PROPERTY RIGHTS ALLIANCE

PROSPERITY ▾▲ FREEDOM ▾▲ INNOVATION

INTERNATIONAL PROPERTY RIGHTS INDEX 2023

FULL REPORT

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INTRODUCTION

2023, the 23rd year of the 3rd millennium and the 21st century, is full of challenges in all areas. While the isolation and rupturing of supply chains due to the COVID-19 pandemic have been overcome, and the inflation pressures have receded, the aftermath has not been totally resolved. Instead of multidimensional synergies essential for harmonious and integral development, we observe strong tensions that hinder possibilities.

The pandemic instantly erased years of progress eradicating poverty, resulting in a fertile breeding ground for intensifying the battle for democracy all over the world, eroding the essential trust that allows social cohesion and the open and determined participation in the achievement of common goals. Meanwhile, science and technology continue their accelerated and dizzying path of progress, showing the power of human creativity and, therefore, the need to promote favorable ecosystems for innovation. It will be through innovative approaches and perspectives that we will manage to address energy and environmental issues and that ultimately will allow us to respond with a responsible intergenerational strategy.

And one of the central elements to achieve this desired path is fostering a robust and virtuous institutional environment, with enough stability, allowing the citizens of the world to push themselves towards the future. A vital piece of this institutional environment embedded within a free society is a robust system of property rights, which itself is a condition for exercising other rights, creating a positive feedback for freedom and prosperity. Whether it is physical or intellectual property rights, they are essential for development. Perhaps in the 21st century there are greater challenges regarding the latter, given their relevance in the so-called knowledge society, promoting social and economic incentives to stimulate creation, innovation and its dissemination. And last but not least, we should insist that property rights are human rights, and that is the ethical core reason for the preference of a robust property rights system.

This year's IPRI edition includes 125 countries representing 93.4% of world population and 97.5% of world GDP, showing, after four years of consecutive set back, a slight recovery of the IPRI. While this is good news, there is still a long way to go; and we must insist on raising awareness of its relevance, particularly on densely populated countries that continue to display a discouraging scenario to access a robust property rights system.

The author wishes to acknowledge the valuable job of Property Rights Alliance in this regard and wishes to thank its Executive Director, Lorenzo Montanari, for his support in the development of the Index edition. Likewise, special thanks to the statistician Karen Tizado, for her professional work in manipulating the data for the Index calculation.

Sary Levy-Carciente
June, 2023

IPRI STRUCTURE & METHODOLOGY

The International Property Rights Index (IPRI) presents the state of property rights in the world's nations, following an institutional approach, as property rights are a linchpin institution for a free society, based on a citizenship that control its own life and build its own destiny.

The IPRI was created by the Property Rights Alliance (PRA) instituting the *Hernando de Soto Fellowship* to produce, since 2007, its yearly edition. A rich and extensive literature on property rights was considered to conceptualize and operationalize the Index, setting its core categories (here-to referred as components or sub-indices) and the items included in each of them.

The IPRI is comprised of three components:

» Legal and Political Environment (LP)

» Physical Property Rights (PPR)

» Intellectual Property Rights (IPR)

The Legal and Political Environment (LP) component provides information about the strength of a country's institutions, the respect for the 'rules of the game' among citizens. Therefore, the items included in the LP are wide-ranging. This component has a significant influence on the development and protection of physical and intellectual property rights.

The other two components of the Index, Physical Property Rights (PPR) and Intellectual Property Rights (IPR), reflect the two kinds of property rights unequivocal for countries' socio-economic development. Items included in these two categories speak to *de jure* rights and *de facto* opportunities in each country, as quantitative and qualitative information.

As a result, the IPRI encompass 11 items, gathered under the three components.

While there are numerous items associated to property rights, the final IPRI is specific to core factors that are directly related to the strength and defense of physical and intellectual property rights. Furthermore, items for which data were available more regularly and for a larger number of countries were given preference, guaranteeing that scores were comparable across countries and years.

The 2023-IPRI keeps previous years' basic methodology allowing for a full comparison of its results with previous editions; however there are some changes in the variables used, given the recurrence of outdated sources or the disappearance of others. In these cases, they have been replaced by variables that respect the goals of the IPRI, aiming to offer a constant update and wide geographical scope.
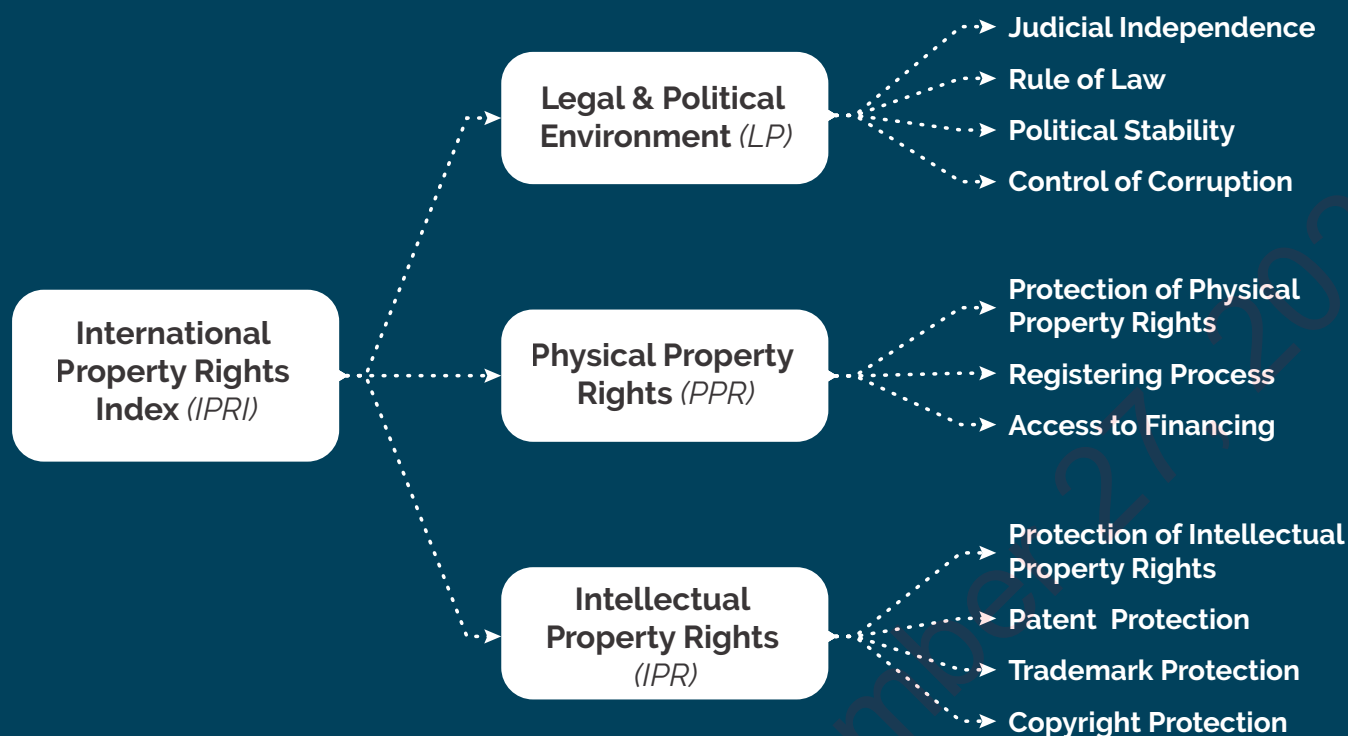
Figure 1. International Property Rights Index Structure.

I. LEGAL AND POLITICAL ENVIRONMENT (LP)

The Legal and Political Environment component focuses on the ability of a nation to enforce a *de jure* system of property rights. The approach of this component is wide and open, grasping the general ambiance of the country limiting the arbitrary exercise of power and stability provided to its citizens. It comprises four (4) elements: the independence of its judicial system, the strength of the rule of law, the stability of its political system and the control of corruption.

JUDICIAL INDEPENDENCE
This item examines the judiciary's freedom from government, individual, or business groups' influence. The independence of the judiciary is a central foundation for the sound protection and sovereign support of the law court system with respect to individuals' property.

For this item, this year, the chosen source was The Rule of Law Index of the World Justice Project (https://worldjusticeproject.org/rule-of-law-index/country/2022) and we used the simple average of two of its factors:

» Civil Justice is Free of Improper Government Influence (7.4) that measures whether the civil justice system is free of improper government or political influence.

» Criminal System is Free of Improper Government Influence (8.6) that measures whether the police and criminal judges are impartial and whether they discriminate in practice based on socio-economic status, gender, ethnicity, religion, national origin, sexual orientation, or gender identity.

Its original data scale is [0 to 1], where 1 is the best score.

RULE OF LAW

This element measures agents' confidence and behavior by the rules of their society. Specifically, it measures the quality of contract enforcement, property rights, police, and courts, as well as the likelihood of crime and violence. It combines several indicators, including fairness, honesty, enforcement, speed, affordability of the court system, protection of private property rights, and judicial and executive accountability. Rule of Law complements the Judicial Independence item.

The chosen data source is the Rule of Law dimension of Worldwide Governance Indicators 2021 (2022 update) (http://info.worldbank.org/governance/wgi/index.aspx#home). The original data scale is [-2.5 to 2.5], where 2.5 is the best score.

POLITICAL STABILITY

Political stability endorses incentives to obtain or to extend ownership and/or management of properties. The higher the likelihood of government instability, the less likely people will be to obtain property and to develop trust in the soundness of the rights attached.

For this item, the chosen data source is the Political Stability and Absence of Violence/Terrorism's dimension of the World Bank, The Worldwide Governance Indicators 2021 (2022 update) (http://info.worldbank.org/governance/wgi/index.aspx#home). The original data scale is [-2.5 to 2.5], where 2.5 is the best score.

NOTE: A special notice has to be made regarding the Political Stability indicator for this year, as it displays a value outside of its normal range for Yemen Rep. -2.588. Therefore, Yemen Rep's score was considered as the extreme of the range scale (minimum value) for the rescaling process. This situation happened also during the last six years, and we followed the same procedure.

CONTROL OF CORRUPTION

This item combines several indicators that measure the extent to which public power is exercised for private gain. This includes from petty to grand forms of corruption, as well as the 'capture' of the state by elites and group-interests. As with the other items in the LP component, corruption influences people's confidence in the existence of sound implementation and enforcement of property rights. Corruption also influences the degree of informality in the economy, which is a deterring factor to the expansion of respect for legal private property.

The data source chosen for this item is the Control of Corruption dimension from World Bank, The Worldwide Governance Indicators 2021 (2022 update) (http://info.worldbank.org/governance/wgi/index.aspx#home). The original data scale is [-2.5 to 2.5], where 2.5 is the best score.

II. PHYSICAL PROPERTY RIGHTS (PPR)

A strong property rights regime promotes people's confidence in its effectiveness to protect private property rights. It also offers an integrated, effective and efficient system for registering property, and it allows access to the required credit to become an owner or to convert that property into capital. For these reasons, the following items are used to measure private physical property rights protection (PPR).

PROTECTION OF PHYSICAL PROPERTY RIGHTS

The Protection of Physical Property Rights relates directly to the strength of a country's property rights system based on the expert's views of the quality of the judicial protection of private property, including financial assets. Additionally, it incorporates experts' opinions on the precision of the legal definition of property rights.

The data source chosen for this item is The Global Competitiveness Index 4.0 2019 Dataset | Version 20191004, from the World Economic Forum's 2019 (https://www.weforum.org/reports/global-competitiveness-report-2019). The original data scale is [1 - 7], where 7 is the best score. The full question and associated answers of the Executive Opinion Survey for this indicator was:

In your country, to what extent are property rights, including financial assets, protected? [1 = not at all; 7 = to a great extent].

REGISTERING PROCESS

This item measures the extent to which regulations are fairly and effectively implemented and enforced, being a proxy of the fairness and efficiency of the registering process of a property. The relevance of this information derives from the fact that the more difficult the property registration is, the more likely it is that assets will stay in the informal sector, discouraging assets' movement from lower to higher prized uses.

The Registering Process indicator reflects one of the main economic arguments set forth by Hernando de Soto: *"what the poor lack is easy access to the property mechanisms that could legally fix the economic potential of their assets so they could be used to produce, secure or guarantee greater value in the extended market"* (2000:48).

The data source chosen for this item is World Justice Project, Rule of Law Index (https://worldjusticeproject.org/rule-of-law-index/country/2022). The original data scale is [0-1], where 1 is the best score. Specifically, we use the simple average of two items included in its Regulatory Enforcement factor:

» Administrative proceedings are conducted without unreasonable delay; that measures whether administrative proceedings at the national and local levels are conducted without unreasonable delay; and

» Due process is respected in administrative proceedings, that measures whether the due process of law is respected in administrative proceedings conducted by national and local authorities in issue areas such as the environment, taxes, and labor.
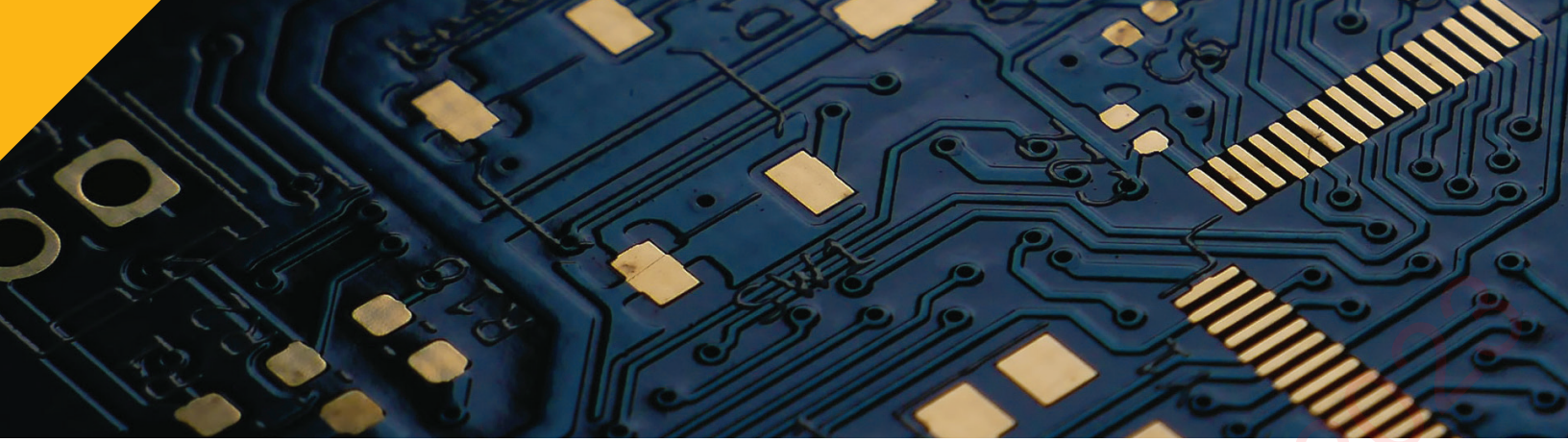
ACCESS TO FINANCING

Financial institutions play a crucial complementary role – along with a strong property rights system – to bring economic assets into the formal economy, to allow the path from ideas and projects to real investments. Credit facilities are also demonstrated to be an important channel for policies to alleviate poverty. The data source chosen for this item is *Financing of SMEs* (EOSQ425) of the World Economic Forum; The Global Competitiveness Index 4.0 2019 Dataset | Version 20191004 (https://www.weforum.org/reports/global-competitiveness-report-2019). The original data scale is [1 to 7], where 7 is the best score. The full question associated for this indicator is:

"In your country, to what extent can small- and medium-sized enterprises (SMEs) access finance they need for their business operations through the financial sector?"

III. INTELLECTUAL PROPERTY RIGHTS (IPR)

The assignment of intellectual property rights does not confer exclusive possession (such as physical property rights), but the benefits of its economic exploitation, promoting the generation of economic incentives towards research and innovation, as well as stimulating the open exposure of ideas, encouraging indirect effects of creativity. IP rights are particularly relevant in times of the so called Knowledge Society.

The Intellectual Property Rights component evaluates the protection of this kind of property. In addition to an opinion-based measure, it assesses protection of three major forms of intellectual property rights (patents, trademarks and copyrights) combining a *de jure* and a *de facto* perspective.

PROTECTION OF INTELLECTUAL PROPERTY RIGHTS

Capturing citizens' perspective on protection of intellectual property is a crucial element of the IPR component.

The data source chosen for this item is The Global Competitiveness Index 4.0 2019 Dataset | Version 20191004 from the World Economic Forum (https://www.weforum.org/reports/global-competitiveness-report-2019). The original data scale is [1 - 7], where 7 is the best score. Its Executive Opinion Survey used the following question and associated answers to generate the information:

In your country, to what extent is intellectual property protected? [1 = not at all; 7 = to a great extent]
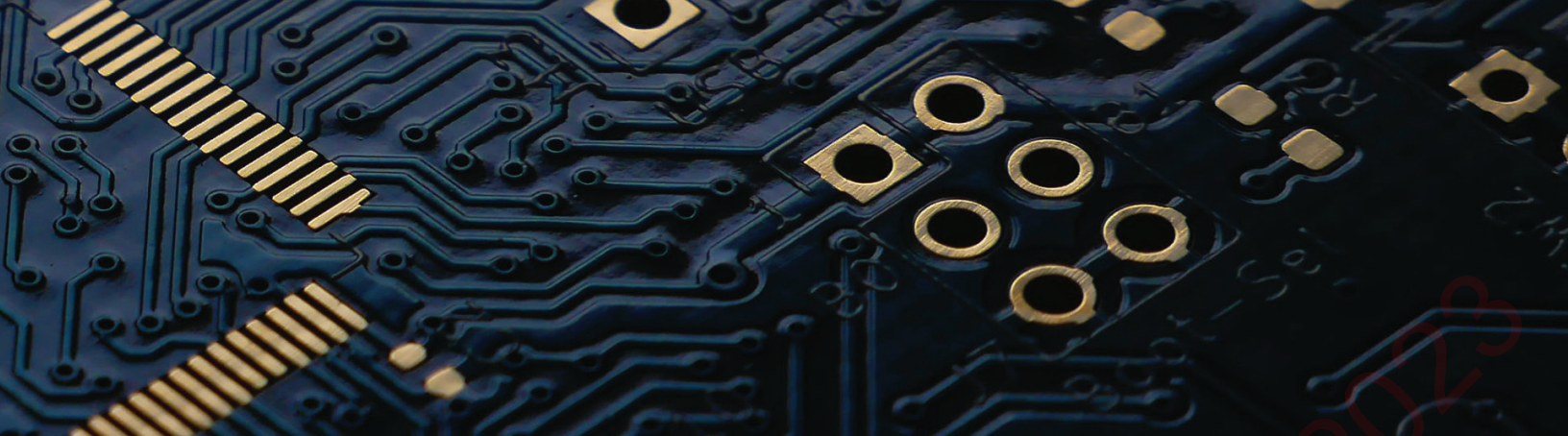
PATENT PROTECTION

This item reflects the strength of a country's patent laws based on six extensive criteria: duration, coverage, restrictions, membership in international treaties, enforcement mechanisms, and applications.

The data used for this item is the International Patent Index created by Dr. Walter Park in its last edition for 2023[1] advanced with PRA. This Index original data scale is [0 - 1], where 1 is the highest score (https://www.propertyrightsalliance.org/wp-content/uploads/Trademarks-and-Patent-Index.pdf). The International Patent Index is built in six clusters: Duration of Protection, Coverage, Restrictions, Membership in Treaties, Enforcement and Patent applications. The variables for the Index are extracted from all relevant laws published in WIPO's journal, *Intellectual Property*.

COPYRIGHT PROTECTION

This item captures the strength and effectiveness of countries' copyright legal framework established by countries.

The data used for this item is the International IP Index (Index), created by the U.S. Chamber of Commerce, edition 2023, whose original scale runs from 0 to 100% as the best score (https://

www.uschamber.com/intellectual-property/2023-international-ip-index).

NOTE: In previous editions we used the BSA Global Software Survey; The Compliance Gap (2018 edition, downloaded on March 29, 2022 at https://www.bsa.org/~/media/Files/StudiesDownload/2018_BSA_GSS_Report_en.pdf), however that data had not been updated since 2018.

TRADEMARK PROTECTION

This item reflects the strength of a country's trademark laws based on four extensive criteria: coverage, membership in treaties, restrictions and trademark applications.

The data used for this item is the International Trademark Index, ITI, (https://www.propertyrightsalliance.org/wp-content/uploads/Trademarks-and-Patent-Index.pdf). Created by Dr. Walter Park and updated in its more recent edition in 2021 with PRA[2], the overall grading scale of the ITI is [0-1], where 1 is the highest and 0 is the lowest value. The same logic is applied to its four components. The variables for the Index are extracted from all relevant laws published in WIPO's journal, *Intellectual Property*.

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1. The updating of the International Patent Index for 2023 was a joint effort of PRA, in the person of Chrysa K. Kazakou and Dr. Walter Park.

2. The updating of the International Trademark Index for 2021 was a joint effort of PRA, in the person of Chrysa K. Kazakou and Dr. Walter Park.

IV. IPRI METHODOLOGY

The 2023 IPRI's scores and rankings are based on data obtained from official sources made publicly available by established international organizations (see Appendix I). For this reason, data come in different styles and scales. Consequently, data are rescaled in order to accurately compare among countries and within IPRI components and the overall score.

IPRI scale ranges [0 – 10], where 10 is the highest value for a property rights system and 0 is the lowest value (or most negative) within a country. The same interpretative logic is applied to the three components and to the 11 items or variables.

The average mechanisms applied assume equal importance for each component on the final IPRI score (and of each item of every component); however, if it were of any research interest, weights could be applied to evaluate the relative importance of the different aspects of a property rights system of a country.

The 2023 IPRI uses data from period 2019–2023. The 11 items are gathered from different sources, which imply that they have different updating frequency. The applied logic in the analysis has been to include the latest available data sets for the IPRI. Most of the items present a lag of one year (see Appendix I), so the time difference among data should not affect the overall analysis.

Almost all the items needed to be rescaled to the IPRI range. The rescaling process was done as follows:

1. For bounded data series with same direction:

$$\left[\left(\frac{\text{Country Value - MIN Original Scale}}{\text{MAX Original Scale - MIN Original Scale}} \right) \times (\text{MAX New Scale - MIN New Scale}\right] + \text{MIN New Scale}$$

2. For unbounded data series with same direction:

$$\frac{(\text{MAX Value of Data Series - Country Value})}{(\text{MAX Value of Data Series - MIN Value of Data Series})} \times 10$$

3. For bounded data series with inverse direction:

$$10 - \left[\left(\frac{\text{Country Value - MIN Original Scale}}{\text{MAX Original Scale - MIN Original Scale}} \right) \times (\text{MAX New Scale - MIN New Scale})\right] + \text{MIN New Scale}$$

IPRI Calculations:

$$LP = \frac{\text{Judicial Independence + Rule of Law + Political Stability + Control of Corruption}}{\text{\# items}}$$

$$PPR = \frac{\text{Physical Property Protection + Registering Property + Ease Access Loans}}{\text{\# items}}$$

$$IPR = \frac{\text{Intellectual Property Protection + Patent Protection + Trademark Protection + Copyright Protection}}{\text{\# items}}$$

$$IPRI = \frac{LP + PPR + IPR}{3}$$

IPRI CALCULATIONS:

In addition to calculating the IPRI scores and its components, countries were ranked according to their scores. With some frequency, a few countries can exhibit almost the same score and they will be placed in the same rank. This way, i.e., Country A could be ranked #1, while Country B and Country C #2, and Country X, Country Y and Country Z are #3.

To minimize this situation and a diffusion bias, ranking calculations were made using IPRI scores with all their decimals. This way the final scores were differentiated, and such were the ranking positions.

The 2023 IPRI includes 125 countries, four less than in the previous edition (Estonia, Guatemala, Hong Kong and Mauritius). Availability of required data is the only factor that determines countries' inclusion in the IPRI.

In order to keep the meaningfulness of the data and analysis, only country-year combinations respecting specific rules have been considered. Since 2013, such rule is to have at least 2/3 of the data required for each component; if not, it will not be included in the analysis.

V. COUNTRIES AND GROUPS

All countries were grouped following different criteria, according to the lastest information available by April 9, 2023 (detailed information in Appendix II):

1. **Regions:** Africa (A), East Asia, South Asia and Pacific (AO), Central and Eastern Europe & Central Asia (CEECA), Latin America & the Caribbean (LAC), Middle East & North Africa (MENA), North America (NA), and Western Europe (WE).

2. **Geographical Regions:** Western Europe, North America, Latin America & the Caribbean, South America, Middle East and North Africa, Africa, East Asia, South Asia and Pacific, Central and Eastern Europe, and Central Asia.

3. **Income Classification** (World Bank, July 2022): Low, Lower-middle, Upper-middle, and High income. The classifications are updated each year on July 1 and are based on the GNI per capita of the previous year.

Comparing this year's groups with last years' we find that:

 » Lebanon goes from Upper-middle income to Lower-middle income.

 » Panama and Romania go from Upper-middle income to High income.

 » Zambia goes from Lower-middle income to Low income.

 » Venezuela remains temporarily unclassified since July 2021 pending release of revised national accounts statistics.

4. **Regional and Development Classification** (International Monetary Fund, 2022): Advanced Economies; Emerging & Developing Asia; Emerging and Developing Europe; Latin America & the Caribbean; Middle East and Central Asia; and Sub-Saharan Africa.

5. **Economic and Regional Integration Agreements** (acronyms): OECD, EU, SADC, ECOWAS, ASEAN, PARLACEN, GCC, AP, MERCOSUR, SAARC, CEMAC, MCCA, CIS, ARAB M UNION, CARICOM, CAN, EFTA, IGAD, USMCA, OPEC, CEEAC, TPP-11, PROSUR.

In this grouping, some elements should be remembered:

 » Venezuela remains suspended as a MERCOSUR State Party, in accordance to the provisions of the second paragraph of Article 5 of the Ushuaia Protocol. https://www.mercosur.int/quienes-somos/paises-del-mercosur/

 » Croatia became the 20th country to join the euro area (January 1, 2023).

 » Turkmenistan is an associated member of the CIS.

 » Eritrea is currently inactive at IGAD (https://www.usaid.gov/east-africa-regional/fact-sheet/intergovernmental-authority-development#:~:text=The%20Intergovernmental%20Authority%20on%20Development,and%20is%20based%20in%20Djibouti).

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2023 IPRI RESULTS

As an average, the sample of 125 countries showed a score of 5.21 (Max. 8.10; Min. 1.90), where the Legal and Political Environment (LP) was the weakest component with a score of 5.06 (Max. 8.80; Min. 1.00), followed by the Physical Property Rights (PPR) component with a score of 5.23 (Max. 8.40; Min. 1.50), and Intellectual Property Rights (IPR) component as the strongest with a score of 5.35 (Max. 8.60; Min. 3.00).

After four years of consecutive set back of the average of the IPRI score and its components, we found a slight recovery of .37% of the IPRI thanks to IPR improvement (aprox 2%). Meanwhile the other two components remain in decline. We must remain alert to this weakness in an institutional framework that is vital for progress and sustainable development.

	IPRI	LP	PPR	IPR
AVERAGE 2018	5.741	5.216	6.464	5.542
AVERAGE 2019	5.729	5.160	6.474	5.553
AVERAGE 2020	5.728	5.140	6.500	5.545
AVERAGE 2021	5.603	5.085	6.480	5.244
AVERAGE 2022	5.191	5.064	5.266	5.244
AVERAGE 2023	**5.211**	**5.056**	**5.229**	**5.347**

Table 1. Average Score: IPRI and Components. 2018 - 2023.

For robustness purposes, we run a normality test for IPRI and its components, showing a Gaussian behavior. All of them showed unimodal distributions (See Table 2, Table 3 and Fig. 3).

		IPRI	LP	PPR	IPR
N	VALID	125	125	125	125
	MISSING	0	0	0	0
MEAN		5.2104	5.0600	5.2312	5.3448
STD. ERROR OF MEAN		.12705	.16868	.12565	.10798
MEDIAN		5.0000	4.5000	4.9000	5.1000
STD. DEVIATION		1.42046	1.88594	1.40480	1.20720
VARIANCE		2.018	3.557	1.973	1.457
RANGE		6.20	7.80	6.90	5.60
MINIMUM		1.90	1.00	1.50	3.00
MAXIMUM		8.10	8.80	8.40	8.60
PERCENTILES	25	4.2000	3.6000	4.2000	4.5000
	50	5.0000	4.5000	4.9000	5.1000
	75	6.2000	6.5500	6.0500	6.0500

Table 2. Statistics. 2023 IPRI and Components.

		IPRI	LP	PPR	IPR
N		125	125	125	125
NORMAL	MEAN	5.2104	5.0600	5.2312	5.3448
PARAMETERS A,B	STD. DEVIATION	1.4205	1.8859	1.4048	1.2072
MOST EXTREME	ABSOLUTE	0.0963	0.1207	0.1174	0.1003
DIFFERENCES	POSITIVE	0.0963	0.1207	0.1174	0.1003
	NEGATIVE	-0.0744	-0.0603	-0.0759	-0.0620
KOLMOGOROV-SMIRNOV Z		1.0769	1.3499	1.3122	1.1219
ASYMP. SIG. (2-TAILED)		0.1965	0.0523	0.0639	0.1613

a. Test distribution is Normal.   b. Calculated from data.

Table 3. Normality Test. One-Sample Kolmogorov-Smirnov Test.
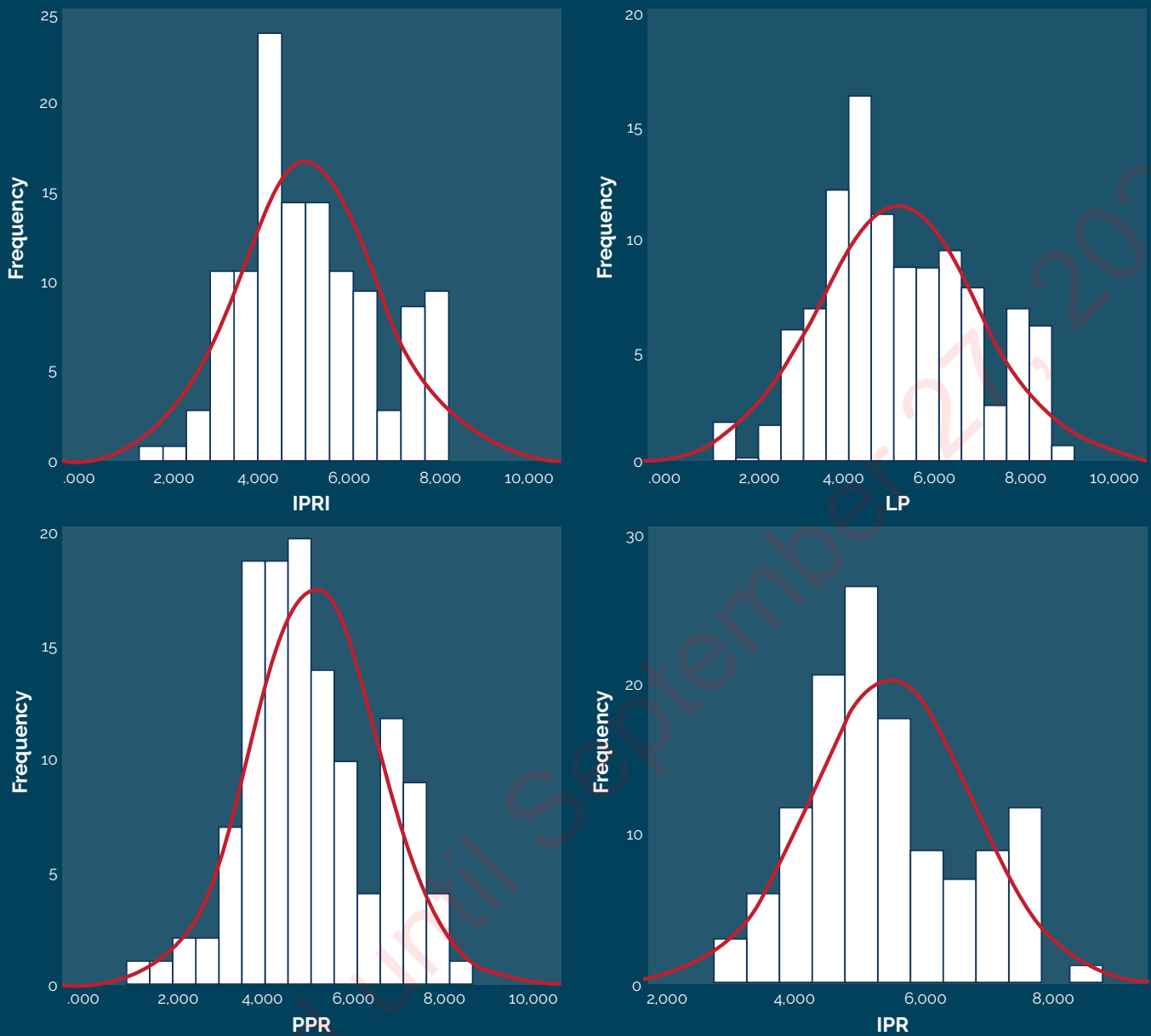
Figure 2. Histogram: 2023 IPRI and its Components.

Table 4 shows, in alphabetical order, the score value of the 125 countries included in the 2023 IPRI and its components. Figure 3a displays countries organized by their IPRI scores from top to bottom, showing their IPRI rankings. Figures 3b, 3c and 3d display countries organized by IPRI components' scores (LP, PPR, IPR) from top to bottom, showing their rankings.

COUNTRY	IPRI	LP	PPR	IPR
ALBANIA	4.5	4.2	4.2	5.1
ALGERIA	4.1	3.3	4.8	4.2
ANGOLA	3.2	3.4	3.3	3.0
ARGENTINA	4.2	4.3	3.9	4.4
ARMENIA	5.2	4.5	5.8	5.5
AUSTRALIA	7.7	8.2	7.4	7.7
AUSTRIA	7.6	7.9	7.4	7.7
AZERBAIJAN	5.1	3.5	6.5	5.3
BAHRAIN	5.7	5.1	6.8	5.2
BANGLADESH	3.7	3.3	4.1	3.8
BELGIUM	7.3	7.6	7.0	7.3
BENIN	4.3	4.0	4.2	4.7
BOLIVIA	3.4	3.0	3.7	3.5
BOSNIA & HERZEGOVINA	4.2	4.1	4.1	4.4
BOTSWANA	5.6	6.5	5.4	4.9
BRAZIL	4.5	4.5	4.1	4.8
BRUNEI DARUSSALAM	5.5	7.2	5.3	4.1
BULGARIA	5.1	5.0	4.8	5.7
BURKINA FASO	4.2	4.0	3.9	4.6
BURUNDI	3.7	2.2	4.8	4.1
CAMEROON	3.6	2.4	3.9	4.6
CANADA	7.4	8.2	7.2	6.9
CHAD	3.1	2.3	3.0	3.9
CHILE	5.9	6.6	5.86	5.95
CHINA	5.3	4.1	5.5	6.5
COLOMBIA	4.6	4.1	4.8	4.8
CONGO, DEM. REP.	3.1	2.0	3.3	4.0
COSTA RICA	5.8	6.4	5.6	5.5
CÔTE D'IVOIRE	4.0	3.3	4.0	4.5
CROATIA	5.2	5.5	4.5	5.6
CYPRUS	6.0	6.4	5.8	5.7
CZECH REPUBLIC	6.6	7.1	6.0	6.6
DENMARK	7.8	8.7	7.8	7.0
DOMINICAN REP.	4.6	4.4	4.5	5.0
ECUADOR	4.2	4.1	4.3	4.2
EGYPT	4.4	3.7	4.9	4.4

COUNTRY	IPRI	LP	PPR	IPR
EL SALVADOR	4.3	3.8	4.4	4.7
ESTONIA	--	--	--	--
ETHIOPIA	3.2	3.0	3.6	3.2
FINLAND	8.1	8.8	8.4	7.1
FRANCE	7.1	7.1	6.5	7.6
GABON	3.8	3.3	3.8	4.3
GEORGIA	4.9	4.8	5.1	4.9
GERMANY	7.7	8.1	7.5	7.6
GHANA	4.9	5.2	5.0	4.6
GREECE	5.2	5.6	4.0	5.8
GUATEMALA	--	--	--	--
HAITI	2.7	2.5	2.2	3.5
HONDURAS	4.0	2.9	4.3	4.6
HONG KONG	--	--	--	--
HUNGARY	5.4	5.4	4.6	6.3
ICELAND	7.2	8.3	7.1	6.2
INDIA	5.1	4.7	5.4	5.1
INDONESIA	5.0	4.4	5.6	5.0
IRAN	3.6	2.8	4.0	4.0
IRELAND	7.4	8.1	6.8	7.4
ISRAEL	6.4	5.5	6.8	6.8
ITALY	6.0	6.4	5.0	6.8
JAMAICA	5.3	5.6	4.9	5.2
JAPAN	7.6	7.8	7.7	7.3
JORDAN	5.4	5.2	6.0	5.1
KAZAKHSTAN	4.6	4.1	4.9	4.9
KENYA	4.6	3.9	4.8	5.2
KINGDOM OF ESWATINI	4.7	4.2	5.0	4.9
KOREA, REP.	6.7	6.8	6.5	6.8
KUWAIT	5.2	5.4	5.7	4.6
LATVIA	6.2	6.8	5.8	5.9
LEBANON	3.6	2.5	4.7	3.6
LITHUANIA	6.4	7.1	5.9	6.0
LUXEMBOURG	7.8	8.2	7.8	7.3
MADAGASCAR	3.7	3.4	3.8	3.8
MALAWI	4.6	5.2	4.3	4.3
MALAYSIA	6.2	5.4	6.6	6.5

COUNTRY	IPRI	LP	PPR	IPR
MALI	3.6	2.6	4.2	4.1
MALTA	6.1	6.7	5.7	5.9
MAURITANIA	3.2	3.3	2.3	4.1
MAURITIUS	--	--	--	--
MEXICO	4.6	3.6	4.3	6.0
MOLDOVA	4.7	4.2	4.5	5.5
MONTENEGRO	5.2	4.9	5.5	5.2
MOROCCO	5.2	4.1	5.6	6.1
MOZAMBIQUE	3.8	3.1	3.6	4.6
NEPAL	4.2	4.2	4.9	3.5
NETHERLANDS	7.9	8.3	7.7	7.5
NEW ZEALAND	7.8	8.7	7.7	7.0
NICARAGUA	3.6	2.4	3.6	4.9
NIGERIA	3.4	3.0	3.7	3.4
NORTH MACEDONIA	4.6	4.5	4.2	5.1
NORWAY	7.8	8.7	7.6	7.0
OMAN	6.1	5.7	6.9	5.7
PAKISTAN	3.8	3.4	4.2	3.9
PANAMA	5.1	4.4	5.3	5.6
PARAGUAY	4.4	3.8	4.8	4.5
PERU	4.4	4.1	4.1	5.0
PHILIPPINES	4.4	3.5	4.9	4.8
POLAND	5.5	5.7	5.0	5.7
PORTUGAL	6.4	7.1	5.3	6.7
QATAR	6.4	6.8	7.2	5.1
ROMANIA	5.8	5.8	5.1	6.5
RUSSIA	3.9	3.0	4.2	4.5
RWANDA	5.4	5.6	5.7	4.9
SAUDI ARABIA	5.7	5.0	7.0	5.1

COUNTRY	IPRI	LP	PPR	IPR
SENEGAL	4.7	4.5	4.9	4.9
SERBIA	4.7	4.1	4.5	5.4
SINGAPORE	8.0	8.1	8.2	7.6
SLOVAKIA	5.9	6.3	5.5	5.8
SLOVENIA	6.0	6.3	5.8	6.0
SOUTH AFRICA	5.2	5.2	5.0	5.4
SPAIN	6.5	6.5	6.1	7.0
SRI LANKA	4.8	4.5	4.7	5.3
SWEDEN	7.8	8.5	7.2	7.6
SWITZERLAND	7.6	8.3	7.8	6.7
TAIWAN	6.7	7.2	7.3	5.7
TANZANIA	4.5	4.1	4.5	4.9
THAILAND	4.8	4.6	4.9	4.8
TRINIDAD & TOBAGO	5.0	5.0	4.5	5.4
TUNISIA	4.7	4.4	4.6	5.1
TURKEY	4.2	3.1	4.3	5.3
UGANDA	4.3	3.6	4.6	4.6
UKRAINE	4.0	3.3	4.2	4.5
UNITED ARAB EMIRATES	6.2	6.4	7.1	5.0
UNITED KINGDOM	7.5	7.6	7.1	7.7
UNITED STATES	7.5	6.7	7.3	7.6
URUGUAY	6.3	7.4	6.0	5.7
VENEZUELA, BOLIVARIAN REP.	1.9	1.1	1.5	3.0
VIETNAM	4.4	4.3	4.5	4.5
YEMEN, REP.	2.4	1.0	2.7	3.4
ZAMBIA	4.3	4.2	4.3	4.5
ZIMBABWE	3.4	2.6	3.1	4.5

Table 4. IPRI 2023 and its Components: Scores by Country (alphabetic order).

Left column (scale 0–10):

- FINLAND - 1
- SINGAPORE - 2
- NETHERLANDS - 3
- DENMARK- 4
- NEW ZEALAND - 5
- NORWAY - 6
- SWEDEN - 7
- LUXEMBOURG - 8
- GERMANY - 9
- AUSTRALIA - 10
- AUSTRIA - 11
- SWITZERLAND - 12
- JAPAN - 13
- UNITED STATES - 14
- UNITED KINGDOM - 15
- CANADA - 16
- IRELAND - 17
- BELGIUM - 18
- ICELAND - 19
- FRANCE - 20
- TAIWAN - 21
- KOREA, REP. - 22
- CZECH REPUBLIC - 23
- SPAIN - 24
- ISRAEL - 25
- PORTUGAL - 26
- QATAR - 27
- LITHUANIA - 28
- URAGUAY - 29
- LATVIA - 30
- MALAYSIA - 31
- UNITED ARAB EMIRATES - 32
- MALTA - 33
- OMAN - 34
- ITALY - 35
- SLOVENIA - 36
- CYPRUS - 37
- CHILE - 38
- SLOVAKIA - 39
- COSTA RICA - 40
- ROMANIA - 41
- BAHRAIN - 42
- SAUDI ARABIA - 43
- BOTSWANA - 44
- BRUNEI DARUSSALAM - 45
- POLAND - 46
- JORDAN - 47
- HUNGARY - 48
- RWANDA - 49
- CHINA - 50
- JAMAICA - 51
- ARMENIA - 52
- MOROCCO - 53
- KUWAIT - 54
- SOUTH AFRICA - 55
- CROATIA - 56
- MONTENEGRO - 57
- GREECE - 58
- BULGARIA - 59
- PANAMA - 60
- AZERBAIJAN - 61
- INDIA - 62
- INDONESIA - 63

Right column (scale 0–10):

- TRINIDAD AND TOBAGO - 64
- GHANA - 65
- GEORGIA - 66
- SRI LANKA - 67
- THAILAND - 68
- SENEGAL - 69
- MOLDOVA- 70
- ESWATINI - 71
- TUNISIA - 72
- SERBIA - 73
- KAZAKHSTAN - 74
- DOMINICAN REPUBLIC - 75
- MEXICO - 76
- KENYA - 77
- NORTH MACEDONIA - 78
- MALAWI - 79
- COLUMBIA - 80
- TANZANIA - 81
- ALBANIA - 82
- BRAZIL - 83
- VIETNAM - 84
- PHILIPPINES - 85
- PARAGUAY - 86
- PERU - 87
- EGYPT - 88
- ZAMBIA - 89
- EL SALBADOR - 90
- BENIN - 91
- UGANDA - 92
- TURKEY - 93
- ECUADOR - 94
- ARGENTINA - 95
- BURKINA FASO - 96
- NEPAL - 97
- BOSNIA AND HERZEGOVINA - 98
- ALGERIA - 99
- UKRAINE - 100
- CÔTE D'IVOIRE - 101
- HONDURAS - 102
- RUSSIA - 103
- PAKISTAN - 104
- GABON - 105
- MOZAMBIQUE - 106
- BANGLADESH - 107
- BURUNDI - 108
- MADAGASCAR - 109
- NICARAGUA - 110
- MALI - 111
- CAMEROON - 112
- IRAN - 113
- LEBANON - 114
- ZIMBABWE - 115
- BOLIVIA - 116
- NIGERIA - 117
- ANGOLA - 118
- ETHIOPIA - 119
- MAURITANIA - 120
- CHAD - 121
- CONGO, DEM. REP. - 122
- HAITI - 123
- YEMEN, REP - 124
- VENEZUELA, BOL. REP. - 125

Figure 3a. IPRI 2023. Scores and Rankings.

Rank	Country
1	FINLAND
2	NORWAY
3	DENMARK
4	NEW ZEALAND
5	SWEDEN
6	NETHERLANDS
7	SWITZERLAND
8	ICELAND
9	LUXEMBOURG
10	CANADA
11	AUSTRALIA
12	GERMANY
13	IRELAND
14	SINGAPORE
15	AUSTRIA
16	JAPAN
17	BELGIUM
18	UNITED KINGDOM
19	URUGUAY
20	BRUNEI DARUSSALAM
21	TAIWAN
22	LITHUANIA
23	PORTUGAL
24	FRANCE
25	CZECH REPUBLIC
26	QATAR
27	LATVIA
28	KOREA, REP
29	UNITED STATES
30	MALTA
31	CHILE
32	SPAIN
33	BOTSWANA
34	CYPRUS
35	COSTA RICA
36	UNITED ARAB EMIRATES
37	ITALY
38	SLOVOKI A
39	SLOVENIA
40	ROMANIA
41	OMAN
42	POLAND
43	GREECE
44	JAMACIA
45	RAWANDA
46	CROATIA
47	ISREAL
48	MALAYSIA
49	KUWAIT
50	HUNGARY
51	GHANA
52	SOUTH AFRICA
53	MALAWI
54	JORDAN
55	BAHRAIN
56	TRINIDAD AND TOBAGO
57	SAUDI ARABIA
58	BULGARIA
59	MONTENEGRO
60	GEORGIA
61	INDIA
62	THAILAND
63	SRI LANKA

Rank	Country
65	NORTH MACEDONIA
66	ARMENIA
67	SENGAL
68	TUNISIA
69	INDONESIA
70	DOMINICAN REPUBLIC
71	PANAMA
72	ARGENTINA
73	VIETNAM
74	NEPAL
75	ESTWATINI
76	ALBANIA
77	ZAMBIA
78	MOLDOVA
79	ECUADOR
80	KAZAKHSTAN
81	SERBIA
82	COLOMBIA
83	TANZANIA
84	CHINA
85	PERU
86	MOROCCOA
87	BOSNIA AND HERZEGOVINA
88	BURKINA FASO
89	BENIN
90	KENYA
91	EL SALVADOR
92	PARAGUAY
93	EGYPT
94	UGANDA
95	MEXICO
96	AZERBAUAN
97	PHILIPPINES
98	ANGOLA
99	PAKISTAN
100	MADAGASCAR
101	GABON
102	ALGERIA
103	UKRAINE
104	COTA D'IVOIRE
105	BANGLADESH
106	MAURITANIA
107	TURKEY
108	MOZAMBIQUE
109	RUSSIA
110	NIGERIA
111	ETHIOPIA
112	BOLIVIA
113	HONDURAS
114	IRAN
115	ZIMBABWE
116	MALI
117	HAITI
118	LEBANON
119	CAMEROON
120	NICARAGUA
121	CHAD
122	BURUNDI
123	CONGO, DEM. REP.
124	VENEZUELA, BOLIVARIAN REP.
125	YEMEN REP.

Figure 3b. LP 2023. Scores and Rankings.

Figure 3c. PPR 2023: Scores and Rankings.

Left column (score axis 0–9):

Country	Rank
FINLAND	1
SINGAPORE	2
SWITZERLAND	3
LUXEMBOURG	4
DENMARK	5
NEW ZEALAND	6
NETHERLANDS	7
JAPAN	8
NORWAY	9
GERMANY	10
AUSTRALIA	11
AUSTRIA	12
TAIWAN	13
UNITED STATES	14
SWEDEN	15
QATAR	16
CANADA	17
UNITED KINGDOM	18
UNITED ARAB EMIRATES	19
ICELAND	20
BELGIUM	21
SAUDI ARABIA	22
OMAN	23
BAHRAIN	24
IRELAND	25
ISRAEL	26
MALAYSIA	27
FRANCE	28
KOREA, REP	29
AZERBAUAN	30
SPAIN	31
CZECH REPUBLIC	32
URUGUAY	33
JORDAN	34
LITHUANIA	35
CYPRUS	36
CHILE	37
LATVIA	38
ARMENIA	39
SLOVENIA	40
KUWAIT	41
RWANDA	42
MALTA	43
INDONESIA	44
MOROCCO	45
COSTA RICA	46
SLOVAKIA	47
CHINA	48
MONTENEGRO	49
INDIA	50
BOTSWANA	51
PORTUGAL	52
PANAMA	53
BRUNEI DARUSSALAM	54
ROMANIA	55
GEORGIA	56
ESWATINI	57
POLAND	58
GHANA	59
ITALY	60
SOUTH AFRICA	61
THAILAND	62
EGYPT	63

Right column (score axis 0–5):

Country	Rank
JAMACIA	64
PHILIPPINES	65
SENEGAL	66
KAZAKHSTAN	67
NEPAL	68
PARAGUAY	69
ALGERIA	70
BURUNDI	71
BULGARIA	72
KENYA	73
COLOMBIA	74
LEBANON	75
SRI LANKA	76
UGANDA	77
TUNISIA	78
HUNGARY	79
DOMINICAN REPUBLIC	80
SERBIA	81
TANZANIA	82
CROATIA	83
TRINIDAD AND TOBAGO	84
MOLDOVA	85
VIETNAM	86
EL SALVADOR	87
MEXICO	88
TURKEY	89
HONDURAS	90
ZAMBIA	91
ECUADOR	92
MALAWI	93
MALI	94
BENIN	95
RUSSIA	96
ALBANIA	97
NORTH MACEDONIA	98
PAKISTAN	99
UKRAINE	100
BRAZIL	101
BOSNIA AND HERZEGOVINA	102
BANGLAFDESH	103
PERU	104
GREECE	105
COTE D'IVOIRE	106
IRAN	107
ARGENTINA	108
BURKINA FASO	109
CAMEROON	110
GABON	111
MADAGASCAR	112
BOLIVIA	113
NIGERIA	114
MOZAMBIQUE	115
NICARAGUA	116
ETHIOPIA	117
ANGOLA	118
CONGO, DEM. REP.	119
ZIMBABWE	120
CHAD	121
YEMEN, REP.	122
MAURITANIA	123
HAITI	124
VENEZUELA, BOLIVARIAN REP.	125

Left chart (axis 0–9):

Rank	Country
1	UNITED STATES
2	UNITED KINGDOM
3	AUSTRIA
4	GERMANY
5	SINGAPORE
6	SWEDEN
7	FRANCE
8	AUSTRALIA
9	NETHERLANDS
10	IRELAND
11	BELGIUM
12	JAPAN
13	LUXEMBOURG
14	FINLAND
15	NORWAY
16	DENMARK
17	NEW ZEALAND
18	SPAIN
19	CANADA
20	ISREAL
21	ITLAY
22	KOREA, REP.
23	SWITZERLAND
24	PORTUGAL
25	CZECH REPUBLIC
26	MALAYSIA.
27	ROMANIA
28	CHINA
29	HUNGARY
30	ICELAND
31	MOROCCO
32	LITHUANIA
33	SLOVENIA
34	MEXICO
35	MALTA
36	LATVIA
37	GREECE
38	SLOVAKIA
39	POLAND
40	OMAN
41	BULGARIA
42	TAIWAN
43	CYPRUS
44	URUGUAY
45	PANAMA
46	CROATIA
47	MOLDOVA
48	ARMENIA
49	COSTA RICA
50	CHILE
51	TRINIDAD AND TOBAGO
52	SOUTH AFRICA
53	SERBIA
54	SRI LANKA
55	AZERBAUAN
56	TURKEY
57	BAHRAIN
58	JAMAICA
59	KENYA
60	MONTENEGRO
61	JORDAN
62	INDIA
63	TUNISIA

Right chart (axis 0–5):

Rank	Country
64	SAUDI ARABIA
65	NORTH MACEDONIA
66	ALBANIA
67	QATAR
68	UNITED ARAB EMIRATES
69	PERU
70	DOMINICAN REPUBLIC
71	INDONESIA
72	RAWANDA
73	NICARAGUA
74	TANZANIA
75	KAZAKHSTAN
76	GEORGIA
77	ESWATINI
78	BOTSWANA
79	SENEGAL
80	COLOMBIA
81	PHILIPPINES
82	THAILAND
83	BRAZIL
84	EL SALVADOR
85	BENIN
86	BURKINA FASO
87	GHANA
88	KUWAIT
89	UGANDA
90	HONDURAS
91	MOZAMBIQUE
92	CAMEROON
93	RUSSIA
94	PARAGUAY
95	UKRAINE
96	COTE D'IVOIRE
97	VIETNAM
98	ZAMBIA
99	ZIMBABWE
100	EGYPT
101	BOSNIA AND HERZEGOVINA
102	ARGENTINA
103	GABON
104	MALAWI
105	ECUADOR
106	ALGERIA
107	BRUNEI DARUSSALAM
108	MAURITANIA
109	MALI
110	BURUNDI
111	IRAN
112	CONGO DEM. REP.
113	CHAD
114	PAKISTAN
115	MADAGASCAR
116	BANGLADESH
117	LEBANON
118	BOLIVIA
119	HAITI
120	NEPAL
121	NIGERIA
122	YEMEN, REP.
123	ETHIOPIA
124	VENEZUELA, BOLIVARIAN REP.
125	ANGOLA

Figure 3d. IPR 2023: Scores and Rankings.

TOP 20%	2ND QUINTILE	3RD QUINTILE	4TH QUINTILE	BOTTOM 20%
FINLAND	IRELAND	CHILE	INDIA	EL SALVADOR
SINGAPORE	BELGIUM	SLOVAKIA	INDONESIA	BENIN
NETHERLANDS	ICELAND	COSTA RICA	TRINIDAD AND TOBAGO	UGANDA
DENMARK	FRANCE	ROMANIA	GHANA	TURKEY
NEW ZEALAND	TAIWAN	BAHRAIN	GEORGIA	ECUADOR
NORWAY	KOREA, REP.	SAUDI ARABIA	SRI LANKA	ARGENTINA
SWEDEN	CZECH REPUBLIC	BOTSWANA	THAILAND	BURKINA FASO
LUXEMBOURG	SPAIN	BRUNEI DARUSSALAM	SENEGAL	NEPAL
GERMANY	ISREAL	POLAND	MOLDOVA	BOSNIA AND HERZEGOVINA
AUSTRALIA	PORTUGAL	JORDAN	ESWATINI	ALGERIA
AUSTRIA	QATAR	HUNGARY	TUNISIA	UKRAINE
SWITZERLAND	LITHUANIA	RWANDA	SERBIA	CÔTE D'IVOIRE
JAPAN	URUGUAY	CHINA	KAZAKHSTAN	HONDURAS
UNITED STATES	LATIVA	JAMAICA	DOMINICAN REPUBLIC	RUSSIA
UNITED KINGDOM	MALAYSIA	ARMENIA	MEXICO	PAKISTAN
CANADA	UNITED ARAB EMIRATES	MOROCCO	KENYA	GABON
	MALTA	KUWAIT	NORTH MACEDONIA	MOZAMBIQUE
	OMAN	SOUTH AFRICA	MALAWI	BANGLADESH
	ITALY	CROATIA	COLOMBIA	BURUNDI
	SLOVENIA	MONTENEGRO	TANZANIA	MADAGASCAR
	CYPRUS	GREECE	ALBANIA	NICARAGUA
		BULGARIA	BRAZIL	MALI
		PANAMA	VIETNAM	CAMEROON
		AZERBAIJAN	PHILIPPINES	IRAN
			PARAGUAY	LEBANON
			PERU	ZIMBABWE
			EGYPT	BOLIVIA
			ZAMBIA	NIGERIA
				ANGOLA
				ETHIOPIA
				MAURITANIA
				CHAD
				CONGO, DEM. REP.
				HAITI
				YEMEN, REP.
				VENEZUELA, BOL. REP.

WEAK ↓

Table 5. 2023 IPRI: Rankings by Quintiles.

Organizing countries by quintile, we found that the number of countries belonging to each quintile increases from the top 20% to the bottom 20% (1st quintile 16 countries, 2nd quintile 21 countries, 3rd quintile 24 countries, 4th quintile 28 countries and 5th quintile 36 countries). Hence, the fourth and the fifth quintiles include 64 countries which is a 48.8% of our sample, while the first three quintiles include almost the same amount countries, 61 countries, being the 51.2% of the sample. (See Table 5).

Figure 4 shows the top 15 countries for the 2023 IPRI edition. This year, Finland leads the IPRI score (8.1) as well as the score of the LP (8.8) and PPR (8.4) components, while USA leads the IPR component (8.6), followed in this component by the UK (7.698). Singapore is in second place in the IPRI (8.0) and also for the PPR (8.2) component. Third comes Netherlands (7.81)

very closely followed by New Zealand (7.79) and Norway (7.72), which is placed second in the LP component (8.71).

The IPRI scores of these 15 top countries come in a range of 7.5 to 8.1 while the components' score as follows: LP [6.7 - 8.8]; PPR [7.1 – 8.4] and IPR [6.7 - 8.6].

Most of these countries show the LP component as their strongest one; just Singapore shows the PPR and the USA and the UK the IPR component. The second strongest component is mostly PPR (9/15), followed by the IPR (4/15) and just UK shows the LP in that place.

The top 15 countries remain the same, with differences in their line-up. This situation has been repeated during the last six years (See Figure 5).
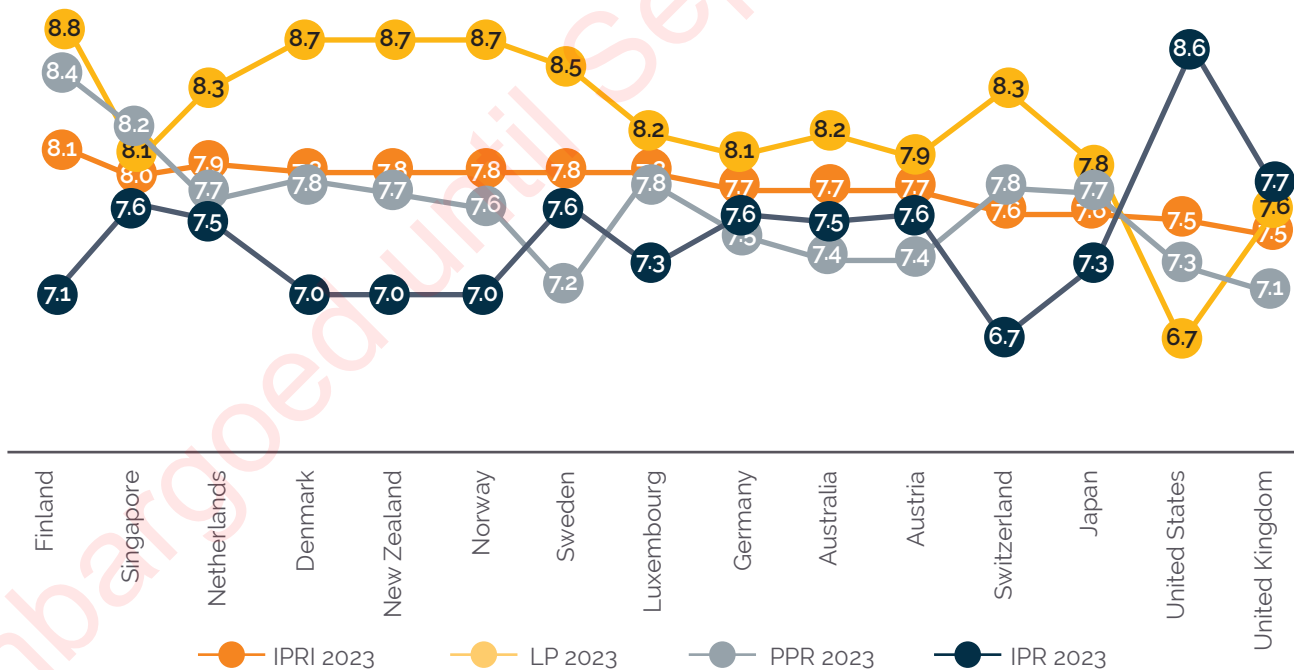

Figure 4. 2023 IPRI & Components: Top 15 Countries.

The 15 bottom countries of this 2023 IPRI edition are: Venezuela Bolivarian Rep. (1.9), Yemen Rep. (2.4), Haiti (2.7), Democratic Rep. of Congo (3.1), Chad (3.1), Mauritania (3.2), Ethiopia (3.2), Angola (3.2), Nigeria (3.4), Bolivia (3.4), Zimbabwe (3.4), Lebanon (3.6), Iran (3.6), Cameroon (3.6) and Mali (3.64). Again they are mostly the same group of countries as last year (See Fig. 6).

IPRI scores for these countries run from 1.8 to 3.6. Angola leads the LP component (3.4) followed

by Mauritania (3.2); the PPR component is led by Lebanon (4.7) followed by Mali (4.2); and the IPR component by Cameroon (4.6) and Zimbabwe (4.5).

Contrary to what is shown for top countries, the weakest component for most of these countries is the LP component (just Haiti and Mauritania show the PPR as their weakest component); 9/15 show the IPR as their strongest component and 5/15 the PPR component. Angola is the
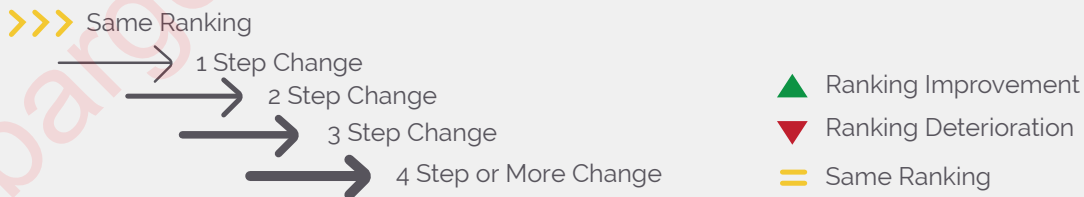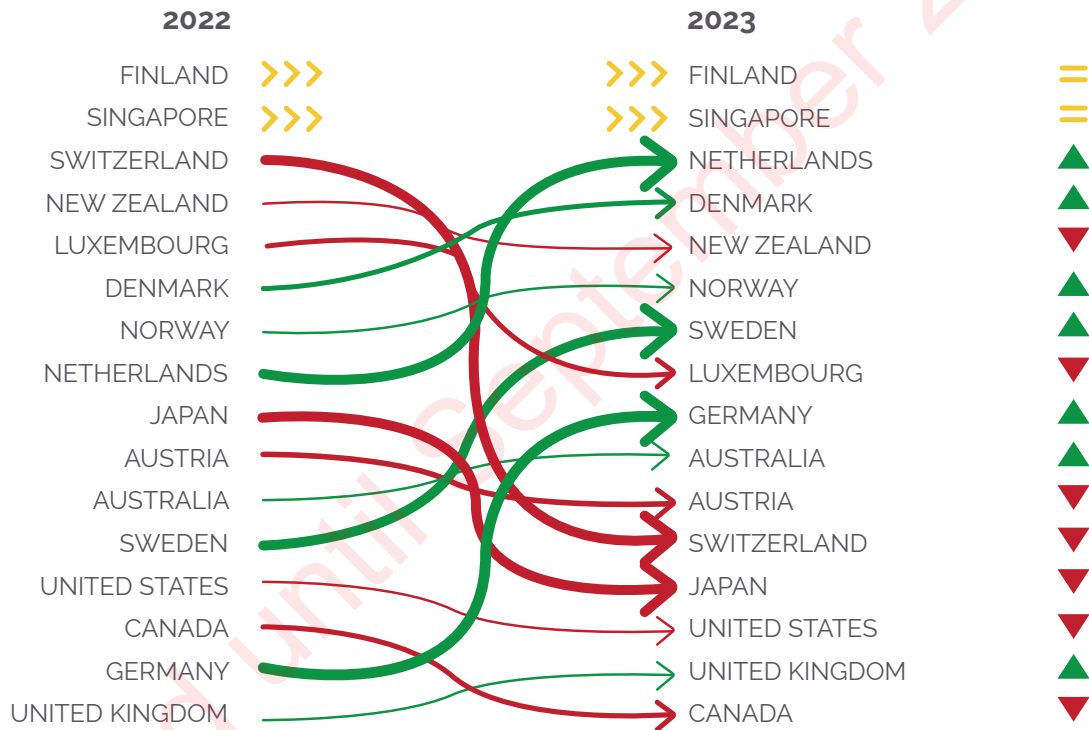

2022   **2023**

2022		2023	
FINLAND	>>>	>>> FINLAND	=
SINGAPORE	>>>	>>> SINGAPORE	=
SWITZERLAND		NETHERLANDS	▲
NEW ZEALAND		DENMARK	▲
LUXEMBOURG		NEW ZEALAND	▼
DENMARK		NORWAY	▲
NORWAY		SWEDEN	▲
NETHERLANDS		LUXEMBOURG	▼
JAPAN		GERMANY	▲
AUSTRIA		AUSTRALIA	▲
AUSTRALIA		AUSTRIA	▼
SWEDEN		SWITZERLAND	▼
UNITED STATES		JAPAN	▼
CANADA		UNITED STATES	▼
GERMANY		UNITED KINGDOM	▲
UNITED KINGDOM		CANADA	▼

>>> Same Ranking

→ 1 Step Change

→ 2 Step Change

→ 3 Step Change

→ 4 Step or More Change

▲ Ranking Improvement

▼ Ranking Deterioration

= Same Ranking

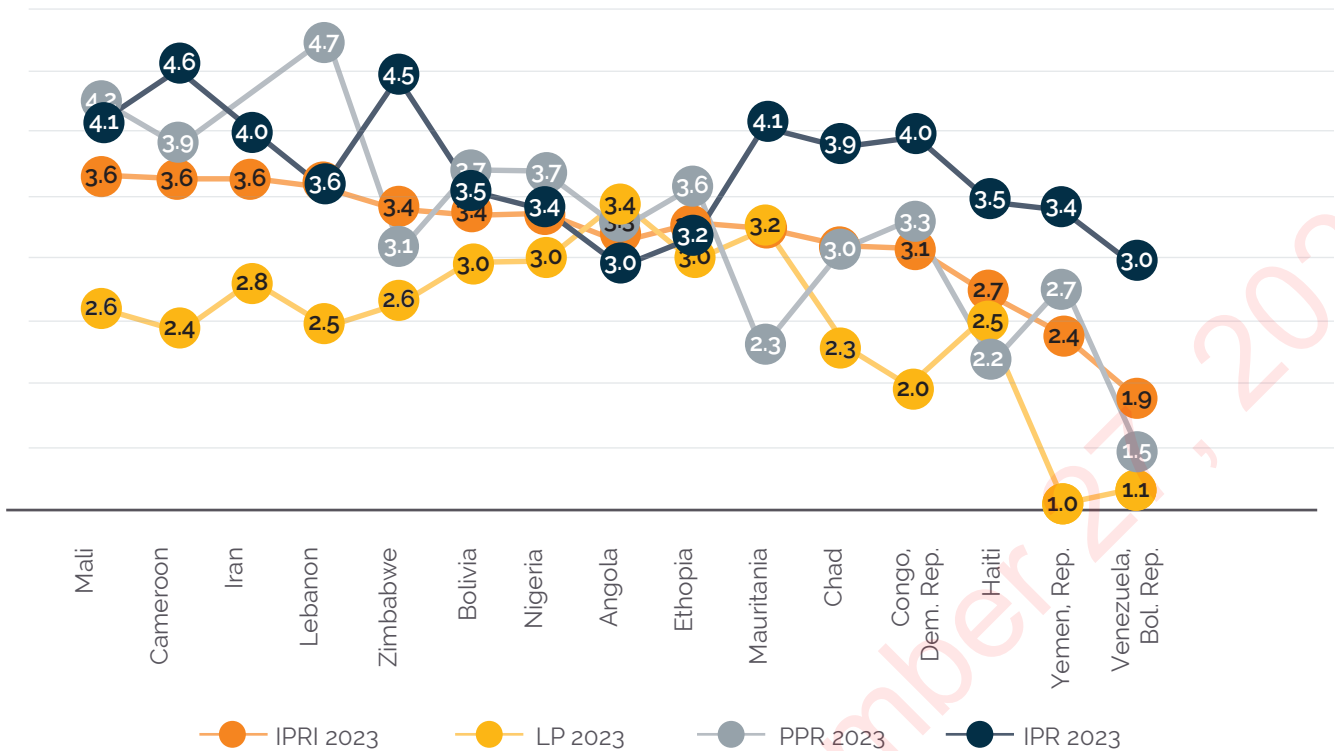*Figure 5. 2023 IPRI vs. 2022 IPRI: Top Countries Ranking Change.*

Figure 6. 2023 IPRI & Components: Bottom 15 Countries.

only one country showing the LP as its strongest component.

We must celebrate that 79 countries improved their IPRI scores this year. Stand outs include Moldova (12.6%), Zambia (9.9%), Zimbabwe (9.4%), Albania (9.2%), and Paraguay (8.9%). The rest (46 countries) deteriorated their scores, the most upsetting being Russia (-11.9%), United Arab Emirates (-9.3%) and Egypt (-7.8%).

For the LP component, 67 countries improved their score compared with 2022, 12 of them over 10% and worth mentioning the first four: Slovakia (17.1%), Malawi (16.9%), Moldova (14.85%) and Ecuador (14%). On the other hand, those countries that showed the higher LP deterioration were Yemen Rep. (-28.18%), China (-19.32%) and Burundi (-18.18%).

For the PPR component, 50 countries achieved an improvement in their score, especially worth

mentioning is Gabon with an increase of 11%. Meanwhile 18 countries displayed no change and 57 countries deteriorated their PPR scores, the three with the greatest decrease being Burkina Faso (-3%), Russia (-2.9%) and Slovakia (-2.62%).

For the IPR component, 69 countries showed improvement, seven no change, and 49 decreased their scores. Worth mentioning: 26 countries displayed an increase over 10% in their IPR component, stand outs being Yemen Rep. (33%), Zimbabwe (28%), Georgia (27%), Moldova (24%), Armenia (23.5%), Bangladesh (22%), Zambia (20.3%) and Albania (20.1%). On the opposite situation, we found 8 countries that deteriorated their IPR scores over 10%: United Arab Emirates (-20.3%), Russia (-17.5%), Taiwan (-14.9%), South Africa (-13.9%), Egypt (-13.2%), Brazil (-12.8%), Brunei Darussalam (-10.7%) and Switzerland (-10.24%).
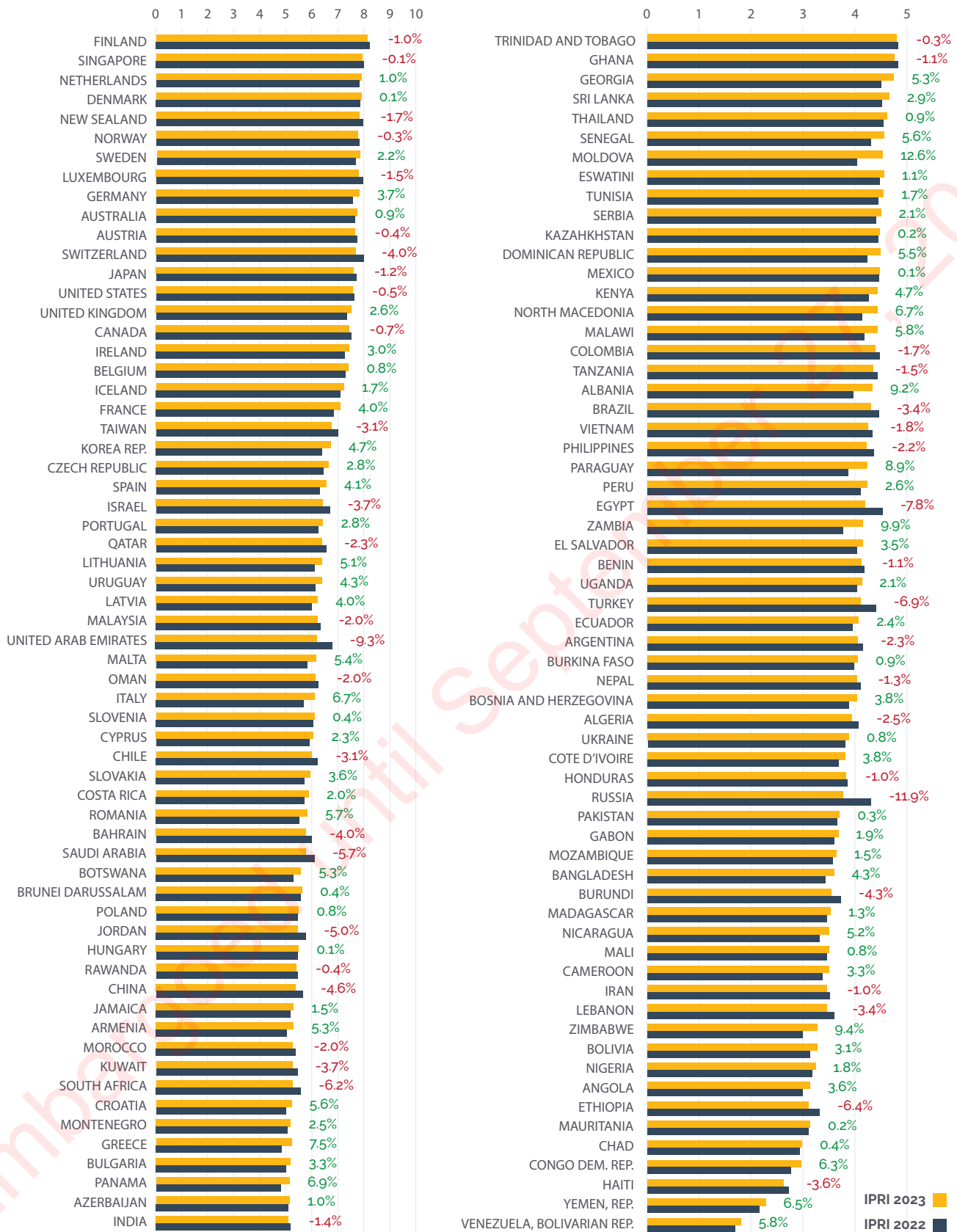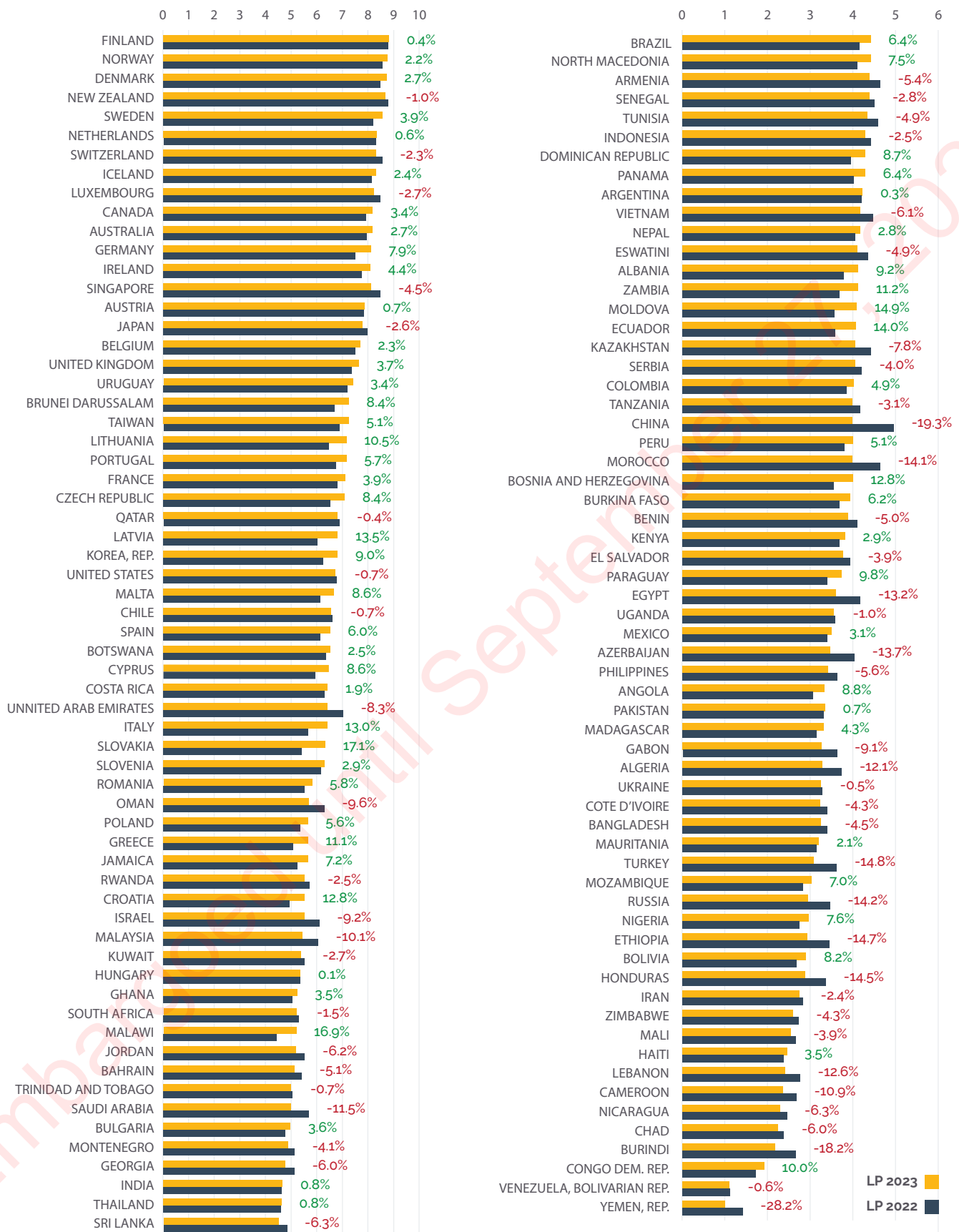
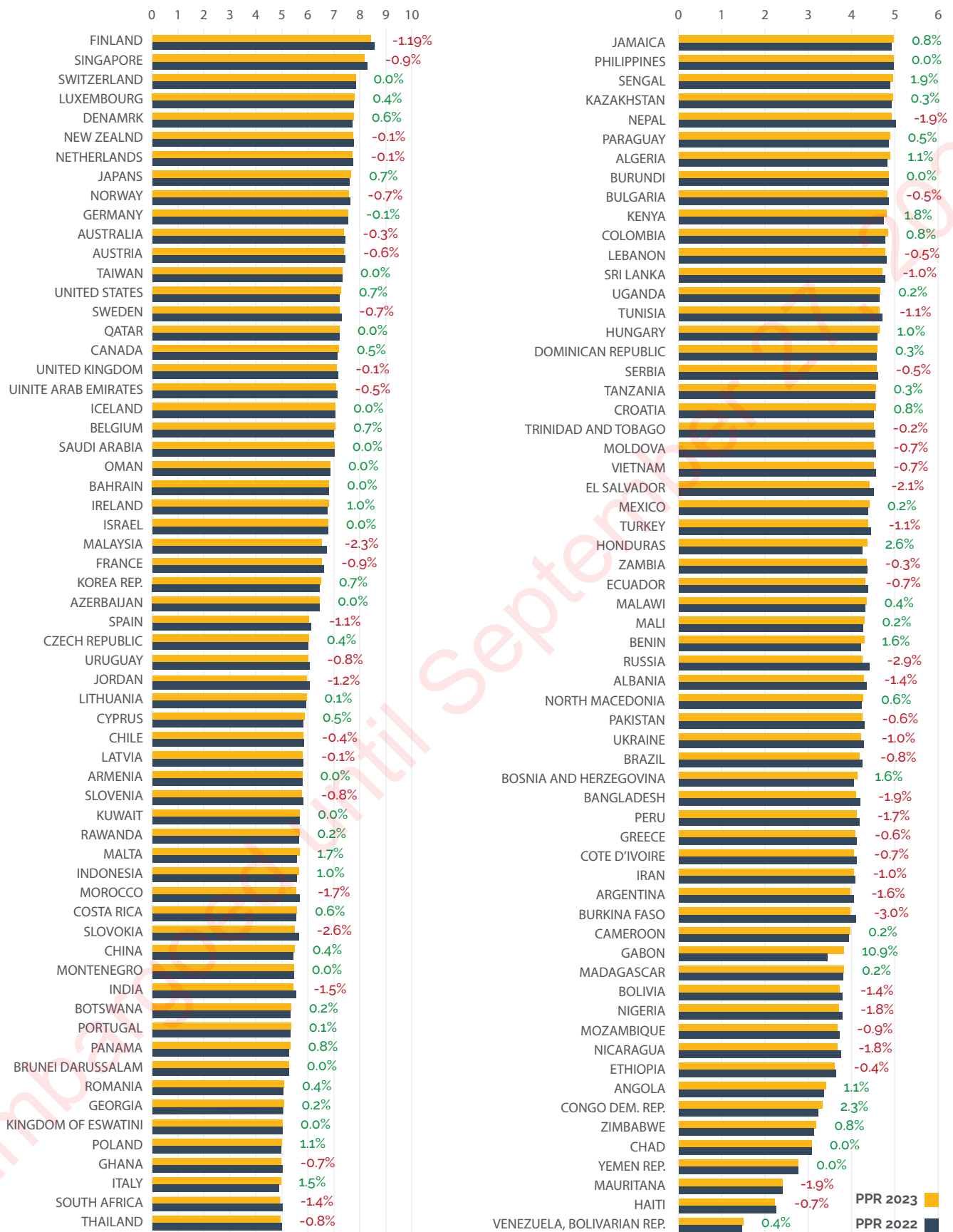**Figure 7. IPRI Score 2023-2022 and Variation (%).**

Country	Variation
FINLAND	-1.0%
SINGAPORE	-0.1%
NETHERLANDS	1.0%
DENMARK	0.1%
NEW SEALAND	-1.7%
NORWAY	-0.3%
SWEDEN	2.2%
LUXEMBOURG	-1.5%
GERMANY	3.7%
AUSTRALIA	0.9%
AUSTRIA	-0.4%
SWITZERLAND	-4.0%
JAPAN	-1.2%
UNITED STATES	-0.5%
UNITED KINGDOM	2.6%
CANADA	-0.7%
IRELAND	3.0%
BELGIUM	0.8%
ICELAND	1.7%
FRANCE	4.0%
TAIWAN	-3.1%
KOREA REP.	4.7%
CZECH REPUBLIC	2.8%
SPAIN	4.1%
ISRAEL	-3.7%
PORTUGAL	2.8%
QATAR	-2.3%
LITHUANIA	5.1%
URUGUAY	4.3%
LATVIA	4.0%
MALAYSIA	-2.0%
UNITED ARAB EMIRATES	-9.3%
MALTA	5.4%
OMAN	-2.0%
ITALY	6.7%
SLOVENIA	0.4%
CYPRUS	2.3%
CHILE	-3.1%
SLOVAKIA	3.6%
COSTA RICA	2.0%
ROMANIA	5.7%
BAHRAIN	-4.0%
SAUDI ARABIA	-5.7%
BOTSWANA	5.3%
BRUNEI DARUSSALAM	0.4%
POLAND	0.8%
JORDAN	-5.0%
HUNGARY	0.1%
RAWANDA	-0.4%
CHINA	-4.6%
JAMAICA	1.5%
ARMENIA	5.3%
MOROCCO	-2.0%
KUWAIT	-3.7%
SOUTH AFRICA	-6.2%
CROATIA	5.6%
MONTENEGRO	2.5%
GREECE	7.5%
BULGARIA	3.3%
PANAMA	6.9%
AZERBAIJAN	1.0%
INDIA	-1.4%
TRINIDAD AND TOBAGO	-0.3%
GHANA	-1.1%
GEORGIA	5.3%
SRI LANKA	2.9%
THAILAND	0.9%
SENEGAL	5.6%
MOLDOVA	12.6%
ESWATINI	1.1%
TUNISIA	1.7%
SERBIA	2.1%
KAZAHKHSTAN	0.2%
DOMINICAN REPUBLIC	5.5%
MEXICO	0.1%
KENYA	4.7%
NORTH MACEDONIA	6.7%
MALAWI	5.8%
COLOMBIA	-1.7%
TANZANIA	-1.5%
ALBANIA	9.2%
BRAZIL	-3.4%
VIETNAM	-1.8%
PHILIPPINES	-2.2%
PARAGUAY	8.9%
PERU	2.6%
EGYPT	-7.8%
ZAMBIA	9.9%
EL SALVADOR	3.5%
BENIN	-1.1%
UGANDA	2.1%
TURKEY	-6.9%
ECUADOR	2.4%
ARGENTINA	-2.3%
BURKINA FASO	0.9%
NEPAL	-1.3%
BOSNIA AND HERZEGOVINA	3.8%
ALGERIA	-2.5%
UKRAINE	0.8%
COTE D'IVOIRE	3.8%
HONDURAS	-1.0%
RUSSIA	-11.9%
PAKISTAN	0.3%
GABON	1.9%
MOZAMBIQUE	1.5%
BANGLADESH	4.3%
BURUNDI	-4.3%
MADAGASCAR	1.3%
NICARAGUA	5.2%
MALI	0.8%
CAMEROON	3.3%
IRAN	-1.0%
LEBANON	-3.4%
ZIMBABWE	9.4%
BOLIVIA	3.1%
NIGERIA	1.8%
ANGOLA	3.6%
ETHIOPIA	-6.4%
MAURITANIA	0.2%
CHAD	0.4%
CONGO DEM. REP.	6.3%
HAITI	-3.6%
YEMEN, REP.	6.5%
VENEZUELA, BOLIVARIAN REP.	5.8%

IPRI 2023
IPRI 2022

Figure 8. LP Score 2023-2022 and Variation (%).

Left chart (scale 0–10):

Country	Variation
FINLAND	0.4%
NORWAY	2.2%
DENMARK	2.7%
NEW ZEALAND	-1.0%
SWEDEN	3.9%
NETHERLANDS	0.6%
SWITZERLAND	-2.3%
ICELAND	2.4%
LUXEMBOURG	-2.7%
CANADA	3.4%
AUSTRALIA	2.7%
GERMANY	7.9%
IRELAND	4.4%
SINGAPORE	-4.5%
AUSTRIA	0.7%
JAPAN	-2.6%
BELGIUM	2.3%
UNITED KINGDOM	3.7%
URUGUAY	3.4%
BRUNEI DARUSSALAM	8.4%
TAIWAN	5.1%
LITHUANIA	10.5%
PORTUGAL	5.7%
FRANCE	3.9%
CZECH REPUBLIC	8.4%
QATAR	-0.4%
LATVIA	13.5%
KOREA, REP.	9.0%
UNITED STATES	-0.7%
MALTA	8.6%
CHILE	-0.7%
SPAIN	6.0%
BOTSWANA	2.5%
CYPRUS	8.6%
COSTA RICA	1.9%
UNNITED ARAB EMIRATES	-8.3%
ITALY	13.0%
SLOVAKIA	17.1%
SLOVENIA	2.9%
ROMANIA	5.8%
OMAN	-9.6%
POLAND	5.6%
GREECE	11.1%
JAMAICA	7.2%
RWANDA	-2.5%
CROATIA	12.8%
ISRAEL	-9.2%
MALAYSIA	-10.1%
KUWAIT	-2.7%
HUNGARY	0.1%
GHANA	3.5%
SOUTH AFRICA	-1.5%
MALAWI	16.9%
JORDAN	-6.2%
BAHRAIN	-5.1%
TRINIDAD AND TOBAGO	-0.7%
SAUDI ARABIA	-11.5%
BULGARIA	3.6%
MONTENEGRO	-4.1%
GEORGIA	-6.0%
INDIA	0.8%
THAILAND	0.8%
SRI LANKA	-6.3%

Right chart (scale 0–6):

Country	Variation
BRAZIL	6.4%
NORTH MACEDONIA	7.5%
ARMENIA	-5.4%
SENEGAL	-2.8%
TUNISIA	-4.9%
INDONESIA	-2.5%
DOMINICAN REPUBLIC	8.7%
PANAMA	6.4%
ARGENTINA	0.3%
VIETNAM	-6.1%
NEPAL	2.8%
ESWATINI	-4.9%
ALBANIA	9.2%
ZAMBIA	11.2%
MOLDOVA	14.9%
ECUADOR	14.0%
KAZAKHSTAN	-7.8%
SERBIA	-4.0%
COLOMBIA	4.9%
TANZANIA	-3.1%
CHINA	-19.3%
PERU	5.1%
MOROCCO	-14.1%
BOSNIA AND HERZEGOVINA	12.8%
BURKINA FASO	6.2%
BENIN	-5.0%
KENYA	2.9%
EL SALVADOR	-3.9%
PARAGUAY	9.8%
EGYPT	-13.2%
UGANDA	-1.0%
MEXICO	3.1%
AZERBAIJAN	-13.7%
PHILIPPINES	-5.6%
ANGOLA	8.8%
PAKISTAN	0.7%
MADAGASCAR	4.3%
GABON	-9.1%
ALGERIA	-12.1%
UKRAINE	-0.5%
COTE D'IVOIRE	-4.3%
BANGLADESH	-4.5%
MAURITANIA	2.1%
TURKEY	-14.8%
MOZAMBIQUE	7.0%
RUSSIA	-14.2%
NIGERIA	7.6%
ETHIOPIA	-14.7%
BOLIVIA	8.2%
HONDURAS	-14.5%
IRAN	-2.4%
ZIMBABWE	-4.3%
MALI	-3.9%
HAITI	3.5%
LEBANON	-12.6%
CAMEROON	-10.9%
NICARAGUA	-6.3%
CHAD	-6.0%
BURINDI	-18.2%
CONGO DEM. REP.	10.0%
VENEZUELA, BOLIVARIAN REP.	-0.6%
YEMEN, REP.	-28.2%

Legend: LP 2023, LP 2022

Figure 9. PPR Score 2023-2022 and Variation (%).

Country	Variation
FINLAND	-1.19%
SINGAPORE	-0.9%
SWITZERLAND	0.0%
LUXEMBOURG	0.4%
DENAMRK	0.6%
NEW ZEALND	-0.1%
NETHERLANDS	-0.1%
JAPANS	0.7%
NORWAY	-0.7%
GERMANY	-0.1%
AUSTRALIA	-0.3%
AUSTRIA	-0.6%
TAIWAN	0.0%
UNITED STATES	0.7%
SWEDEN	-0.7%
QATAR	0.0%
CANADA	0.5%
UNITED KINGDOM	-0.1%
UINITE ARAB EMIRATES	-0.5%
ICELAND	0.0%
BELGIUM	0.7%
SAUDI ARABIA	0.0%
OMAN	0.0%
BAHRAIN	0.0%
IRELAND	1.0%
ISRAEL	0.0%
MALAYSIA	-2.3%
FRANCE	-0.9%
KOREA REP.	0.7%
AZERBAIJAN	0.0%
SPAIN	-1.1%
CZECH REPUBLIC	0.4%
URUGUAY	-0.8%
JORDAN	-1.2%
LITHUANIA	0.1%
CYPRUS	0.5%
CHILE	-0.4%
LATVIA	-0.1%
ARMENIA	0.0%
SLOVENIA	-0.8%
KUWAIT	0.0%
RAWANDA	0.2%
MALTA	1.7%
INDONESIA	1.0%
MOROCCO	-1.7%
COSTA RICA	0.6%
SLOVAKIA	-2.6%
CHINA	0.4%
MONTENEGRO	0.0%
INDIA	-1.5%
BOTSWANA	0.2%
PORTUGAL	0.1%
PANAMA	0.8%
BRUNEI DARUSSALAM	0.0%
ROMANIA	0.4%
GEORGIA	0.2%
KINGDOM OF ESWATINI	
POLAND	1.1%
GHANA	-0.7%
ITALY	1.5%
SOUTH AFRICA	-1.4%
THAILAND	-0.8%

Country	Variation
JAMAICA	0.8%
PHILIPPINES	0.0%
SENGAL	1.9%
KAZAKHSTAN	0.3%
NEPAL	-1.9%
PARAGUAY	0.5%
ALGERIA	1.1%
BURUNDI	0.0%
BULGARIA	-0.5%
KENYA	1.8%
COLOMBIA	0.8%
LEBANON	-0.5%
SRI LANKA	-1.0%
UGANDA	0.2%
TUNISIA	-1.1%
HUNGARY	1.0%
DOMINICAN REPUBLIC	0.3%
SERBIA	-0.5%
TANZANIA	0.3%
CROATIA	0.8%
TRINIDAD AND TOBAGO	-0.2%
MOLDOVA	-0.7%
VIETNAM	-0.7%
EL SALVADOR	-2.1%
MEXICO	0.2%
TURKEY	-1.1%
HONDURAS	2.6%
ZAMBIA	-0.3%
ECUADOR	-0.7%
MALAWI	0.4%
MALI	0.2%
BENIN	1.6%
RUSSIA	-2.9%
ALBANIA	-1.4%
NORTH MACEDONIA	0.6%
PAKISTAN	-0.6%
UKRAINE	-1.0%
BRAZIL	-0.8%
BOSNIA AND HERZEGOVINA	1.6%
BANGLADESH	-1.9%
PERU	-1.7%
GREECE	-0.6%
COTE D'IVOIRE	-0.7%
IRAN	-1.0%
ARGENTINA	-1.6%
BURKINA FASO	-3.0%
CAMEROON	0.2%
GABON	10.9%
MADAGASCAR	0.2%
BOLIVIA	-1.4%
NIGERIA	-1.8%
MOZAMBIQUE	-0.9%
NICARAGUA	-1.8%
ETHIOPIA	-0.4%
ANGOLA	1.1%
CONGO DEM. REP.	2.3%
ZIMBABWE	0.8%
CHAD	0.0%
YEMEN REP.	0.0%
MAURITANA	-1.9%
HAITI	-0.7%
VENEZUELA, BOLIVARIAN REP.	0.4%

PPR 2023
PPR 2022

Figure 10. IPR Score 2023-2022 and Variation (%).

Country	Variation
UNITED STATES	-1.5%
UNITED KINGDOM	4.1%
AUSTRIA	-1.4%
GERMANY	3.4%
SINGAPORE	6.0%
SWEDEN	3.3%
FRANCE	8.9%
AUSTRALIA	0.2%
NETHERLANDS	2.6%
IRELAND	3.3%
BELGIUM	-0.4%
JAPAN	-1.7%
LUXEMBOURG	-2.2%
FINLAND	-2.5%
NORWAY	-3.0%
DENMARK	-3.5%
NEW ZEALAND	-4.3%
SPAIN	7.3%
CANADA	-6.3%
ISRAEL	-2.6%
ITALY	5.1%
KOREA, REP.	4.6%
SWITZERLAND	-10.2%
PORTUGAL	1.9%
CZECH REPUBLIC	-0.6%
MALAYSIA	6.2%
ROMANIA	10.1%
CHINA	2.8%
HUNGARY	-0.6%
ICELAND	2.6%
MORCCO	7.7%
LITHUANIA	4.4%
SLOVENIA	-1.0%
MEXICO	-1.7%
MALTA	5.5%
LATVIA	-1.5%
GREECE	10.1%
SLOVAKIA	-2.8%
POLAND	-3.7%
OMAN	4.4%
BULGARIA	6.5%
TAIWAN	-14.9%
CYPRUS	-2.2%
URUGUAY	11.6%
PANAMA	13.8%
CROATIA	3.0%
MOLDOVA	24.2%
ARMENIA	23.5%
COSTA RICA	3.7%
CHILE	-8.5%
TRINIDAD AND TOBAGO	0.0%
SOUTH AFRICA	-13.9%
SERBIA	9.7%
SRI LANKA	16.6%
AZERBAIJAN	15.6%
TURKEY	-6.2%
BAHRAIN	-7.6%
JAMAICA	-3.5%
KENYA	9.0%
MONTENEGRO	13.0%
JORDAN	-8.1%
INDIA	-3.2%
TUNISIA	11.3%

Country	Variation
SAUDI ARABIA	-7.1%
NORTH MACEDONIA	11.4%
ALBANIA	20.1%
QATAR	-7.6%
UNITED ARAB EMIRATES	-20.3%
PERU	4.3%
DOMINICAN REPUBLIC	7.6%
INDONESIA	15.0%
RWANDA	1.5%
NACARAGUA	18.2%
TANZANIA	-1.9%
KHAZAKHSTAN	8.2%
GEORGIA	26.8%
ESWATINI	8.2%
BOTSWANA	15.8%
SENEGAL	19.3%
COLOMBIA	-8.8%
PHILIPPINES	-1.9%
THAILAND	2.9%
BRAZIL	-12.8%
EL SALVADOR	16.9%
BENIN	0.0%
BURKINA FASO	0.0%
GHANA	-6.3%
KUWAIT	-8.9%
UGANDA	6.8%
HONDURAS	6.3%
MOZAMBIQUE	0.0%
CAMEROON	16.3%
RUSSIA	-17.5%
PARAGUAY	18.6%
UKRAINE	3.4%
COTE D'IVOIRE	15.5%
VIETNAM	1.4%
ZAMBIA	20.3%
ZIMBABWE	28.1%
EGYPT	-13.2%
BOSNIA AND HERZEGOVINA	-1.5%
ARGENTINA	-5.3%
GABON	4.4%
MALAWI	-0.1%
ECUADOR	-4.1%
ALGERIA	2.4%
BRUNEI DARUSSALAM	-10.7%
MAURITANIA	0.0%
MALI	4.7%
BURUNDI	0.0%
IRAN	0.0%
CONGO DEM. REP.	8.0%
CHAD	4.9%
PAKISTAN	0.8%
MADAGASCAR	0.0%
BANGLADESH	22.1%
LEBANON	0.0%
BOLIVIA	4.0%
HAITI	-9.7%
NEPAL	-5.0%
NIGERIA	1.0%
YEMEN REP.	32.9%
EHTIOPIA	-4.2%
VENEZUELA, BOLIVIAN REP.	11.4%
ANGOLA	0.9%

IPR 2023
IPR 2022

2023 IPRI BY GROUPS

The IPRI analysis was also performed for groups of countries, which were gathered following different criteria: Geographical Regions, Income Level, Degree of Development and Participation in Integration Agreements. (For Group members see Appendix II). For each group, we calculated the IPRI score and of its components. (See below).

CRITERIA	GROUP	IPRI	LP	PPR	IPR
REGIONAL GROUPS	A	4.079	3.703	4.147	4.387
	AO	5.650	5.567	5.850	5.535
	CEECA	5.163	4.985	5.027	5.478
	LAC	4.440	4.195	4.331	4.794
	MENA	5.006	4.463	5.652	4.902
	NA	7.472	7.437	7.222	7.758
	WE	7.197	7.708	6.835	7.049
GEOGRAPHICAL REGIONS	Africa	4.146	3.726	4.254	4.459
	Asia	5.264	4.913	5.736	5.142
	Central America and the Caribbean	4.490	4.154	4.366	4.949
	European Union	6.564	6.956	6.119	6.618
	North America	6.524	6.144	6.264	7.163
	Oceania	7.740	8.407	7.572	7.242
	Rest of Europe	5.351	5.172	5.341	5.541
	South America	4.376	4.296	4.298	4.536
REGION & DEVELOPMENT CLASSIFICIATION	Advanced Economies	7.045	7.457	6.788	6.890
	Emerging and Developing Asia	4.859	4.559	5.118	4.899
	Emerging and Developing Europe	4.787	4.480	4.544	5.338
	Latin America and the Caribbean	4.440	4.195	4.331	4.794
	Middle East and Central Asia	4.783	4.250	5.334	4.765
	Sub-Saharan Africa	4.112	3.720	4.217	4.398
INCOME GROUP	High Income	6.623	6.956	6.479	6.435
	Upper Middle Income	4.796	4.438	4.827	5.122
	Lower Middle Income	4.117	3.589	4.313	4.450
	Low Income	3.793	3.236	3.989	4.155

CRITERIA	GROUP	IPRI	LP	PPR	IPR
	OECD	6.726	7.026	6.438	6.713
	EU	6.564	6.956	6.119	6.618
	SADC	4.185	3.985	4.141	4.429
	ECOWAS	4.160	3.795	4.280	4.405
	ASEAN	5.464	5.349	5.710	5.333
	PARLACEN	4.326	3.569	4.429	4.980
	GCC	5.878	5.736	6.777	5.121
	AP	4.876	4.573	4.749	5.308
	MERCOSUR	4.851	4.996	4.724	4.834
	SAARC	4.329	4.022	4.645	4.321
REGIONAL INTEGRATION AGREEMENTS	CEMAC	3.511	2.688	3.576	4.269
	MCCA	4.431	3.882	4.467	4.945
	CIS	4.727	3.866	5.155	5.160
	ARAB M UNION	4.319	3.774	4.325	4.856
	OPEC	4.125	3.762	4.539	4.074
	CARICOM	4.319	4.378	3.862	4.717
	CAN	4.135	3.818	4.193	4.393
	EFTA	7.529	8.436	7.481	6.670
	IGAD	4.044	3.493	4.309	4.330
	USMCA	6.524	6.144	6.264	7.163
	CEEAC	3.705	3.028	3.977	4.110
	TPP-11	6.319	6.534	6.246	6.176
	PROSUR	4.367	4.152	4.332	4.618

Table 6. 2023 IPRI and Components: Groups Score.

It is worth mentioning that some groups are in different classifications, and they report different score values. That is the case of Latin America and the Caribbean. This is because some of the classifications include/exclude some countries.
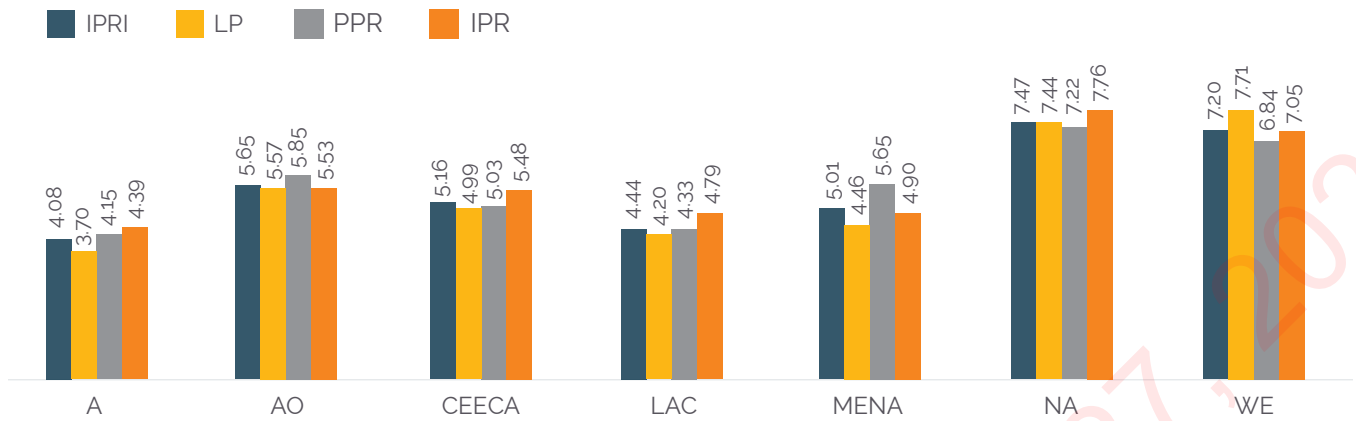
Figure 11. 2023 IPRI and Components. Regional Groups Score.
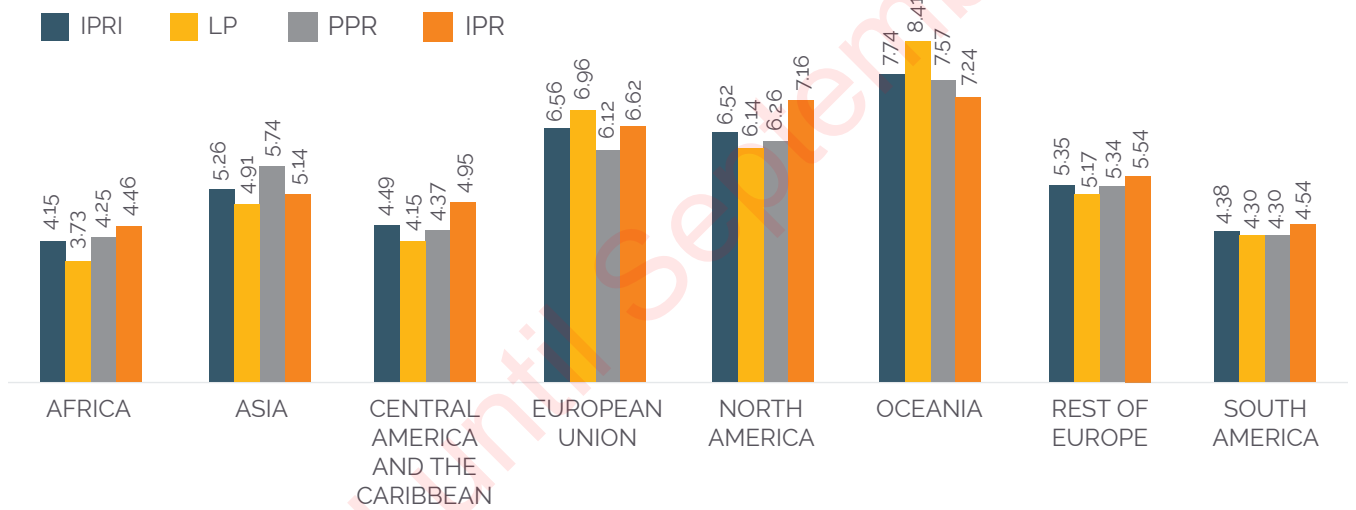
Figure 12. 2023 IPRI and Components. Geographical Groups Score.
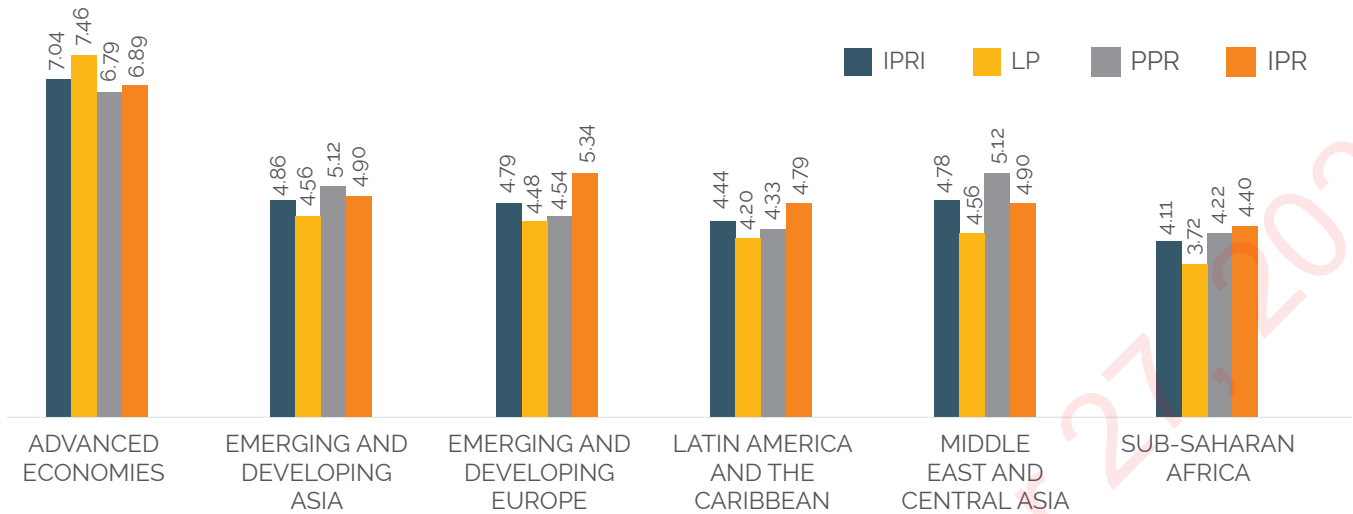
Figure 13. 2023 IPRI and Components. Region & Development Groups Score.
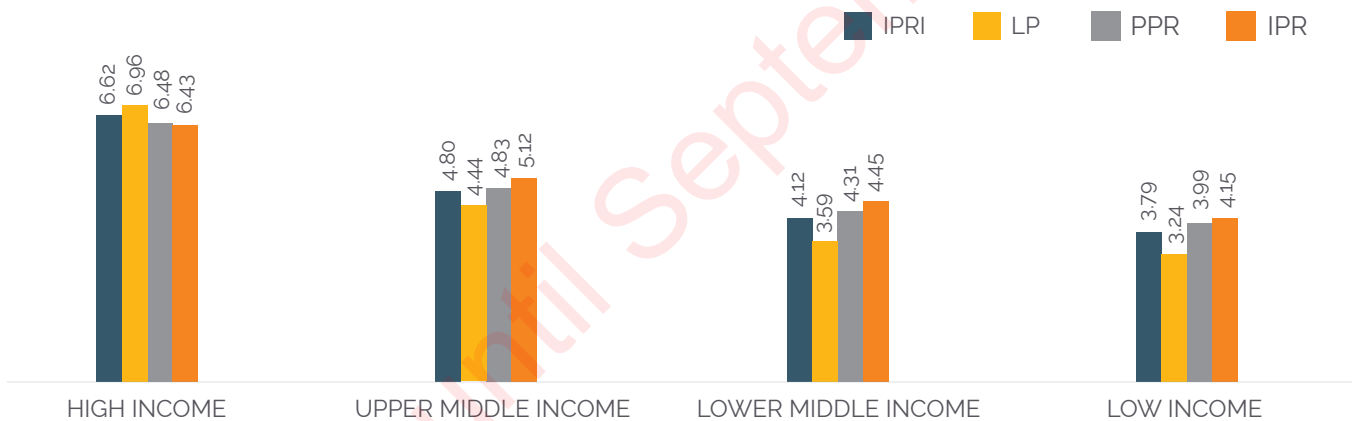
Figure 14. 2023 IPRI and Components. Income Groups Score

All groups reduced their IPRI score this year compared to 2022 from 2.7% to 10.5%. Below, a brief analysis of the groups' results:

1. ***Regional Groups:*** North America (7.47) leads the IPRI score, followed by Western Europe (7.20); and East Asia, South Asia & Pacific (5.65). On the other extreme we find Africa (4.08) and

Latin America & the Caribbean (4.44), while this group also exhibited the highest improvement (2%). On the other hand MENA countries deteriorated the most in their IPRI score (-3.5%), driven mainly by the weakening of the LP component (-8.15%) followed by East Asia, South Asia & Pacific (-1.8%) for the same reason.
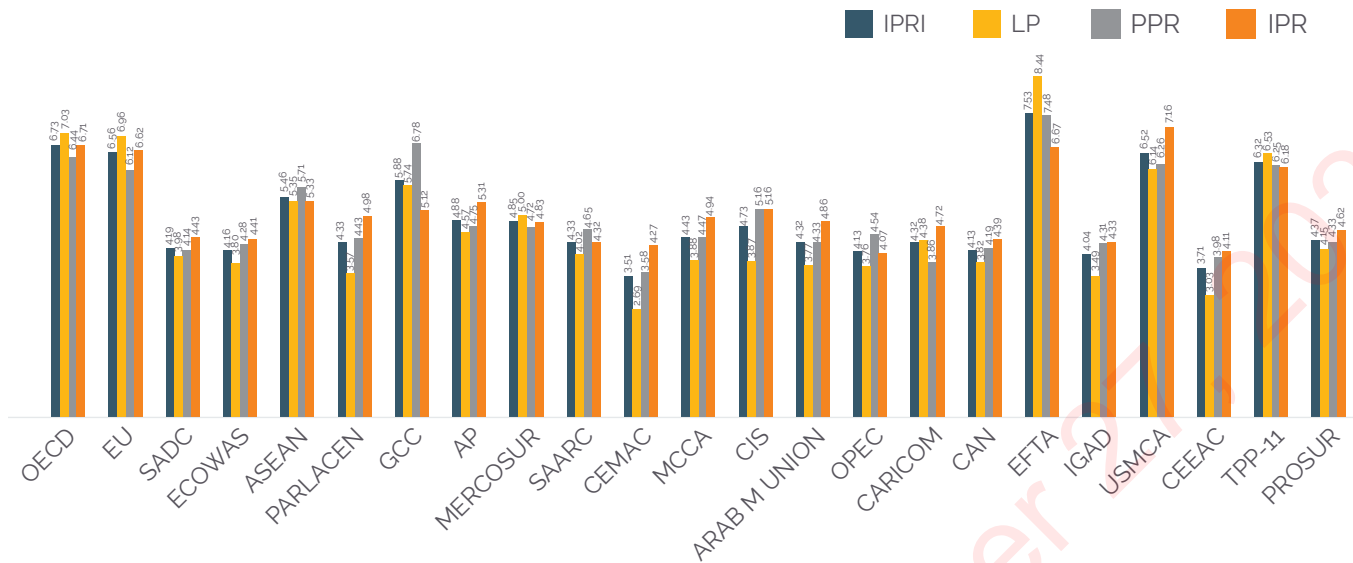
2. **Geographical Groups:** At the top we find Oceania (7.74), European Union (6.56) and North America (6.52) the while at the bottom are Africa (4.15), Central America and the Caribbean (4.49) and South America (4.38). The IPRI scores' change compared to 2022 were mixed: positive changes for Central America & Caribbean (3.2%) and the European Union (2.3%) while negative for Asia (-2.78%) mainly due to weakening of LP component (-5.8%).

3. **Regional & Development Groups** (IMF classification): Advanced Economies (7.05) leads the IPRI scores, followed by Emerging and Developing Asia (4.86), Emerging and Developing Europe (4.79), Emerging and Developing Asia (4.87), Latin America and the Caribbean (4.44), ending with Sub-Saharan Africa (4.11). Emerging and Developing Europe and Latin America and the Caribbean improved 2%, while Middle East & Central Asia deteriorated almost the same, mainly because of the LP component (-7.4%).

4. **Income Group** (World Bank classification): As in previous editions, the income classification groups show the same display of the IPRI score. High Income (6.62) remains at the top, followed by Upper Middle (4.80), Lower Middle (4.12) and Low Income (3.79) countries. The LP component show improvement for all the groups but High income countries, result of an improvement for the IPR component.

5. **Integration Agreements:** since 2017, the five top groups are EFTA (7.53), OECD (6.73), EU (6.56), USMCA (6.52) and TPP-11 (6.32). The main improvements were shown by PARLACEN (4.66%) and the MCCA (3.9%), in both cases for relevant increases in the IPR component (of 13.7 and 12.4%, respectively). On the other hand, the main setbacks were displayed by PROSUR (-4.78%), GCC (-4.57%) and OPEC (-2.55)

2023 IPRI & POPULATION

The fact that the unit of analysis of the IPRI is countries/territories may avoid assessing important demographic impacts, contrary to our main goal, which is to appraise properly the level of property rights that people enjoy. Given the former, since 2015 we include a population incidence to the Index.

Although the 2023 IPRI average score is 5.211, when population weighs in, the score reduces to 5.04 which is a decrease of 1.53% from 2022 and

almost a 10% from 2021 (IPRI-Pop 2022=5.12; and IPRI-Pop 2021=5.596). This happens even when we found a slight improvement in the IPRI score this year, meaning that citizens of most populated countries display a discouraging scenario to access and enjoy a robust property rights system. On the other hand, we may see it as an opportunity to alert and warn policy makers to use the IPRI as a tool to guide their improvement initiatives.

2023 IPRI (RANGES)	NUMBER OF COUNTRIES	POPULATION (000)	POPULATION (%)	IPRI INCIDENCE (%)	IPRI-POP. INCIDENCE (%)	% GDP
1.9 - 2.8	3	72,629	1.0	1.1	0.4	0.56
2.9 - 3.7	16	874,243	11.8	8.5	8.1	1.76
3.8 - 4.7	38	1,790,308	24.2	25.3	20.5	10.11
4.8 - 5.7	27	3,494,798	47.3	21.7	48.6	27.44
5.8 - 6.7	21	323,666	4.4	20.0	5.5	9.01
6.8 - 7.7	12	775,489	10.5	13.8	15.6	47.34
7.8 - 8.7	8	56,472	0.8	9.6	1.2	3.78
	125	7,387,606	100	100	100	100

Table 7. 2023 IPRI: Population.

This year's sample of 125 countries has a population of 7.39 thousand millions people[3]-representing 93.4% of world population, showing that 83.4% of that population live in 81 countries with an IPRI between 2.9 and 5.7.

We may also supplement this IPRI-Population analysis, with GDP[4] results, as follows:

» 2023-IPRI countries include 93.4% of world population, accounting for 97.5% of world GDP.

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3. Source: United Nations, Department of Economic and Social Affairs, Population Division (2022). World Population Prospects 2022. [https://population.un.org/wpp/Download/Standard/Population/].

4. GDP data year is 2021 except for Kuwait (2020), Venezuela (2014) and Yemen (2018) (latest available).

» 60% of the world GDP comes from 41 countries with 15.6% of the total population, and they show robust property rights systems, in a range [5.8 – 8.7] of the IPRI scores.

» Particularly 51% of the total GDP is from 20 countries with 11% of total population with an IPRI score in a range of [6.8 – 8.7].

» 13% of the population lives in 19 countries with lower levels of property rights [1.9 – 3.7] and accounts only for 2% of world GDP.

» 27.4% of the total GDP lies in 27 countries with 47% of the total population, and they show middle IPRI scores, in a range [4.8 – 5.7]

This information is an important indication of the positive relationship between a robust property rights system and economic strength. An element to be considered carefully by densely populated countries and their policy makers.

Figure 16 shows a combination of elements for analyzing changes in the IPRI scores: country, population, and their belonging to a regional group. It's upsetting news to see that most of the countries have deteriorated their scores, particularly those densely populated.
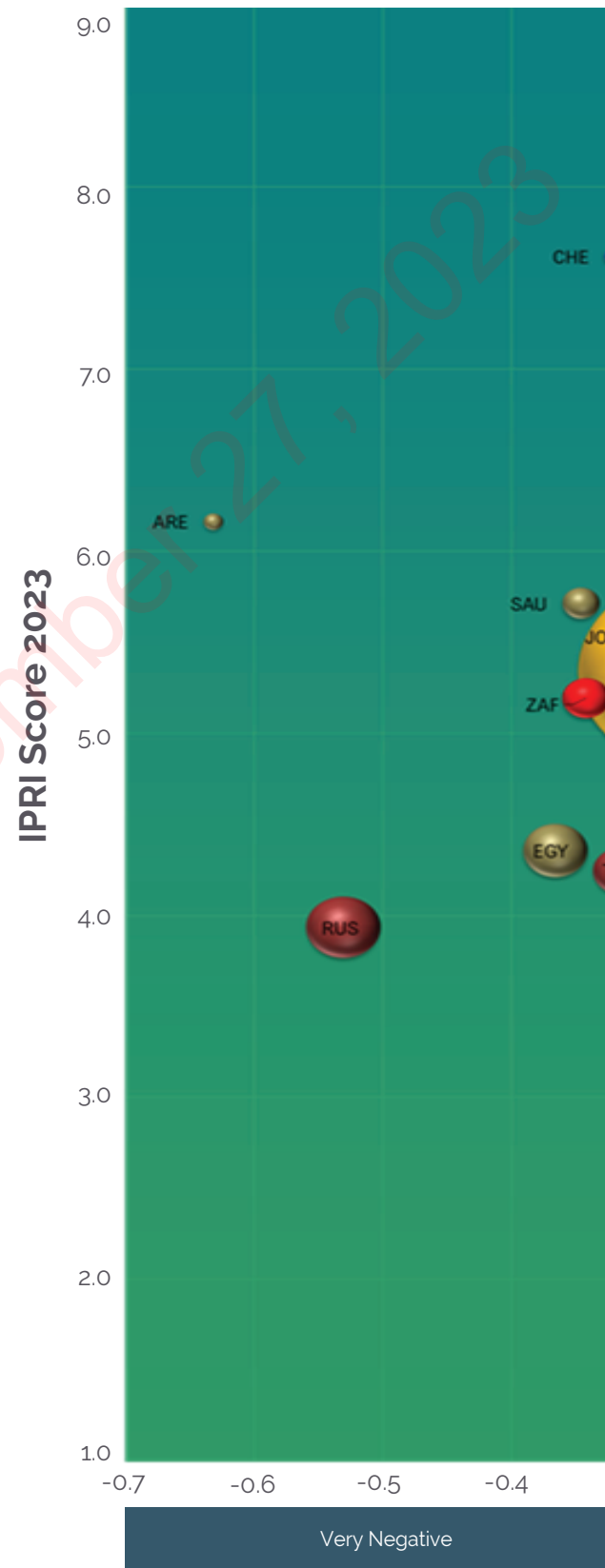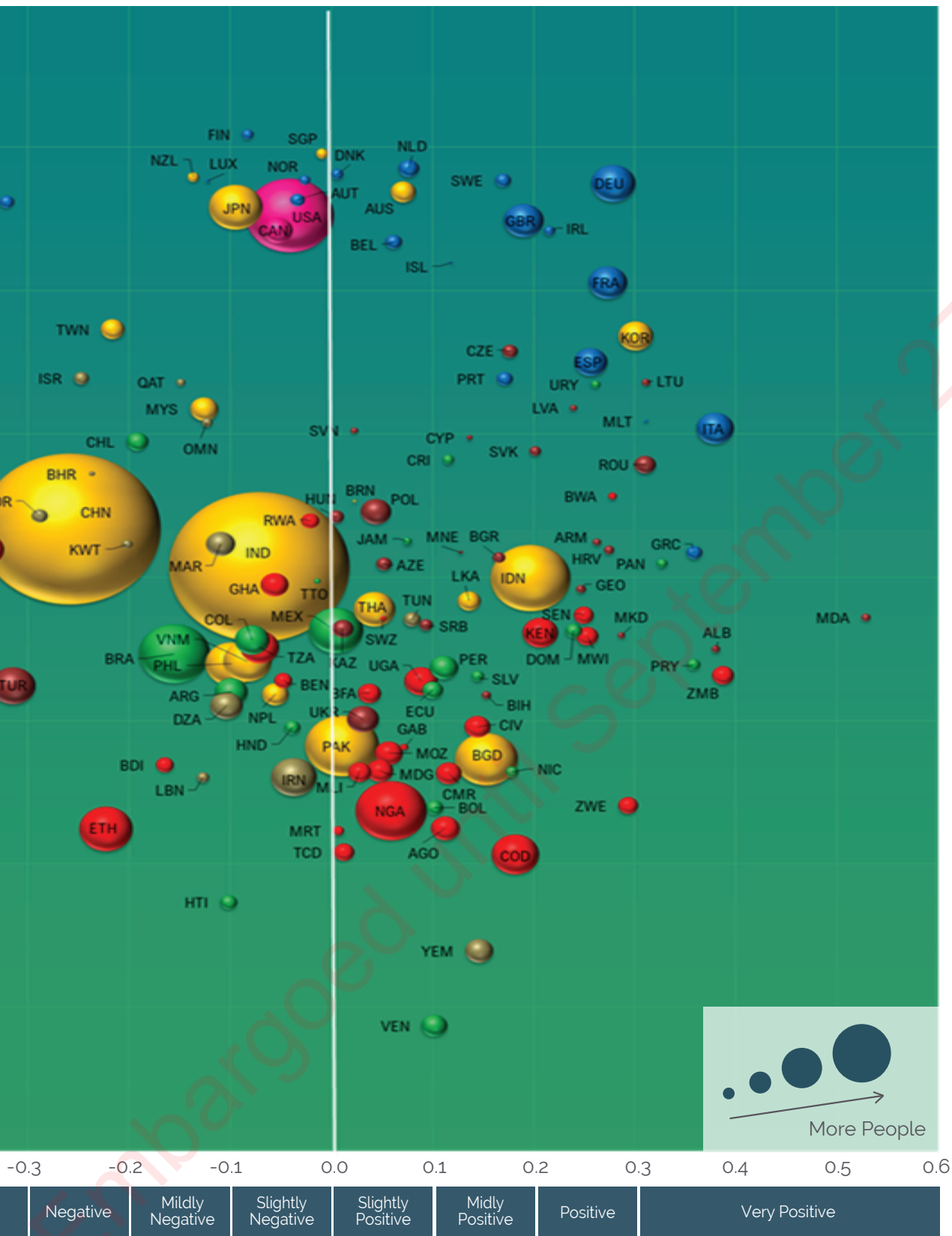
Figure 16. 2023-2022 IPRI Score Changes (Population and Regional Groups).

2023 IPRI & GENDER

We use a Gender Equality component combined with the IPRI, to grasp possible bias as proxy for discrimination in a country/territory, which would mean that the results of the Index would not be equally applicable to all members of a society. The possible forms of discrimination are multiple, but we have considered only that based on gender.

The data used to calculate the Gender Equality component for the IPRI are those items more closely related to property rights and its impact in economic development of the Social Institutions and Gender Index, SIGI (by OECD). The SIGI is composed of five sub-indices, each representing a separate dimension of discrimination: Discriminatory Family Code, Restricted Physical Integrity, Son Bias, Restricted Resources and Assets, and Restricted Civil Liberties.

The GE component is calculated using the following indicators (Source: OECD Gender, Institutions, and Development Database 2019 (GID-DB). https://www.genderindex.org/data/, downloaded March 05, 2023. Details in Appendix III):

1. **Women's Access to Land Ownership:** Estimates whether women and men have equal and secure access to land assets, use, control and ownership.

2. **Women's Access to Bank Loans:** Measures whether women and men have equal and secure access to formal financial services.

3. **Women's Access to Property Other than Land:** Determines whether women and men have equal and secure access to non-land assets use, control and ownership.

4. **Inheritance Practices:** Measures whether women and men have the same legal rights to inheritance of land and non-land assets.

5. **Women's Social Rights:** Covers broader aspects of women's equality, and it is a composite of seven other items crucial to equal standing in society. Items:

» *Divorce:* Measures whether women and men have the same legal rights to initiate divorce and have the same requirements for divorce or annulment.

» *Household responsibilities:* Measures whether women and men have the same legal rights, decision-making abilities and responsibilities within the household.

» *Female genital mutilation:* Measures the occurrence of female genital mutilation.

» *Violence against women:* Measures whether the legal framework protects women from violence – including intimate partner violence, rape, and sexual harassment – without legal exceptions and in a comprehensive approach.

» *Freedom of movement:* Measures whether women and men have the same rights to apply for national identity cards (if applica-

ble) and passports, and to travel outside the country.

» *Citizenship rights:* Measures whether women and men have the same citizenship rights and ability to exercise their rights.

» *Workplace rights:* Measures whether women and men have the same legal rights and opportunities in the workplace.

The original data has three levels: 0 (Best), 0.5 (Average) and 1 (Worst). All data series were rescaled to (0-10). The final GE score is calculated as the average of the five equally weighted variables. Those variables with more than one item were calculated also as equally weighted. A minimum score (0) means complete discrimination against women, while maximum score (10) is given to countries with gender equality. As the GE data source is discrete, equal outcomes are likely to be found. That will be minimized in the IPRI-GE thanks to the variability of the IPRI scores.

To account for Gender Equality (GE), this chapter extends the standard IPRI measure to include a measure of GE concerning property rights. The IPRI formula incorporates Gender Equality as following:

$$\text{IPRI-GE= IPRI} * [(GE+10)/20]$$

This way if a country shows a GE=10 (perfect gender equality), its IPRI-GE score will be equal to its IPRI score; while if a country displays a GE=0 (total discrimination), its IPRI-GE score will be half of its IPRI score, as only half of the population will enjoy some level of property rights protection (we are assuming, 50% female, 50% male population).

Simultaneously, to make easier the comparison of the IPRI and the IPRI-GE and make it more informative for policy makers, we keep the scale for the IPRI-GE from 0-10.

I. IPRI-GE AND GE: COUNTRY RESULTS

After weighting the IPRI with the gender component, the IPRI-GE scores 4.56, which is a reduction of 12.6% from the IPRI value (IPRI2023= 5.21). Meanwhile the 125 countries display an average GE score of 7.22.

Looking into details of the GE components, we find that of the five components, Women's Social Rights is the weaker, showing an average score of 5.26, followed by Inheritance Practices (6.74), Women's Access to Land Ownership (7.56), Women's Access to Property other than Land (7.88); and the strongest one is Women's Access to Bank Loans (8.6). Within Women's Social Rights we find that the strongest component is Freedom of Movement (8.3), followed by Citizenship Rights (7.44), Divorce Rights (6.58), Household Responsibilities (4.26), Violence against Women (4.24), Workplace Rights (3.36); and the weakest is Female Genital Mutilation (2.62).

The average of the 2023 IPRI-GE score is 4.56, which is a slight improvement from last year

(2022 IPRI-GE2022=4.48), but not enough to recover the values of 2021 (IPRI GE 2021: 4.89). See Figure 17b for IPRI-GE scores and rankings.

On the other extreme of the IPRI-GE, with scores below five (2.5), we find Venezuela, Bolivarian Rep. (1.79), Yemen Rep. (1.86), Mauritania (2.09), Chad (2.17), Haiti (2.37), Democratic Rep. Congo (2.45) and Cameroon (2.48).

Some of these countries report these low values due to their low IPRI scores and not their GE scores, which is the case for the Bolivarian Rep. of Venezuela with GE=9.071 while an IPRI=1.87, Haiti with GE=7.357 and an IPRI=2.733, and Democratic Rep. Congo with GE=6.00 and an IPRI=3.07).

On the contrary we also find countries with a low GE score that boost their IPRI-GE, thanks to their IPRI results. That is the case of Kuwait with GE=1.36 while an IPRI=5.23 and an IPRI-GE=2.97.

Figure 17a. 2023 GE. Scores & Rankings..

Left chart (scale 0–10):
- AUSTRIA - 1
- MALTA - 1
- SWEDEN - 1
- BELGIUM - 4
- PORTUGAL - 4
- NORWAY - 6
- AUSTRALIA - 7
- NEW ZEALAND - 7
- DENAMRK - 9
- ICELAND - 9
- IRELAND - 9
- NETHERLANDS - 9
- SWITZERLAND - 9
- UNITED STATES - 9
- SLOVAKIA - 15
- COLOMBIA - 16
- FINLAND - 16
- GERMANY - 16
- LUXEMBOURG - 16
- ROMANIA - 16
- LITHUANIA - 21
- DOMINICAN REPUBLIC - 22
- FRANCE - 22
- PANAMA - 22
- CHINA - 25
- ITALY - 25
- POLAND - 25
- VENEZUELA - 25
- RUSSIA - 29
- SLOVENIA - 29
- CYPRUS - 31
- LATVIA - 31
- CANADA - 33
- CZECH REPUBLIC - 33
- PERU - 35
- SPAIN - 35
- UNITED KINGDOM - 35
- ARGENTINA - 38
- UKRAINE - 38
- AZERBAIJAN - 40
- CROATIA - 40
- NICARAGUA - 40
- BRAZIL - 43
- SINGAPORE - 43
- MACEDONIA, FYR - 45
- HONDURAS - 46
- MOZAMBIQUE - 46
- TAIWAN - 46
- KOREA REP. - 49
- JAMAICA - 50
- JAPAN - 50
- TRINIDAD AND TOBAGO - 52
- EL SALVADOR - 53
- SOUTH AFRICA - 53
- THAILAND - 55
- BOLIVIA - 56
- MOLDOVA - 56
- MONTENEGRO - 56
- BOSNIA AND HERZEGOVINA - 59
- MEXICO - 59
- SENEGAL - 59
- URUGUAY - 59

Right chart (scale 0–8):
- ALBANIA - 63
- ARMENIA - 63
- KAZAKHSTAN - 63
- BULGARIA - 66
- SERRBIA - 67
- HAITI - 68
- ETHIOPIA - 69
- BURKINA FASO - 70
- ISRAEL - 70
- RWANDA - 70
- HUNGARY - 73
- TURKEY - 73
- GEORGIA - 75
- VIETNAM - 75
- ZAMBIA - 77
- BURUNDI - 78
- NEPAL - 79
- ZIMBABWE - 79
- ECUADOR - 81
- INDIA - 82
- COSTA RICA - 83
- BENIN - 84
- MALI - 84
- GREECE - 86
- BRUNEI DARUSSALEME - 87
- GHANA - 88
- PARAGUAY - 88
- UNITED ARAB EMIRATES - 88
- IRAN - 91
- MALAWI - 91
- QATAR - 91
- BOTSWANA - 94
- CONGO, DEM. REP. - 94
- MADAGASCAR - 96
- YEMEN, REP. - 97
- TUNISIA - 98
- ANGOLA - 99
- CHILE - 99
- KENYA - 99
- MALAYSIA - 102
- GABON - 103
- NIGERIA - 104
- TANZANIA - 105
- INDONESIA - 106
- MOROCCO - 106
- SRI LANKA - 106
- LEBANON - 109
- ALGERIA - 110
- BAHRAIN - 111
- JORDAN - 112
- OMAN - 112
- SAUDI ARABIA - 114
- COTE D'IVOIRE - 115
- CHAD - 116
- BANGLADESH - 117
- PAKISTAN - 118
- CAMEROON - 119
- UGANDA - 120
- ESWATINI - 121
- PHILIPPINES - 121
- EGYPT - 123
- MAURITANIA - 123
- KUWAIT - 125

Left chart (scale 0–8):

Rank	Country
FINLAND - 1	
SWEDEN - 2	
NETHERLANDS - 3	
NORWAY - 4	
NEW ZEALAND - 5	
DENMARK - 6	
AUSTRIA - 7	
AUSTRALIA - 8	
LUXEMBOURG - 9	
GERMANY - 10	
SWITZERLAND - 11	
UNITED STATES - 12	
SINGAPORE - 13	
BELGIUM - 14	
IRELAND - 15	
ICELAND - 16	
UNITED KINGDOM - 17	
CANADA- 18	
JAPAN - 19	
FRANCE - 20	
PORTUGAL - 21	
CZECH REPUBLIC - 22	
LITHUANIA - 23	
TAIWAN - 24	
KOREA REP. - 25	
SPAIN - 26	
MALTA - 27	
LATVIA - 28	
ITALY - 29	
SLOVENIA - 30	
SLOVAKIA - 31	
CYPRUS - 32	
ROMANIA - 33	
URUGUAY - 34	
ISRAEL - 35	
POLAND - 36	
QATAR - 37	
CHINA - 38	
UNITED ARAB EMIRATES - 39	
PANAMA - 40	
CROATIA - 41	
COSTA RICA - 42	
JAMAICA - 43	
MALAYSIA - 44	
AZERBAIJAN - 45	
HUNGARY - 46	
RWANDA - 47	
SOUTH AFRICA - 48	
ARMENIA - 49	
CHILE - 50	
MONTENEGRO - 51	
BRUNEI DARUSSALAM - 52	
BULGARIA - 53	
TRINIDAD AND TOBAGO - 54	
BOTSWANA - 55	
OMAN - 56	
DOMINCAN REPUBLIC - 57	
COLOMBIA- 58	
THAILAND - 59	
NORTH MACEDONIA - 60	
GREECE - 61	
BAHRAIN - 62	

Right chart (scale 0–4):

Rank	Country
GEORGIA - 63	
INDIA - 64	
MOLDOVA - 65	
SENEGAL - 66	
SAUDI ARABIA - 67	
BRAZIL - 68	
MEXICO - 69	
KAZAKHSTAN - 70	
PERU - 71	
SERBIA - 72	
GHANA - 73	
JORDAN - 74	
ALBANIA - 75	
MOROCCO - 76	
ARGENTINA - 77	
EL SALVADOR - 78	
VIETNAM - 79	
RUSSIA - 80	
INDONESIA - 81	
UKRAINE - 82	
MALAWI - 83	
BOSNIA AND HERZEGOVINA - 84	
ZAMBIA - 85	
TUNISIA - 86	
TURKEY - 87	
SRI LANKA - 88	
BURKINA FASO - 89	
HONDURAS - 90	
KENYA - 91	
PARAGUAY - 92	
NEPAL - 93	
BENIN - 94	
ECUADOR - 95	
MOZAMBIQUE - 96	
TANZANIA - 97	
NICARAGUA - 98	
BURUNDI - 99	
ESWATINI - 100	
ALGERIA - 101	
BOLIVIA - 102	
MALI - 103	
KUWAIT - 104	
GABON - 105	
MADAGASCAR - 106	
IRAN - 107	
PHILIPPINES - 108	
UGANDA - 109	
ZIMBABWE - 110	
COTE D'IVOIRE - 111	
EGYPT - 112	
ETHIOPIA - 113	
LEBANON - 114	
PAKISTAN - 115	
BANGLADESH - 116	
NIGERIA - 117	
ANGOLA - 118	
CAMEROON - 119	
CONGO, DEM. REP. - 120	
HAITI - 121	
CHAD - 122	
MAURITANIA - 123	
YEMEN, REP. - 124	
VENEZUELA, BOLIVARIAN REP. - 125	

Figure 17b. 2023 IPRI-GE. Scores & Rankings.

Analyzing the IPRI-GE by groups, we found the following results (see Figure18a - 18e):

» **Geographical Regions:** At the top of the IPRI-GE scores we find Oceania (7.57) that also leads the GE (9.57), followed by the European Union (IPRI-GE 6.26, GE 9.01) and North America (IPRI-GE 6.12, GE 8.62). Meanwhile at the bottom we find Africa (IPRI-GE 3.25), South America (IPRI-GE 3.85), Central America & Caribbean (IPRI-GE 4.06), Asia (IPRI-GE 4.26) and Rest of Europe (IPRI-GE 4.91).

» **Regional and Development Criteria (IMF classification):** Advanced Economies (IPRI-GE 6.721, GE 9.04) is leading the group followed by Emerging and Developing Europe (4.32), Latin America and the Caribbean (3.96), Emerging and Developing Asia (3.90), Middle East & Central Asia (3.65), ending with Sub-Saharan Africa (3.28). Emerging and Developing Europe shows a high GE score (8.0) but the IPRI pulls down their IPRI-GE, similarly with Latin America and the Caribbean (GE=7.9), and Emerging and Developing Asia (GE=5.99).

» **Income Classification (World Bank classification):** The IPRI-GE keeps displaying the same pattern as the IPRI, holding the relationship between the robustness of the property rights system and economic strength, and also for non-discrimination by gender. On the other hand, the GE shows also the same pattern for High (8.28) and Upper Middle Income countries (7.53), while its scores are higher for Low Income (6.25) than Lower Middle Income countries (5.64).

» **Economic and Regional Integration Agreements:** The IPRI-GE scores show the following five top groups are EFTA (7.36), OECD (6.32), EU (6.26), USMCA (6.12) and TPP-11 (5.64). The bottom groups are CEMAC (2.52), CEEAC (2.89), IGAD (3.08), OPEC (3.09) and Arab Monetary Union (3.17). It should be noted that PARLACEN, CIS, CAN, CARICOM, AP, MERCOSUR, MCCA and PROSUR show high GE scores, but their IPRI scores reduce their IPRI-GE values.
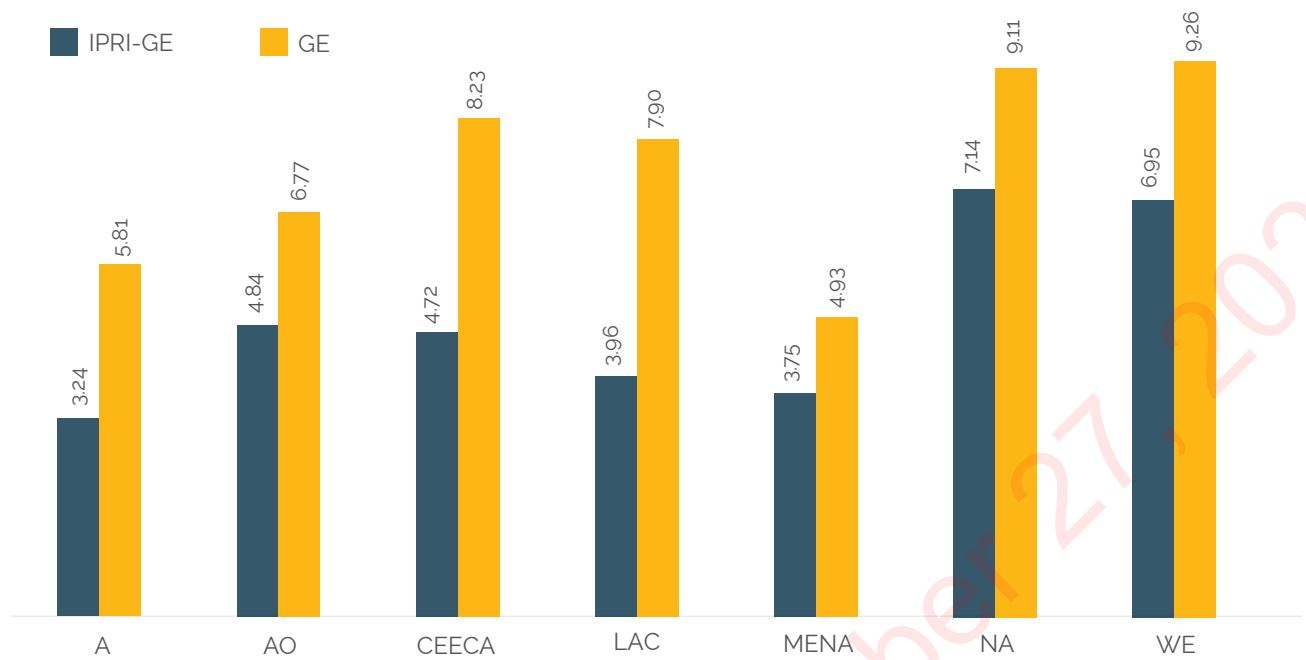
Figure 18a. 2023 IPRI-GE and GE. Regional Groups Scores.
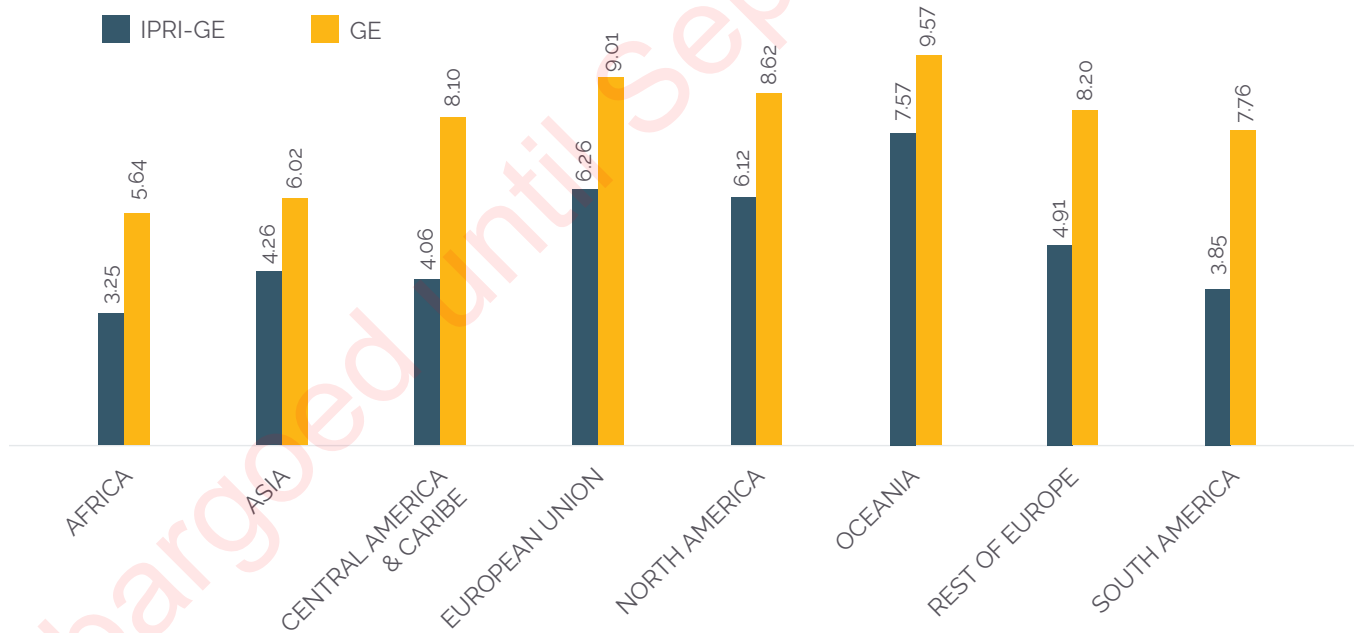
Figure 18b. 2023 IPRI-GE and GE. Geographical Groups Scores.
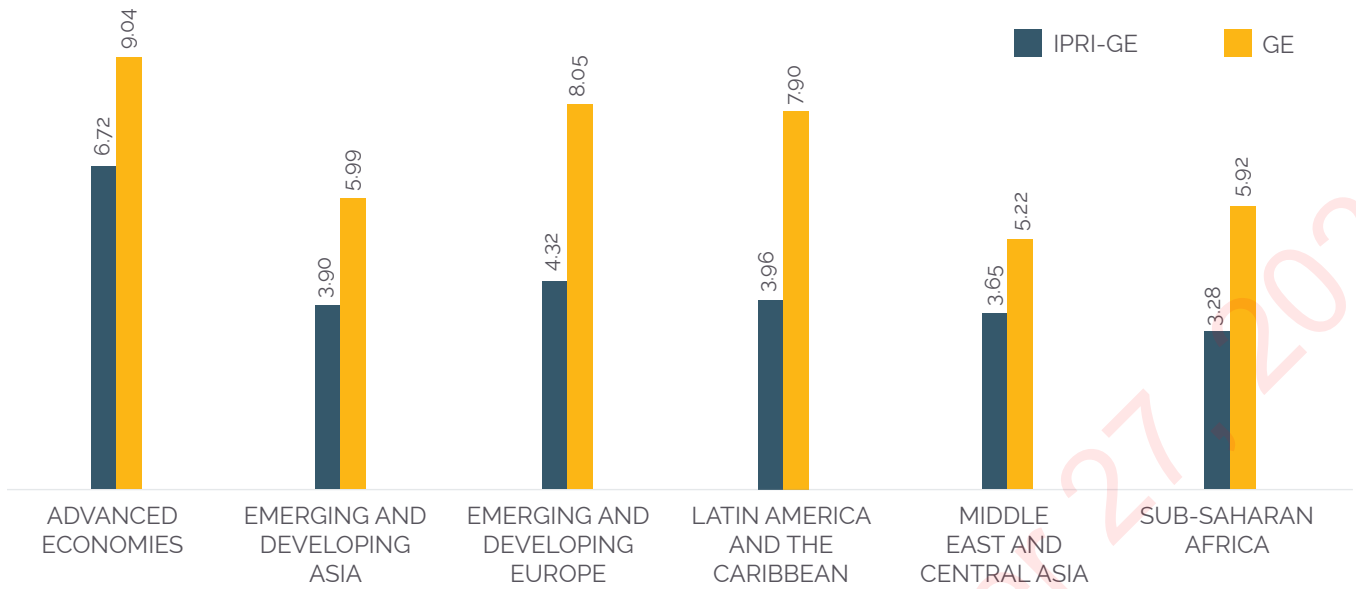
Figure 18c. 2023 IPRI-GE and GE. Regional and Development Groups Scores.

Chart data:
Group	IPRI-GE	GE
ADVANCED ECONOMIES	6.72	9.04
EMERGING AND DEVELOPING ASIA	3.90	5.99
EMERGING AND DEVELOPING EUROPE	4.32	8.05
LATIN AMERICA AND THE CARIBBEAN	3.96	7.90
MIDDLE EAST AND CENTRAL ASIA	3.65	5.22
SUB-SAHARAN AFRICA	3.28	5.92
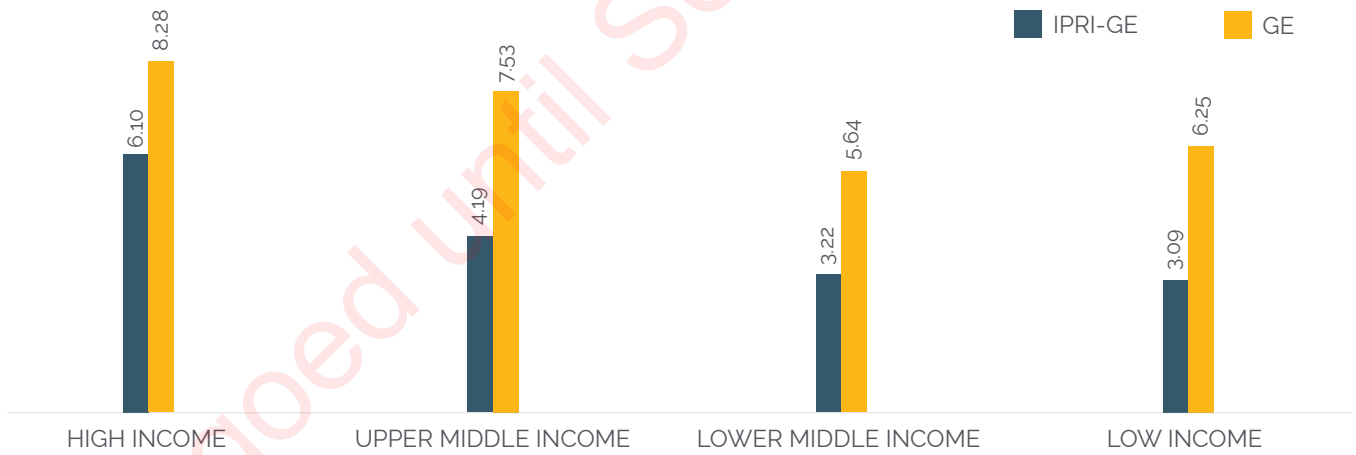
Figure 18d. 2023 IPRI-GE and GE. Income Groups Scores.

Chart data:
Group	IPRI-GE	GE
HIGH INCOME	6.10	8.28
UPPER MIDDLE INCOME	4.19	7.53
LOWER MIDDLE INCOME	3.22	5.64
LOW INCOME	3.09	6.25
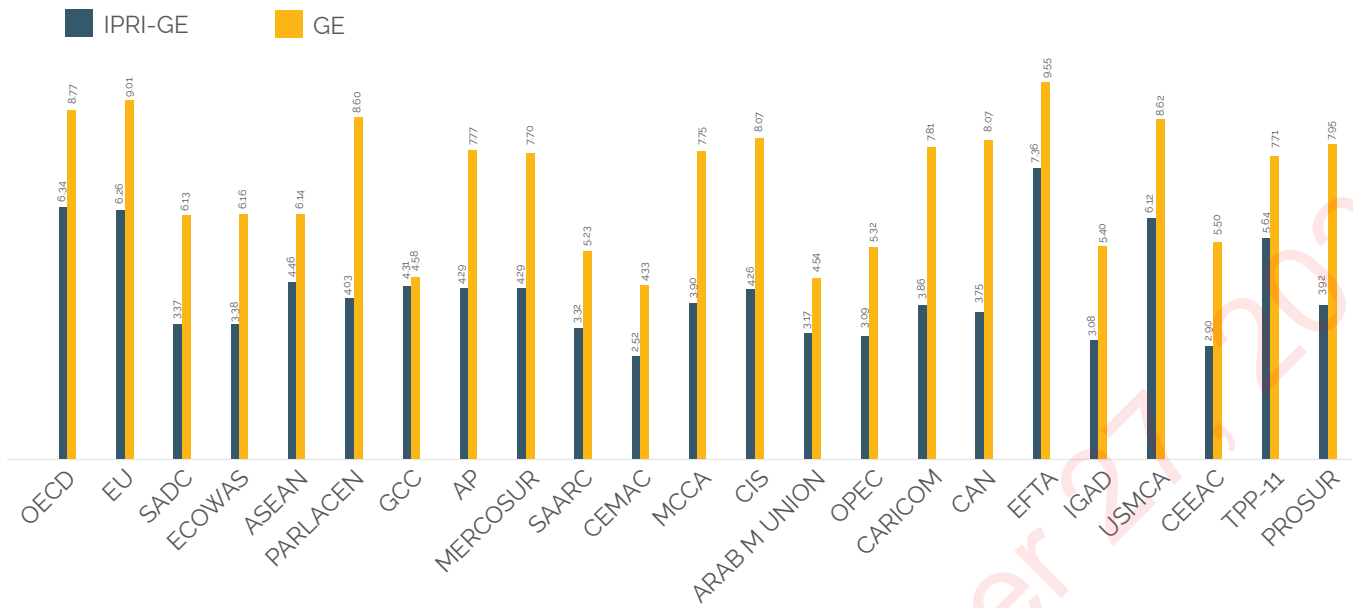
Figure 18e. 2023 IPRI-GE and GE. Integration Agreements Groups Scores.

Table 8 shows the 2023 IPRI-GE rankings by quintile for the 125 countries in the sample. As in the IPRI, the number of countries belonging to each quintile increases from the top 20% to the bottom 20% (1st quintile 15 countries, 2nd quintile 18 countries, 3rd quintile 24 countries, 4th quintile 29 countries, and 5th quintile 39 countries). Hence, the fourth and the fifth quintiles include 54.4% of the countries (68 countries) of the sample while the first three include 57 countries.

STRONG	TOP 20%	2ND QUINTILE	3RD QUINTILE	4TH QUINTILE	BOTTOM 20%
	FINLAND	ICELAND	URUGUAY	COLUMBIA	TURKEY
	SWEDEN	UNITED KINGDOM	ISREAL	THAILAND	SRI LANKA
	NETHERLANDS	CANADA	POLAND	NORTH MACEDONIA	BURKINA FASO
	NORWAY	JAPAN	QATAR	GREECE	HONDURAS
	NEW ZEALAND	FRANCE	CHINA	BAHRAIN	KENYA
	DENMARK	PORTUGAL	UNITED ARAB EMIRATES	GEORGIA	PARAGUAY
	AUSTRIA	CZECH REPUBLIC	PANAMA	INDIA	NEPAL
	AUSTRALIA	LITHUANIA	CROATIA	MOLDOVA	BENIN
	LUXEMBOURG	TAIWAN	COSTA RICE	SENEGAL	ECUADOR
	GERMAN	KOREA, REP.	JAMAICA	SAUDI ARABIA	MOZAMBIQUE
	SWITZERLAND	SPAIN	MALAYSIA	BRAZIL	TANZANIA
	UNITED STATES	MALTA	AZERBAIJAN	MEXICO	NICARAGUA
	SINGAPORE	LATIVA	HUNGARY	KAZAKHSTAN	BURUNDI
	BELGIUM	ITALY	RWANDA	PERU	ESWATINI
	IRELAND	SLOVENIA	SOUTH AFRICA	SERBIA	ALGERIA
		SLOVAKIA	ARMENIA	GHANA	BOLIVIA
		CPYRUS	CHILE	JORDAN	MALI
		ROMANIA	MONTENEGRO	ALBANIA	KUWAIT
			BRUNEI DARUSSALAM	MOROCCO	GABON
			BULGARIA	ARGENTINA	MADAGASCAR
			TRINIDAD AND TOBAGO	EL SALVADOR	IRAN
			BOTSWANA	VIETNAM	PHILIPPINES
			OMAN	RUSSIA	UGANDA
			DOMINICAN REPUBLIC	INDONESIA	ZIMBABWE
				UKRAINE	CÔTE D'IVOIRE
				MALAWI	EGYPT
				BOSNIA & HERZEGOVINA	ETHIOPIA
				ZAMBIA	LEBANON
				TUNISIA	PAKISTAN
					BANGLADESH
					NIGERIA
					ANGOLA
					CAMEROON
					CONGO, DEM. REP.
					HAITI
					CHAD
					MAURITANIA
					YEMEN, REP.
WEAK					VENEZUELA, BOL. REP.

Table 8. 2023 IPRI-GE Ranking by Quintiles.

7

2023 IPRI & TAXES

According to the OECD, property taxes are defined as those recurrent and non-recurrent taxes on the use, ownership or transfer of property. These include taxes on real estate or net worth, taxes on change of ownership by inheritance or gift, and taxes on financial and capital transactions. This indicator relates to the government as a whole (all levels of government) and is measured as a percentage of both GDP and total taxation (https://data.oecd.org/tax/tax-on-property.htm).

It is undeniable that property tax implies a constraint, a restriction to that property right. By virtue of the above, an adjustment to the IPRI for this concept is made to account for these impacts. We extend the IPRI using the data on property tax revenues as a % of total taxes revenues, from the OECD, as follows:

$$IPRI\text{-}PT = IPRI - ((IPRI/100)*PT))$$

Results show that on average the IPRI-PT score for these countries is 5.75% lower than its IPRI value, with some of them with a reduction over 10%. That is the case for South Korea (-15.1%), Canada (-11.92%), USA (-11.4%), UK (-11.36%), Israel (-11.17%), Luxembourg (-10.02%) and Australia (-10.07%) displaying the highest negative impact.

On the other hand, Czech Rep. (-0.58%), Lithuania (-0.92%), Slovakia (-1.34%), Austria (-1.46%), Slovenia (-1.65%), México (-1.8%) and Costa Rica (-1.98%) are countries showing a property tax impact of less than 2%.
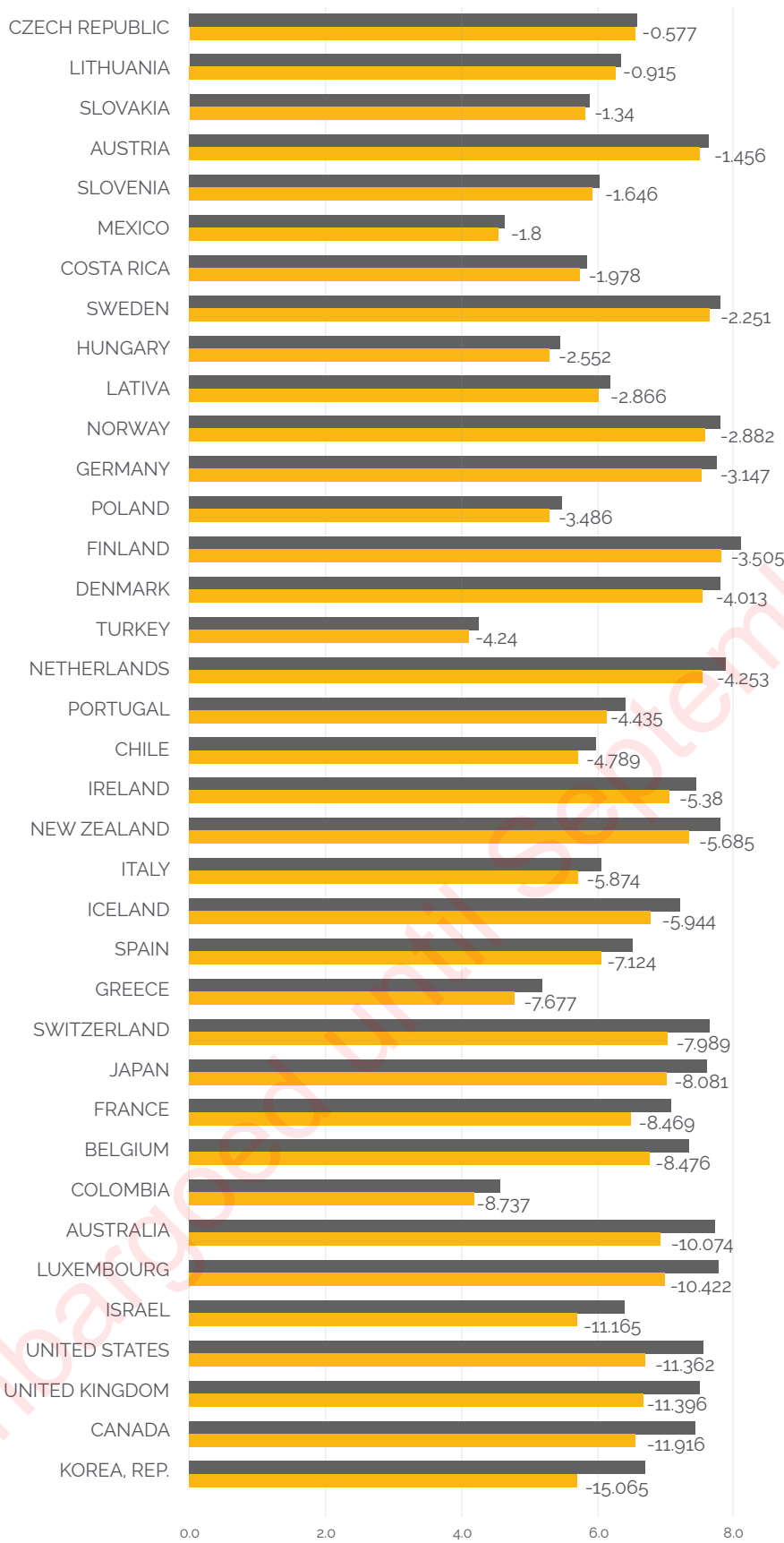
Figure 19. 2023 IPRI vs 2023 IPRI-PT. OECD Countries.Quintiles.

■	IPRI 2023
■	IPRI-PTax

8

2023 IPRI AND A PROMISSORY ECOSYSTEM

There's broad academic literature highlighting the relevant impacts between the respect for property rights and making strides of the quality of life of citizens, turning property rights into a fundamental piece of a virtuous ecosystem for human development. In light of the above, we examined different elements to assess conceivable relationships – using statistical correlations – with the IPRI, drawing empirically based conclusions.

Those measurements were gathered in three (3) dimensions:

1. Productive Drive

2. Socio-Political Dynamics

3. Future Trends' Oriented

We used the Pearson's Correlation Coefficient, which is a measure of the linear dependence between two variables, to evaluate their associations with the IPRI and its components. The tranches or correlation's ranges we use are as follow: None [0], Weak (0 - 0.3), Soft [0.3 - 0.5), Moderate [0.5 - 0.6), Good [0.6 - 0.8), Strong [0.8 – 1), Perfect [1].

I. PRODUCTIVE DRIVE

Seeking a broad and comprehensive approach to developing a virtuous and promising ecosystem, we started looking those elements grasping the productive drive the economy offers to their citizens. We included four categories to be evaluated (source details in Appendix IV):

» **Production:** using the Gross Domestic Product (GDP) in constant USD (2015=100) *per capita* terms; and also adjusted by the Gini Coefficient to capture income inequality (Data Source: World Bank and UN DESA).

» **Composition of Production:** Using the Economic Complexity Index (Trade) which asseses the diversity and sophistication of the productive capabilities embedded in the exports of each country that require a high level of knowledge (Data Source: MIT Media Lab, The Observatory of Economic

Complexity, 2021. https://oec.world/en/rankings/eci/hs6/hs07?tab=table).

» **Investment:** Using a) for Domestic Investment the Gross Capital Formation in current per capita terms, which consists of outlays in addition to the fixed assets of the economy plus net changes in the level of inventories (Data Source: World Bank and UN DESA); and b) for Investment Environment: The Venture Capital and Private Equity Country Attractiveness, The index that measures the attractiveness of countries for investors in the venture capital (VC) and private equity (PE) asset classes, providing the most up-to-date aggregated information on the quality of the investment environment and an assessment of the ease of transaction-making (Data Source: IESE Business School, A. Groh, H. Liechtenstein, K. Lieser and M.

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5. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It was calculated without making deductions for depreciation or for depletion and degradation of natural resources.

6. The Gini coefficient is a statistical measure of the degree of variation represented in a set of values.

| PRODUCTIVE DRIVE | | | | | |
| PRODUCTION | | INVESTMENT | | COMPOSITION | ENTREPRENEURSHIP |
GDP PER CAPITA (CONSTANT 2015 US$)	GDP PER CAPITA (CONSTANT 2015 US$) *GINI	GROSS CAPITAL FORMATION PER CAPITA (CURRENT US$)	THE VENTURE CAPITAL AND PRIVATE EQUITY COUNTRY ATTRACTIVENESS	ECONOMIC COMPLEXITY INDEX (TRADE)	GLOBAL ENTREPRENEUR SHIP INDEX
IPRI	0.8385	0.8262	0.8309	0.8178	0.7711	0.9001
LP	0.8121	0.7902	0.8108	0.7514	0.7205	0.8512
PPR	0.7983	0.7897	0.7949	0.7637	0.7094	0.8497
IPR	0.7567	0.7830	0.7343	0.8242	0.7821	0.8446

Table 9. Pearson's Correlation Coefficients.

Biesinger: https://blog.iese.edu/vcpein-dex/).

» ***Entrepreneural Ecosystem:*** Using the Global Entrepreneurship Index of GEDI that measures the health of the entrepreneurship ecosystems in countries, and ranks the performance of these countries against each other, providing a picture of how each of them performs in both the domestic and international context (Data Source: The Global Entrepreneurship and Development Institute. http://thegedi.org/global-entrepreneurship-and-development-index/).

We found that correlations among these variables and the IPRI and its components were significant and relevant[7] and the direction of the correlations were as expected. (See Table 9).

For Production, we found GDP *per capita* and the GDP adjusted by Gini Coefficient show strong correlations with the IPRI and the IPRI components, while good correlation for PPR and IPR. The LP component correlation is strong for GDP, while good when adjusted by the Gini coefficient.

Domestic investments showed strong correlations with the IPRI and LP component while good correlations with PPR and IPR compo-

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7. Correlation theory is aimed to show the possible relationship, association or dependence between two or more observed variables. Besides it allows for the analysis of the type of association (direct or indirect) and the level or degree of intensity between them.

PRODUCTION | **INVESTMENT** | **COMPOSITION** | **ENTREPRENEURSHIP**

110,000 — $R^2 = 0.7031$

4,000,000 — $R^2 = 0.6826$

30,000,000 — $R^2 = 0.6904$

120 — $R^2 = 0.5946$

2,50 / 0 / -2,5 — $R^2 = 0.6689$

100 — $R^2 = 0.8101$

- ● IPRI vs GDP pc
- ● IPRI vs GDP pc-GINI
- ● IPRI vs GKF pc
- ● IPRI vs The Venture Capital and Private Equity Country Attractiveness
- ● IPRI vs ECI
- ● IPRI vs GEI

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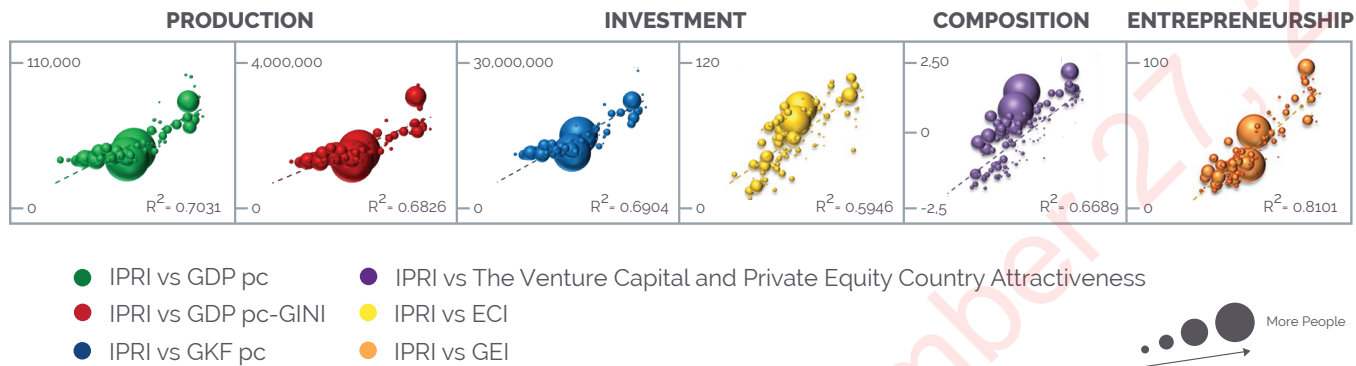
Figure 20a. Productive Drive and IPRI Correlations (Including Demographic Impact).

nents. Investment Environment showed strong correlations with the IPRI and the IPR component, while good correlations with LP and PPR components.

The Complexity of Production showed good correlations with the IPRI and all its components and the Entrepreneural Ecosystem showed strong correlations with the IPRI and all its components.

All the items included showed significant results, pointing to property rights as a building blocks of a robust and dynamic economy.

Figures 20a and 20b show the best-fit curve for the IPRI and its components with each element considered for productive drive analysis and the coefficients of determination[8] (R2). Figure 20a displays the relationship with a demographic perspective. The proportion of population is represented by the radius of each circle.

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8. The coefficient of determination (R2) represents the proportion of the variance in the dependent variable that is predictable from the independent variable. It ranges from 0 to 1.
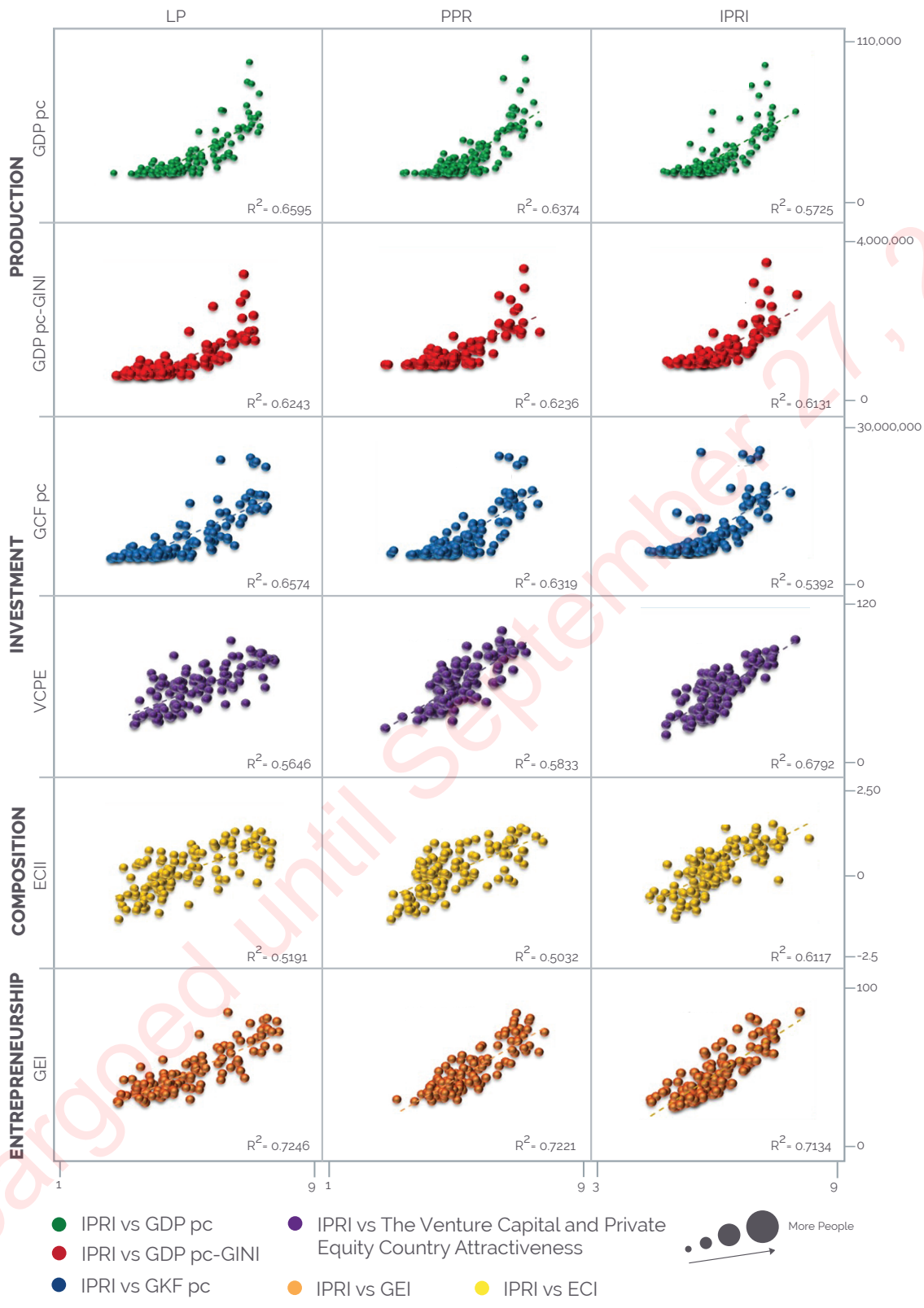
Figure 20b. Economic Drive and IPRI Components' Correlations.
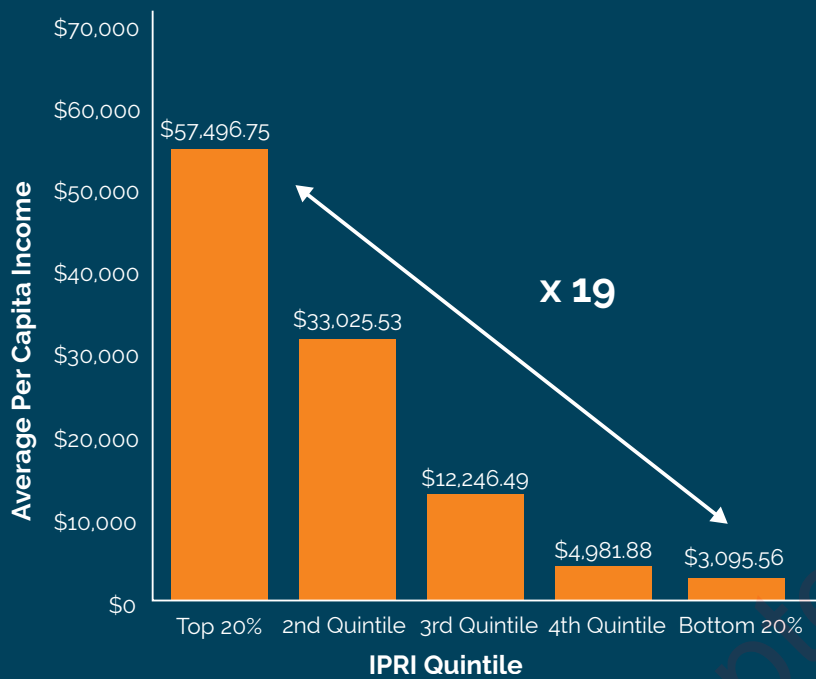
Figure 20c: Average Income per capita by 2023-IPRI Quintiles.

Figure 20c shows that, on average, countries in the top quintile of IPRI scores (i.e. top 20%) show a *per capita* income of 19 times that of the countries in the bottom quintile. That disparity reduced from last year when it was 21 times, and goes back to the difference showed in 2021. Statistics are based on the averages of 2023-IPRI scores and corresponding data on average GDP *per capita* in USD constant terms (2015=100, source: World Bank data) for the last available year. These results reinforce the significant and positive relationship between prosperity and a property rights system.

II. SOCIO-POLITICAL DYNAMICS

Problem solving in society is a collective effort that requires sustained cooperation among many different types and groups of people. More and more our citizens demand opportunities to achieve their dreams, to have their rights respected and to be beneficiaries of the advances of humanity, wherever they are generated. With this in mind, we assessed the relationship of the IPRI and its components with five elements:

» **Impunity:** As and antonym or opposite of accountability, impunity is a negative attribute to a sociopolitical environment discouraging positive behavior while not disapproving or punishing the negative ones. We used the Atlas of Impunity data which is intended to draw attention to abuses of power and press policymakers for change. (Data Source: David Miliband, the Chicago Council on Global Affairs & Eurasia Group's Geostrategy, Atlas of Impunity https://www. eurasiagroup.net/live-post/atlas-of-impunity-2023)

» **Social Mobility:** Social Mobility refers to change in a person's socio-economic situation, either in relation to their parents (inter-generational mobility) or throughout their lifetime (intra-generational mobility). Generally it is measured by income, education and health. We used the The World Economic Forum's Global Social Mobility Index identifying areas for improving social mobility and promoting equally shared opportunities for the entirety of their citizens, regardless of their development stage. (Data Source: World Economic Forum 2020 http:// www3.weforum.org/docs/Global_Social_ Mobility_Report.pdf)

» **Global Mobility:** Mobility rights or the right to travel is a human rights concept encompassing the right of individuals to travel from place to place within the territory of a country, and to leave the country and return to it. To grasp it we chose The Henley Passport Index that ranks countries according to travel freedom for their citizens, that is, according to the number of countries their citizens can travel to visa-free. (Data Source: Henley & Partners Holding Ltd. https://www.henley-global.com/passport-index)

» **Social Capital:** Social Capital has different definitions, but it is generally understood as the network of relationships among people who live and work in a particular society, enabling it to function effectively; or as the group of norms and bonds that allow collective social action. It is built upon trust, reciprocity, cooperation, assistance, support, interdependence, interaction, dialogue, involvement and participation (Jaffé, Levy-Carciente & Zanoni, 2007). To grasp this concept we used the Social Capital sub-index of the Prosperity Index by Legatum that measures the countries' performance in two areas: social cohesion and engagement, and community and family networks. (Data Source: Prosperity Index by Legatum http:// www.li.com)

» **Philanthropy:** Philanthropy is defined as a form of altruism, consisting of private initiatives for the public good. It is very important for providing opportunities and has the power to influence lasting social change. This way it is considered as one of the cornerstones of a stable society. To grasp it we used The Global Philanthropy Environment Index (GPEI) which serves to inform

the development of philanthropic environments across economies by providing rigorous, comparative international data that can raise awareness and understanding of the best strategies to create a more enabling environment for philanthropy globally. (Data Source: IUPUI Indiana University, Lilly Family School of Philanthropy: https://globalindices.iupui.edu/environment-index/index.html)

We found, as expected, negative, very strong correlations of the IPRI, the LP, and IPR component with Impunity and good correlations of the PPR component. Same, while as expected, positive, with Social Mobility. Philanthropy enabling environments showed good correlations with the IPRI and all its components. And Global Mobility and Social Capital showed good correlations with the IPRI, LP, and IPR component, and moderate with the PPR component.

	SOCIO-POLITICAL DYNAMICS				
	IMPUNITY	SOCIAL MOBILITY	GLOBAL MOBILITY	SOCIAL CAPITAL	PHILANTHROPY
	ATLAS OF IMPUNITY	GLOBAL SOCIAL MOBILITY INDEX	HENLEY PASSPORT INDEX	LEGATUM PROSPERITY INDEX	THE GLOBAL PHILANTHROPY ENVIRONMENT INDEX
IPRI	-0.8711	0.8688	0.7567	0.6731	0.7954
LP	-0.9125	0.8749	0.7652	0.6821	0.7734
PPR	-0.7173	0.7705	0.5940	0.5841	0.7241
IPR	-0.8253	0.8115	0.7811	0.6378	0.7535

Table 10. Pearson's Correlation Coefficients.

IMPUNITY   SOCIAL MOBILITY   GLOBAL MOBILITY   SOCIAL CAPITAL   PHILANTHROPY

$R^2 = 0.7589$ $R^2 = 0.7548$ $R^2 = 0.5725$ $R^2 = 0.4531$ $R^2 = 0.6320$

- IPRI vs Atlas of Impunity (AOI)
- IPRI vs Global Social Mobility Index (GSMI)
- IPRI vs Henley Passport Index (HPI)
- IPRI vs Social Capital Legatum (SCL)
- IPRI vs The Global Philanthropy Environment Index (GPEI)

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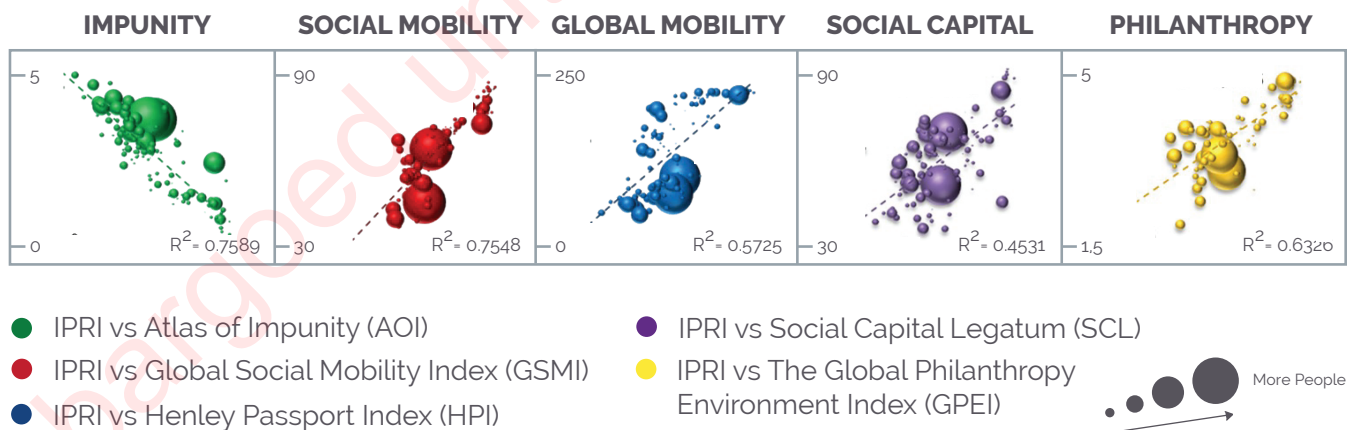
Figure 21a. Socio-Political Dynamics and IPRI Correlations (w/ demographic incidence).
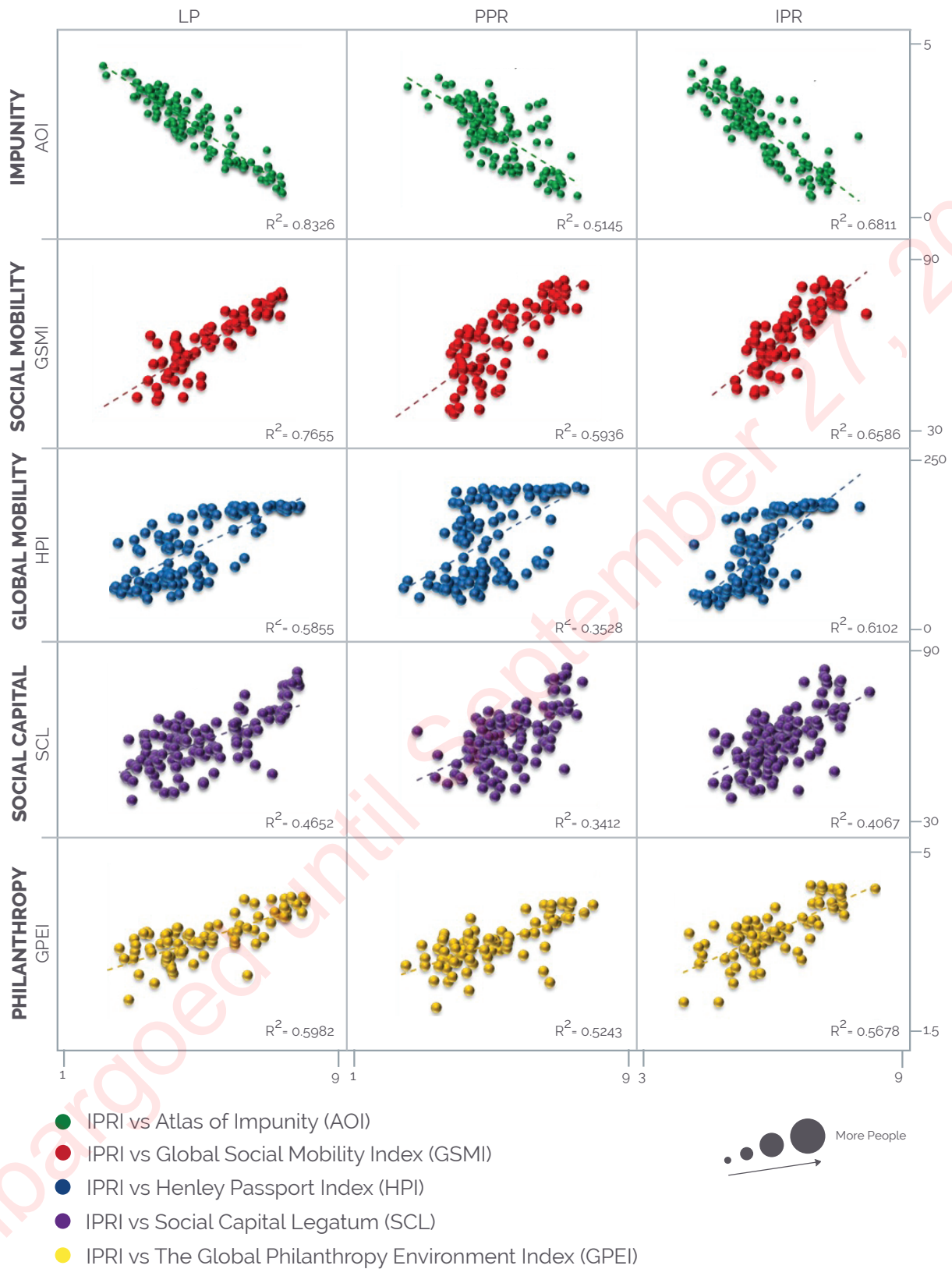
Figure 21b. Socio-Political Dynamics and IPRI Components' Correlations.

III. FUTURE TRENDS' ORIENTED

Living in times of accelerated and vertiginous changes demands us to evaluate the appropriateness and relevance of property rights systems for this emerging society. With this in mind, we examined the relationship of the IPRI and its components with six elements:

» **Openness to ICT:** Information and Communications Technology (ICT) has dramatically changed how people interact in society and has shown potential for economic growth and social well-being. To grasp the openness to ICT we used The Networked Readiness Index that measures the propensity for countries to exploit the opportunities offered by information and communications technology. (Data Source: Soumitra Dutta and Bruno Lanvin, 2022. The Networked Readiness Index. Portulans Institute. https://networkreadinessindex.org/wp-content/uploads/reports/nri_2022.pdf)

» **Innovation Capacity:** Given the positive relationship between innovation and development, it is important to grasp the capacity of its ecosystem environment. For this element we used The Global Innovation Index to capture innovation ecosystem performance and track the most recent global innovation trends.(Data Source: WIPO, 2022, The Global Innovation Index https://www.globalinnovationindex.org/Home)

» **Openness to AI:** As Artificial Intelligence (AI) is promising to improve efficiency, ensuring fairer access, and enhancing experience, there are foundations needed to integrate AI using it with responsibility. To measure this element we used The Oxford Insights Government AI Readiness Index 2022 which seeks to grasp how ready governments are to implement AI for delivering public services.   (Data Source: Rogerson A., E. Hankins, P. Fuentes N. and S. Rahim, 2022. Government AI Readiness Index, Oxford Insights. https://www.oxfordinsights.com/government-ai-readiness-index-2022)

» **Environmental Sustainability:** This is of increasing relevance, and it refers to the ability to maintain an ecological balance in our planet's natural environment and conserve natural resources to support the wellbeing of current and future generations. To take this element into account we used The Green Future Index that measures the extent to which countries and territories are moving toward a green future by reducing their carbon emissions, developing clean energy, innovating in green sectors, and preserving their environment, as well as the degree to which governments are implementing effective climate policies. (Data Source: MIT Technology Review, Morgan Stanley, Citrix, and Iris Ceramica Group. The Green Future Index: https://www.technologyreview.com/2023/04/05/1070581/the-green-future-index-2023/)

» **Energy Performance:** Energy is an essential aspect for economic growth and development, so the reliability and quality of its sources is of vital importance. To grasp this aspect we used The World Energy Trilemma Index which provide insights into a country's relative energy performance with regards to Energy Security, Energy Equity and Environmental Sustainability, highlighting chal-

	FUTURE TRENDS' ORIENTED					
	OPENNESS TO ICT	INNOVATION CAPACITY	OPENNESS TO AI	ENERGY PERFORMANCE	ENVIRONMENTAL SUSTAINABILITY	RISK ALERT
	NETWORK READINESS INDEX	GLOBAL INNOVATION INDEX	GOVERNMENT AI READINESS INDEX	WORLD ENERGY TRILEMMA INDEX	GREEN FUTURE INDEX	INFORM
IPRI	0.8920	0.8725	0.8519	0.8041	0.7632	-0.7936
LP	0.8398	0.8089	0.7943	0.7755	0.7762	-0.8192
PPR	0.8229	0.7880	0.8028	0.7267	0.6171	-0.7126
IPR	0.8746	0.8813	0.8306	0.7669	0.7635	-0.6924

Table 11. Pearson's Correlation Coefficients.

lenges and opportunities for improvements in meeting energy goals now and in the future. (Data Source: World Energy Council and Oliver Wyman, The World Energy Trilemma Index https://www.worldenergy.org/publications/entry/world-energy-trilemma-index-2022)

» **Risk Alert:** Given the interconnectedness of our world, proactive and coordinated actions are a must to anticipate and mitigate negative impacts of crises. To measure this element we used the INFORM Index which identifies countries at a high risk of humanitarian crises and are more likely to require international assistance. The index is based on risk concepts and envisages three dimensions: Hazards & Exposure, Vulnerability, and Lack of Coping Capacity.

The robustness of a property rights system shows relevant and positive relationships with those features of the emerging society, and it was to be expected, since it is a guarantee that

OPENNESS TO ICT	INNOVATION CAPACITY	OPENNESS TO AI	ENERGY PERFORMANCE	ENVIRONMENTAL SUSTAINABILITY	RISK ALERTNESS
100 ... 0	70 ... 0	90 ... 0	90 ... 20	7 ... 2	9 ... 0
R^2= 0.7956	R^2= 0.7612	R^2= 0.7257	R^2= 0.6466	R^2= 0.5824	R^2= 0.6297

● IPRI vs Network Readiness Index (NRI)
● IPRI vs Global Innovation Index (GII)
● IPRI vs Government AI Readiness Index (GAIRI)

● IPRI vs World Energy Trilemma Index (WETI)
● IPRI vs Green Future Index (GFI)
● IPRI vs INFORM Index for Risk Management

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Figure 24a. Future Trends' Oriented and IPRI Correlations (w/demographic incidence).

is offered to the innovative efforts to improve the living conditions of the population.

All the elements we measured showed strong or good correlations. Standing out were the results of Openness to ICT, showing strong correlations for the IPRI and all components. The innovative capacity displayed strong results for the IPRI and components, except for PPR which was a good correlation. Openness to AI showed strong results for the IPRI and components, except for LP which was a good correlation.

Energy Performance correlations' results were strong for IPRI and good for all the components, while Environmental Sustainability, showed good correlations for the IPRI and components.

As expected, Risk Alerts showed negative correlations, strong for LP and good for IPRI and the other two components.
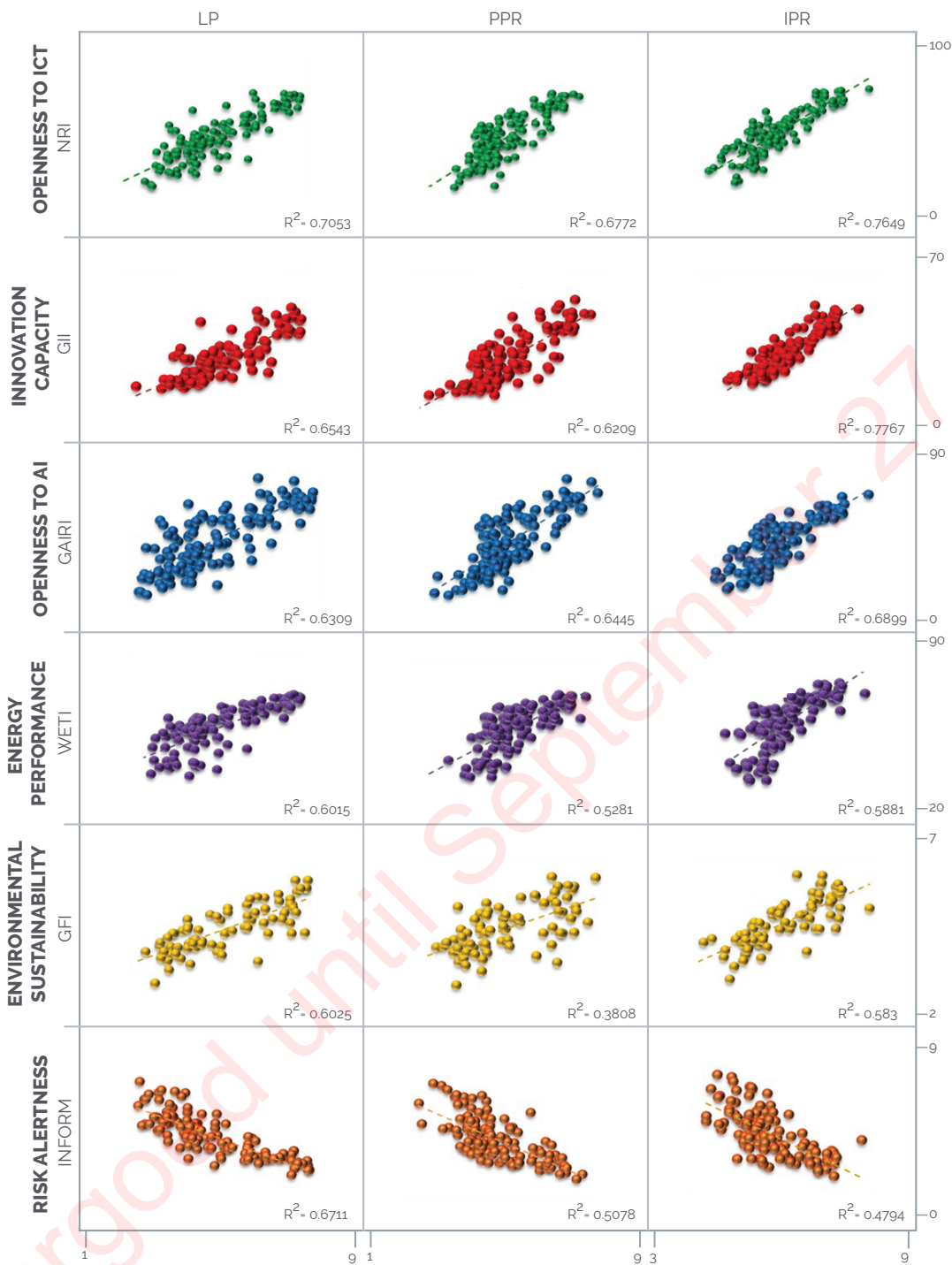
Figure 24b. Future Trends' Oriented and IPRI Components' Correlations.

9

CLUSTER'S ANALYSIS

Cluster analysis is useful for gathering similar entities into groups. It classifies individuals into groups as homogeneous as possible based on pre-defined variables. We performed a cluster analysis for all the 125 countries according to the IPRI components' scores (LP, PPR, IPR). Additionally, we included illustrative variables that do not influence the formation of the cluster but will bring an important contribution to describe them. Those variables were the ones we used to calculate correlations (Section VIII),

mainly to expose conditions or features in the resulting clusters.

In order to seize the variability in the analysis – given the great differences among countries in the IPRI – we used Ward's Method with squared Euclidean distance that groups countries with minimal loss inertia. We applied a Principal Component Analysis (PCA) for handling variables by factors, given the high correlation among them.

I.   CLUSTER ANALYSIS WITH IPRI COMPONENTS

The results of the PCA express that the three components of the IPRI (LP, PPR, and IPR) define a dimension called IPRI, which collects 89.15% of the inertia. The second and third factors – with inertias of 6.6% and 4.25% respectively – are the residue of the inertia. These latest factors do not contribute to the first factor inertia and are generally very close to the origin of the first factor. They could be subdivided into groups

more associated to the PPR dimension, defining the second factor, and those more associated to LP and IPR defining the third factor.

Next, we used the mobile centers algorithm to show inertia within groups and the criteria to decide the optimal number of classes or clusters (Table 12).

CLUSTER	INERTIA	COUNTRIES	DISTANCE OF CENTROIDS TO ORIGIN	COORDINATES OF CENTROIDS		
				FACTOR 1	FACTOR 2	FACTOR 3
Between-clusters	2.28520					
Within cluster						
Cluster 1/3	0.26320	48	2.46540	-1.57000	-0.01000	0.01000
Cluster 2/3	0.33750	52	0.04760	0.22000	-0.03000	-0.02000
Cluster 3/3	0.11410	25	6.59330	2.57000	0.07000	0.03000

Table 12. Cluster Analysis.

The analysis showed that the three clusters were sufficient to explain the grouping of countries; more specifically, the observed inertia within each group does not exceed the inertia among groups. Clusters' members are as shown in Table 13 and illustrated in Figure 23.

Although the first factor contains 89.15% of inertia, which is enough to illustrate the formation of the clusters, Fig. 23 illustrates Factors 1 and 2 as well as the three clusters' centroids (yellow). The size of the centroid depends on the number of countries in the cluster.

Cluster 1 displays countries (green) located in the negative coordinates of the first factor; this includes countries with low values of the LP, PPR and IPR. Cluster 2 includes countries (red) placed close to the origin, showing average values of the LP, PPR and IPR. Cluster 3 (blue) contains countries located in the positive coordinates of the first factor, and its members are linked to high values of the LP, PPR and IPR.

The second factor consists mostly of countries in Cluster 2, including those whose scores are very close to the average neighboring between Cluster 2 and Cluster 1, and those neighboring Cluster 2 and Cluster 3. Cluster 1 and Cluster 3 are outright opposites, and their individuals are not directly associated with each other.

Besides the clusters, Fig. 23 also shows the contribution of each country explaining their in-

ertia gathered by the factors: the bigger the dot size representing the country, the higher its contribution. Closeness of countries is an indication of their similarity, while increasing distances show the opposite.

In the central circle are those countries that have no-statistically significant contribution to the definition of the factors, and, as it has already been mentioned, they are close to the average and are mostly members of Cluster 2. In addition, arrows represent each of the three dimensions of the IPRI. Their definite direction indicates the direct relationship with the individuals, i.e. as countries are in the same direction of the vector, countries tend to have a higher relationship with this dimension; and as a country's direction diverts from the vector, its relationship decreases to the point of being contrary to it.

Subsequently, clusters' composition using income, population, participation in economic and regional integration agreements, and regional and development criteria are shown in Fig. 24 a-d, where font size represents the frequency of the groups in the cluster. The analysis of each cluster can describe the internal characteristics of the countries within it. In this regard, Table 14 exhibits the features that are statistically significant in each group. Additional statistics are shown Appendix V, VI and VII.

COUNTRIES				
CLUSTER 1		CLUSTER 2		CLUSTER 3
GABON	PARAGUAY	SOUTH AFRICA	TUNISIA	BELGIUM
CÔTE D'IVOIRE	BOLIVIA	MONTENEGRO	MALTA	JAPAN
UKRAINE	EGYPT	POLAND	MOROCCO	CANADA
RUSSIA	PERU	JAMAICA	KAZAKHSTAN	AUSTRALIA
PAKISTAN	ZIMBABWE	INDIA	MOLDOVA	GERMANY
IRAN	NIGERIA	BULGARIA	LATIVA	IRELAND
BANGLADESH	TANZANIA	PANAMA	DOMINICAN REPUBLIC	LUXEMBOURG
MADAGASCAR	BRAZIL	JORDAN	HUNGARY	AUSTRIA
MOZAMBIQUE	COLUMBIA	ARMENIA	KENYA	UNITED KINGDOM
HONDURAS	ALBANIA	RWANDA	ROMANIA	NETHERLANDS
BOSNIA AND HERZEGOVINA	BURUNDI	COSTA RICA	SERBIA	SWEDEN
MALI	LEBANON	SLOVAKIA	BAHRAIN	NORWAY
BURKINA FASO	CONGO, DEM. REP.	GEORGIA	GREECE	NEW ZEALAND
ECUADOR	TURKEY	INDONESIA	CHINA	SWITZERLAND
ARGENTINA	CHAD	CYPRUS	LITHUANIA	DENMARK
BENIN	ETHIOPIA	CROATIA	OMAN	FRANCE
EL SALVADOR	NORTH MACEDONIA	TRINIDAD AND TOBAGO	SAUDI ARABIA	SINGAPORE
UGANDA	MALAWI	SRI LANKA	URUGUAY	KOREA, REP.
ZAMBIA	NEPAL	CHILE	MALAYSIA	ICELAND
CAMEROON	ANGOLA	SLOVENIA	AZERBAIJAN	FINLAND
ALGERIA	MAURITANIA	SENEGAL	ITALY	CZECH REPUBLIC
VIETNAM	HAITI	KUWAIT	MEXICO	SPAIN
NICARAGUA	YEMEN, REP.	THAILAND	UNITED ARAB EMIRATES	TAIWAN
PHILIPPINES	VENEZUELA, BOL. REP.	BOTSWANA	PORTUGAL	ISRAEL
		GHANA	BRUNEI DARUSSALAM	UNITED STATES
		KINGDOM OF ESWATINI	QATAR	

Table 13. Clusters' Members.

Factor 2 - 6.60%
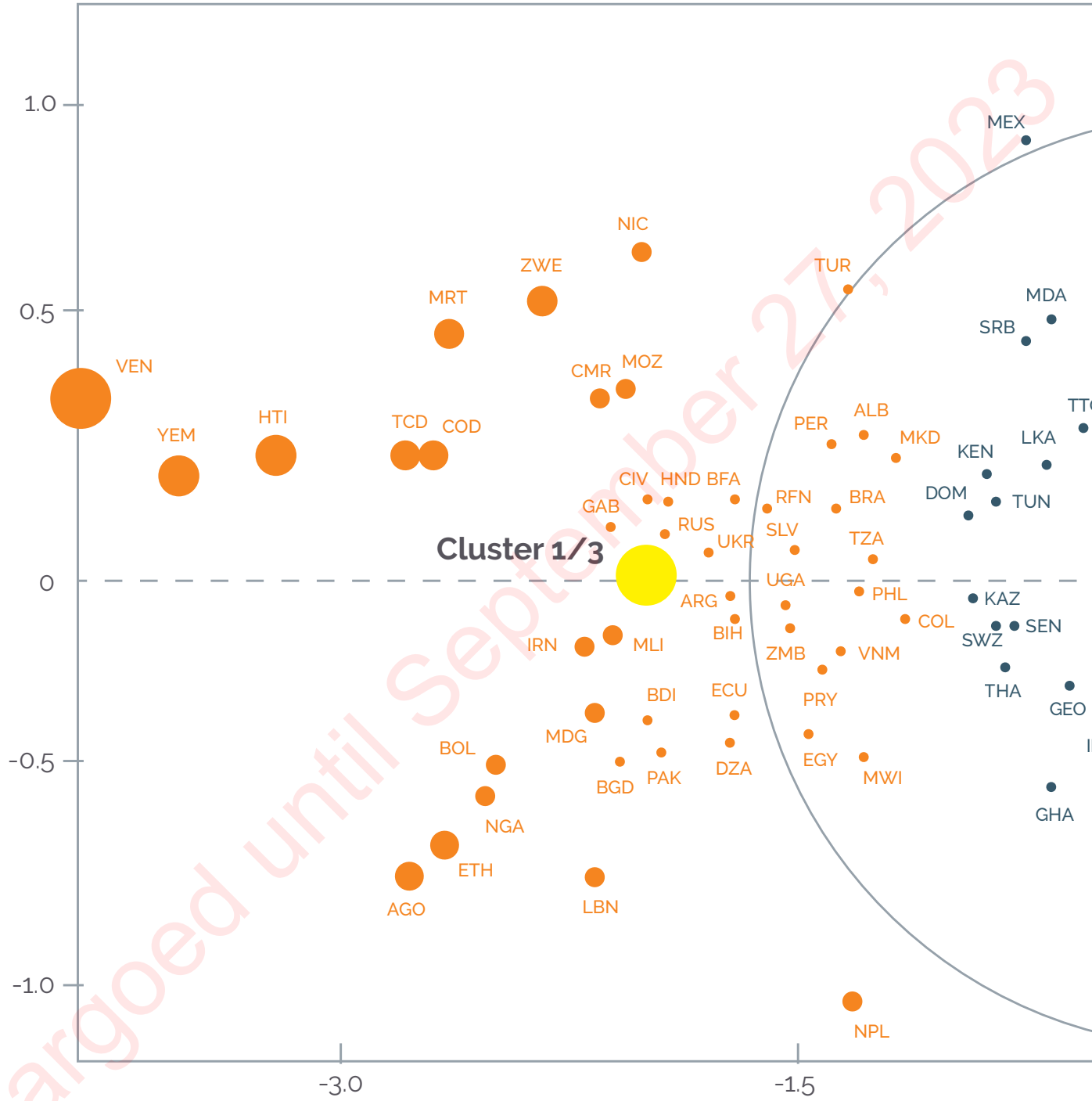
Figure 23. Clusters' Members and Centroids. (w/ IPRI components)

Cluster 2/3

Cluster 3/3

GRC HUN CHN IPR ITA
PRT
BGR MAR FRA USA
HRV GBR
PAN POL ESP IRL AUT
ISR SWE
MYS KOR DEU
CZE BEL AUS
SVN NLD
SVK
MLT JPN SGP
IND MNE CRI LVA LTU LUX
AZE CYP
LP URY NOR
JOR CHL NZL
CHL OMN DNK
RWA BWA BHR
SAU ISL CHE
KWT PPR FIN
BRN ARE QAT TWN

Cut "a" of the tree into 3 clusters

●	CLUSTER 1/3	48
●	CLUSTER 2/3	52
●	CLUSTER 3/3	25

0   1.5   3.0

Factor 1 - 89.15%

Low Income

Upper Middle Income

Lower Middle Income

Cluster 1

Low Income

Lower Middle Income

High Income

Upper Middle Income

Cluster 2

High Income

Cluster 3

Figure 24a. Clusters' Composition by Income Classification.

Emerging and Developing Asia

Latin American and the Caribbean

Sub-Saharan Africa

Emerging and Developing Europe

Middle East and Central Asia

Cluster 1

Sub-Saharan Africa

Emerging and Developing Europe

Advanced Economies

Middle East and Central Asia

Latin America and the Caribbean

Emerging and Developing Asia

Cluster 2

Advanced Economies

Cluster 3

Figure 24b. Clusters' Composition by Regional and Development Criteria.

Cluster 1
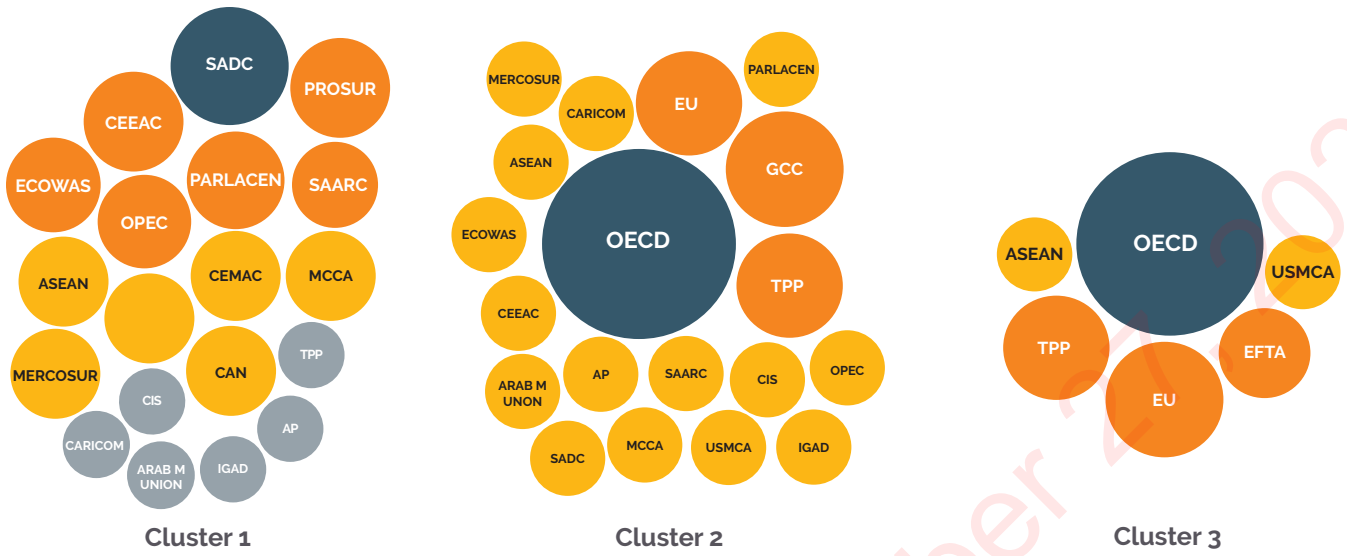
Cluster 2

Cluster 3

Figure 24c. Clusters' Composition by Economic and Regional Integration Agreements.

2,486,465

3,926,592

974,549

Cluster 1

Cluster 2

Cluster 3

Figure 24b. Clusters' Composition by Regional and Development Criteria.

CLUSTER 1			CLUSTER 2			CLUSTER 3		
Characteristic Variables	Test-Value	Probability	Characteristic Variables	Test-Value	Probability	Characteristic Variables	Test-Value	Probability
INFORM	7.36	0.000	LP	1.40	0.080	IPRIGE	8.96	0.000
AOI	7.13	0.000	ECI	1.36	0.088	GDPPC	8.95	0.000
POPUL	-0.35	0.362	PPR	1.19	0.118	GKFPC	8.76	0.000
GEN	-3.74	0.000	WETI	1.15	0.124	GEI	8.73	0.000
GPEI	-4.82	0.000	IPR	0.91	0.181	GDPGINI	8.56	0.000
SCL	-4.87	0.000	GAIRI	0.89	0.187	IPR	8.50	0.000
GSMI	-4.90	0.000	POPUL	0.85	0.198	GII	8.29	0.000
GDPGINI	-5.28	0.000	HPI	0.53	0.296	PPR	8.14	0.000
GFI	-5.28	0.000	IPRIGE	0.37	0.355	LP	8.12	0.000
GKFPC	-5.54	0.000	VCPE	0.33	0.370	NRI	7.89	0.000
GDPPC	-5.60	0.000	NRI	0.25	0.401	GAIRI	7.74	0.000
HPI	-6.03	0.000	GEI	-0.53	0.300	VCPE	7.28	0.000
GII	-6.37	0.000	GFI	-0.63	0.264	SCL	6.70	0.000
WETI	-6.59	0.000	SCL	-0.65	0.259	HPI	6.64	0.000
VCPE	-6.62	0.000	GII	-0.67	0.250	GPEI	6.64	0.000
ECI	-6.65	0.000	GEN	-0.71	0.238	GSMI	6.46	0.000
GEI	-6.76	0.000	AOI	-0.98	0.164	ECI	6.39	0.000
NRI	-6.91	0.000	GEPI	-1.59	0.055	WETI	6.31	0.000
GAIRI	-7.05	0.000	GKFPC	-1.66	0.048	GFI	5.75	0.000
IPRIGE	-7.75	0.000	GDPGINI	-1.66	0.048	GEN	5.42	0.000
PPR	-7.89	0.000	GDPPC	-1.68	0.047	POPUL	-0.62	0.269
IPR	-7.91	0.000	GSMI	-1.76	0.039	INFORM	-5.83	0.000
LP	-8.10	0.000	INFORM	-2.60	0.005	AOI	-7.56	0.000

Statistically significant only if Value-Test ≥ 1.96

Table 14. Clusters' Illustrative Variables Stats.

I. CLUSTER DESCRIPTION

CLUSTER 1
Cluster 1 is composed of 48 countries with a combined population of more than 2.4 billion people. The closest country to its centroid is Gabon, followed by Côte d'Ivoire, Ukraine, Russia and Pakistan. The Bolivarian Rep. of Venezuela is by far the most remote country of the cluster's centroid, followed by Rep. of Yemen, Haiti, Mauritania and Angola.

A close look at Cluster 1 countries' coordinates reveals that Colombia is the closest to the Cluster 2 centroid. Looking simultaneously at Cluster 1 and Cluster 2, the closest countries from Cluster 1 to Cluster 2 are North Macedonia to Kenya, Tanzania to Dominican Republic and Colombia to Kazakhstan, meaning similarity in conditions (see Fig. 23).

Countries in Cluster 1 are statistically significant for low scores (under overall mean) in LP, PPR and IPR components. The same is true for the IPRI-GE. Countries of Cluster 1 also show under overall average levels in all the dimensions we analyzed; that is, they show poor performances in Productive Drive, Socio-Political Dynamics and Orientation to Future Trends. This is the result of a lack of policies or inappropriate ones to improve key elements for progress and development.

Using the Regional and Development Criteria of the IMF and the Income Criteria of the World Bank, the Sub-Saharan Africa group (19/26), Latin America and the Caribbean (12/20) and Low Income (12/13) and Lower-Middle Income (23/32) countries are highly represented in this cluster. The Southern African Development Community (8/11) is the prevalent integration agreement in this cluster, followed by The Forum for the Progress and Development of South America (6/6), Communauté Economique des Etats de l'Afrique Centrale (6/7 members), The Organization of the Petroleum Exporting Countries (6/9), the Economic Community Of West African States (5/7), Andean Community (4/4) and Communauté Économique & Monétaire de l'Afrique Centrale (3/3).

CLUSTER 2
Cluster 2 is composed of 52 countries with a combined population of more than 3.9 billion people. The closest country to its centroid is South Africa, followed by Montenegro, Poland, Jamaica and India. Qatar is the farthest country from the centroid, followed by Brunei Darussalam, Portugal, United Arab Emirates and Mexico. Figure 23 illustrates that Dominican Republic and Kazakhstan are the closest countries to the Cluster 1 centroid, and Malaysia and Lithuania are the closest countries to Cluster 3. The closest countries between Clusters 2 and 3

are Portugal (Cluster 2) to Spain (Cluster 3), and Malaysia (Cluster 2) to Israel (Cluster 3).

Using the Regional and Development Criteria of the IMF, countries within the groups Middle East and Central Asia, Emerging and Developing Europe, Latin America and the Caribbean, and Advanced Economies represents 73% in this cluster, whereas by the Income Criteria of the World Bank, the Upper Middle Income and High Income countries represent over 80% of the cluster's members. Following belonging to Integration Agreements, we can see that the European Union (14/26), the Organization for Economic Cooperation and Development (12/37), the Gulf Cooperation Council (6/6) and the Commonwealth of Independent States (4/5) show higher frequency in Cluster 2.

CLUSTER 3
Cluster 3 is composed of 25 countries showing a combined population of less than 1 billion people. The closest country to its centroid is Belgium, followed by Japan, Canada, Australia and Germany. The farthest country of the group is United States of America, followed by Israel, Taiwan, Spain and Czech Republic. Israel, Czech Republic, Spain and Korea Rep. are the closest countries to Cluster 2.

Compared to Cluster 1, countries belonging to Cluster 3 exhibit opposite results: all the variables are significant, but with positive and high values, showing good performances in Productive Drive, Socio-Political Dynamics and Orientation to Future Trends.

Using the Regional and Income Classification of the IMF, all Advanced Economies are in this cluster and all of them are within the High Income countries' group. Looking at Integration Agreements, the Organization for Economic Coopera-

tion and Development (23/37) and the European Union (12/26) are highly represented in this cluster.

The data suggest that most of the chosen integration agreements demonstrate some level of heterogeneity in terms of strength of property rights systems among their members. In the presence of homogeneity it would be easier for an integration agreement to promote common policies to enhance the strength of property rights. Simultaneously, heterogeneity could be also seen as a great opportunity, as policies could be addressed to specific members of the agreement. On the other hand, integration agreements showing members in just one cluster reveal homogeneity among their countries' property rights systems. Even those agreements participating in two clusters show members in cluster boundaries and could be seen as a possible transition from one cluster to the other.

It is important to highlight that the most populous countries in the world, India and China, are in Cluster 2, and they are countries whose results are very close to the average.

As conclusions of the Cluster Analysis, we found that:

» Each cluster represents more than a grouping by variables directly associated with property rights. They are groups with common characteristics within them and with different features among clusters. This confirms the consistency of the IPRI and the

relevance of property rights systems influencing societies.

» Cluster 1 and Cluster 3 are two extreme poles in terms of the performance of their economies, their institutions, and their innovation, as well as their IPRI scores.

» Cluster 2 statistical values reflected its intermediate positions, and, depending on the decisions taken in the present and near future of each country, will be inclined to one of the two polar classes. Those countries that keep their position very close to Cluster 1 should revise their policies regarding property rights; but as has been shown, also in other dimensions to improve their performance and the well-being of their citizens.

» Countries in Cluster 1 should make particular efforts to strengthen their legal and political environment to protect physical and intellectual properties, which are still weak, in order to improve quality of life in their societies.

» Countries in the boundaries between two clusters have to make special efforts to mind the gap, which will place them in a higher level.

» Specific analyses of countries and of groups of them related to their cluster are a rich open vein for future investigations.

FINAL REMARKS

2023-IPRI edition includes 125 countries representing 93.4% of world population and 97.5% of world GDP, showing, after four years of consecutive set back, a slight recovery of 0.37% of the IPRI thanks to IPR improvement (of aprox. 2%). Meanwhile the other two components remain in a declining situation.

On average, the 125 countries showed an IPRI score of 5.21, where the Legal and Political Environment (LP) was the weakest component with a score of 5.06, followed by the Physical Property Rights (PPR) component with a score of 5.23; and the Intellectual Property Rights (IPR) was the strongest component with a score of 5.35.

When population weighs in, IPRI score reduces to 5.04 which is a decrease of 1.53% from 2022 and almost a 10% from 2021 (IPRI-Pop 2022=5.12; and IPRI-Pop 2021=5.596), meaning that citizens of most populated countries display a discouraging scenario to access and enjoy a robust property rights system. Also, after weighting the IPRI with a gender component, the IPRI-GE scores 4.56, which is a reduction of 12.6% from the IPRI value (IPRI2023= 5.21), even though, it is a slight improvement from last year (2022 IPRI-GE2022=4.48), but not enough to recover the values of 2021 (IPRI GE 2021: 4.89). Looking for property taxes' impact,

just for OECD countries, the IPRI-PT score is 5.75% lower than its IPRI value, with a wide range that goes from 0.6% to more than 15%.

Results keep suggesting that countries with high IPRI scores and its components also show high income and high development levels indicating the positive relationship between a robust property rights system and people's quality of life. This is clearly supported by the correlations 17 variables organized in 3 groups (Productive Drive, Socio-Political Dynamics and Orientation to Future Trends) that were contrasted with the IPRI and its components. Results show the relevance of property rights systems and its association with the best performances and practices in societies. Cluster Analysis also confirmed the consistency of the IPRI, since the assembled countries exhibited a high degree of similarity, showing the relevance of property rights systems in shaping societies.

The International Property Rights Index in this edition keeps showing regularity with previous ones, allowing us to say that it has a proper structure for monitoring the performance of property rights systems and its relationship with societies' virtuous environments, globally, regionally and within countries.

APPENDICES

I. DATA SOURCE: IPRI 2023

IPRI-2023	DATA	DOWNLOAD DATE	ORIGINAL SCALE	YEAR (DATA)	SOURCE	LINK
LEGAL AND POLITICAL ENVIRONMENT (LP)	Judicial Independence	Mar. 05,2023	[0-1](best)	2022	World Justice Project, Rule of Law Index	https://worldjus-ticeproject.org/rule-of-law-index/country/2022
	Rule of Law	Mar. 05,2023	[-2,5 to 2,5](best)	2021	The Worldwide Governance Indicators 2021 (2022 update)	http://info.worldbank.org/governance/wgi/index.aspx#home
	Political Stability	Mar. 05,2023	[-2,5 to 2,5](best)	2021	The Worldwide Governance Indicators 2021 (2022 update)	http://info.worldbank.org/governance/wgi/index.aspx#home
	Control of Corruption	Mar. 05,2023	[-2,5 to 2,5](best)	2021	The Worldwide Governance Indicators 2021 (2022 update)	http://info.worldbank.org/governance/wgi/index.aspx#home
PHYSICAL PROPERTY RIGHTS (PPR)	Physical Property Protection	Mar. 05,2023	[1-7](best)	2019	World Economic Forum. The Global Competitiveness Index 4.0 2019 Dataset | Version 20191004	https://www.wefo-rum.org/reports/global-competi-tiveness-report-2019
	Registering Process	Mar. 05,2023	[0-1](best)	2022	World Justice Project, Rule of Law Index	https://worldjus-ticeproject.org/rule-of-law-index/country/2022
	Access to Financing	Mar. 13,2023	[1-7](best)	2019	World Economic Forum. The Global Competitiveness Index 4.0 2019 Dataset | Version 20191004	https://www.wefo-rum.org/reports/global-competi-tiveness-report-2019

IPRI-2023	DATA	DOWNLOAD DATE	ORIGINAL SCALE	YEAR (DATA)	SOURCE	LINK
INTELLECTUAL PROPERTY RIGHTS (IPR)	Intellectual Property Protection	Mar. 05,2023	[1-7](best)	2019	World Economic Forum. The Global Competitiveness Index 4.0 2019 Dataset | Version 20191004	https://www.wefo-rum.org/reports/global-competi-tiveness-report-2019
	Patent Protection	Mar. 05,2023	[0-6](best)	2023	Patent Index 2023. Chrysa K. Kazakou (Atty), Walter G. Park (PhD)	
	Copyright Protection	Mar. 13,2023	[0-100%] (best)	2022	US Chamber of Commerce, International IP Index 2023	https://www.uschamber.com/intellectual-proper-ty/2023-international-ip-in-dex
	Trademark Protection	Mar. 05,2023	[0-1](best)	2021	International Trademark Index 2021. Chrysa K. Kazakou (Atty), Walter G. Park (PhD)	

II. GROUPS CONFORMATION: IPRI 2023

	GROUP	#	COUNTRIES
GRUPO REGIONAL	**A**	27	ANGOLA, BENIN, BOTSWANA, BURKINA FASO, BURUNDI, CAMEROON, CHAD, CONGO, DEM. REP., CôTE D'IVOIRE, ESWATINI, ETHIOPIA, GABON, GHANA, KENYA, MADAGASCAR, MALAWI, MALI, MAURITANIA, MOZAMBIQUE, NIGERIA, RWANDA, SENEGAL, SOUTH AFRICA, TANZANIA, UGANDA, ZAMBIA, ZIMBABWE
	AO	18	AUSTRALIA, BANGLADESH, BRUNEI DARUSSALAM, CHINA, INDIA, INDONESIA, JAPAN, KOREA, REP., MALAYSIA, NEPAL, NEW ZEALAND, PAKISTAN, PHILIPPINES, SINGAPORE, SRI LANKA, TAIWAN, THAILAND, VIETNAM
	CEECA	24	ALBANIA, ARMENIA, AZERBAIJAN, BOSNIA AND HERZEGOVINA, BULGARIA, CROATIA, CYPRUS, CZECH REPUBLIC, GEORGIA, HUNGARY, KAZAKHSTAN, LATVIA, LITHUANIA, MACEDONIA, FYR, MOLDOVA, MONTENEGRO, POLAND, ROMANIA, RUSSIA, SERBIA, SLOVAKIA, SLOVENIA, TURKEY, UKRAINE
	LAC	20	ARGENTINA, BOLIVIA, BRAZIL, CHILE, COLOMBIA, COSTA RICA, DOMINICAN REPUBLIC, ECUADOR, EL SALVADOR, HAITI, HONDURAS, JAMAICA, MEXICO, NICARAGUA, PANAMA, PARAGUAY, PERU, TRINIDAD AND TOBAGO, URUGUAY, VENEZUELA BOLIVARIAN REPUBLIC OF
	MENA	15	ALGERIA, BAHRAIN, EGYPT, IRAN, ISRAEL, JORDAN, KUWAIT, LEBANON, MOROCCO, OMAN, QATAR, SAUDI ARABIA, TUNISIA, UNITED ARAB EMIRATES, YEMEN, REP.
	NA	2	CANADA, UNITED STATES (USA)
	WE	19	AUSTRIA, BELGIUM, DENMARK, FINLAND, FRANCE, GERMANY, GREECE, ICELAND, IRELAND, ITALY, LUXEMBOURG, MALTA, NETHERLANDS, NORWAY, PORTUGAL, SPAIN, SWEDEN, SWITZERLAND, UNITED KINGDOM (UK)
GEOGRAPHICAL REGIONS	**EUROPEAN UNION**	26	AUSTRIA, BELGIUM, BULGARIA, CROATIA, CYPRUS, CZECH REPUBLIC, DENMARK, FINLAND, FRANCE, GERMANY, GREECE, HUNGARY, IRELAND, ITALY, LATVIA, LITHUANIA, LUXEMBOURG, MALTA, NETHERLANDS, POLAND, PORTUGAL, ROMANIA, SLOVAKIA, SLOVENIA, SPAIN, SWEDEN
	REST OF EUROPE	15	ALBANIA, ARMENIA, BOSNIA AND HERZEGOVINA, GEORGIA, ICELAND, MACEDONIA, FYR, MOLDOVA, MONTENEGRO, NORWAY, RUSSIA, SERBIA, SWITZERLAND, TURKEY, UKRAINE, UNITED KINGDOM
	AFRICA	31	ALGERIA, ANGOLA, BENIN, BOTSWANA, BURKINA FASO, BURUNDI, CAMEROON, CHAD, CONGO, DEM. REP., CôTE D'IVOIRE, EGYPT, ESWATINI, ETHIOPIA, GABON, GHANA, KENYA, MADAGASCAR, MALAWI, MALI, MAURITANIA, MOROCCO, MOZAMBIQUE, NIGERIA, RWANDA, SENEGAL, SOUTH AFRICA, TANZANIA, TUNISIA, UGANDA, ZAMBIA, ZIMBABWE
	NORTH AMERICA	3	CANADA, MEXICO, UNITED STATES
	CENTRAL AMERICA AND THE CARIBBEAN	9	COSTA RICA, DOMINICAN REPUBLIC, EL SALVADOR, HAITI, HONDURAS, JAMAICA, NICARAGUA, PANAMA, TRINIDAD AND TOBAGO
	SOUTH AMERICA	10	ARGENTINA, BOLIVIA, BRAZIL, CHILE, COLOMBIA, ECUADOR, PARAGUAY, PERU, URUGUAY, VENEZUELA BOLIVARIAN REPUBLIC OF
	ASIA	29	AZERBAIJAN, BAHRAIN, BANGLADESH, BRUNEI DARUSSALAM, CHINA, INDIA, INDONESIA, IRAN, ISRAEL, JAPAN, JORDAN, KAZAKHSTAN, KOREA, REP., KUWAIT, LEBANON, MALAYSIA, NEPAL, OMAN, PAKISTAN, PHILIPPINES, QATAR, SAUDI ARABIA, SINGAPORE, SRI LANKA, TAIWAN, THAILAND, UNITED ARAB EMIRATES, VIETNAM, YEMEN, REP.
	OCEANIA	2	AUSTRALIA, NEW ZEALAND

	GROUP	#	COUNTRIES
INCOME CLASSIFICATION	HIGH INCOME	49	AUSTRALIA, AUSTRIA, BAHRAIN, BELGIUM, BRUNEI DARUSSALAM, CANADA, CHILE, CROATIA, CYPRUS, CZECH REPUBLIC, DENMARK, FINLAND, FRANCE, GERMANY, GREECE, HUNGARY, ICELAND, IRELAND, ISRAEL, ITALY, JAPAN, KOREA, REP., KUWAIT, LATVIA, LITHUANIA, LUXEMBOURG, MALTA, NETHERLANDS, NEW ZEALAND, NORWAY, OMAN, PANAMA, POLAND, PORTUGAL, QATAR, ROMANIA, SAUDI ARABIA, SINGAPORE, SLOVAKIA, SLOVENIA, SPAIN, SWEDEN, SWITZERLAND, TAIWAN, TRINIDAD AND TOBAGO, UNITED ARAB EMIRATES, UNITED KINGDOM, UNITED STATES, URUGUAY
	LOW INCOME	13	BURKINA FASO, BURUNDI, CHAD, CONGO, DEM. REP., ETHIOPIA, MADAGASCAR, MALAWI, MALI, MOZAMBIQUE, RWANDA, UGANDA, YEMEN, REP, ZAMBIA.
	LOWER MIDDLE INCOME	32	ANGOLA, ALGERIA, BANGLADESH, BENIN, BOLIVIA, CAMEROON, CôTE D'IVOIRE, EGYPT, EL SALVADOR, KINGDOM OF ESWATINI, GHANA, HAITI, HONDURAS, INDIA, INDONESIA, IRAN, KENYA, LEBANON, MAURITANIA, MOROCCO, NEPAL, NICARAGUA, NIGERIA, PAKISTAN, PHILIPPINES, SENEGAL, SRI LANKA, TANZANIA, TUNISIA, UKRAINE, VIETNAM, ZIMBABWE.
	UPPER MIDDLE INCOME	30	ALBANIA, ARGENTINA, ARMENIA, AZERBAIJAN, BOSNIA AND HERZEGOVINA, BOTSWANA, BRAZIL, BULGARIA, CHINA, COLOMBIA, COSTA RICA, DOMINICAN REPUBLIC, ECUADOR, GABON, GEORGIA, JAMAICA, JORDAN, KAZAKHSTAN, NORTH MACEDONIA, MALAYSIA, MEXICO, MONTENEGRO, MOLDOVA, PARAGUAY, PERU, RUSSIA, SERBIA, SOUTH AFRICA, THAILAND, TURKEY
REGION CLASSIFICATION	ADVANCED ECONOMIES	34	AUSTRALIA, AUSTRIA, BELGIUM, CANADA, CYPRUS, CZECH REPUBLIC, DENMARK, FINLAND, FRANCE, GERMANY, GREECE, ICELAND, IRELAND, ISRAEL, ITALY, JAPAN, KOREA, REP., LATVIA, LITHUANIA, LUXEMBOURG, MALTA, NETHERLANDS, NEW ZEALAND, NORWAY, PORTUGAL, SINGAPORE, SLOVAKIA, SLOVENIA, SPAIN, SWEDEN, SWITZERLAND, TAIWAN, UNITED KINGDOM,UNITED STATES.
	EMERGING AND DEVELOPING ASIA	11	BANGLADESH, BRUNEI DARUSSALAM, CHINA, INDIA, INDONESIA, MALAYSIA, NEPAL, PHILIPPINES, SRI LANKA, THAILAND, VIETNAM
	EMERGING AND DEVELOPING EUROPE	14	ALBANIA, BOSNIA AND HERZEGOVINA, BULGARIA, CROATIA, HUNGARY, MOLDOVA, MONTENEGRO, NORTH MACEDONIA, POLAND, ROMANIA, RUSSIA, SERBIA, TURKEY, UKRAINE
	LATIN AMERICA AND THE CARIBBEAN	20	ARGENTINA, BOLIVIA, BRAZIL, CHILE, COLOMBIA, COSTA RICA, DOMINICAN REPUBLIC, ECUADOR, EL SALVADOR, HAITI, HONDURAS, JAMAICA, MEXICO, NICARAGUA, PANAMA, PARAGUAY, PERU, TRINIDAD AND TOBAGO, URUGUAY, VENEZUELA, BOLIVARIAN REPUBLIC OF
	MIDDLE EAST AND CENTRAL ASIA	20	ALGERIA, ARMENIA, AZERBAIJAN, BAHRAIN, EGYPT, IRAN, GEORGIA, JORDAN, KAZAKHSTAN, KUWAIT, LEBANON, MAURITANIA, MOROCCO, OMAN, PAKISTAN, QATAR, SAUDI ARABIA, TUNISIA, UNITED ARAB EMIRATES, YEMEN, REP.
	SUB-SAHARAN AFRICA	26	ANGOLA, BENIN, BOTSWANA, BURKINA FASO, BURUNDI, CAMEROON, CHAD, CONGO, DEM. REP., CôTE D'IVOIRE, KINGDOM OF ESWATINI, ETHIOPIA, GABON, GHANA, KENYA, MADAGASCAR, MALAWI, MALI, MOZAMBIQUE, NIGERIA, RWANDA, SENEGAL, SOUTH AFRICA, TANZANIA, UGANDA, ZAMBIA, ZIMBABWE

GROUP	#	COUNTRIES
OECD	38	AUSTRALIA, AUSTRIA, BELGIUM, CANADA, CHILE, COLOMBIA, COSTA RICA, CZECH REPUBLIC, DENMARK, ESTONIA, FINLAND, FRANCE, GERMANY, GREECE, HUNGARY, ICELAND, IRELAND, ISRAEL, ITALY, JAPAN, KOREA, REP, LATVIA, LITHUANIA, LUXEMBOURG, MEXICO, NETHERLANDS, NEW ZEALAND, NORWAY, POLAND, PORTUGAL, SLOVAKIA, SLOVENIA, SPAIN, SWEDEN, SWITZERLAND, TURKEY, UNITED KINGDOM (UK), UNITED STATES (USA)
EU	27	AUSTRIA, BELGIUM, BULGARIA, CYPRUS, CROATIA, CZECH REPUBLIC, DENMARK, ESTONIA, FINLAND, FRANCE, GERMANY, GREECE, HUNGARY, IRELAND, ITALY, LATVIA, LITHUANIA, LUXEMBURG, MALTA, NETHERLANDS, POLAND, PORTUGAL, ROMANIA, SLOVAKIA, SLOVENIA, SPAIN, SWEDEN,
SADC	16	ANGOLA, BOTSWANA, COMOROS, CONGO, DEM. REP., ESWATINI, LESOTHO, MADAGASCAR, MALAWI, MAURITIUS, MOZAMBIQUE, NAMIBIA, SEYCHELLES, SOUTH AFRICA, TANZANIA, UNITED REPUBLIC OF, ZAMBIA, ZIMBABWE,
ECOWAS	15	BENIN, BURKINA FASO, CAPE VERDE, CôTE D'IVOIRE, GAMBIA, GHANA, GUINEA, GUINEA-BISSAU, LIBERIA, MALI, NIGER, NIGERIA, SENEGAL, SIERRA LEONE, TOGO,
ASEAN	10	BRUNEI DARUSSALAM, CAMBODIA, INDONESIA, LAO PDR, MALAYSIA, MYANMAR, PHILIPPINES, SINGAPORE, THAILAND, VIETNAM,
PARLACEN	6	DOMINICAN REPUBLIC, EL SALVADOR, GUATEMALA, HONDURAS, NICARAGUA, PANAMA
GCC	6	BAHREIN, KUWAIT, OMAN, QATAR, SAUDI ARABIA, UNITED ARAB EMIRATES,
AP	4	CHILE, COLOMBIA, MEXICO, PERU
MERCOSUR	4	ARGENTINA, BRAZIL, PARAGUAY, URUGUAY
SAARC	8	AFGHANISTAN, BANGLADESH, BHUTAN, INDIA, MALDIVES, NEPAL, PAKISTAN, SRI LANKA
CEMAC	6	CAMEROON, CENTRAL AFRICAN REPUBLIC*, CONGO, REP., GABON, EQUATORIAL GUINEA, CHAD
MCCA	5	COSTA RICA, EL SALVADOR, GUATEMALA, HONDURAS, NICARAGUA
CIS	10	ARMENIA, AZERBAIJAN, BIELORUSSIA, KAZAKHSTAN, KYRGYZ REPUBLIC, MOLDOVA, RUSSIA, TAJIKISTAN, UZBEKISTAN, TURKMENISTAN*
ARAB M UNION	5	ALGERIA, LIBYA, MAURITANIA, MOROCCO, TUNISIA
CARICOM	15	ANTIGUA AND BARBUDA, BAHAMAS, THE, BARBADOS, BELIZE, DOMINICA, GRENADA, GUYANA, HAITI, JAMAICA, MONTSERRAT, ST. KITTS AND NEVIS, ST. LUCIA, ST. VINCENT AND THE GRENADINES, SURINAME, TRINIDAD AND TOBAGO
CAN	4	BOLIVIA, COLOMBIA, ECUADOR, PERU
EFTA	4	ICELAND, LIECHTENSTEIN, NORWAY, SWITZERLAND
IGAD	8	ETHIOPIA, KENYA, UGANDA, SUDAN, SOUTH SUDAN, DJIBOUTI, ERITREA, SOMALIA
USMC	3	CANADA, MEXICO, UNITED STATES
OPEC	13	ALGERIA, ANGOLA, CONGO, REP., GABON, EQUATORIAL GUINEA, IRAN, IRAQ, KUWAIT, LIBYA, NIGERIA, SAUDI ARABIA, UNITED ARAB EMIRATES, VENEZUELA, BOLIVARIAN REPUBLIC OF
CEEAC	11	ANGOLA, BURUNDI, CAMEROON, CENTRAL AFRICAN REPUBLIC, CONGO, REP., GABON, EQUATORIAL GUINEA, CONGO, DEM. REP., SÃO TOMÉ AND PRINCIPE, CHAD, RWANDA,
TPP-11	11	AUSTRALIA, BRUNEI DARUSSALAM, CANADA, CHILE, JAPAN, MALAYSIA, MEXICO, NEW ZEALAND, PERU, SINGAPORE, VIETNAM,
PROSUR	8	ARGENTINA, BRAZIL, COLOMBIA, ECUADOR, GUYANA, PARAGUAY, PERU, SURINAM.

REGIONAL INTEGRATION AGREEMENTS

III. GE DATA SOURCE: IPRI 2023

IPRI-GE	OCDE GID-DB	DOWNLOAD DATE	ORIGINAL SCALE	SOURCE
Women´s Access to Bank Loans	Secure access to formal financial services	Mar. 05,2023	0; 0.5; 1 (best; average; worst)	OCDE GID-DB https://www. genderindex. org/data/
Women´s Access to Land Ownership	Secure access to land assets			
Women´s Access to Property Other than land	Access to non-land assets			
Inheritance Practices	Inheritance			
	Divorce			
	Household responsibilities			
Women Social Rights	Female genital mutilation			
	Violence against women			
	Freedom of movement			
	Citizenship rights			

IV. CORRELATIONS DATA SOURCES

GROUP	SUB-GROUP	DATA	DOWNLOAD DATE	ORIGINAL SCALE	YEAR	SOURCE	LINK
PRODUCTIVE DRIVE	Production	GDP per capita (constant 2015 US$)	May 22, 2023	[0-∞] (best)	2018-2021 Latest available	The World Bank Database	https://data.worldbank.org/indicator/ny.gdp.pcap.kd
		GDP per capita (constant 2015 US$) *GINI	May 22, 2023	[0-∞] (best)	GDP 2018-2021, GINI Latest available	The World Bank Database	https://data.worldbank.org/indicator/SI.POV.GINI
	Investment	Gross capital formation (current US$) Per Capita	May 22, 2023	[0-∞] (best)	2018-2021 Latest available	The World Bank Database	https://data.worldbank.org/indicator/NE.GDI.TOTL.CD
		The Venture Capital and Private Equity Country Attractiveness	May 22, 2023	[1-100] (best)	2021	IESE Business School	https://blog.iese.edu/vcpeindex/ranking/
	Composition	Economic Complexity Index (Trade HS07	May 22, 2023	≈[-2, 2] (best)	2021	The Observatory of Economic Complexity	https://oec.world/en/rankings/eci/hs6/hs07?tab=rank
	Entrepreneurship	Global Entrepreneurship Index	May 22, 2023	[0-100] (best)	2019	The Global Entrepreneurship and Development Institute	http://thegedi.org/wp-content/uploads/2021/02/2019_GEI-2019_final_v2.pdf

GROUP	SUB-GROUP	DATA	DOWNLOAD DATE	ORIGINAL SCALE	YEAR	SOURCE	LINK
SOCIO-POLITICAL DYNAMICS	Impunity	Atlas of Impunity	May 22, 2023	0-5] (worst	2023	Eurasia Group	https://www.eurasiagroup.net/live-post/atlas-of-impunity-2023
	Social Mobility	Global Social Mobility Index	May 22, 2023	[0-100] (best)	2020	World Economic Forum	https://www.weforum.org/reports/global-social-mobility-index-2020-why-economies-benefit-from-fixing-inequality/
	Global Mobility	Henley Passport Index	May 22, 2023	[0-194] (best)	2023	Henley and Partners	https://www.henleypassportindex.com/global-ranking
	Social Capital	Legatum Prosperity Index	May 22, 2023	[0-100] (best)	2023	Legatum Institute Foundation	https://www.prosperity.com/rankings
	Philantropy	The Global Philanthropy Environment Index	May 22, 2023	[1-5] (best)	2022	Indiana University–Purdue University Indianapolis (IUPUI)	https://globalindices.iupui.edu/environment-index/index.html

GROUP	SUB-GROUP	DATA	DOWNLOAD DATE	ORIGINAL SCALE	YEAR	SOURCE	LINK
FUTURE TRENDS' ORIENTED	Openness to ICT	Network Readiness Index	May 22, 2023	[0-100] (best)	2022	Portulans Institute	https://networkreadinessindex.org
	Innovation capacity	Global Innovation Index	May 22, 2023	[0-100] (best)	2022	World Intellectual Property Organization	https://www.globalinnovationindex.org/analysis-indicator
	Openness to AI	Government AI Readiness Index	May 22, 2023	[0-100] (best)	2022	Oxford Insights	https://www.oxfordinsights.com/government-ai-readiness-index-2022
	Energy Performance	World Energy Trilemma Index	May 22, 2023	[0-100] (best)	2022	World Energy Council	https://www.worldenergy.org/transition-toolkit/world-energy-trilemma-index
	Environmental sustainability	Green Future Index	May 22, 2023	[0-10] (best)	2023	MIT Technology Review	https://www.technologyreview.com/2023/04/05/1070581/the-green-future-index-2023/
	Risk Alertness	INFORM	May 22, 2023	[0-10] (worst)	2023	Inter-Agency Standing Committee Reference Group on Risk, Early Warning and Preparedness and the European Commission.	https://drmkc.jrc.ec.europa.eu/inform-index/INFORM-Risk/Results-and-data/moduleId/1782/id/453/controller/Admin/action/Results

V. CLUSTERS MEMBER'S POSITION

COUNTRY - CLUSTER 1	ACCR.	DISTANCE TO CENTROID	COUNTRY - CLUSTER 2	ACCR.	DISTANCE TO CENTROID	COUNTRY - CLUSTER 3	ACCR.	DISTANCE TO CENTROID
GABON	GAB	0.01686	SOUTH AFRICA	ZAF	0.09311	BELGIUM	BEL	0.06021
COTE D'IVOIRE	CIV	0.03958	MONTENEGRO	MNE	0.01663	JAPAN	JPN	0.10179
UKRAINE	UKR	0.06512	POLAND	POL	0.16089	CANADA	CAN	0.10253
RUSSIA	RUS	0.09559	JAMAICA	JAM	0.19808	AUSTRALIA	AUS	0.12403
PAKISTAN	PAK	0.11818	INDIA	IND	0.20667	GERMANY	DEU	0.17316
IRAN	IRN	0.12735	BULGARIA	BGR	0.26081	IRELAND	IRL	0.17472
BANGLADESH	BGD	0.15619	PANAMA	PAN	0.26982	LUXEMBOURG	LUX	0.19556
MADAGASCAR	MDG	0.16503	JORDAN	JOR	0.27521	AUSTRIA	AUT	0.19773
MOZAMBIQUE	MOZ	0.16551	ARMENIA	ARM	0.27981	UNITED KINGDOM	GBR	0.21420
HONDURAS	HND	0.18495	RWANDA	RWA	0.28086	NETHERLANDS	NLD	0.23352
BOSNIA AND HERZEGOVINA	BIH	0.18946	COSTA RICA	CRI	0.33814	SWEDEN	SWE	0.26385
MALI	MLI	0.19482	SLOVAKIA	SVK	0.34459	NORWAY	NOR	0.30561
BURKINA FASO	BFA	0.20921	GEORGIA	GEO	0.34924	NEW ZEALAND	NZL	0.34381
ECUADOR	ECU	0.22506	INDONESIA	IDN	0.41688	SWITZERLAND	CHE	0.37048
ARGENTINA	ARG	0.28308	CYPRUS	CYP	0.43617	DENMARK	DNK	0.39224
BENIN	BEN	0.28580	CROATIA	HRV	0.44134	FRANCE	FRA	0.56849
EL SALVADOR	SLV	0.28749	TRINIDAD AND TOBAGO	TTO	0.45632	SINGAPORE	SGP	0.58365
UGANDA	UGA	0.29912	SRI LANKA	LKA	0.47404	KOREA, REP	KOR	0.69090
ZAMBIA	ZMB	0.30790	CHILE	CHL	0.53092	ICELAND	ISL	0.75101
CAMEROON	CMR	0.32636	SLOVENIA	SVN	0.54017	FINLAND	FIN	0.93320
ALGERIA	DZA	0.35061	SENEGAL	SEN	0.54994	CZECH REPUBLIC	CZE	1.20326
VIETNAM	VNM	0.44694	KUWAIT	KWT	0.55808	SPAIN	ESP	1.20783
PARAGUAY	PRY	0.44952	THAILAND	THA	0.58974	TAIWAN	TWN	1.61747
BOLIVIA	BOL	0.47151	BOTSWANA	BWA	0.59927	ISRAEL	ISR	1.71492
EGYPT	EGY	0.48912	GHANA	GHA	0.60392	UNITED STATES	USA	1.73802
PERU	PER	0.55262	KINGDOM OF ESWATINI	SWZ	0.67160			
ZIMBABWE	ZWE	0.58080	TUNISIA	TUN	0.67429			
NIGERIA	NGA	0.58391	MALTA	MLT	0.70055			
TANZANIA	TZA	0.59032	MOROCCO	MAR	0.73692			
BRAZIL	BRA	0.59635	KAZAKHSTAN	KAZ	0.78584			
NICARAGUA	NIC	0.59764	MOLDOVA	MDA	0.79047			
PHILIPPINES	PHL	0.64518	LATVIA	LVA	0.81542			
COLOMBIA	COL	0.71592	DOMINICAN REPUBLIC	DOM	0.81885			

VI. ILLUSTRATIVE VARIABLES. AVERAGES BY CLUSTERS

	CLUSTER 1	CLUSTER 2	CLUSTER 3
Total Countries	48	52	25
Total Population (000)	2,486,465	3,926,592	974,549
Average IPRI	3.86	5.40	7.42
Average LP	3.33	5.33	7.79
Average PPR	3.98	5.40	7.28
Average IPR	4.27	5.46	7.18
Average GEN	6.40	7.08	9.09
Average IPRIGE	3.17	4.62	7.09
Average GDPPC	3,392.39	13,437.39	52,667.70
Average GDPGINI	137,139.68	403,381.07	1,632,598.78
Average GKFPC	845,664.32	3,710,616.28	14,399,527.54
Average VCPE	32.63	51.49	78.80
Average ECI	-0.62	0.30	1.31
Average GEI	19.23	34.25	66.48
Average AOI	2.87	2.06	0.92
Average GSMI	49.25	59.61	77.45
Average HPI	80.96	123.25	186.96
Average SCL	50.29	55.25	68.39
Average GPEI	3.12	3.53	4.43
Average NRI	39.75	52.85	73.85
Average GII	21.64	31.74	53.16
Average GAIRI	36.46	51.80	73.17
Average WETI	52.12	65.02	78.78
Average GFI	3.90	4.68	5.63
Average INFORM	5.06	3.14	1.76

REGIONAL INTEGRATION AGREEMENTS		TOTAL	CLUSTER 1	%	CLUSTER 2	%	CLUSTER 3	%
Organization for Economic Co-operation and Development	OECD	37	2	5.41%	12	32.43%	23	62.16%
European Union	EU	26		0.00%	14	53.85%	12	46.15%
Southern African Development Community	SADC	11	8	72.73%	3	27.27%		
Economic Community Of West African States	ECOWAS	7	5	71.43%	2	28.57%		
Association of Southeast Asian Nations	ASEAN	7	2	28.57%	4	57.14%	1	14.29%
Central American Parliament	PARLACEN	5	3	60.00%	2			
Gulf Cooperation Council	GCC	6			6	100.00%		0.00%
Pacific Alliance	AP	4	2	50.00%	2	50.00%		
Southern Common Market	MERCOSUR	4	3	75.00%	1	25.00%		
South Asian Association for Regional Cooperation	SAARC	5	3	60.00%	2	40.00%		
Central African Economic and Monetary Community	CEMAC	3	3	100.00%				
Central American Common Market	MCCA	4	3	75.00%	1	25.00%		
Commonwealth of Independent States	CIS	5	1	20.00%	4	80.00%		
Arab Mahgreb Union	ARAB M UNION	4	2	50.00%	2	50.00%		
Caribbean Community	CARICOM	3	1	33.33%	2	66.67%		
Andean Community	CAN	4	4	100.00%				
European Free Trade Association	EFTA	3					3	100.00%
Intergovernmental Authority on Development	IGAD	3	2	66.67%	1			
United States-Mexico-Canada Agreement	USMCA	3		0.00%	1		2	66.67%
Organization of the Petroleum Exporting Countries	OPEC	9	6	66.67%	3	33.33%		0.00%
La Communauté Economique des Etats de l'Afrique Centrale	CEEAC	7	6	85.71%	1	14.29%		
Trans-Pacific Partnership	TPP-11	11	2	18.18%	4	36.36%	5	45.45%
The Forum for the Progress and Development of South America	PROSUR	6	6	100.00%		0.00%		

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