidences the added value of the Index ranking as a benchmarking tool, namely to help highlighting aspects of rule of law that do not emerge directly by looking into the eight dimensions separately.

IMPACT OF MODELING ASSUMPTIONS ON THE WJP RULE OF LAW INDEX RESULTS

The WJP Rule of Law Index and the underlying dimensions are the outcome of choices: the framework (driven by theoretical models and expert opinion), the variables included, the estimation or not of missing values, the normalization of the variables, the weights assigned to the variables and sub-factors, and the aggregation method, among other elements. Some of these choices are based on expert opinion, or common practice, driven by statistical analysis or the need for ease of communication. The aim of the uncertainty analysis is to assess to what extent — and for which countries in particular — these choices might affect country classification. We have dealt with these uncertainties simultaneously in order to assess their joint influence and fully acknowledge their implications (Saltelli and D'Hombres, 2010). Data are considered to be error-free since the WJP team already undertook a double-check control of potential outliers and eventual errors and typos were corrected during this phase.

The robustness assessment of the WJP Rule of Law Index was based on a combination of a Monte Carlo experiment and a multi-modeling approach. This type of assessment aims to respond to eventual criticism that the country scores associated with aggregate measures are generally not calculated under conditions of certainty, even if they are frequently presented as such (Saisana et al., 2005, 2011). The Monte Carlo simulation related to the weights and comprised 1,000 runs, each corresponding to a different set of weights of the sub-factors underlying each dimension, randomly

⁵ The Pearson correlation ratio or first order sensitivity measure offers a precise definition of importance, that is 'the expected reduction in variance of the CI that would be obtained if a variable could be fixed'; it can be used regardless of the degree of correlation between variables; it is model-free, in that it can be applied also in non-linear aggregations; it is not invasive, in that no changes are made to the index or to the correlation structure of the indicators.

TABLE 2: IMPORTANCE MEASURES (VARIANCE-BASED) FOR THE SUB-FACTORS AND DIMENSIONS IN THE 2014 WJP RULE OF LAW INDEX.

	#.1	#.2	#.3	#.4	#.5	#.6	#.7	#.8
INDEX	0.87	0.93	0.87	0.8	.63*	0.95	0.87	0.88
	[.84, .91]	[.92, .95]	[.86, .9]	[.76, .86]	[.54, .67]	[.94, .96]	[.87, .92]	[.87, .9]
D1	0.91	0.78	0.71	0.82	0.88			
	[.88, .92]	[.77, .82]	[.7, .75]	[.75, .85]	[.82, .89]			
D2	0.95	0.87	0.95	0.8				
	[.93, .96]	[.86, .91]	[.9, .95]	[.8, .86]		•		
D3	0.7	0.87	0.76	0.83				
	[.69, .78]	[.84, .9]	[.75, .83]	[.82, .87]				
D4	.57*	0.9	0.74	0.79	.61*	0.88	0.81	0.75
	[.56, .6]	[.85, .9]	[.73, .79]	[.74, .85]	[.56, .65]	[.83, .9]	[.7, .84]	[.74, .79]
D5	0.66	.38*	0.66					
	[.66, .76]	[.38, .44]	[.63, .72]					
D6	0.83	0.88	0.72	0.81	0.75			
	[.81, .84]	[.85, .9]	[.72, .8]	[.8, .86]	[.69, .81]			
D7	0.59	0.67	0.82	0.76	.39*	0.77	0.67	
	[.59, .62]	[.63, .73]	[.79, .84]	[.73, .83]	[.39, .5]	[.77, .83]	[.66, .72]	
D8	0.65	0.8	0.8	0.7	0.89	0.76	0.84	
	[.64, .71]	[.77, .87]	[.79, .87]	[.7, .73]	[.86, .91]	[.69, .85]	[.83, .88]	
D9	.43*	0.7	0.66					
	[.42, .6]	[.7, .79]	[.66, .81]					

Source: Saisana and Saltelli, European Commission Joint Research Centre; WJP Rule of Law Index 2014.

Notes: (1) Numbers represent the kernel estimates of the Pearson correlation ratio, as in Paruolo et al., 2013. Min-max estimates for the Pearson correlation ratio derive from the choice of the smoothing parameter and are shown in parenthesis. (2) Sub-factors that have much lower contribution to the variance of the relevant Dimension scores than the equal weighting expectation are marked with an asterisk. (3) D1: Constraints on Government Powers, D2: Absence of Corruption, D3: Open Government, D4: Fundamental Rights, D5: Order and Security, D6: Regulatory Enforcement, D7: Civil Justice, D8: Criminal Justice, D9: Informal Justice

sampled from uniform continuous distributions centered in the reference values. The choice of the range for the weights' variation was driven by two opposite needs: on the one hand, the need to ensure a wide enough interval to have meaningful robustness checks (about ±25% of the reference value); on the other hand, the need to respect the rationale of the WJP that the sub-factors have roughly the same importance when calculating a dimension. Given these considerations, limit values of uncertainty intervals have been defined as shown in Table 4.

The multi-modeling approach involved combinations of the remaining two key assumptions on the 'no imputation' of missing data and the aggregation formula across the subfactors or the dimensions. The WJP calculated sub-factor scores using only available information for each country6. This choice (often termed as 'no imputation') was confronted with the application of the expectation-maximization method for the estimation of the missing data⁷. Regarding the WJP assumption on the aggregation function (arithmetic average), and despite the fact that it received statistical support (see principal component analysis results in the previous section), decision-theory practitioners have challenged this type of aggregation because of their fully compensatory nature, in which a comparative advantage of a few variables can compensate a comparative disadvantage of many variables (Munda, 2008). This offsetting might not be always desirable when dealing with fundamental aspects of rule of law. Hence, we considered the geometric average instead, which is a partially compensatory approach.8 Consequently, we tested

Note that here 'no imputation' is equivalent to replacing missing values with the average of the available data within each sub-factor.

The Expectation-Maximization (EM) algorithm (Little and Rubin, 2002) is an iterative procedure that finds the maximum likelihood estimates of the parameter vector by repeating two steps: (1) The expectation E-step: Given a set of parameter estimates, such as a mean vector and covariance matrix for a multivariate normal distribution, the E-step calculates the conditional expectation of the complete-data log likelihood given the observed data and the parameter estimates. (2) The maximization M-step: Given a complete-data log likelihood, the M-step finds the parameter estimates to maximize the complete-data log likelihood from the E-step. The two steps are iterated until the iterations converge.

In the geometric average, sub-factors are multiplied as opposed to summed in the arithmetic average, Sub-factor weights appear as exponents in the multiplication. To avoid that zero values introduce a bias in the geometric average, we re-scaled linearly the subfactors scores to a minimum of 0.01.

TABLE 3: ADDED-VALUE OF THE RULE OF LAW INDEX.

	INDEX	D1	D2	D3	D4	D5	D6	D7	D8	D9
INDEX		0.88	0.92	0.89	0.86	0.77	0.94	0.89	0.91	0.16
D1	42		0.75	0.85	0.86	0.52	0.82	0.75	0.76	0.18
D2	31	54		0.79	0.72	0.72	0.91	0.84	0.89	0.18
D3	36	46	52		0.83	0.63	0.84	0.74	0.75	0.14
D4	38	48	54	52		0.53	0.78	0.74	0.72	0.07
D5	53	64	56	58	67		0.71	0.71	0.77	0.05
D6	30	40	28	40	54	60		0.89	0.83	0.17
D7	31	47	44	54	52	61	35		0.83	0.21
D8	35	54	40	56	58	54	38	44		0.18
D9	78	75	77	73	77	82	72	76	75	

Source: Saisana and Saltelli, European Commission Joint Research Centre; WJP Rule of Law Index 2014.

Notes: (1) Numbers above the diagonal are Spearman rank correlation coefficients, whilst numbers below the diagonal are the percentage of countries that shift +10 positions between the rankings. (3) D1: Constraints on Government Powers, D2: Absence of Corruption, D3: Open Government, D4: Fundamental Rights, D5: Order and Security, D6: Regulatory Enforcement, D7: Civil Justice, D8: Criminal Justice, D9: Informal Justice.

four models based on the combination of no imputation versus expectation-maximization and arithmetic versus geometric average. Combined with the 1,000 simulations per model to account for the uncertainty in the weights across the sub-factors, we carried out altogether 4,000 simulations.

Selected results of the uncertainty analysis are provided in Figure 2, which shows median ranks and 90% intervals computed across the 4,000 Monte Carlo simulations for the overall Index and for two dimensions: Absence of Corruption (D2, one of the most robust dimensions) and Order and Security (D5, one of the least robust dimensions). Countries are ordered from the highest to the lowest levels of rule

of law according to their reference rank in the WJP (black line), the dot being the simulated median rank. Error bars represent, for each country, the 90% interval across all simulations.

More specifically, if one takes the simulated median rank as being representative of these scenarios, then the fact that the dimension ranks are close to the median ranks suggests that the eight dimensions and the overall Index are suitable summary measures of the rule of law aspects. Country ranks in the overall Index and in all eight dimensions are very close to the median rank: 90 percent of the countries shift with respect to the simulated median less than \pm 1 position in

TABLE 4: UNCERTAINTY PARAMETERS (MISSING VALUES, WEIGHTS AND AGGREGATION FUNCTION)

	REFERENCE	ALTERNATIVE
I. UNCERTAINTY RELATED TO MISSING DATA	NO ESTIMATION OF MISSING DATA	EXPECTATION MAXIMIZATION (EM)
II. UNCERTAINTY IN THE AGGREGATION FUNCTION	ARITHMETIC AVERAGE	GEOMETRIC AVERAGE
	REFERENCE VALUE FOR THE WEIGHT	DISTRIBUTION FOR UNCERTAINTY ANALYSIS
III. UNCERTAINTY INTERVALS FOR THE EIGHT DIMENSION WEIGHTS	0.125	U[0.094, 0.156]
IV. UNCERTAINTY INTERVALS FOR THE SUB-FACTOR WEIGHTS		
1: CONSTRAINTS ON GOVERNMENT POWERS (6 SUB-FACTORS)	0.167	U[0.125, 0.208]
2: ABSENCE OF CORRUPTION (4 SUB-FACTORS)	0.250	U[0.188, 0.313]
3: OPEN GOVERNMENT (4 SUB-FACTORS)	0.250	U[0.188, 0.313]
4: FUNDAMENTAL RIGHTS (8 SUB-FACTORS)	0.125	U[0.094, 0.156]
5: ORDER AND SECURITY (3 SUB-FACTORS)	0.333	U[0.250, 0.417]
6: REGULATORY ENFORCEMENT (5 SUB-FACTORS)	0.200	U[0.150, 0.250]
7: CIVIL JUSTICE (7 SUB-FACTORS)	0.143	U[0.107, 0.179]
8: CRIMINAL JUSTICE (7 SUB-FACTORS)	0.143	U[0.107, 0.179]

 $\textbf{Source:} \ \textbf{Saisana} \ \textbf{and} \ \textbf{Saltelli,} \ \textbf{European Commission Joint Research Centre;} \ \textbf{WJP Rule of Law Index 2014}.$

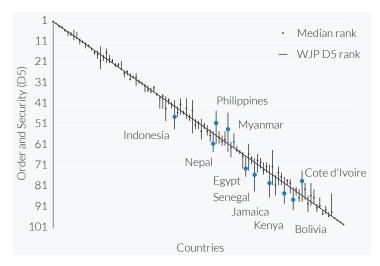
the Rule of Law Index, Constraints on Government Powers (D1) and Fundamental Rights, (D4); less than \pm 2 positions in Absence of Corruption (D2), Open Government (D3), Regulatory Enforcement (D6) and Criminal Justice (D8); less than \pm 3 positions in Civil Justice (D7); and less than \pm 5 positions in Order and Security (D5). These moderate shifts for the vast majority of the countries can be taken as an indication that country classifications along the rules of law issues depend mostly on the variables used and not on the methodological judgments made during the aggregation.

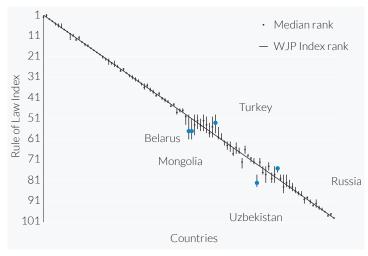
Simulated intervals for most countries are narrow enough, hence robust to changes in the estimation of missing data, weights and aggregation formula — less than 6 positions in 75% of the cases across the eight dimensions and the overall Index. These results suggest that for the vast majority of the countries, the Rule of Law Index ranks allow for meaningful inferences to be drawn.

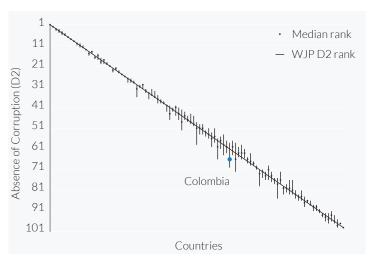
Nevertheless, few countries have relatively wide intervals (more than 15 positions): none on Constraints on Government Powers (D1), Absence of Corruption (D2), Fundamental Rights (D4), Civil Justice (D7); China, Malaysia, and United Arab Emirates on Open Government (D3); Cote d'Ivoire, Jamaica, Myanmar, Philippines, Russia, Senegal, and Thailand on Order and Security (D5); Uzbekistan on Regulatory Enforcement (D6); and Brazil and Panama on Criminal Justice (D8). These relatively wide intervals are due to compensation of low performance on some sub-factors with a very good performance on other sub-factors in a given dimension (see country profiles in the main part of the report). These cases have been flagged herein as part of the uncertainty analysis in order to give more transparency in the entire process and to help appreciate the WJP Rule of Law Index results with respect to the choices made during the development phase. To this end, Table 5 reports the Index and dimension ranks together with the simulated intervals (90% of the 4000 scenarios capturing estimation of missing data, weights and aggregation formula).

The fact that the dimension on Absence of Corruption (D2) is one of the most robust dimensions in the WJP Rule of Law Index with respect to modeling assumptions and also very coherent — as discussed in the previous section, see Table 1 and Table 2 — is all the more noteworthy given its inclusion in the Corruption Perception Index of Transparency International, as one of the thirteen measures describing perception of corruption in the public sector and among politicians.

FIGURE 2: UNCERTAINTY ANALYSIS (WJP INDEX AND SELECTED DIMENSION RANKS VS. MEDIAN RANK, 90% INTERVALS).







Source: Saisana and Saltelli, European Commission Joint Research Centre; WJP Rule of Law Index 2014.

Notes: Countries are ordered from high to low levels of rule of law. Median ranks and intervals are calculated over 4,000 simulated scenarios combining random weights (25% above/below the equal weights assumption), imputed versus missing values, and geometric versus arithmetic average at the dimension (or sub-factor) level. Countries with less reliable ranks – 5 or more positions shift from the simulated median rank are flagged.

TABLE 5: COUNTRY RANKS AND 90% INTERVALS FOR THE RULE OF LAW INDEX AND THE EIGHT DIMENSIONS.

COUNTRIES	INDE	Χ	F1		F2		F3		F4		F5		F6		F7		F8	
Afghanistan	98	[97,98]	78	[77,83]	99	[98,99]	89	[87,98]	91	[90,92]	97	[97,97]	97	[96,97]	99	[99,99]	96	[94,96]
Albania	63	[62,66]	68	[65,69]	83	[81,85]	60	[56,63]	49	[49,51]	53	[51,56]	64	[62,67]	53	[50,56]	75	[68,79]
Argentina Australia	58 8	[50,60] [8,8]	71 8	[68,74] [7,8]	47 8	[45,48] [8,8]	56 12	[51,56] [11,13]	31 10	[31,33] [10,10]	83 14	[81,85] [14,15]	73 7	[68,74] [6,7]	40 12	[40,45] [11,17]	70 11	[66,75] [10,14]
Austria	7	[5,7]	6	[6,8]	10	[10,11]	6	[5,11]	5	[5,5]	10	[9,12]	6	[5,7]	7	[7,9]	5	[5,5]
Bangladesh	92	[92,93]	80	[79,83]	95	[91,96]	85	[84,86]	87	[87,88]	76	[75,85]	91	[88,92]	92	[88,94]	94	[91,95]
Belarus	50	[49,61]	95	[92,95]	38	[37,39]	79	[76,80]	83	[80,85]	33	[32,35]	42	[35,47]	30	[23,36]	50	[48,53.5]
Belgium Belivio	17 94	[17,17]	11 88	[11,12]	13	[13,13]	18 81	[18,18]	9	[9,9]	16 82	[15,19]	19 88	[19,19]	19 96	[18,19]	20 98	[19,20]
Bolivia Bosnia & Herzegovina	39	[93,95] [39,40]	51	[88,88] [49,52]	87 55	[86,87] [53,60]	44	[77,82] [41,46]	75 32	[71,76] [30,33]	45	[81,92] [44,46]	49	[86,90] [46,49]	56	[95,97] [55,67]	32	[98,98] [31,34]
Botswana	25	[23,26]	25	[25,28]	23	[22,23]	22	[22,25]	54	[52,58]	26	[25,27]	20	[20,21]	28	[22,30]	23	[22,24]
Brazil	42	[41,43]	32	[32,33]	45	[42,52]	36	[34,39]	35	[33,36]	71	[67,72]	39	[35,48]	50	[48,59]	69	[64,84]
Bulgaria	44	[44,45]	58	[55,59]	64	[60,65]	51	[46,54]	36	[33,36]	36	[36,37]	57	[55,60]	45	[44,46]	56	[51,58]
Burkina Faso Cambodia	53 91	[49,56] [90,92]	76 94	[73,76] [92,95]	54 86	[51,56] [84,89]	71 82	[66,75] [81,84]	50 82	[49,52] [79,83]	65 54	[64,72] [53,59]	34 94	[31,34] [91,95]	42 97	[40,44] [95,98]	64 95	[63,69] [93,95]
Cameroon	95	[94,95]	87	[84,87]	98	[94,98]	91	[88,92]	81	[78,83]	80	[77,80]	93	[91,95]	95	[95,97]	92	[90,93]
Canada	11	[10,11]	13	[13,13]	14	[14,16]	3	[3,3]	16	[16,19]	15	[15,17]	9	[8,10]	13	[11,15]	15	[13,16]
Chile	21	[21,22]	17	[16,17]	22	[22,24]	19	[19,21]	21	[21,22]	61	[59,66.5]	21	[20,22]	26	[22,29]	28	[28,30]
China	76	[74,82]	92	[89,96]	49	[45,50]	74	[69,84]	96	[96,97]	29	[26,32]	78	[74,85]	77	[75,87]	51	[47,55]
Colombia Cote d'Ivoire	61 72	[58,61] [70,73]	47 77	[45,49] [74,78]	61 69	[58,70] [67,69]	40 88	[36,44] [86,91]	61 72	[57,62] [71,78]	89 85	[82,89] [73,88]	50 58	[49,53] [56,62]	54 57	[52,62] [52,60]	79 60	[74,87] [57,62]
Croatia	36	[34,36]	40	[40,43]	36	[33,36]	38	[35,40]	37	[35,38]	39	[37,49]	53	[52,57]	46	[44,58]	31	[30,32]
Czech Republic	23	[22,25]	23	[22,24]	31	[30,31]	33	[31.5,34]	11	[11,12]	28	[27,28]	24	[24,25]	20	[20,20]	19	[19,20]
Denmark	1	[1,2]	1	[1,1]	<u> </u>	[1,1]	5	[5,6]	2	[2,3]	3	[3,4]	2	[2,2]	4	[3,4]	3	[2,3]
Dominican Republic	67 77	[65,68]	67 85	[66,71]	77 51	[75,85] [49,54]	45 75	[42,49]	47 62	[47,48] [58,65]	87 91	[85,93]	76 54	[75,79]	60 78	[54,61] [76,84]	66 86	[63,69] [82,88]
Ecuador Egypt	74	[72,76] [70,74]	74	[84,86] [69,76]	52	[49,54]	64	[71,77] [59,68]	90	[90,92]	66	[86,91] [66,76]	75	[52,55] [73,82]	84	[81,91]	57	[53,59]
El Salvador	64	[62,67]	66	[65,67]	53	[52,55]	84	[81,84]	42	[39,43]	70	[65,74]	52	[50,53]	62	[60,66]	90	[89,97]
Estonia	15	[15,16]	12	[11,12]	18	[17,20]	15	[15,16]	12	[11,13]	24	[20,24]	13	[13,16]	16	[12,16]	13	[11,15]
Ethiopia	88	[86,88]	91	[89,92]	56	[51,58]	94	[91,95]	94	[93,94]	73	[69,74]	89	[87,94]	85	[81,89]	46	[41,49]
Finland	4 18	[4,4]	5 14	[5,5] [14,14]	6 20	[5,6]	11 16	[9,11]	4 18	[4,4]	8 30	[5,10] [29,31]	11 14	[11,12]	8 18	[7,9] [18,19]	1 21	[1,2]
France Georgia	18 31	[18,18]	55	[51,57.5]	24	[19,20] [23,24]	43	[15,17] [40,47]	18 51	[16,19] [49,53]	17	[13,24]	31	[13,15] [30,37]	32	[18,19]	36	[21,22] [35,37]
Germany	9	[9,9]	9	[9,9]	12	[11,12]	14	[14,14]	8	[8,8]	13	[12,13]	16	[14,18]	3	[3,4]	16	[15,16]
Ghana Î	37	[36,38]	27	[26,28]	58	[55,61]	37	[34,41]	33	[32,36]	57	[54,60]	43	[40,44]	35	[31,35]	49	[48,52]
Greece	32	[31,33]	29	[29,30]	34	[34,37]	34	[33,43]	28	[28,29]	49	[48,53]	37	[34,41]	25	[23,34]	43	[43,50]
Guatemala Hong Kong SAR, China	83 16	[78,84] [15,16]	59 24	[58,63] [22,24]	76 9	[75,78] [9,9]	57 10	[52,59] [7,12]	57 29	[54,58] [28,30]	92 4	[92,94] [3,4]	85 15	[81,86] [14,17]	93 15	[92,94] [11,16]	93 10	[91,94] [9,11]
Hungary	30	[30,31]	36	[34,39]	29	[28,29]	35	[34,40]	30	[29,31]	21	[19,21]	30	[30,34]	55	[51,65]	34	[32,34]
ndia	66	[62.5,68]	35	[35,37]	72	[71,75]	30	[29,31]	63	[61,65]	95	[84,95]	81	[78,87]	90	[84,91]	48	[44,49]
ndonesia	46	[46,49]	31	[31,31]	80	[78,82]	29	[29,32]	65	[61,65]	42	[39,53]	46	[43,48]	67	[62,69]	71	[66,73]
ran	82	[78,87]	90	[89,94]	42	[41,43]	90	[87,92]	99	[99,99]	77	[71,80]	41	[35,42]	38	[36,38]	63	[61,68]
taly Jamaica	29 45	[29,29] [44,45]	26 34	[25,27] [33,35]	30 50	[30,36] [48,59]	39 59	[36,41] [54,63]	22 44	[22,23] [42,46]	50 74	[49,53] [70,86]	29 32	[28,29]	36 64	[35,38] [59,70]	24 53	[23,24] [51,64]
Japan	12	[12,13]	15	[15,17]	11	[10,12]	8	[6,8]	20	[19,20]	1	[1,1]	12	[11,12]	11	[10,13]	18	[18,18]
Jordan	38	[37,39]	64	[60,67]	33	[32,34]	65	[62,67]	77	[74,77]	20	[17,21]	35	[35,42]	21	[21,24]	30	[28,30]
Kazakhstan	71	[70,72]	93	[90,94]	60	[57,63]	87	[86,89]	74	[72,76]	35	[32,35]	63	[59,66]	66	[59,70]	61	[57,62]
Kenya	86	[84,87]	62	[59,63]	93	[92,96]	83	[78,84]	80	[78,85]	79	[76,89]	80	[78,84]	72	[69,72]	84	[78,87]
Kyrgyzstan Lebanon	78 49	[77,82] [49,54]	70 44	[69,74] [41,44]	96 70	[93,97] [69,71]	73 62	[68,74] [57,64]	66 43	[66,67] [40,46]	52 43	[50,53] [42,47]	68 66	[65,73] [63,68]	74 70	[73,75] [67,71]	85 55	[80,87] [53,62]
_iberia	87	[86,88]	56	[51,64]	85	[81,86]	86	[85,89]	53	[52,57]	93	[90,94]	96	[96,98]	87	[78,89]	87	[81,87]
Macedonia, FYR	34	[34,35]	61	[57,62]	37	[35,39]	24	[23,25]	38	[37,38]	47	[46,49]	44	[38,44]	41	[40,43]	37	[36,38]
Madagascar	81	[78,81]	83	[79,84]	84	[83,86]	68	[64,75]	76	[74,82]	46	[38,48]	82	[79,84]	79	[76,84]	80	[72,81]
Malawi	55 35	[49,57]	60 49	[56,61]	65 28	[59,66] [27,29]	80 42	[76,80]	58 85	[56,61]	68 12	[66,70]	77 48	[75,80]	31	[27,33]	40 33	[38,47] [32,34]
Malaysia Mexico	79	[34,37] [74,82]	49	[45,52] [46,55]	78	[72,78]	32	[36,62]	60	[81,86] [58,65]	96	[11,14] [96,96]	51	[44,50] [49,51]	37 88	[36,38] [78,88]	97	[96,97]
Moldova	75	[74,78]	79	[77,80]	88	[86,88]	58	[53,64]	68	[67,69]	40	[38,41]	79	[75,83]	76	[75,79]	82	[77,85]
Mongolia	51	[51,61]	53	[53,56]	71	[71,79]	93	[90,94]	45	[42,45]	38	[36,43]	70	[68,73]	48	[44,49]	39	[37,41]
Morocco	52	[49,59]	46	[45,49]	62	[57,64]	46	[42,50]	84	[82,86]	44	[38,46]	36	[35,40]	51	[48,54]	81	[77,84]
Myanmar Nepal	89 57	[89,92] [53,60]	82 45	[79,84] [44,47]	63 73	[58,72] [72,76]	96 61	[94,97] [54,63]	97 48	[96,98] [47,48]	60 55	[45,64] [54,64]	92 56	[88,93] [53,57]	86 75	[81,90] [73,76]	89 52	[85,90] [50,53]
Netherlands	5	[5,6]	7	[6,7]	7	[7,7]	7	[6,9]	6	[6,6]	22	[21,23]	4	[4,4]	2	[2,2]	9	[9,10]
New Zealand	6	[5,7]	4	[4,4]	3	[3,4]	2	[2,2]	7	[7,7]	11	[10,11]	5	[5,6]	9	[8,9]	12	[11,15]
Vicaragua	85	[82,86]	96	[95,96]	75	[72,77]	54	[52,66]	69	[67,70]	72	[69,75]	71	[69,74]	91	[89,93]	78	[73,84]
Vigeria	93	[90,94]	69	[68,71]	97	[95,99]	76	[73,77]	88	[87,89]	98	[98,98]	83	[78,84]	52	[48,53]	91	[89,92]
Norway Pakistan	2 96	[1,2] [96,96]	2 73	[2,3] [71,76]	2 91	[2,2] [90,92]	1 95	[1,1] [91,95]	3 92	[2,3] [91,94]	19 99	[14,21] [99,99]	95	[1,1] [92,95]	94	[1,1] [92,94]	4 68	[4,4] [64,72.5]
Panama	56	[50,58]	75	[73,81]	57	[56,66]	31	[29,33]	46	[44,46]	62	[55,62]	55	[54,57]	69	[67,71]	65	[63,84]
Peru	62	[62,64]	38	[37,40]	79	[79,83]	63	[55,68]	34	[33,36]	78	[74,80]	61	[59,63]	83	[80,89]	67	[63,74]
Philippines	60	[55,61]	39	[37,40]	44	[41,47]	55	[52,58]	67	[67,71]	56	[44,60]	60	[57,61]	82	[80,87]	73	[68,77]
Poland	22 26	[22,23]	22	[21,23]	27	[27,29]	27	[27,27]	24	[24,25]	25	[25,28]	26	[26,27]	22	[22,26]	17	[17,17]
Portugal Republic of Korea	∠o 14	[25,26] [14,14]	19 16	[19,21] [15,16]	26 16	[26,26] [16,17]	25 13	[23,26] [12,13]	17 23	[16,18] [21,23]	58 7	[56,61] [6,8]	27 17	[26,28] [14,18]	23 10	[21,34] [9,12]	26 8	[26,27] [8,8]
Romania	33	[32,33]	43	[40,43]	41	[40,47]	47	[42,50]	25	[24,26]	31	[30,31]	45	[41,46]	34	[31,35]	29	[28,30]
Russia	80	[74,77]	89	[89,92]	66	[61,65.5]	67	[63,71]	79	[76,81]	75	[63,80]	67	[64,69]	68	[65,69]	76	[67,78]
Senegal	43	[42,43]	33	[32,34]	48	[44,49]	70	[67,73]	39	[39,41]	69	[67,83]	33	[30,34]	39	[38,39]	54	[52,57]
Serbia	54	[51,57]	65	[64,67]	67	[65,68]	48	[43,49]	40	[39,43]	51	[48,58]	65	[62,67]	71	[69,72]	58	[53,60]
Sierra Leone Singapore	84 10	[80.5,85] [10,13]	50 21	[46,50] [18,23]	82 5	[76,83] [4,6]	98 21	[97,98] [19,21]	59 26	[59,63] [24,27]	88 2	[79,90] [2,2]	87 8	[85,89] [8,10]	63 6	[59,66] [5,6]	88 2	[86,92] [1,3]
Slovenia	28	[27,28]	30	[29,30]	32	[30,32]	23	[22,24]	13	[12,13]	37	[37,43]	28	[26,29]	29	[26,33]	27	[26,27]
South Africa	40	[38,40]	37	[35,37]	46	[43,47]	26	[25,26]	41	[40,43]	86	[79,87]	40	[37,46]	44	[40,46]	47	[45,48]
Spain	24	[24,25]	28	[26,28]	25	[25,25]	28	[28,28]	14	[14,15]	34	[33,35]	25	[24,25]	24	[22,28]	25	[25,25]
Sri Lanka	48	[46,48]	54	[50,57]	39	[38,39]	41	[37,48]	56	[54,59]	59	[54,61]	69	[67,74]	80	[75,82]	38	[38,40]
Sweden Tanzania	3 69	[3,3] [64,68]	3 52	[2,3] [51,55]	4 74	[3,5] [69,76]	4 72	[4,4] [67,76]	1 70	[1,1] [69,71]	6 90	[6,8] [89,93]	3 74	[3,3] [67,75]	5 61	[5,6] [55,63]	6 44	[6,7] [41,46]
Thailand	47	[46,48]	63	[61,64]	40	[40,43]	50	[46,53]	52	[49,53]	48	[39,55]	62	[58,63]	89	[83,93]	35	[35,37]
Гunisia	41	[41,42]	41	[40,42]	43	[40,45]	49	[44,50]	64	[59,65]	41	[40,43]	47	[44,50]	43	[40,44]	45	[41,47]
Turkey	59	[49,58]	72	[67,74]	35	[32,35]	69	[65,70]	78	[76,80]	67	[60,73]	38	[35,40]	47	[46,48]	62	[59,63]
Jganda	90	[89,90]	81	[77,83]	89	[88,91]	92	[88,94]	93	[91,94]	84	[82,88]	90	[88,94]	59	[54,62]	72	[64,76]
Jkraine Jnited Arab Emirates	68 27	[70,75]	84 42	[81,87]	94 17	[92,97]	53 52	[49,55] [44 74]	55 73	[53,56] [72,80]	27 9	[26,29]	84 23	[77,85]	49 33	[46,52]	83 7	[81,88]
United Arab Emirates United Kingdom	13	[27,28] [11,13]	10	[39,48] [10,10]	17	[15,18] [14,15]	9	[44,74] [7,11]	73 15	[72,80] [14,15]	23	[6,9] [21,23]	10	[22,23] [9,10]	33 14	[29,36] [12,15]	7 14	[6,7] [11,14]
United States	19	[19,19]	20	[18,21]	21	[21,21]	17	[16,17]	27	[25,27]	18	[17,20]	22	[21,23]	27	[23,30]	22	[21,23]
Jruguay	20	[20,20]	18	[18,19]	19	[18,20]	20	[19,21]	19	[16,20]	64	[63,65]	18	[16,18]	17	[16,17]	42	[40,47]
Jzbekistan	73	[78,84]	97	[97,98]	81	[76,83]	78	[75,81]	95	[95,95]	5	[5,6]	59	[55,70]	58	[53,63]	59	[52,60]
Venezuela Vietnam	99 65	[99,99]	99	[99,99]	90 59	[88,91]	97 77	[96,97]	89 71	[87,89]	94	[93,95]	99	[99,99]	98 73	[97,98]	99	[99,99]
	65 70	[65,69] [68,69]	86 57	[84,87] [51,59]	59 68	[54,64] [63,69]	77 66	[75,84] [61,69]	71 86	[67,73] [82,87]	32 63	[31,35] [61,64]	86 72	[83,89] [68,75]	73 65	[73,78] [56,66]	41 77	[39,43] [72,79]
Zambia																		

Source: Saisana and Saltelli, European Commission Joint Research Centre; WJP Rule of Law Index 2014.

Notes: Countries are presented in alphabetical order. 90% intervals are calculated over 4,000 simulated scenarios combining random weights (25% above/below the equal weights assumption), imputed versus missing values, and geometric versus arithmetic average at the dimension (or sub-factor) level.

Though country rankings are not calculated by the WJP for the Informal Justice, a similar robustness analysis reveals that twenty two countries in this dimension have relatively wide intervals (more than 15 positions)9. These wide intervals are in most cases due to the amount of missing data (4 or more out of the 8 question items). This outcome further supports the WJP choice to use the Informal Justice dimension scores as an indication for within country comparisons and not across countries.

As a general remark, the robustness of an index should not be interpreted as an indication of the index's quality. It is instead a consequence of the index's dimensionality. In other words, robustness is to some extent the flip side of redundancy: a very high correlation between variables will lead to an index ranking that is practically not affected by the methodological choices, so the index will be both robust and redundant. Similarly, a low correlation among variables would imply that the methodological choices are very important in determining country rankings, and thus the index is unlikely to be robust to these choices. The results herein have revealed that the 2014 Rule of Law Index is robust without being redundant.

RULE OF LAW INDEX AND THE VARIABILITY OF **ITS DIMENSIONS**

Finally, we study the relationship between the Rule of Law Index scores of a given country and the variability of its eight underlying dimensions, namely what the relationship is, if any, between the Index score and a balanced performance in constraints on government powers, absence of corruption, open government, fundamental rights, order and security, regulatory enforcement, civil justice, and criminal justice. While the Index values provide a quantitative indication of trends in rule of law, changes in the dimension's variability convey information on the quality of the changes: an increase in rule of law may be achieved by improving the performance in specific dimensions, whilst a decrease in the coefficient of variation may be achieved by reducing gaps in performance between dimensions.

As can be seen from the scissor's pattern in Figure 3, generally countries with higher levels of rule of law exhibit less variability since they tend to achieve high values in most of the underlying dimensions. The opposite generally holds true for countries with lower levels of rule of law. The average variability in the top tertile group is 0.11, in the middle tertile group is 0.21, and in the low tertile group is 0.27. This reflects the fact that countries with lower levels of rule of law generally display larger discrepancies in performance

between dimensions, and that focusing only in particular dimensions while allowing performance gaps between dimension yields only marginal results in their overall rule of law score. However, it is worth noting that there is a certain variance in the results: although Tanzania and Pakistan belong to the low tertile group in the rule of law, their variability is just above the average variability of the top tertile group. The same applies to a number of countries in the middle tertile group (South Africa, Colombia, and Macedonia-FYR). Instead, although the United Arab Emirates belongs to the top tertile group, its variability is above the average of the middle tertile group.

The Pearson correlation coefficient between the Rule of Law Index and the coefficient of variation is -0.83, what reflects a high degree of negative association between the Index and the variability of its eight dimensions.

CONCLUSIONS

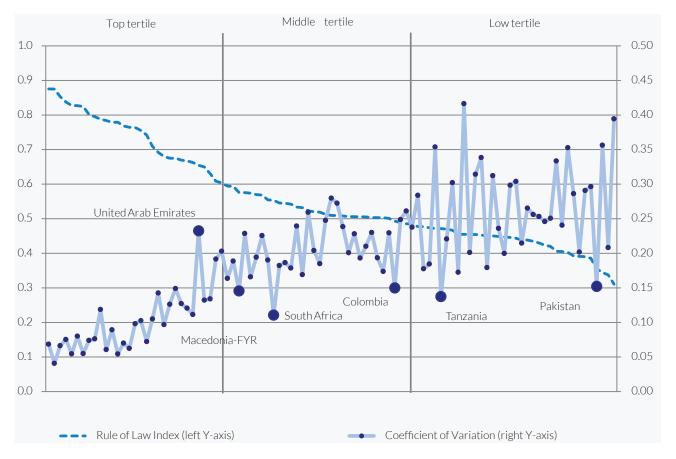
The WJP team invited the JRC for the fourth consecutive year to delve into the statistical properties of the revised Rule of Law Index, so as to ensure the transparency and reliability of the results and to enable academics and policymakers to derive more accurate and meaningful conclusions. In fact, stringent criteria of transparency must be adopted when composite indicators are used as a basis for policy assessments. Failure to open up the black box of composite indicator development is likely to lead only to greater erosion of the credibility and legitimacy of these measures as tools for improved policymaking.

The JRC analysis suggests that the conceptualized multi-level structure of the 2014 WJP Rule of Law Index — calculated through almost 500 survey questions and eight dimensions for 99 countries — is statistically sound, coherent, and balanced. Indeed, within each dimension a single latent factor is identified and all sub-factors are roughly equally important in determining the variation of the respective dimension scores. This outcome can be used as statistical justification for the equal weights and arithmetic averaging at the various levels of aggregation of the Rule of Law Index - which should not be taken for granted when arithmetic averaging is concerned. The Absence of Corruption dimension is especially coherent and robust, which is noteworthy given its inclusion in the Corruption Perception Index of Transparency International.

Country ranks across the eight dimensions and in the overall Index are also fairly robust to methodological changes related to the estimation of missing data, weighting or aggregation rule (less than ± 3 positions shift in 96% of the cases). Consequently, benchmarking inferences can be drawn

These are: Albania, Australia, Chile, Croatia, Czech Republic, Finland, Greece, Hong Kong SAR of China, Hungary, Iran, Italy, Jamaica, Macedonia-FYR, New Zealand, Norway, Portugal Singapore, Slovenia, Sri Lanka, Turkey, United Kingdom, and Uruguay.

FIGURE 3: RULE OF LAW INDEX VALUES AND THE VARIABILITY OF THEIR UNDERLYING DIMENSIONS.



Source: Saisana and Saltelli, European Commission Joint Research Centre; WJP Rule of Law Index 2014. **Notes:** Countries are ordered from high to low levels of rule of law. The coefficient of variation for each country is calculated as the ratio of the standard deviation across the eight dimensions of the rule of law to their average.

for most countries in the Rule of Law Index and the eight underlying dimensions, whilst some caution may be needed for a few countries. Note that perfect robustness would have been undesirable as this would have implied that the Index and the dimensions are perfectly correlated and hence redundant, which is not the case. In fact, one way in which the 2014 Rule of Law Index helps to highlight other aspects of rule law is by pinpointing the differences in rankings that emerge from a comparison between the Index and each of the eight dimensions: for more than 30% (up to 53%) of the countries, the Index ranking and any of the eight dimensions rankings differ by 10 positions or more.

The main refinements suggested by the present analysis relate to the dimensions of Order and Security and Informal Justice. The former needs a revision with respect to the subfactor on civil conflict is effectively limited, whilst Informal Justice appears to be measuring an aspect of the rule of law that is totally different to what is being measured by the other eight dimensions. The missing data for 20+ countries within Informal Justice do not allow for a reliable estimation of their performance level in this respect. Beyond conceptual issues, these statistical considerations may justify the WJP's

choice not to include Informal Justice in the index calculation, but to consider it instead indicatively for within country comparisons only.

The added value of the 2014 WJP Rule of Law Index and its underlying dimensions — developed using international quality standards and tested using state of the art statistical analyses — lays in the ability to summarize different aspects of rule of law in a more efficient and parsimonious manner than what is possible with a collection of almost 500 survey questions taken separately. In fact, the Rule of Law Index, presented this year for the first time as an overall aggregate, has a very high reliability 0.97 and captures indeed the single latent phenomenon underlying the eight main dimensions of rule of law. In past reports, the WJP team had opted not to calculate an overall index in order to shed more light onto the dimensions of the rule of law. Hopefully, this year's initiative to accompany the detailed country profiles with an overall rule of law score will reinforce the media's uptake of the Rule of Law Index and the WJP's engagements with civil society.

REFERENCES

Groeneveld, R. A., Meeden, G. 1984. Measuring skewness and kurtosis. The Statistician 33: 391-99.

Little, R. J. A., Rubin, D. B. 2002. Statistical Analysis with Missing Data. 2nd edition. Hoboken, NJ: John Wiley & Sons.

Munda, G. 2008. Social Multi-Criteria Evaluation for a Sustainable Economy. Berlin Heidelberg: Springer-Verlag.

Nunnaly, J. 1978. Psychometric theory. New York: McGraw-Hill.

OECD/EC JRC, 2008. Handbook on Constructing Composite Indicators: Methodology and User Guide. Paris: OECD.

Paruolo P., Saisana M., Saltelli A. 2013, Ratings and Rankings: voodoo or science? J Royal Statistical Society A 176(3): 609-634.

Saisana, M., D'Hombres, B., Saltelli, A. 2011. Rickety Numbers: Volatility of University Rankings and Policy Implications. Research Policy 40: 165-77.

Saisana, M., and Saltelli, A. 2011. Rankings and Ratings: Instructions for use. Hague Journal on the Rule of Law 3(2): 247-268.

Saisana, M. 2011. Statistical tests on the Global Innovation Index (p.57-64), in Dutta, S. (Ed), The Global Innovation Index 2011. Accelerating Growth and Development, INSEAD.

Saisana, M., Saltelli, A., Tarantola, S. 2005. Uncertainty and Sensitivity Analysis Techniques as Tools for the Analysis and Validation of Composite Indicators. Journal of the Royal Statistical Society A 168 (2):307-323.

Saltelli, A., Funtowicz S. 2014. When All Models Are Wrong, Computer Modeling, Issues in Science and Technology, 79-85.

Saltelli, A., D'Hombres, B. 2010. Sensitivity Analysis Didn't Help. A Practitioner's Critique of the Stern Review. Global Environmental Change 20: 298-302.

Saltelli, A., Ratto, M., Andres, T., Campolongo, F., Cariboni, J., Gatelli, D., Saisana, M., Tarantola, S. 2008. Global Sensitivity Analysis: The Primer. Chichester, England: John Wiley & Sons.