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PROSPERITY ▼▲ FREEDOM ▼▲ INNOVATION

INTERNATIONAL PROPERTY RIGHTS INDEX 2024

FULL REPORT

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INTRODUCTION

"I believe that in about fifty years' time it will be possible to programme computers . . . to make them play the imitation game so well that an average interrogator will not have more than a 70 percent chance of making the right identification after five minutes of questioning"

— Alan Turing[1]

The remarkable progress in science and technology continues to demonstrate the boundless potential of human creativity. History has repeatedly shown that realizing this potential requires a virtuous societal ethic. Such an ethic is essential for leveraging these advancements to deliver on the promises of progress, prosperity, and peace for all citizens while upholding the values of freedom and human dignity and ensuring harmony with the environment.

Technological breakthroughs in telecommunications, social networks, Big Data, augmented reality, large language models, and generative artificial intelligence, among others, are paving the way for a world where the boundaries between the real and digital realms blur into a seamless virtual experience, and the imminent arrival of quantum computing is poised to further amplify this convergence. Indeed, the rapid pace of technological change has made forecasting the future an increasingly intricate task, akin to crafting a science fiction narrative. The reality, however, is that we stand at the threshold of a vast ocean of possibilities, ranging from the utopian to the dystopian.

Simultaneously, driven by technological disruptions, political, economic, and sociocultural transformations are undergoing profound shifts. There is a growing consensus that we are in the midst of an epochal change, one that is projected to alter energy patterns and consequently bring about significant transformations in production, consumption, and the social integration mechanisms of populations. There is now a notable emphasis on environmental considerations, which is expected to lead to changes in how production is spatially organized and how populations are distributed, with a shift towards prioritizing local over global concerns and a focus on nearby habitats.

These changes will inevitably impact various aspects of our lives, including our workspaces—increasingly dominated by teleworking—our education systems—with a plethora of diverse offerings in hyperspace and the potential presence of bot teachers—our dietary habits, physical and emotional well-being, life expectancy, and quality of life. They will also usher in novel forms of physical and virtual interpersonal relationships, along with faster and more extensive channels of interrelation and, consequently, increased information dissemination, as well as pandemic contagion risks.

1. Alan Turing, "Computing Machinery and Intelligence," Mind 59, no. 236 (1950): 433– 60, mind.oxfordjournals.org/content/LIX/236/433.14

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Modern technologies already facilitate greater citizen participation, enhancing democratic processes. However, they also enable a vigilant state capable of imposing rigid control and infringing on privacy rights, thereby undermining human rights and citizen freedoms. Studies on democracy's state in 2023 highlight significant setbacks in terms of human rights, participation, representation, and the rule of law. Institutional weakening and declining public trust are fueled by poor institutional performance, corruption, and its connections to illicit networks. The fight against these challenges could leverage the technological innovations mentioned earlier, but these same technologies are also exploited by nefarious elements to undermine the freedom of law-abiding citizens and governments.

Additionally, economic freedom indicators by 2023 reflect the lowest values in the past two decades. It is crucial to remember that economic freedom is intrinsic to all human rights and is pivotal in enabling individuals to pursue their goals and capacities within society, in coordination with other members. Economic freedom is shaped by an institutional and regulatory framework that should foster internal dynamics allowing individuals to efficiently meet their material needs.

Given the complexity of society, governments play a crucial role in fostering human progress and improving living standards by reducing obstacles for working citizens. Nearly 250 years ago, Adam Smith elucidated how a nation's wealth grows most effectively when its people enjoy "the obvious and simple system of natural liberty."

Yet again, in the realm of economics, we are witnessing a series of technological advancements that have the potential to significantly increase productivity and thereby satisfy the population's needs. However, this potential is hindered by protectionist tendencies that seek to block new market entrants and unfair competition practices disguised as cronyism, reminiscent of the mercantilist era. To realize the promise of a better world and harness technological changes for the desired outcome, we must cultivate an institutional environment that incentivizes ethical social behavior.

Central to this endeavor is the cultivation of a robust and virtuous institutional framework, characterized by stability, to propel global citizens into the future. A cornerstone of this institutional environment, within a free society, is a strong system of property rights. Such a system not only facilitates the exercise of other rights but also establishes a positive feedback loop for freedom and prosperity.

Property rights represent a multifaceted legal institution that grants owners the authority to utilize portions of nature while restricting others from doing the same (Freyfogle, 2010[2]). These rights are foundational for the exercise of various other rights and freedoms. They serve as a natural check on the exercise of power, curbing the authority of the State and driving productive transformation within the knowledge society.

In short, property rights are an essential element for a free society based on the foundation of citizenship to control their lives and build their destiny.

2. Freyfogle, E.T., 2010. "Property and Liberty" *Harvard Environmental Law Review,* Vol. 34(1):75-118 [ssrn.com/abstract=1024574 or dx.doi.org/10.2139/ssrn.1024574]

As Arthur Lee pointed out in Virginia (1775:14[3]): *"The right of property is the guardian of every other right, and to deprive the people of this, is in fact to deprive them of their liberty."*

The discourse surrounding property rights is extensive and dates back centuries. Aristotle[4] (1988 [c.330 BCE]) contended that private property fosters human virtues such as responsibility and prudence, enhances self-possession, and thereby cultivates self-control. He viewed property ownership as a positive force that prepares individuals for citizenship. Locke[5] (1988 [1689]), on the other hand, tied the discussion to the state of nature and provided a moral justification for the legitimacy of individual appropriation, known as the First Occupancy theory. Hegel[6] (1967 [1821]) underscored the relationship between property and self-development, promoting the concept of individual freedom. In contrast, Bentham[7] (1843) viewed property as a legal construct, and John Stuart Mill[8] defined individual property as a "primary and fundamental institution" upon which the economic structures of society have always been built (Book II, Chapter I: Of Property).

Beyond the theoretical and philosophical discussions, analysis of its impacts and the empirical evidence shows the relevance of property rights. In that sense, Hernando de Soto[9] states: *"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). And deterring political inherence in people's lives, the Hungarian economist Janos Kornai observed: *"The further elimination of private ownership is taken, the more consistently can full subjection be imposed"*[10]. Additionally, Epstein expresses, *"Private property gives the right to exclude others without the need for any justification. Indeed, it is the ability to act at will and without need for justification within some domain which is the essence of freedom, be it of speech or of property,"*[11] showing the unavoidable link between property and liberty.

Whether pertaining to physical or intellectual property, property rights are indispensable for development. In the 21st century, there may be greater challenges concerning the latter, given their significance in the knowledge society. They promote social and economic incentives to stimulate creation, innovation, and dissemination of knowledge. It is crucial to emphasize that property rights are human rights, as states Article 17 of the Universal Declaration of Human Rights. This ethical consideration underpins the preference for a robust system of property rights.

3. Lee, Arthur. 1775. *An appeal to the justice and interest of the people of Great Britain in the present dispute with America*, 4th edition. New York
4. Aristotle, 1988 [c.330BCE]. *The Politics* Stephen Everson (ed.), Cambridge: Cambridge University Press
5. Locke, J., 1988 [1689]. *Two Treatises of Government.* Peter Laslett (ed.), Cambridge: Cambridge University Press
6. Hegel, G.W. F. 1967 [1821], *The Philosophy of Right*, T.M. Knox (trans.), Cambridge: Cambridge University Press
7. Bentham, J., 1843. *Principles of the Civil Code* [laits.utexas.edu/poltheory/bentham/pcc/index.html]
8. Mill, J. S., 1909 [1848]. *Principles of Political Economy with some of their Applications to Social Philosophy*. W. J. Ashley (ed.) London: Longmans, Green and Co. [econlib.org/library/Mill/mlPCover.html]
9. De Soto, H. (2000) El Misterio del Capital. Lima: El comercio.
10. Quoted in Skidelsky, Robert. 1997. The Road from Serfdom. New York: Penguin. P.99.
11. Epstein, Richard 1985. Takings. Cambridge, Mass.: Harvard University Press. P. 66.

The Property Rights Alliance (PRA) established the **International Property Rights Index** (IPRI) in 2007 to monitor and serve as a barometer of property rights worldwide. The IPRI takes an institutional approach, recognizing property rights as a pivotal institution for a free society. The Index evaluates institutional strength and government effectiveness in protecting both physical and intellectual property rights. It is structured into three components (details in the Methodological Appendix):

- The Legal and Political Environment (LP) component provides information about the strength of a country's institutions, and 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 socio-economic development. Items included in these two categories speak to *de jure* rights and *de facto* opportunities in each country.

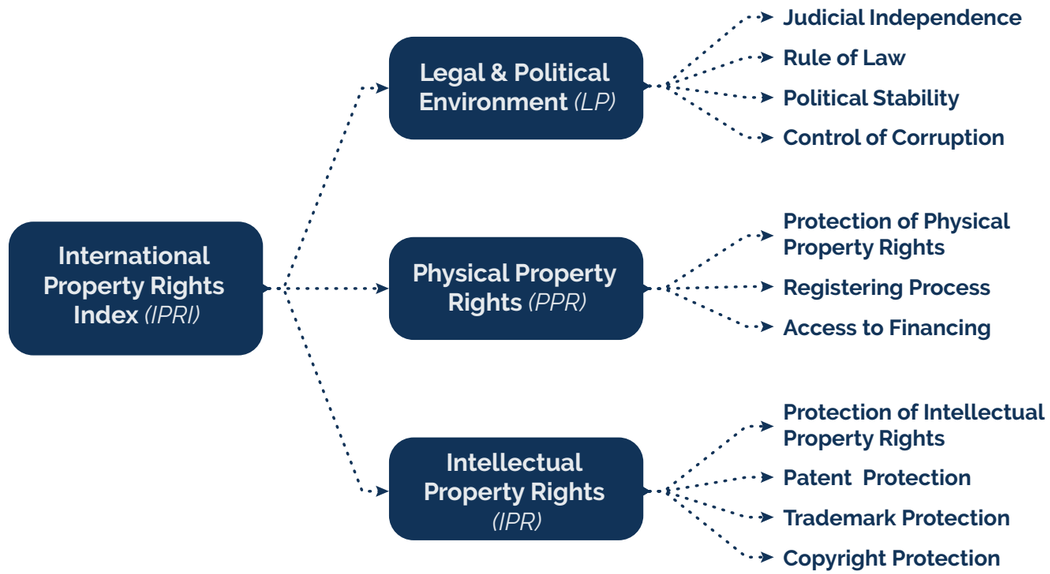
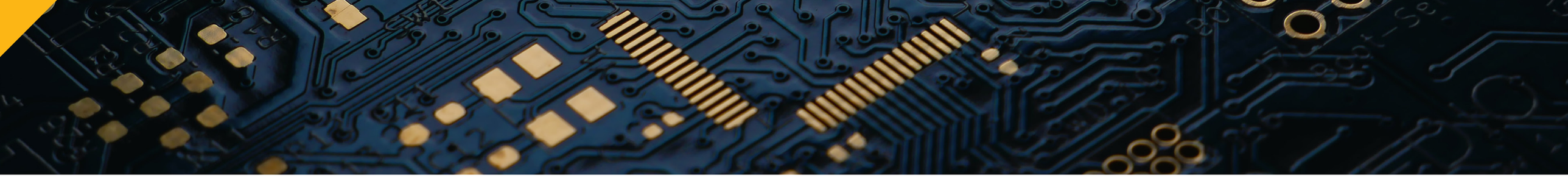


Figure 1. International Property Rights Index Structure. *The IPRI is comprised of three components: Legal and Political Environment (LP), Physical Property Rights (PPR), and Intellectual Property Rights (IPR).*



This year's IPRI edition covers 125 countries, representing 93.4% of the world population and 97.5% of the world's GDP. The average score of 5.18 indicates a setback that was previously thought to have been overcome. This underlines the need to raise awareness, especially in densely populated countries that continue to exhibit a discouraging scenario regarding access to and enjoyment of a robust property rights system.

The setback was 0.53%, mainly because of the negative impact of LP whose score decreased by 1.5% (basically as a consequence of the performance of Political Stability, -2.94%.), and of PPR, with a decrease of 0.31%, both, somewhat compensated by the positive performance of IPR, which showed an improvement of 0.19%. On the other hand, we found the most positive change in the Registering Process item at 9.9%, which indicates a global awareness of the importance of streamlining the associated processes.

This year, Finland leads the IPRI score (8.1) as well as the score of the LP (8.7) and PPR (8.5) component, while the USA leads the IPR component (8.6), followed in this component by the United Kingdom (7.7) and Austria (7.66). Singapore is in 2nd place in the IPRI (7.94) and for the PPR (8.25) component. Third comes Denmark (7.774) — that is in the 2nd place (8.64) for LP — and Netherlands (7.773).

As in previous years, we found that most top countries show the LP component as their strongest, while in the other extreme of the distribution, this component is the weakest in bottom countries. This is a recurring result to consider in the analysis and design of public policies.

We must celebrate those 35 countries that improved their IPRI scores this year compared to 2023 while alerting those 89 that deteriorated them. Despite changes being slight, Nigeria (+4.4%) stands out in positive relative terms, while Montenegro (-6.05%) and Haiti (-6.02%) in negative relative terms. In absolute terms, we should mention Nigeria (+0.15), Saudia Arabia (+0.12), and Cote D'Ivore (+0.12), while on the other extreme Montenegro (-0.31), Ukraine (-0.19), and Haiti (-0.16).

The IPRI analysis also encompasses groups of countries categorized by different criteria such as geographical regions, income levels, degree of development, and participation in integration agreements. Comparing the groups' performance this year is as crucial as evaluating their trend over time. Interestingly, we observe a consistent intergroup dynamic, with the exception of occasional fluctuations in the performance of the 'Rest of Europe' group, which has at times outperformed or underperformed compared to other groups of countries. The remaining groups appear to exhibit a parallel behavior.

Demographic perspective is another crucial element in the analysis. To accurately assess the level of property rights enjoyed by people, a factor is included to account for population density. When population is factored in, the world's IPRI score decreases from 5.18 to 5.023. Additionally, the IPRI-Pop score has been decreasing over the last five years, raising concerns regarding property rights for the vast majority of the world's population.

This year's sample of 125 countries has a population of 7.39 thousand million people, representing 93.4% of the world population, and 83% of that population lives in countries with low-mid IPRI scores, and so forth weak-mid robust property rights systems. Meanwhile, just 16% of the population, enjoy a mid-high level of robust property rights systems, and countries with the strongest systems account for 60% of the world's GDP, with just 16% of the population.

As relevant to analyzing differences among countries is to consider internal differences or discriminations (which could be for different motives) inside each country and for that, the IPRI includes in the analysis a Gender Equality component (GE). This year the sample shows an average GE score of 7.91, indicating a 9.6% improvement compared to 2023. After weighting the IPRI with the gender component, the IPRI-GE scores 4.715 which is a reduction of 8.98% from the IPRI2024 score;

but if compared to IPRI-GE2023, it represents an improvement of 3.4%, but not enough to recover its value of 2021. Another element considered is the impact that property taxes have on property rights. Therefore, an adjustment to the IPRI was done to account for these impacts; and results show that, on average, the IPRI-PT score is 5.76% lower than their IPRI scores, with an important dispersion from -0.6% to -15% reduction.

To show how property rights are a key institutional arrangement of a complex web of interwoven relationships of a virtuous ecosystem, we calculated a set of correlations with a group of 14 indices or variables organized into three groups for their analysis, which we called: Prosperity & Competitivity, Entrepreneurship Impulse, and Future Trends. Those correlations were mostly strong and good, supporting the relevance of the robustness of a property rights system.Moreover, on average, countries in the top quintile of IPRI scores show a per capita income of 19 times that of the countries in the bottom quintile, reinforcing the significant and positive relationship between prosperity and a property rights system.

Finally, we performed a cluster analysis as a valuable statistical method for grouping similar entities. 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.

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2024 IPRI RESULTS

In this edition, the sample of 125 countries, on average, received a score of 5.18 (Max. 8.10; Min. 1.90). The Legal and Political Environment (LP) emerged as the weakest component with a score of 4.98 (Max. 8.7; Min. 1.00), followed by the Physical Property Rights (PPR) component with a score of 5.21 (Max. 8.50; Min. 1.50), and the Intellectual Property Rights (IPR) component as the strongest with a score of 5.36 (Max. 8.60; Min. 3.00); which also highlights with the higher minimum level of all the IPRI components.

Average scores for 2024 relapsed in a setback of 0.53%, mainly because of the negative impact of LP whose score decreased by 1.5%, and of PPR, with a decrease of 0.31%, both, somewhat compensated by the positive performance of IPR, which showed an improvement of 0.19%. Detailing the items in the components we find that the one showing the most positive change is Registering Process at 9.9%; while the one that deteriorates the most is Political Stability by 2.94%.

AVERAGE	IPRI	LP	PPR	IPR
2020	5.7282	5.1398	6.5002	5.5447
2021	5.6030	5.0847	6.4799	5.2443
2022	5.1914	5.0644	5.2656	5.2443
2023	5.2108	5.0561	5.2291	5.3472
2024	5.1834	4.9802	5.2127	5.3572

Figure 2. Average Score: IPRI and Components. *2020-2024.*

Figure 3 shows, in alphabetical order, the score value of the 125 countries included in the 2024 IPRI and its components. It is also colored as a heatmap to facilitate comparative evaluation.

Figure 4 displays countries organized by their IPRI scores from top to bottom, showing IPRI components' scores (LP, PPR, IPR).

RESULTS

	COUNTRY	IPRI 2024	LEGAL AND POLITICAL ENVIRONMENT (LP)	JUDICIAL INDEPENDENCE	RULE OF LAW	POLITICAL STABILITY	CONTROL OF CORRUPTION	PHYSICAL PROPERTY RIGHTS (PPR)	PHYSICAL PROPERTY PROTECTION	REGISTERING PROCESS	ACCESS TO FINANCING	INTELLECTUAL PROPERTY RIGHTS (IPR)	INTELLECTUAL PROPERTY PROTECTION	PATENT PROTECTION	COPYRIGHT PROTECTION	TRADEMARK PROTECTION
1	FINLAND	8.1	8.7	9.4	8.9	6.8	9.5	8.5	9.3	8.7	7.5	7.1	9.2	7.2		4.8
2	SINGAPORE	7.9	8.0	6.2	8.6	7.9	9.2	8.3	8.9	8.8	7.0	7.6	8.9	6.5	9.6	5.4
3	DENMARK	7.8	8.6	9.2	8.8	6.7	9.8	7.7	8.3	8.7	6.1	7.0	7.8	7.0		6.2
4	NETHERLANDS	7.8	8.1	8.8	8.3	6.4	8.8	7.7	8.5	8.3	6.4	7.5	8.5	6.7	8.6	6.4
5	LUXEMBOURG	7.8	8.1	7.8	8.5	7.1	8.8	7.9	8.5	8.9	6.3	7.3	8.4	6.8		6.6
6	SWEDEN	7.7	8.4	9.2	8.4	6.8	9.1	7.2	7.5	7.9	6.2	7.6	7.7	6.5	9.1	7.1
7	NEW ZEALAND	7.7	8.5	8.7	8.5	7.6	9.3	7.7	8.1	8.4	6.5	7.0	8.1	6.5	7.2	6.2
8	AUSTRALIA	7.7	8.1	9.0	8.0	6.9	8.5	7.4	8.4	8.1	5.8	7.5	7.9	7.2	8.4	6.6
9	NORWAY	7.7	8.4	9.3	8.5	6.7	9.1	7.6	7.9	8.4	6.5	7.0	7.5	7.4		6.3
10	GERMANY	7.7	8.0	9.0	8.1	6.2	8.6	7.4	7.2	8.4	6.8	7.6	7.1	7.2	9.1	7.1
11	SWITZERLAND	7.6	8.3		8.5	7.3	9.0	7.8	9.0		6.6	6.7	8.8	6.5	4.8	6.8
12	JAPAN	7.6	7.8	7.7	8.1	7.1	8.1	7.7	8.7	7.8	6.5	7.3	8.3	6.7	8.2	6.2
13	AUSTRIA	7.6	7.7	8.5	8.4	6.3	7.5	7.3	8.6	7.2	6.2	7.7	8.2	7.2		7.6
14	UNITED STATES	7.5	6.7	6.8	7.7	4.9	7.2	7.2	7.6	6.6	7.5	8.6	7.8	8.1	9.6	8.8
15	UNITED KINGDOM	7.5	7.6	8.2	7.8	6.0	8.2	7.1	7.5	7.6	6.3	7.7	7.6	6.5	9.5	7.3
16	CANADA	7.4	8.0	9.1	8.1	6.5	8.3	7.2	7.7	7.8	6.0	7.0	7.4	7.6	6.8	6.1
17	IRELAND	7.4	8.0	8.9	8.1	6.8	8.3	6.8	7.9	7.7	4.8	7.4	7.7	7.8	8.0	6.0
18	BELGIUM	7.3	7.6	8.6	7.7	6.2	8.0	7.0	7.9	7.2	5.8	7.3	8.4	7.0		6.6
19	ICELAND	7.1	8.0		8.4	7.5	8.1	7.1	8.2		5.9	6.2	7.6	5.9		5.2
20	FRANCE	7.0	6.9	7.2	7.4	5.7	7.5	6.5	7.0	7.0	5.5	7.6	7.8	6.1	9.3	7.1
21	TAIWAN (CHINA)	6.7	7.1		7.5	6.5	7.3	7.3	7.6		7.0	5.7	7.2	6.3	3.6	
22	KOREA, REP.	6.7	6.8	7.2	7.3	6.1	6.5	6.5	6.7	7.4	5.5	6.8	6.0	6.3	8.6	6.1
23	CZECH REPUBLIC	6.5	7.0	7.8	7.2	6.6	6.3	6.0	6.2	6.1	5.7	6.6	6.5	7.2		6.2
24	SPAIN	6.4	6.2	6.3	6.6	5.5	6.4	6.0	6.3	6.4	5.4	7.0	6.3	7.2	7.7	6.6
25	URUGUAY	6.4	7.5	7.9	6.5	7.2	8.2	6.0	6.8	6.1	5.0	5.7	6.2	4.8		5.9
26	QATAR	6.4	6.8		6.8	6.9	6.6	7.2	7.4		7.0	5.1	7.5	4.1		3.7
27	LITHUANIA	6.3	7.0	8.0	7.1	6.3	6.5	6.0	6.2	7.2	4.6	6.0	5.9	6.5		5.7
28	PORTUGAL	6.3	6.9	7.3	7.2	6.7	6.5	5.3	6.5	4.7	4.8	6.7	6.9	6.3		7.0
29	ISRAEL	6.3	5.3		6.9	2.4	6.6	6.8	7.4		6.2	6.8	7.6	6.6	6.6	6.6
30	MALAYSIA	6.2	5.5	5.1	6.1	5.3	5.5	6.5	7.5	5.4	6.7	6.5	7.3	6.2	6.5	6.2

	COUNTRY	IPRI 2024	LEGAL AND POLITICAL ENVIRONMENT (LP)	JUDICIAL INDEPENDENCE	RULE OF LAW	POLITICAL STABILITY	CONTROL OF CORRUPTION	PHYSICAL PROPERTY RIGHTS (PPR)	PHYSICAL PROPERTY PROTECTION	REGISTERING PROCESS	ACCESS TO FINANCING	INTELLECTUAL PROPERTY RIGHTS (IPR)	INTELLECTUAL PROPERTY PROTECTION	PATENT PROTECTION	COPYRIGHT PROTECTION	TRADEMARK PROTECTION
31	UNITED ARAB EMIRATES	6.2	6.4	5.2	6.7	6.4	7.3	7.1	7.8	6.8	6.6	5.0	7.6	4.7	3.3	4.5
32	LATVIA	6.1	6.7	7.7	6.8	6.0	6.4	5.8	6.2	6.2	5.0	5.9	6.1	4.9		6.7
33	OMAN	6.1	5.7		6.0	6.1	5.1	6.9	7.7		6.0	5.7	7.6	4.7		4.8
34	MALTA	6.1	6.6	7.4	6.6	6.8	5.5	5.7	6.8	5.2	5.0	5.9	6.2	6.4		5.3
35	SLOVENIA	6.1	6.4	5.7	6.9	6.4	6.5	5.8	6.1	5.9	5.4	6.0	6.3	5.7		6.1
36	ITALY	6.0	6.3	7.7	5.6	5.8	6.1	4.9	5.6	5.3	3.8	6.8	6.0	6.7	7.0	7.3
37	CYPRUS	5.9	6.4	7.6	6.1	5.8	5.8	5.8	6.6	6.1	4.7	5.7	6.3	5.2		5.4
38	CHILE	5.9	6.4	7.1	6.4	5.2	6.9	5.9	7.2	5.3	5.2	5.4	6.2	7.2	3.0	5.4
39	SAUDI ARABIA	5.8	5.2		5.6	4.3	5.7	7.0	7.9		6.2	5.3	7.2	4.4	4.7	4.9
40	COSTA RICA	5.8	6.4	7.0	5.9	6.9	5.9	5.6	6.6	5.8	4.3	5.5	6.0	5.5	5.0	5.5
41	SLOVAKIA	5.8	6.2	7.1	6.2	5.9	5.4	5.5	5.7	5.5	5.3	5.8	5.6	5.9		6.0
42	ROMANIA	5.8	5.7	6.1	5.8	6.0	5.0	5.1	6.1	4.8	4.4	6.5	6.1	6.3		7.0
43	BAHRAIN	5.7	5.1		5.9	4.2	5.3	6.8	7.8		5.8	5.2	7.0	3.5		5.3
44	BOTSWANA	5.6	6.5	6.6	5.9	7.2	6.3	5.3	6.5	5.0	4.4	4.9	5.2	4.8		4.6
45	BRUNEI DARUSSALAM	5.5	7.2		6.9	7.5	7.3	5.3	5.5		5.0	4.1	5.5	4.1	2.2	4.6
46	JORDAN	5.5	5.2	5.8	5.4	4.4	5.1	6.0	6.7	5.3	6.1	5.1	6.4	5.8	2.8	5.6
47	POLAND	5.4	5.6	4.5	5.9	6.0	6.0	5.0	5.1	4.9	4.9	5.7	5.2	6.3	4.5	6.9
48	RWANDA	5.3	5.4	5.0	5.3	5.1	6.1	5.7	6.6	5.2	5.2	4.9	6.1	4.7		4.1
49	HUNGARY	5.3	5.0	3.2	5.8	6.3	4.8	4.5	4.9	3.7	5.0	6.3	5.2	6.7	6.3	7.3
50	JAMAICA	5.3	5.7	7.3	4.9	5.8	5.0	4.9	5.7	4.5	4.5	5.2	5.5	4.5		5.7
51	CHINA	5.3	3.9	1.7	4.9	4.1	5.0	5.5	6.0	4.7	5.7	6.5	5.8	7.0	4.3	8.6
52	MOROCCO	5.2	4.1	3.3	4.6	4.4	4.3	5.5	7.2	4.3	5.0	6.1	6.5	6.3	5.3	6.1
53	ARMENIA	5.2	4.4		4.7	3.4	5.1	5.8	6.4		5.2	5.5	5.4	4.6		6.5
54	CROATIA	5.2	5.6	5.1	5.7	6.2	5.3	4.5	4.6	4.7	4.1	5.6	4.6	5.5		6.6
55	KUWAIT	5.2	5.2	4.5	5.6	5.6	5.3	5.6	5.7	5.4	5.6	4.6	5.2	3.6	4.0	5.8
56	BULGARIA	5.1	4.9	4.6	4.8	5.5	4.7	4.8	4.9	4.5	5.2	5.7	4.5	6.3		6.3
57	GREECE	5.1	5.4	5.7	5.7	5.1	5.1	4.0	5.0	4.4	2.7	5.9	5.0	6.5	6.4	5.9
58	INDIA	5.1	4.7	5.3	5.2	3.9	4.4	5.5	5.7	4.6	6.1	5.1	5.7	5.7	3.9	
59	SOUTH AFRICA	5.1	5.0	6.9	5.0	3.6	4.4	4.9	5.2	5.1	4.4	5.4	6.1	6.5	3.6	5.4
60	PANAMA	5.0	4.3	3.4	4.3	5.6	3.7	5.2	5.8	4.5	5.4	5.6	5.7	6.7		4.5
61	AZERBAIJAN	5.0	3.3		3.8	3.1	2.9	6.5	6.8		6.1	5.3	7.0	4.1		4.8
62	INDONESIA	5.0	4.4	4.7	4.6	4.1	4.1	5.6	6.2	4.9	5.8	5.0	5.9	5.0	4.0	5.0
63	TRINIDAD AND TOBAGO	5.0	5.0	5.4	4.7	5.7	4.2	4.5	5.5	4.0	4.0	5.4	4.5	5.7		6.1
64	GHANA	4.9	5.2	6.2	4.8	4.9	4.9	5.0	5.2	5.2	4.6	4.6	4.9	5.0	4.3	4.3
65	GEORGIA	4.9	4.7	3.3	5.3	4.1	6.2	5.1	6.2	4.6	4.6	4.9	4.6	5.0		5.1
66	MONTENEGRO	4.9	4.5	3.7	4.7	4.9	4.8	4.9	5.6	3.7	5.4	5.2	4.8	4.4		6.3
67	THAILAND	4.8	4.7	5.2	5.1	4.2	4.1	5.0	5.5	3.5	5.9	4.8	4.5	5.4	4.0	5.2
68	SENEGAL	4.7	4.4	3.5	4.5	4.7	4.9	4.9	5.4	4.8	4.3	4.9	5.7	4.9		4.0
69	DOMINICAN REPUBLIC	4.7	4.6	3.7	4.8	5.7	4.1	4.6	5.5	3.1	5.1	5.0	5.5	5.4	3.9	5.2
70	SRI LANKA	4.7	4.1	4.0	4.9	3.4	4.2	4.6	4.8	3.9	5.2	5.3	4.6	5.4		6.0
71	MOLDOVA	4.7	4.1	3.9	4.4	3.7	4.3	4.5	4.8	4.2	4.4	5.5	4.7	4.9		7.0
72	TUNISIA	4.7	4.3	4.2	4.8	3.8	4.5	4.5	5.6	4.0	4.0	5.1	4.5	5.0		5.9
73	KENYA	4.6	3.9	4.8	4.4	3.1	3.5	4.8	5.6	3.9	4.9	5.2	5.2	5.8	4.3	5.5
74	KAZAKHSTAN	4.6	4.1	3.6	4.1	4.3	4.6	4.9	5.6	4.5	4.5	4.9	5.2	3.7		5.9
75	KINGDOM OF ESWATINI	4.6	4.0		3.8	4.5	3.7	5.0	6.0		4.1	4.9	4.1	5.2		5.4
76	SERBIA	4.6	4.0	2.5	4.8	4.7	4.1	4.5	4.9	3.9	4.9	5.4	4.4	4.8		6.8
77	MEXICO	4.6	3.4	3.8	3.3	3.6	3.0	4.4	5.2	3.4	4.5	6.0	5.2	6.3	5.4	7.0
78	NORTH MACEDONIA	4.6	4.5	3.6	4.8	5.2	4.4	4.1	4.3	4.2	3.9	5.1	3.8	5.3		6.3
79	COLOMBIA	4.6	4.2	4.8	4.1	3.7	4.3	4.7	5.1	4.0	4.8	4.8	4.7	5.5	3.3	5.7
80	BRAZIL	4.5	4.4	5.1	4.5	4.3	3.9	4.2	4.9	3.4	4.2	5.0	4.6	5.7	3.8	6.0
81	TANZANIA	4.5	4.2	3.9	4.1	4.5	4.3	4.5	5.3	3.3	4.8	4.9	5.2	4.7		5.0
82	ALBANIA	4.5	4.3	3.0	4.7	5.2	4.2	4.2	3.8	3.9	4.8	5.1	3.5	5.2		6.6
83	MALAWI	4.5	4.9	6.7	4.6	4.7	3.8	4.3	5.4	4.5	2.9	4.3	4.2	4.1		4.7
84	PHILIPPINES	4.4	3.6	3.0	4.0	3.6	3.9	4.9	5.8	3.9	4.8	4.8	5.8	5.9	3.3	4.2
85	VIETNAM	4.4	4.3	3.0	4.7	4.9	4.4	4.4	5.0	3.9	4.4	4.5	4.4	6.1	2.5	5.1

	COUNTRY	IPRI 2024	LEGAL AND POLITICAL ENVIRONMENT (LP)	JUDICIAL INDEPENDENCE	RULE OF LAW	POLITICAL STABILITY	CONTROL OF CORRUPTION	PHYSICAL PROPERTY RIGHTS (PPR)	PHYSICAL PROPERTY PROTECTION	REGISTERING PROCESS	ACCESS TO FINANCING	INTELLECTUAL PROPERTY RIGHTS (IPR)	INTELLECTUAL PROPERTY PROTECTION	PATENT PROTECTION	COPYRIGHT PROTECTION	TRADEMARK PROTECTION
86	PARAGUAY	4.3	3.8	3.5	3.8	5.1	2.8	4.7	5.3	3.9	4.9	4.5	4.0	5.0		4.6
87	EGYPT	4.3	3.5	3.1	4.5	2.9	3.6	4.9	6.9	2.4	5.4	4.5	4.7	4.8	2.3	6.3
88	ZAMBIA	4.3	4.3	4.0	4.0	5.2	3.9	4.2	5.2	4.0	3.4	4.5	4.4	4.6		4.4
89	PERU	4.3	4.0	4.4	3.9	4.1	3.4	4.0	4.2	3.4	4.4	5.0	3.7	6.1	4.6	5.6
90	EL SALVADOR	4.3	3.7	3.0	3.5	4.7	3.7	4.3	4.4	4.2	4.4	4.7	3.6	6.3		4.4
91	UGANDA	4.3	3.5	3.6	4.2	3.4	2.9	4.6	5.1	4.0	4.8	4.6	4.0	5.5		4.3
92	TURKEY	4.3	3.1	1.3	4.1	2.9	4.1	4.4	5.4	2.9	5.0	5.3	4.8	5.9	3.6	6.7
93	BENIN	4.3	3.9	2.8	3.8	4.3	4.8	4.2	4.8	3.9	4.0	4.7	5.1	4.6		4.3
94	ARGENTINA	4.2	4.3	3.9	4.0	5.0	4.1	3.9	4.6	4.4	2.7	4.4	4.9	5.7	2.3	4.6
95	NEPAL	4.1	4.2	4.2	4.1	4.5	3.9	4.8	5.1	4.5	4.8	3.5	4.0	3.0		3.3
96	BOSNIA AND HERZEGOVINA	4.1	4.0	3.7	4.4	4.1	3.6	4.1	3.8	4.4	4.1	4.4	3.2	3.7		6.3
97	ALGERIA	4.1	3.4	3.1	3.3	3.5	3.7	4.8	5.1	4.7	4.7	4.2	5.0	4.1	2.2	5.4
98	ECUADOR	4.1	4.0	4.0	3.8	4.5	3.7	4.2	4.5	3.8	4.4	4.2	4.4	5.9	2.5	4.1
99	BURKINA FASO	4.1	3.8	5.0	3.8	1.4	4.8	3.9	4.9	3.7	3.0	4.6	4.9	4.6		4.4
100	CÔTE D'IVOIRE	4.1	3.6	2.0	4.0	4.0	4.3	4.1	4.9	4.9	2.4	4.5	4.8	4.8		4.0
101	HONDURAS	4.0	3.1	2.3	3.0	3.9	3.0	4.3	5.2	2.9	5.0	4.6	4.9	5.0	3.6	4.9
102	UKRAINE	3.8	2.8	3.1	3.2	1.0	3.7	4.2	3.9	4.7	3.9	4.5	3.9	5.7	2.6	5.9
103	RUSSIA	3.8	2.6	1.6	2.6	3.2	3.0	4.2	4.5	4.4	3.8	4.5	4.7	6.5	0.0	7.0
104	GABON	3.8	3.3	1.9	3.3	5.1	2.9	3.6	4.2	4.1	2.6	4.3	3.8	4.8		4.4
105	MOZAMBIQUE	3.8	3.0	3.2	3.0	2.4	3.3	3.7	3.9	3.8	3.4	4.6	3.3	5.0		5.5
106	PAKISTAN	3.7	3.2	4.4	3.7	1.2	3.4	4.2	5.1	2.6	4.9	3.9	5.0	3.7	1.8	4.9
107	BURUNDI	3.7	2.3		2.4	2.6	2.0	4.8	5.6		4.0	4.1	4.7	3.7		3.8
108	BANGLADESH	3.7	3.2	3.1	3.8	2.8	2.8	4.0	4.9	2.6	4.4	3.8	3.7	3.2		4.6
109	CAMEROON	3.6	2.4	1.8	2.9	2.3	2.7	3.9	4.9	3.3	3.6	4.6	5.2	4.8		3.6
110	LEBANON	3.6	2.5	2.6	2.8	2.1	2.7	4.7	5.1	4.4	4.7	3.6	3.8	3.1		3.9
111	NICARAGUA	3.6	2.4	0.4	2.4	4.3	2.4	3.5	4.3	2.3	3.9	4.9	3.7	5.7		5.4
112	MADAGASCAR	3.6	3.2	2.9	3.1	3.9	3.0	3.7	3.7	3.6	3.9	3.8	3.5	3.6		4.4
113	IRAN	3.6	2.7	3.3	3.0	1.8	2.7	4.0	4.2	4.6	3.1	4.0	2.9	3.7		5.4
114	MALI	3.5	2.4	3.3	3.0	0.0	3.2	4.1	4.3	4.2	3.9	4.1	4.1	4.6		3.6
115	NIGERIA	3.5	2.9	4.4	3.2	1.4	2.8	3.7	4.4	3.6	3.0	4.0	3.3	4.3	4.3	4.0
116	ZIMBABWE	3.4	2.7	2.5	2.5	3.2	2.5	3.2	3.1	3.2	3.3	4.5	4.2	4.8		4.3
117	BOLIVIA	3.4	2.9	1.6	2.4	4.4	3.2	3.6	2.8	3.0	5.1	3.5	2.5	3.3		4.9
118	MAURITANIA	3.2	3.3	2.1	3.7	4.0	3.4	2.3	2.1	2.8	2.1	4.1	3.9	5.2		3.2
119	ANGOLA	3.2	3.4	3.0	3.0	3.7	3.8	3.3	3.7	4.1	2.1	3.0	2.9	2.8	0.0	3.3
120	ETHIOPIA	3.2	2.8	2.5	3.8	0.9	4.1	3.5	3.8	2.9	3.9	3.2	3.5	2.2		3.8
121	CHAD	3.0	2.1		2.3	2.0	2.0	3.0	3.5		2.6	3.9	3.6	4.6		3.6
122	CONGO, DEM. REP.	3.0	1.8	2.5	1.7	1.0	1.9	3.2	3.5	3.7	2.6	4.0	3.1	4.8		4.0
123	HAITI	2.6	2.2	2.1	2.2	2.2	2.1	2.1	2.3	1.8	2.1	3.5	2.3	3.7		4.4
124	YEMEN	2.4	1.0		1.3	0.0	1.6	2.7	3.2		2.3	3.4	2.3	3.7		4.2
125	VENEZUELA	1.9	1.3	0.4	0.6	2.5	1.7	1.5	1.0	0.6	2.9	3.0	1.4	4.1	2.3	4.2

Figure 3. IPRI 2024 and its Components: *Scores by Country*

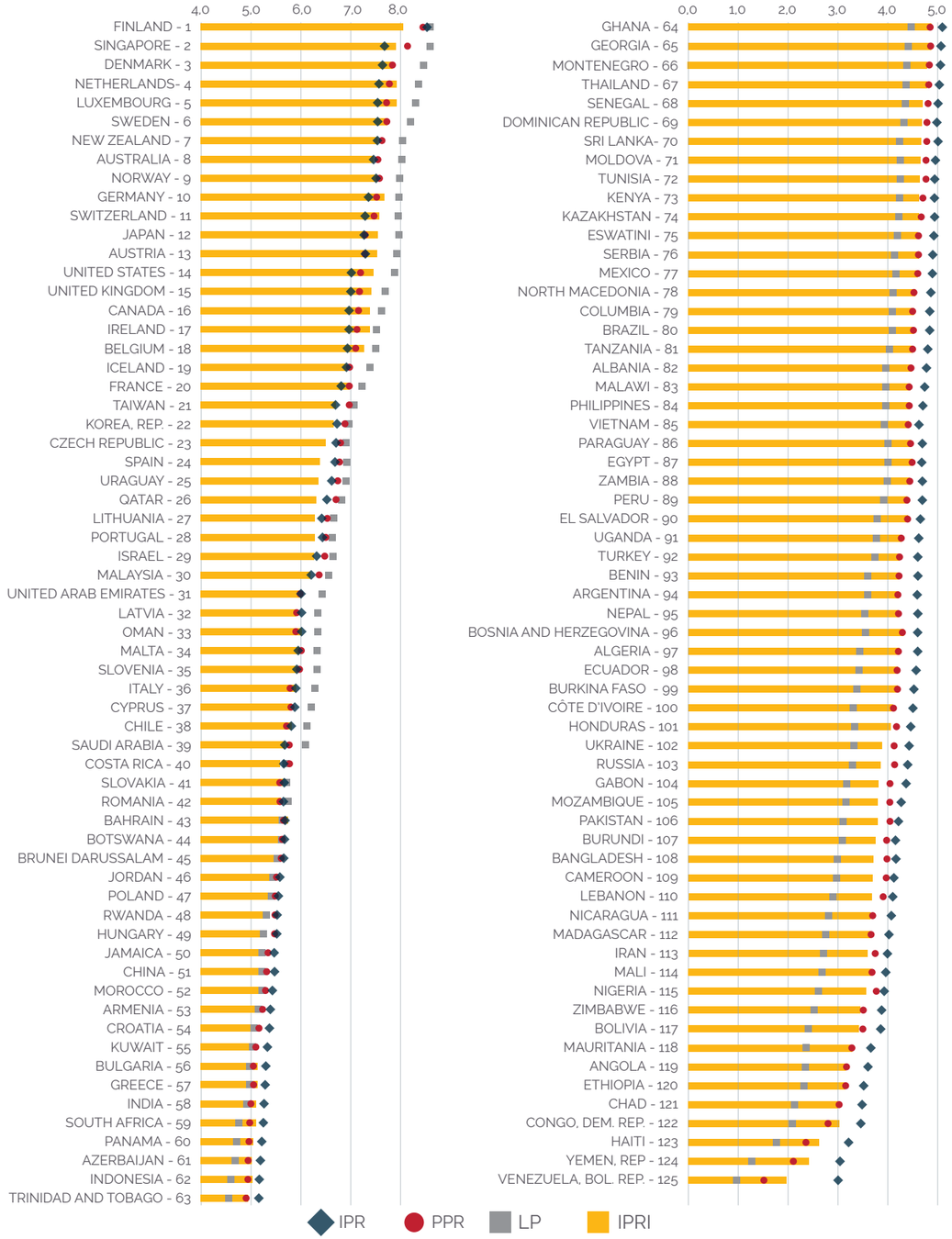


Figure 4. IPRI & Components 2024 scores *(order by IPRI rankings).*

STRONG

WEAK

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

Figure 5. 2024 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 fifth quintiles include 64 countries which is 48.8% of our sample, while the first three quintiles include almost the same number of countries, 61 countries, 51.2% of the sample. (See Figure 5).

Figure 6 shows the top 15 countries for the 2024 IPRI edition. This year, Finland leads the IPRI score (8.1) as well as the score of the LP (8.7) and PPR (8.5) component, while the USA leads the IPR component (8.6), followed in this component by the United Kingdom (7.7) and Austria (7.66). Singapore is in 2nd place in the IPRI (7.94) and for the PPR (8.25) component.

Third comes Denmark (7.774) — that is in the 2nd place (8.64) for LP — and Netherlands (7.773). In fifth place and subsequent ones are: Luxembourg, Sweden, New Zealand, Australia, Norway, Germany, Switzerland, Japan, Austria, the USA, and the United Kingdom.

The IPRI scores of these 15 top countries come in a range of 7.5 to 8.1, so the difference among them is less than 10%, and a similar situation arises with the IPRI components' score, as follows: LP [6.7 - 8.6]; PPR [7.1 – 8.52] and IPR [6.73 - 8.6].

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

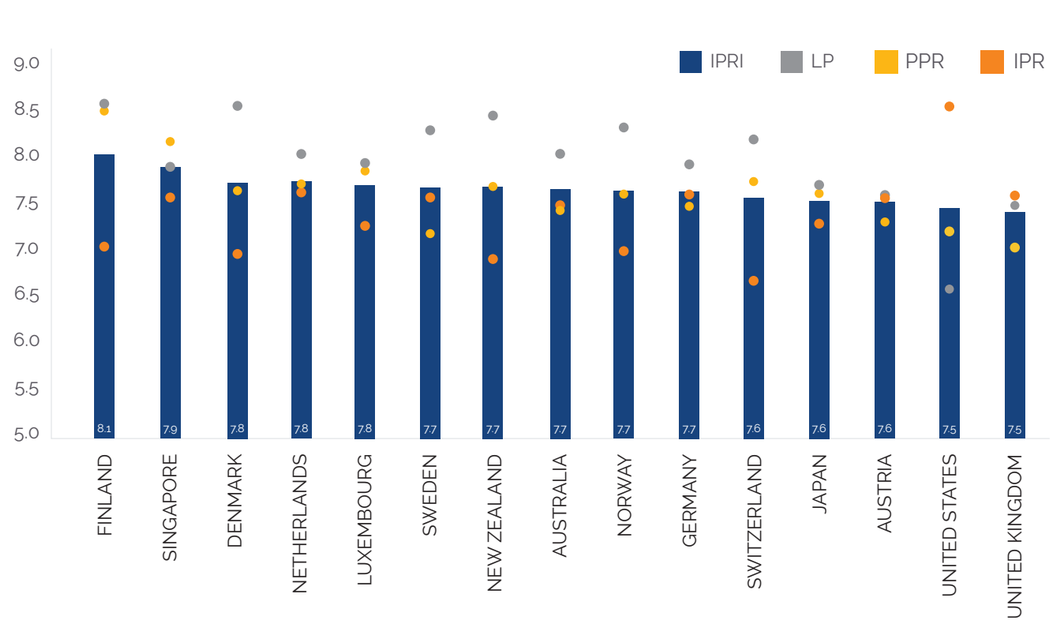


Figure 6. 2024 IPRI & Components: Top 15 Countries.



It should be said that the top 15 countries are the same that in 2023, with slight differences in their line-up; and this situation has been constant during the last seven years (See Figure 7).

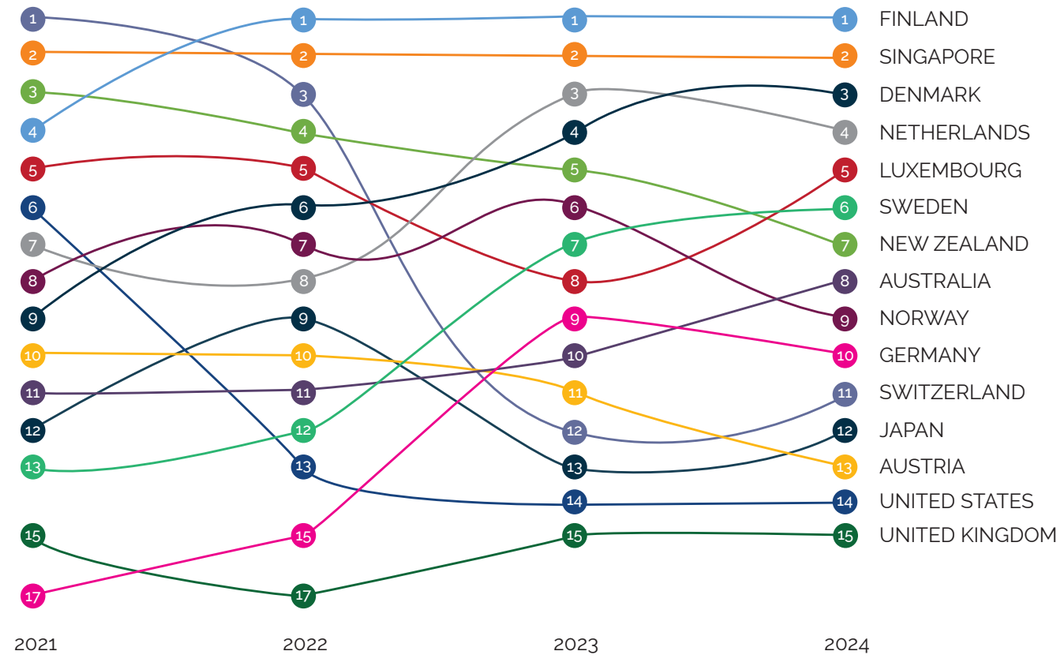


Figure 7. IPRI 2021-2024: Top Countries Ranking.

Contrary to what is shown for top countries, the weakest component for most of these others 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 only country showing the LP as its strongest component. Important to note are score ranges for these counties: IPRI [1.9-3.6]; LP [1.0, 3.4]; PPR [1.5-4.1], and IPR [3.0-4.9]; being the latter the component with the best performance.



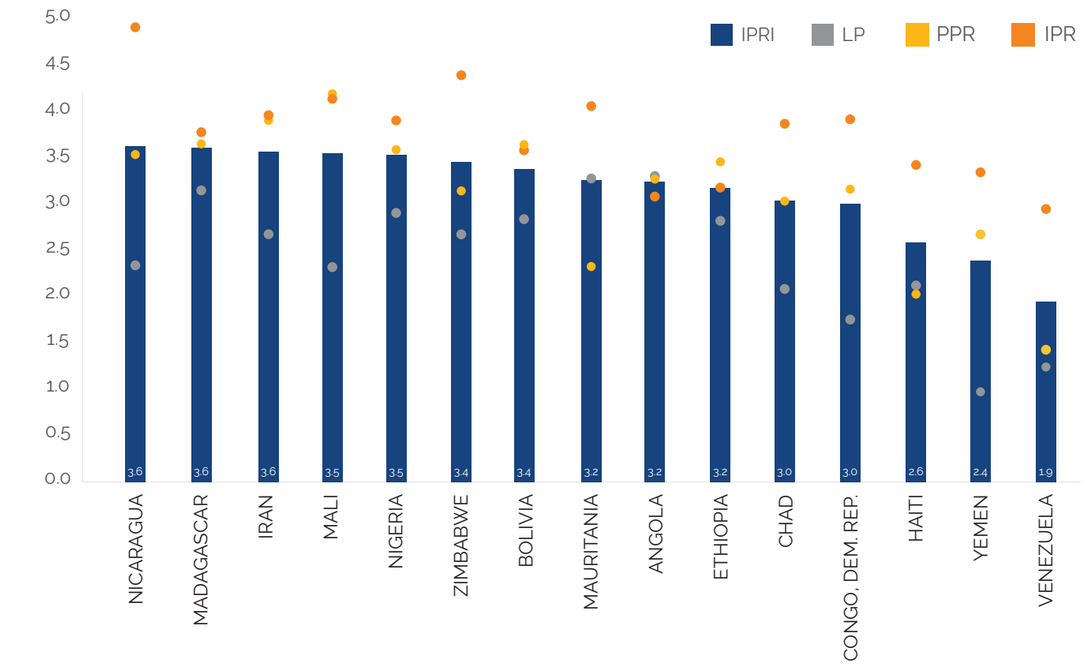


Figure 8. 2024 IPRI & Components: Bottom 15 Countries.

The 15 bottom countries of this 2024 IPRI edition are Venezuela Bolivarian Rep. (1.9), Yemen Rep. (2.4), Haiti (2.6), Democratic Rep. of Congo (3.0), Chad (3.0), Ethiopia (3.2), Angola (3.2), Mauritania (3.2), Bolivia (3.4), Zimbabwe (3.4), Nigeria (3.5), Mali (3.5), Iran (3.6), Madagascar (3.6) and Nicaragua (3.6). Again, they are mostly the same group of countries as last year (Fig. 8).

Looking at the IPRI components: leading the LP we find Angola (3.4), Mauritania (3.3), and Madagascar (3.2); for the PPR, Mali (4.1), Iran (4.0) Madagascar (3.7), and for the IPR Nicaragua (4.9), Zimbabwe (4.5), and Mali (4.1).

We must celebrate those 35 countries that improved their IPRI scores this year compared to 2023 while alerting those 89 that deteriorated them. Despite changes in both cases being slight, Nigeria (+4.4%) stands out in positive relative terms and Montenegro (-6.05%) and Haiti (-6.02%) in negative relative terms. In absolute terms, we should mention Nigeria (+0.15), Saudia Arabia (+0.12), and Cote D'Ivore (+0.12), while on the other extreme Montenegro (-0.31), Ukraine (-0.19), and Haiti (-0.16).

For the LP component (see Fig. 10), 72 countries improved their score compared with 2023, worth mentioning Cote D'Ivoire (0.29) and the Dominican Republic (0.21). The rest of the 53 countries decreased their scores, highlighting Ukraine (-0.55), Russia (-0.42), and Sri Lanka (-0.37).

For the PPR component (see Fig. 11), 44 countries achieved an improvement in their score, worth mentioning Turkey (0.11), Luxembourg (0.098), and Finland (0.09). Meanwhile, 15 countries displayed no change, and 66 countries, deteriorated their PPR scores, being Montenegro (-0.59) the most upsetting.

For the IPR component (see Fig. 12), six (6) countries showed improvement, and it was not trivial, particularly for Nigeria (15.64%) and Brazil (5.62%), followed by Saudi Arabia, Egypt, Canada, and Greece. The rest of the countries kept their previous score.



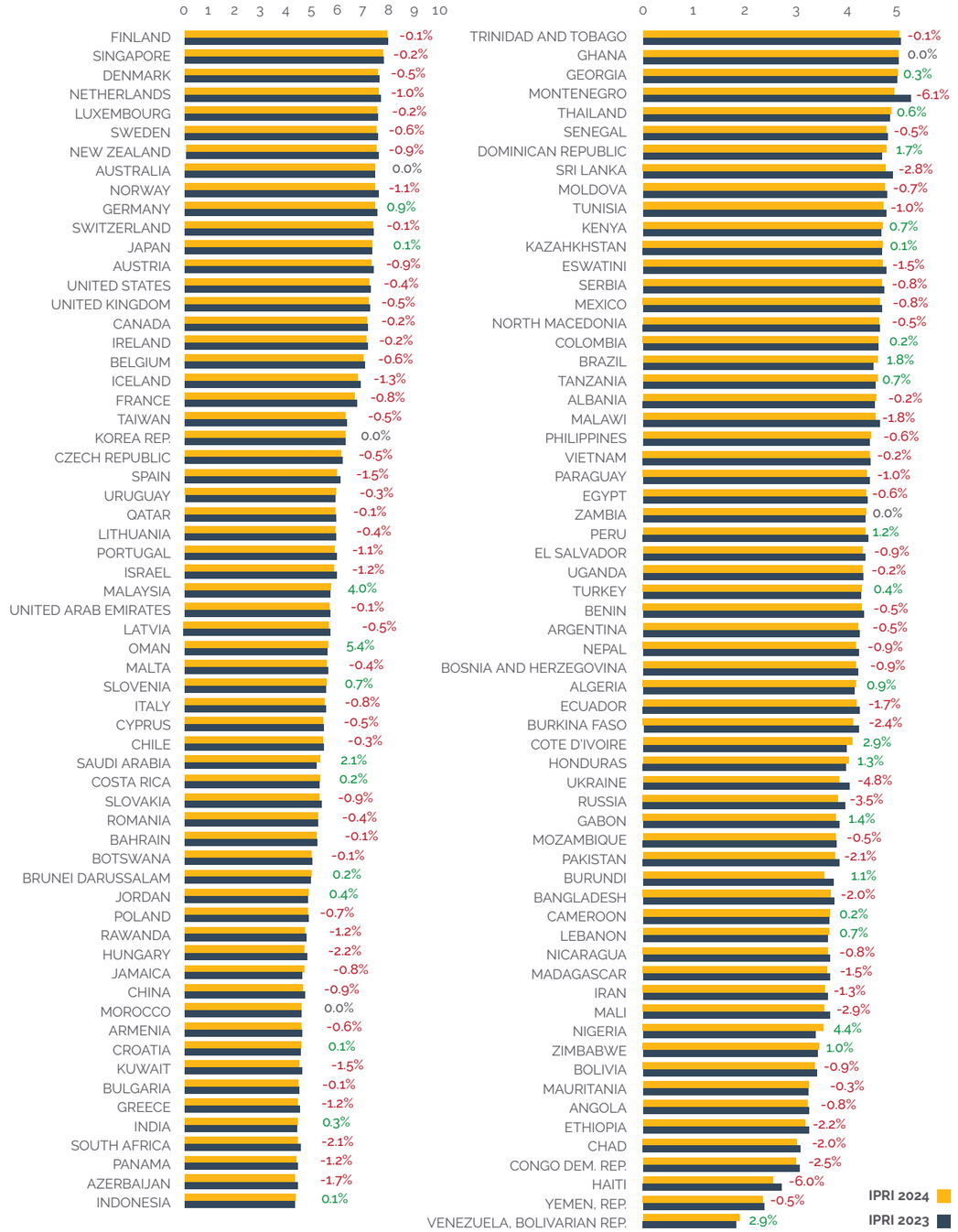


Figure 9. 2024-2023 IPRI Score Variation (%).

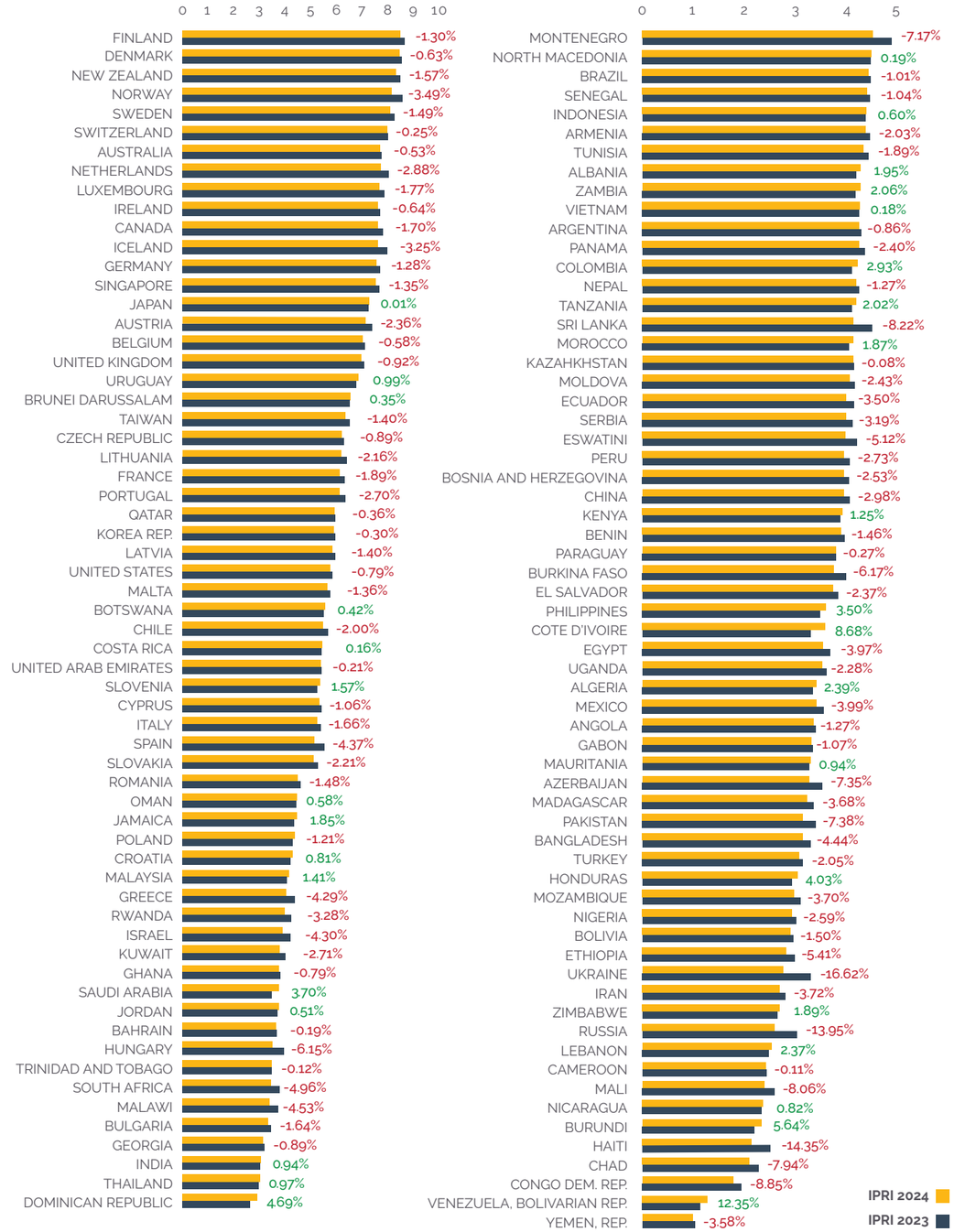


Figure 10. LP Score 2024-2023 and Variation (%).

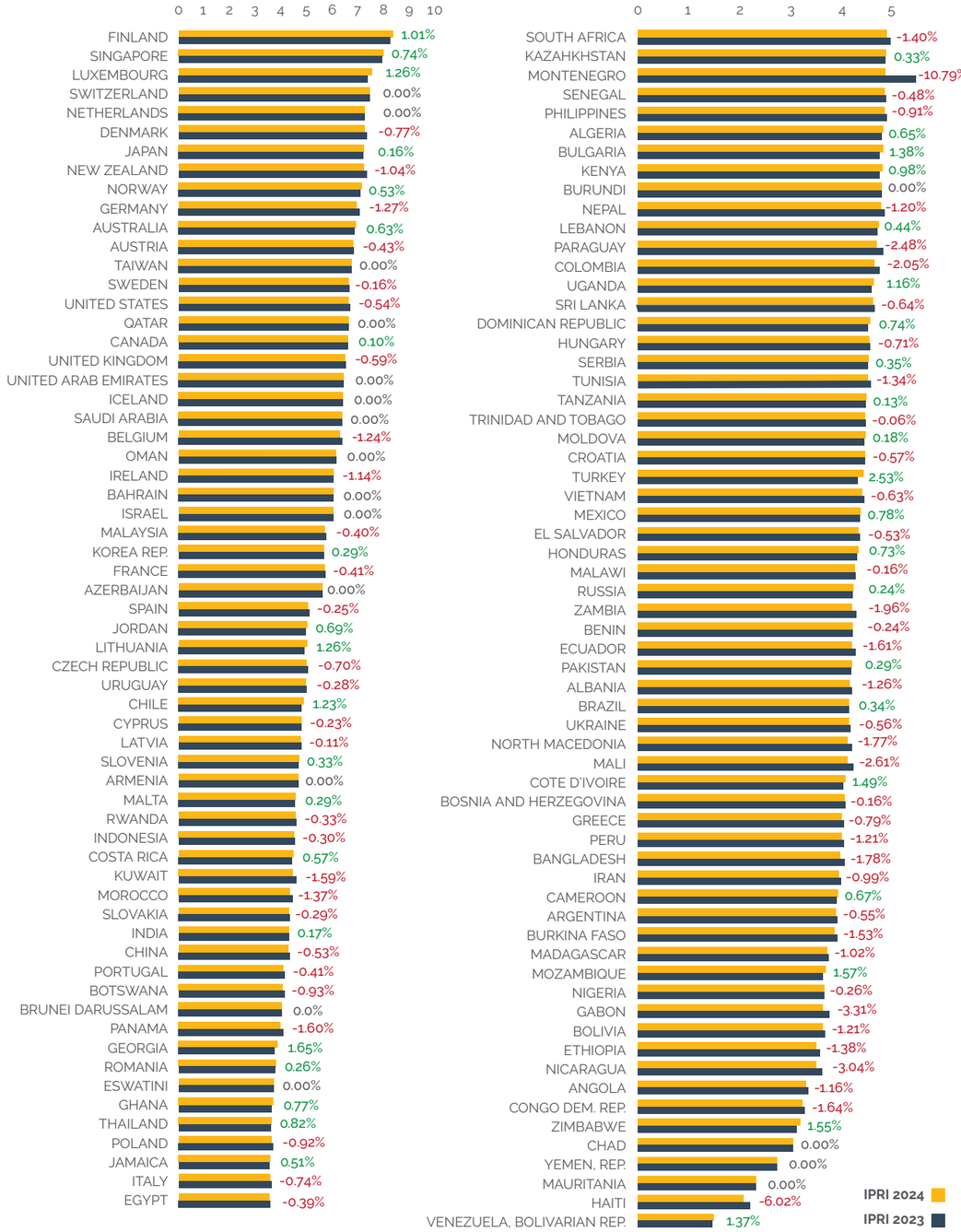


Figure 11. PPR Score 2024-2023 and Variation (%).

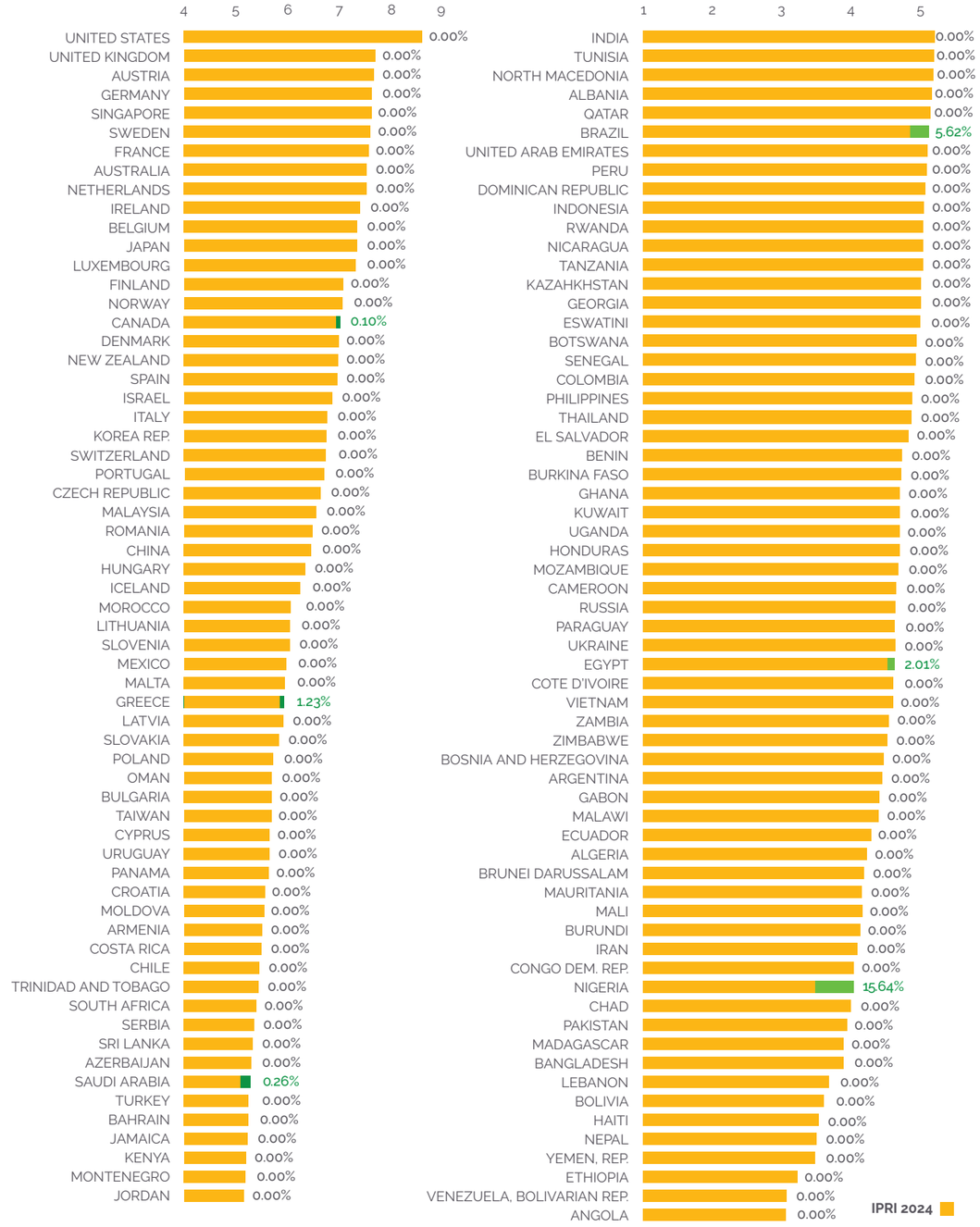


Figure 12. IPR Score 2024-2023 and Variation (%).

3

2024 IPRI BY GROUPS

The IPRI analysis is 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 Methodological Appendix, Section 3). For each group, we calculated the IPRI's and components' scores.

NAME GROUP	GROUP	IPRI	LP	PPR	IPR
REGIONAL GROUPS	NA	7.4500	7.3414	7.2066	7.8022
	WE	7.1465	7.5618	6.8241	7.0537
	AO	5.6284	5.5110	5.8395	5.5348
	CEECA	5.1149	4.8614	5.0057	5.4776
	MENA	4.9999	4.4404	5.6391	4.9201
	LAC	4.4287	4.1734	4.3054	4.8072
	A	4.0591	3.6380	4.1321	4.4071
GEOGRAPHICAL REGIONAL GROUPS	Oceania	7.7047	8.3175	7.5546	7.2420
	European Union	6.5234	6.8384	6.1105	6.6212
	North America	6.4971	6.0330	6.2651	7.1932
	Rest of Europe	5.2854	5.0100	5.3057	5.5406
	Asia	5.2480	4.8663	5.7294	5.1483
	Central America & Caribe	4.4772	4.1427	4.3403	4.9487
	South America	4.3687	4.2767	4.2664	4.5630
	Africa	4.1276	3.6669	4.2368	4.4792
REGIONAL & DEVELOPMENT CLASSIFICATION	Advanced economies	6.9535	7.2876	6.7165	6.8565
	Emerging and Developing Asia	4.8407	4.5279	5.0948	4.8993
	Middle East & Central Asia	4.7738	4.2137	5.3295	4.7781
	Emerging and Developing Europe	4.6844	4.2298	4.5017	5.3216
	Latin America & the Caribbean	4.4287	4.1734	4.3054	4.8072
	Sub-Saharan Africa	4.0905	3.6511	4.2015	4.4189

NAME GROUP	GROUP	IPRI	LP	PPR	IPR
INCOME GROUP	High income	6.5918	6.8617	6.4716	6.4422
	Upper middle income	4.7381	4.3304	4.7716	5.1123
	Lower middle income	4.1166	3.5787	4.3044	4.4668
	Low income	3.6983	3.0216	3.9438	4.1296
REGIONAL INTEGRATION AGREEMENTS	EFTA	7.4674	8.2376	7.4944	6.6701
	OECD	6.6872	6.9104	6.4337	6.7177
	EU	6.5234	6.8384	6.1105	6.6212
	USMCA	6.4971	6.0330	6.2651	7.1932
	TPP-11	6.3014	6.4707	6.2500	6.1837
	GCC	5.8843	5.7401	6.7623	5.1505
	ASEAN	5.4724	5.3766	5.7080	5.3325
	MERCOSUR	4.8602	4.9911	4.6883	4.9012
	AP	4.8510	4.5069	4.7383	5.3077
	CIS	4.6707	3.6906	5.1619	5.1596
	MCCA	4.4303	3.8964	4.4496	4.9447
	PROSUR	4.3505	4.1139	4.2746	4.6629
	PARLACEN	4.3254	3.5982	4.3980	4.9801
	ARAB M UNION	4.3184	3.8002	4.2984	4.8564
	CARICOM	4.2776	4.2903	3.8257	4.7170
	SAARC	4.2683	3.8665	4.6176	4.3207
	OPEC	4.2568	3.8098	4.6614	4.2992
	ECOWAS	4.1613	3.7391	4.2630	4.4818
	SADC	4.1503	3.9014	4.1205	4.4291
	CAN	4.0980	3.7732	4.1281	4.3929
	IGAD	4.0279	3.4277	4.3261	4.3299
	CEEAC	3.6715	2.9573	3.9471	4.1102
	CEMAC	3.4754	2.6149	3.5427	4.2688

Figure 13. 2024 IPRI and Components: Groups Score.

It is important to note that certain groups are classified differently, resulting in varying reported score values. This discrepancy is particularly notable in Latin America and the Caribbean, where some classifications include or exclude certain countries.

Additionally, while it is crucial to evaluate changes by region for this year, it is equally important to analyze trends over time. In this regard, we observe a consistent intergroup dynamic, with the exception of occasional fluctuations in the performance of the 'Rest of Europe' group, which has at times outperformed or underperformed compared to other groups of countries. The remaining groups appear to exhibit a parallel behavior (Fig. 14).

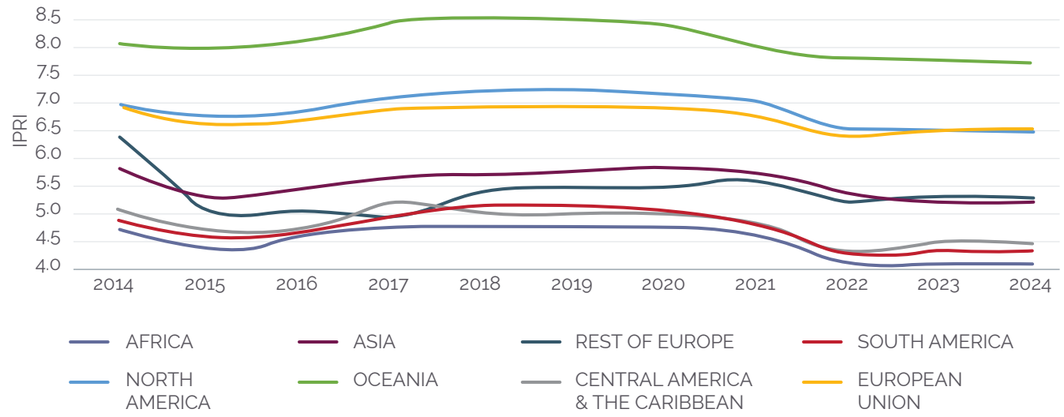


Figure 14. IPRI scores by Regional Groups 2014-2024.

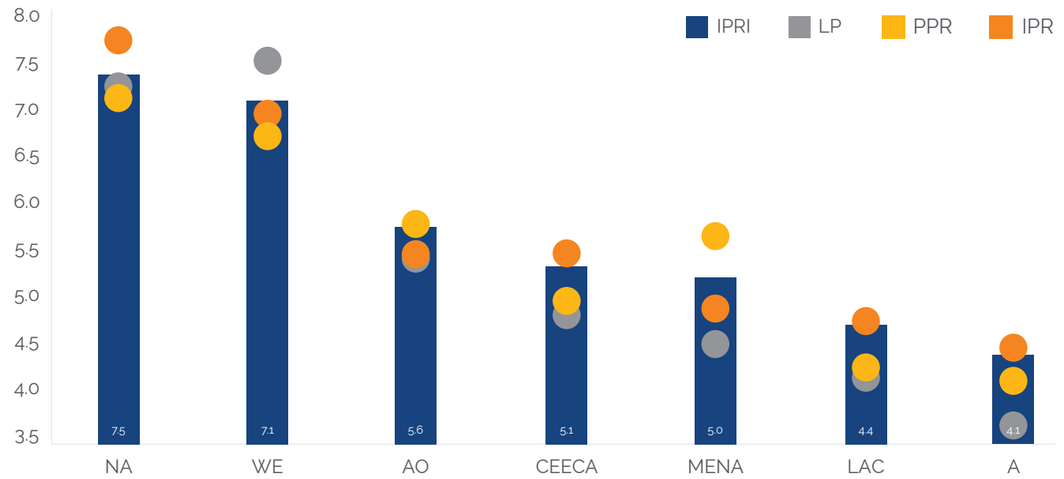


Figure 15. 2024 IPRI and Components: Regional Groups Score.

Below is a brief analysis of the groups' results:

A. Regional Groups (Fig. 15): North America (NA) (7.45) leads the IPRI score, followed by Western Europe (WE) (7.15), East Asia, South Asia & Pacific (AO) (5.63), and Central and Eastern Europe (CEECA) (5.11). On the other extreme, we find Africa (A) (4.06) and Latin America & the Caribbean (LAC) (4.43) and Middle East & North Africa (MENA) (4.99) countries. Beyond the score all groups exhibited a weakening behavior of the IPRI, being the most relevant CEECA (-0.93%) and WE (-0.71%). That behavior was observed in the LP and the PPR component too, while the IPR component exhibited an improved behavior, being most relevant for North America (+0.57).

B. Geographical Groups (Fig. 16): At the top, we find Oceania (7.7), European Union (6.52), and North America (6.50); while at the bottom are Africa (4.13), South America (4.37), and Central America and the Caribbean (4.48). All IPRI scores decreased compared to 2023 (in a range of -0.1% to –1.22%), as well as those of LP and PPR. Meanwhile, most of the groups showed an improvement in the IPR component, the most relevant exhibited by South America (+0.59%).

C. Regional & Development Groups, following the International Monetary Fund (IMF) classification (Fig. 17): Advanced Economies (6.95) leads the IPRI scores, followed by Emerging and Developing Asia (4.84), Middle East and Central Asia (4.773), Emerging and Developing Europe (4.68), Latin America and the Caribbean (4.43), ending with Sub-Saharan Africa (4.1).

D. All groups deteriorate their IPRI scores performance (from 0.18% to 2.15%), as well as the LP and the PPR components. For the IPR component, three groups improved their scores: Latin America and the Caribbean 0.28%, Middle East and Central Asia 0.28%, and Sub-Saharan Africa 0.47%.

E. Income Group, following World Bank classification (Fig. 18): As in previous editions, the income classification groups show the same display of the IPRI score. High Income (6.59) remains at the top, followed by Upper Middle Income (4.74), Lower Middle Income (4.12) and Low Income (3.70) countries. All groups showed a decrease in their IPRI scores, with concerns in this order: Low income (-2.5%), Upper Middle Income (-1.2%), High Income (0.47%), and Lower Middle Income (0.01%) countries. LP and PPR components also showed deterioration while IPR for Lower Middle Income (+0.37%) and High Income (0.11%) countries showed a slight improvement.

F. Integration Agreements: Since 2017, the five top groups are EFTA (7.47), OECD (6.69), EU (6.52), USMCA (6.49), and TPP-11 (6.30). The groups showing improvement were OPEC (+3.19%), MERCOSUR (0.18%), ASEAN (0.16%), GCC (0.11%), and ECOWAS (0.03%). All the others showed a decrease in their IPRI scores (from -0.007% to -1.18%). For the LP component the main improvements were shown by OPEC (1.28%) and PARLACEN (0.82%); while for the PPR component, OPEC improved by 2.69% and IGAD by 0.39%. For the IPR component, 9/23 groups improved their scores, being the most relevant OPEC (5.5%), ECOWAS (1.74%), and MERCOSUR (1.38%), while the other groups kept their scores.

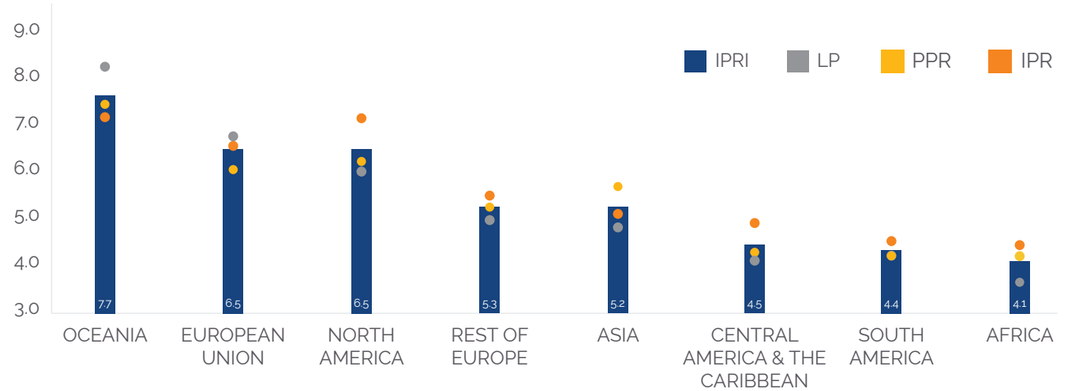


Figure 16. 2024-IPRI scores for Geographical groups.

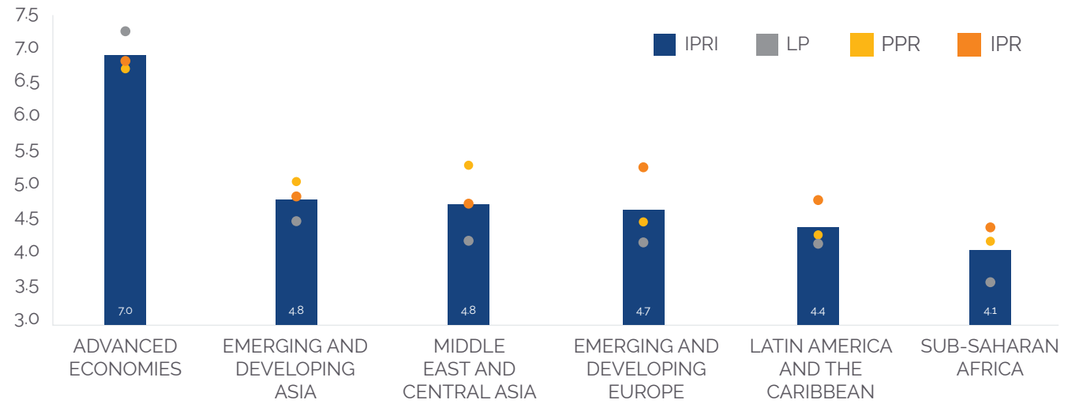


Figure 17. 2024 IPRI and Components: Region & Development Groups Score.

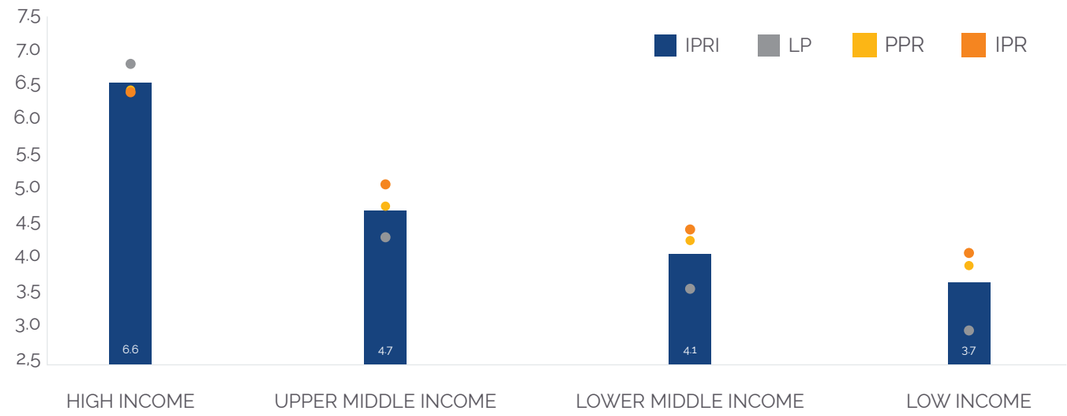


Figure 18. 2024 IPRI and Components: Income Groups Score.

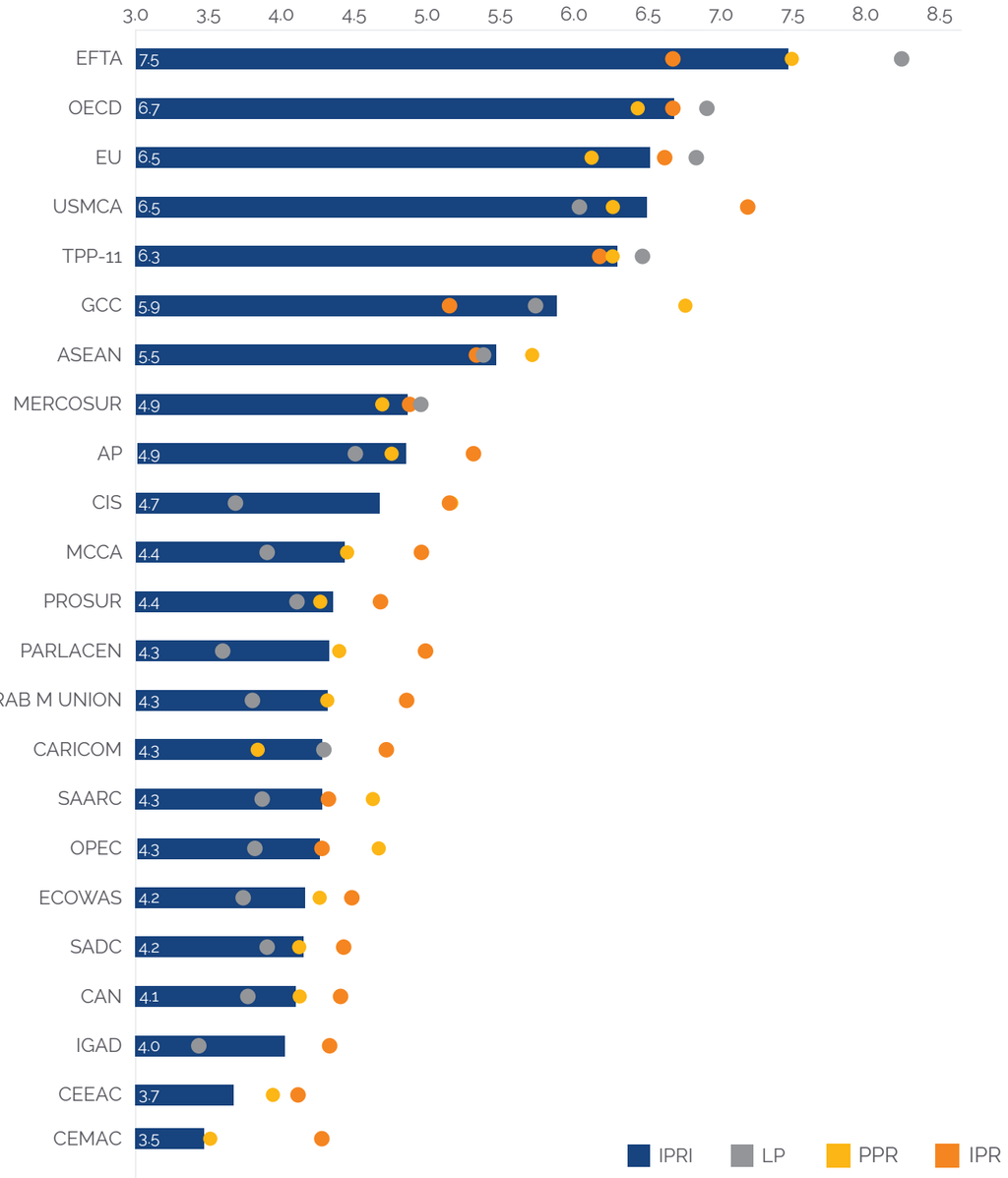


Figure 19. 2024 IPRI and Components: Integration Agreement Groups Score.

4

2024 IPRI & POPULATION

The primary goal of the IPRI is to accurately assess the level of property rights enjoyed by people. However, the fact that the unit of analysis of the Index is countries/territories may overlook important demographic differences.To address this, since 2015, we have incorporated a population incidence factor in the Index. For further details, please refer to the Methodological Appendix, Section 4.

This year's sample of 125 countries has a population of 7.39 thousand million people[12] representing 93.4% of the world population, showing that 83% of that population lives in 80 countries with an IPRI between 2.9 and 5.7. Meanwhile, just 15.8% of the population, enjoy a mid-high level [6.8 – over] of robust property rights systems.

2023 IPRI (RANGES)	NUMBER OF COUNTRIES	POPULATION (000)	% POPULATION	IPRI INCIDENCE (%)	IPRI-POPULATION INCIDENCE (%)	% GDP
1.9 - 2.8	3	72,629	1.0	1.1	0.4	0.53
2.9 - 3.8	21	1,328,698	18.0	11.4	12.7	4.75
3.9 - 4.8	35	1,429,228	19.3	23.9	17.1	8.91
4.9 - 5.7	24	3.365.473	45.6	19.3	46.9	25.54
5.8 - 6.7	22	359.617	4.9	21.0	6.0	9.82
6.8 - 7.7	15	796.489	10.8	17.4	16.1	48.16
7.8 - 8.7	5	35.472	0.5	6.1	0.8	2.28
TOTAL	**125**	**7,387,606**	**100**	**100**	**100**	**100**

Figure 20. 2024 IPRI – Population.

For those reasons, although the 2024 IPRI average score is 5.18, when population weighs in, its score reduces to 5.023 which is a decrease of 0.34% from 2023 but almost a 10% compared to 2021 (IPRI-Pop 2023=5.04; IPRI-Pop 2022=5.12; and IPRI-Pop 2021=5.596).

This represents a discouraging scenario for the vast majority of the world's population, as they lack access to and the enjoyment of the benefits of a robust property rights system. However, we can also view this as an opportunity to alert and advise policymakers.

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



The IPRI can serve as a valuable tool to guide their efforts for improvement, especially in densely populated countries.

We complement the IPRI-Population analysis with GDP[13] results, as follows:

- 2024-IPRI countries include 93.4% of the world population, accounting for 97.5% of the world GDP.
- 60.3% of the world GDP comes from 42 countries with 16.1% of the total population, and they show robust property rights systems, with IPRI scores over 5.8.
- Particularly 50.44% of the total GDP is from 20 countries with 11.3% of total population with an IPRI score over 6.8.
- 19% of the population lives in 24 countries with lower levels of property rights [1.9 – 3.8] and accounts only for 5.28% of world GDP.
- 25.5% of the total GDP comes from 24 countries with 45.6% 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 and world GDP share — an element to be considered carefully by densely populated countries and their policymakers.

Figure 21 shows a combination of elements for analyzing changes in the IPRI scores: country, population, and their belonging to a regional group. It's a piece of upsetting news to see that most of the countries have deteriorated their scores, particularly those densely populated.

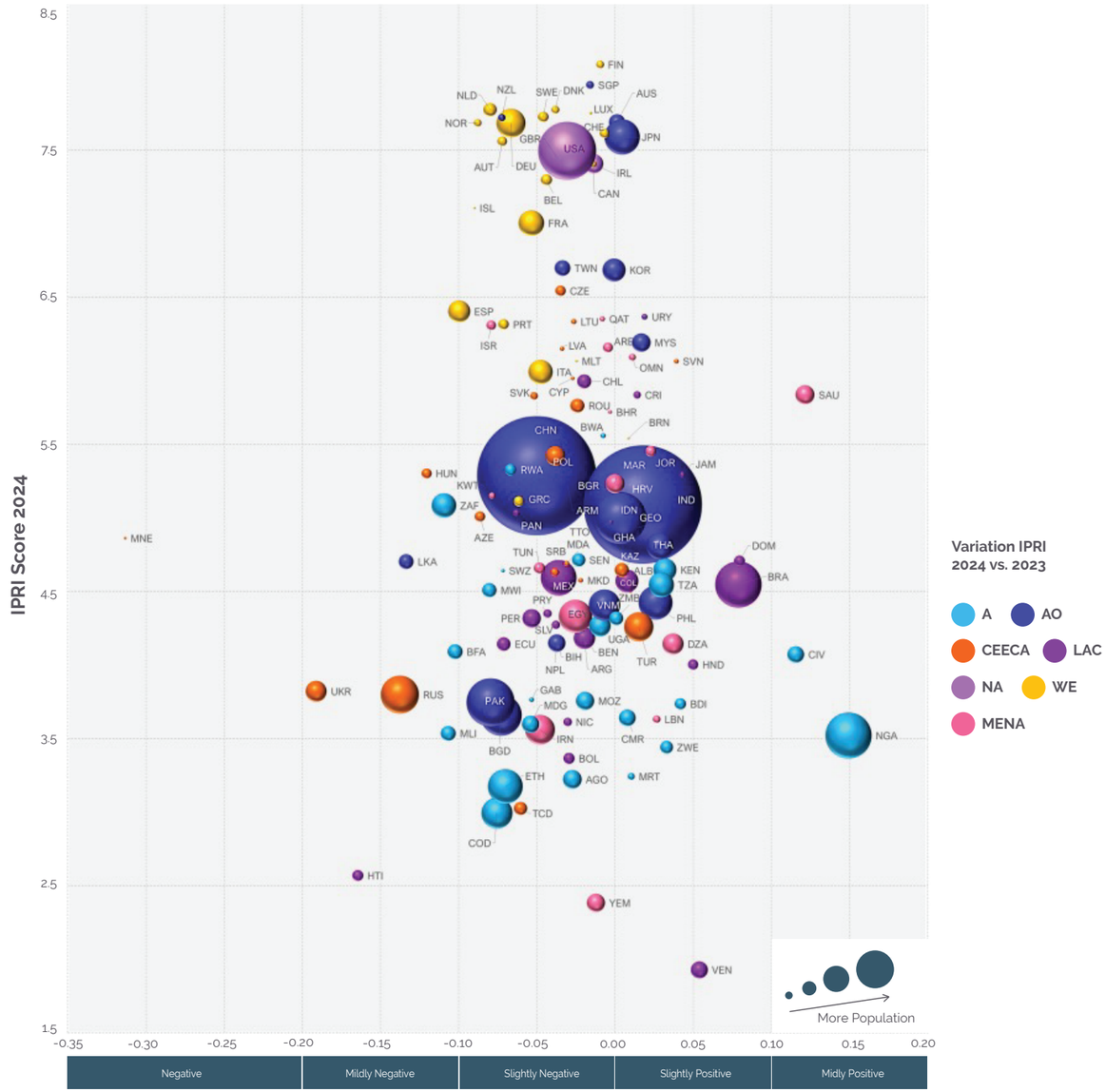


Figure 21. 2024-2023 IPRI Score Changes *(Population and Regional Groups).*

13. GDP data year is 2022 except Lebanon (2021), Venezuela (2014) and Yemen (2018) (latest available).

5

2024 IPRI & GENDER

The Gender Equality (GE) component, when combined with the IPRI, aims to identify possible biases or discrimination in a country/territory. This approach recognizes that the results of the Index may not be equally applicable to all members of society. While there are multiple forms of discrimination, the IPRI considers only gender-based discrimination, utilizing data from the Social Institutions and Gender Index (SIGI). The SIGI data can be accessed in the Gender, Institutions, and Development Database by the OECD. For further details, please refer to the Methodological Appendix, Section 5.

124 countries exhibit an average GE score of 7.91, indicating a 9.6% improvement (GE2022: 7.22). It is worth mentioning that SIGI data is released every five years. Between the fourth edition in 2019 and the fifth in July 2023, progress has been observed across all regions of the world, with developing countries narrowing the gap with developed countries. This is exceptionally positive news.

GENDER EQUALITY DIMENSIONS	SIGI DIMENSION	SCORE
GE (AVERAGE)		7.9147
WOMEN´S ACCESS TO BANK LOANS	Secure access to formal financial services	9.3347
WOMEN´S ACCESS TO LAND OWNERSHIP	Secure access to land assets	8.1855
WOMEN´S ACCESS TO PROPERTY OTHER THAN LAND	Access to non-land assets	8.6694
INHERITANCE PRACTICES	Inheritance	6.8548
WOMEN SOCIAL RIGHTS	Average	6.5294
	Divorce	6.3105
	Household responsibilities	6.7339
	Female genital mutilation	6.7137
	Violence against women	5.6855
	Freedom of movement	8.7903
	Citizenship rights	7.0968
	Workplace rights	4.3750

Looking into the details of the GE components, we find that of the five components, Women's Social Rights is the weaker, showing an average score of 6.53, followed by Inheritance Practices (6.85), Women's Access to Land Ownership (8.19), and Women's Access to Property other than Land (8.67); and the stronger one is Women's Access to Bank Loans (9.33). Within 'Women's Social Rights' we find that the strongest component is Freedom of Movement (8.8), followed by Citizenship Rights (7.1), Divorce Rights (6.3), Household Responsibilities (6.7), Violence against Women (5.69), and Female Genital Mutilation (6.7); and the weakest is Workplace Rights (4.38).

We found 53 countries with GE scores over 9, while 11 below 5, being Cameroon (0.43) and Mauritania (2.07) the ones demanding more effort.

After weighting the IPRI with the gender component, the IPRI-GE scores 4.715, which is a reduction of 8.98% from the IPRI value (IPRI2024= 5.18).

Moreover, if compared to IPRI-GE2023 (4.56), it represents an improvement of 3.4%; but not enough to recover the values of 2021 (IPRI GE 2021: 4.89).

Given the components of the IPRI-GE, results show its combined effect, where one of it can boost or pull down the other. Those are the situations for Venezuela, Bolivarian Rep. with an IPRI-GE of 1.89, when its GE is 9.57, but its IPRI score is 1.9; or for Dominican Rep. whose IPRI-GE is 4.62 while showing a GE score of 9.64 and an IPRI score of 4.7. The opposite is for Cameroon whose GE score is 0.43, its IPRI is 3.6, so its IPRI-GE is 1.9.

A similar situation is found in some groups' scores in which we found some like South America, Central America & Caribe, LAC, PARLACEN, CIS, CAN, CARICOM, AP, MERCOSUR, MCCA, and PROSUR, showing good/high GE scores but poor IGRI-GE scores as a consequence of their low IPRI score.



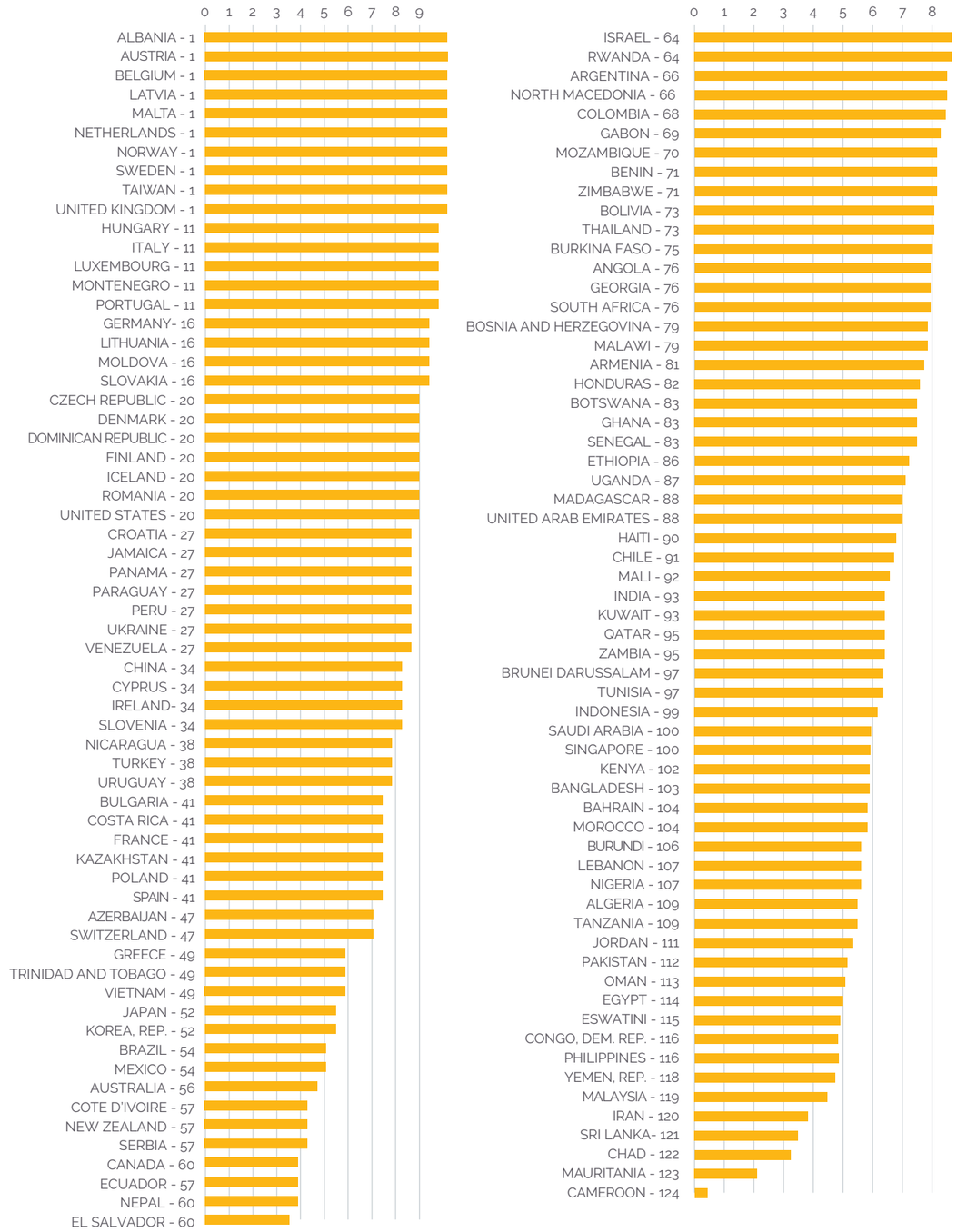


Figure 23. 2024 GE: Scores & Rankings.

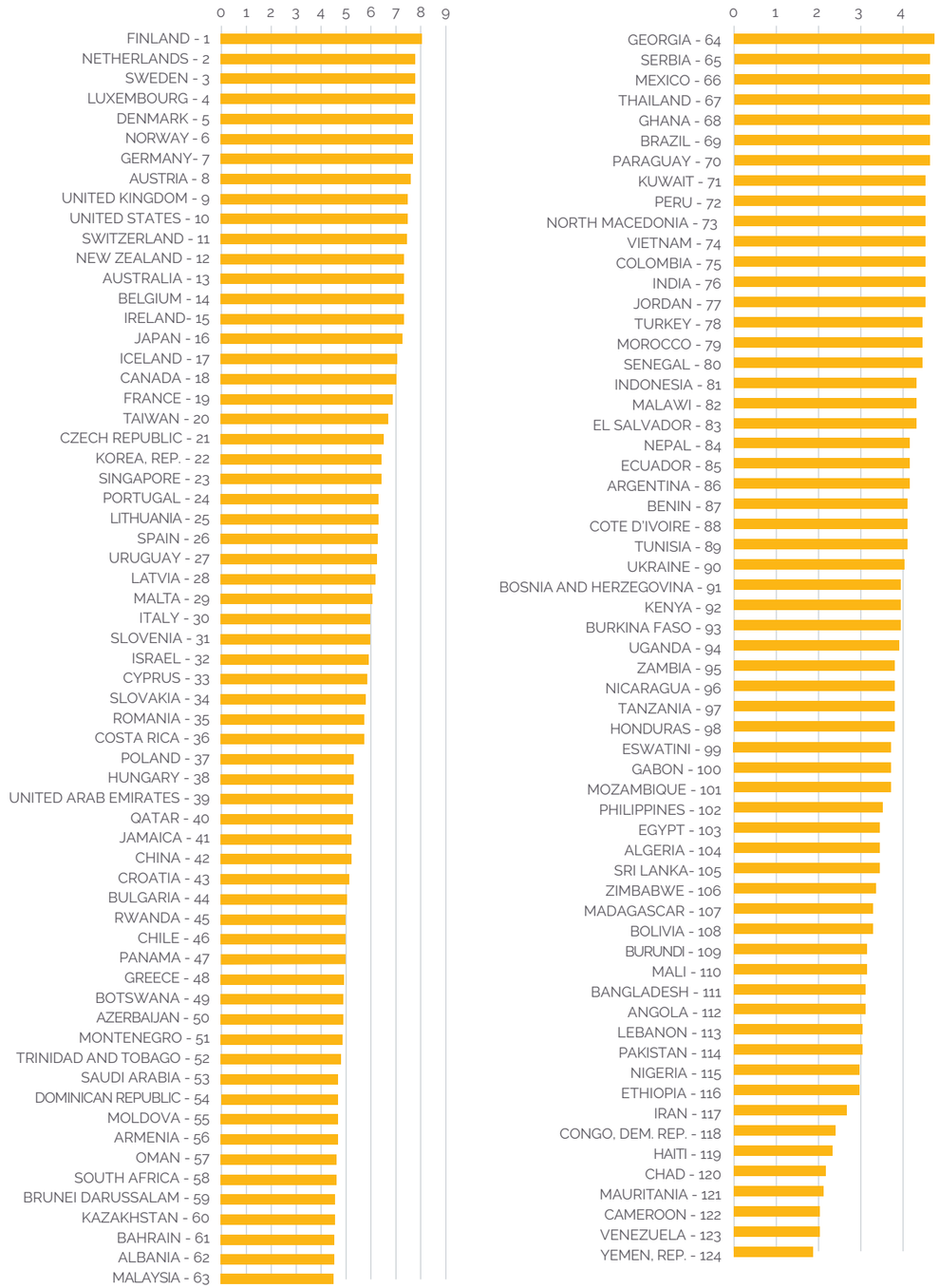


Figure 24. 2024 IPRI-GE: Scores & Rankings.

STRONG
[Figure 25.]

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

**Following Russia's war of aggression against Ukraine, Belarus and Russia were excluded from the fifth edition of the SIGI.*

WEAK

Figure 25. 2024 IPRI-GE: Ranking by Quintiles.

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 98 countries, 3rd quintile 23 countries, 4th quintile 28 countries, and 5th quintile 39 countries). Hence, the fourth and the fifth quintiles include 54% of the countries (67 countries) of the sample while the first three include 57 countries.

Analyzing the IPRI-GE by groups, we found the following results:

- Regional Groups: At the top of the IPRI-GE scores we find North America (7.15) and Western Europe (7.03); then come Central and Eastern Europe and Central Asia (4.99), East Asia, South Asia and Pacific (4.88), and Latin America and the Caribbean (4.17); and at the bottom, Africa (3.37) and Middle East and North Africa (3.98).

- Geographical Regions: At the top of the IPRI-GE scores we find Oceania (7.25), followed by European Union (6.4), North America (6.21), and the Rest of Europe (5.17). The same three groups lead the GE component in a slightly different order, European Union (9.64), Rest of Europe (9.11), and North America (9.1). Africa (6.4) and Asia (6.7) show the weakest GE scores and also very low IPRI GE scores (3.4 and 4.4 respectively). On the other hand, low levels of IPRI-GE are shown in South America (4.1) and Central America & Caribe (4.3), but these groups show good levels in GE (8.72 and 8.83 respectively).

- Regional and Development Criteria (IMF classification): Advanced Economies (IPRI-GE 6.74, GE 9.41) is leading the group followed by Emerging and Developing Europe (IPRI-GE 4.6, GE 9.3), Latin America and the Caribbean (IPRI-GE 4.17, GE 8.8), Emerging and Developing Asia (IPRI-GE 4.0, GE 6.6), Middle East & Central Asia (IPRI-GE 33.85, GE 5.96), ending with Sub-Saharan Africa (IPRI-GE 3.4, GE 6.7). Emerging and Developing Europe show a high GE score, but their IPRI pulls down their IPRI-GE, similarly with Latin America and the Caribbean.

- 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 the economic strength, and also for non-discrimination by gender. On the other hand, the GE shows also the same pattern for High (8.89) and Upper Middle Income countries (8.62), while its scores are higher for Low income (6.52) than Lower Middle Income countries (6.24).

- Economic and Regional Integration Agreements: The IPRI-GE scores show the following five top groups EFTA (7.32), OECD (6.48), EU (6.41), USMCA (6.21), and TPP-11 (5.6). The bottom groups are CEMAC (2.44), CEEAC (2.89), Arab Monetary Union (3.26), IGAD (3.34), SAARC (3.39), OPEC (3.47), and SADC (3.5). 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.

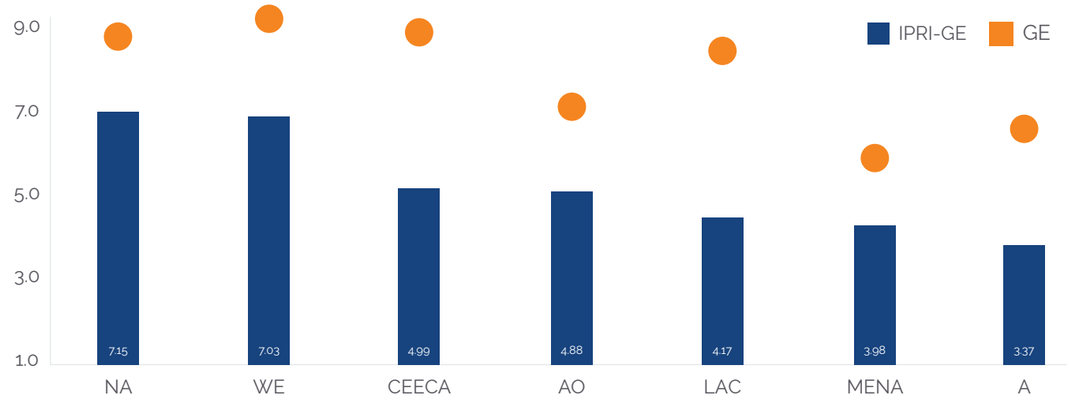


Figure 26. 2024 IPRI-GE and GE: Regional Groups Scores

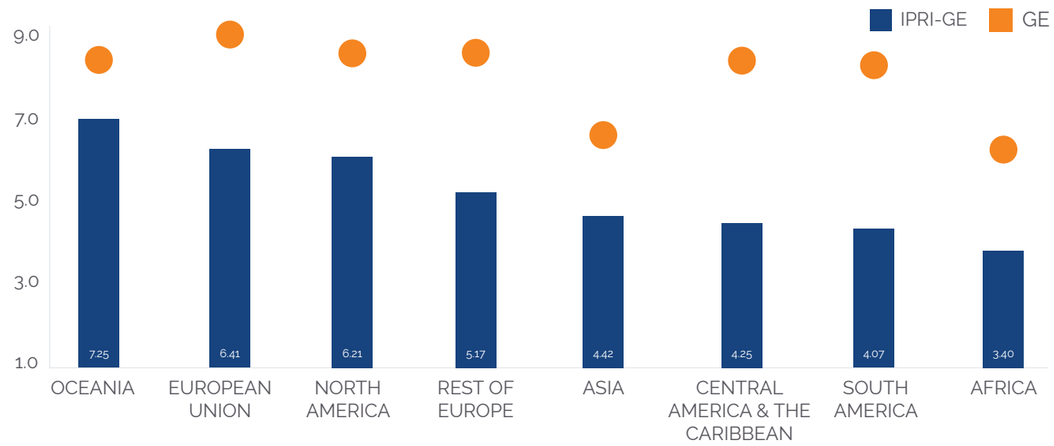


Figure 27. 2024 IPRI-GE and GE: Geographical Groups Scores.

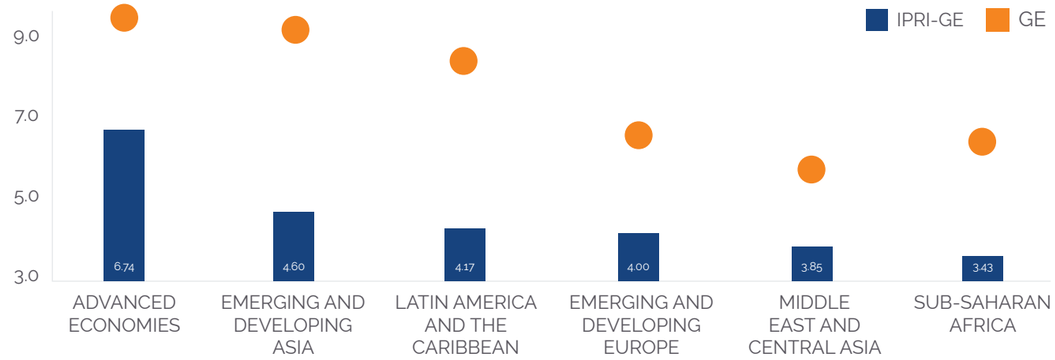


Figure 28. 2024 IPRI-GE and GE: Regional and Development Groups Scores.

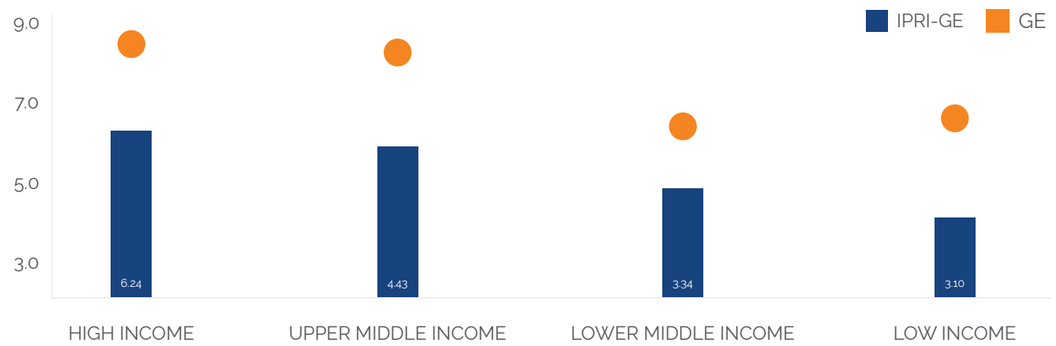


Figure 29. 2024 IPRI-GE and GE: Income Groups Scores.

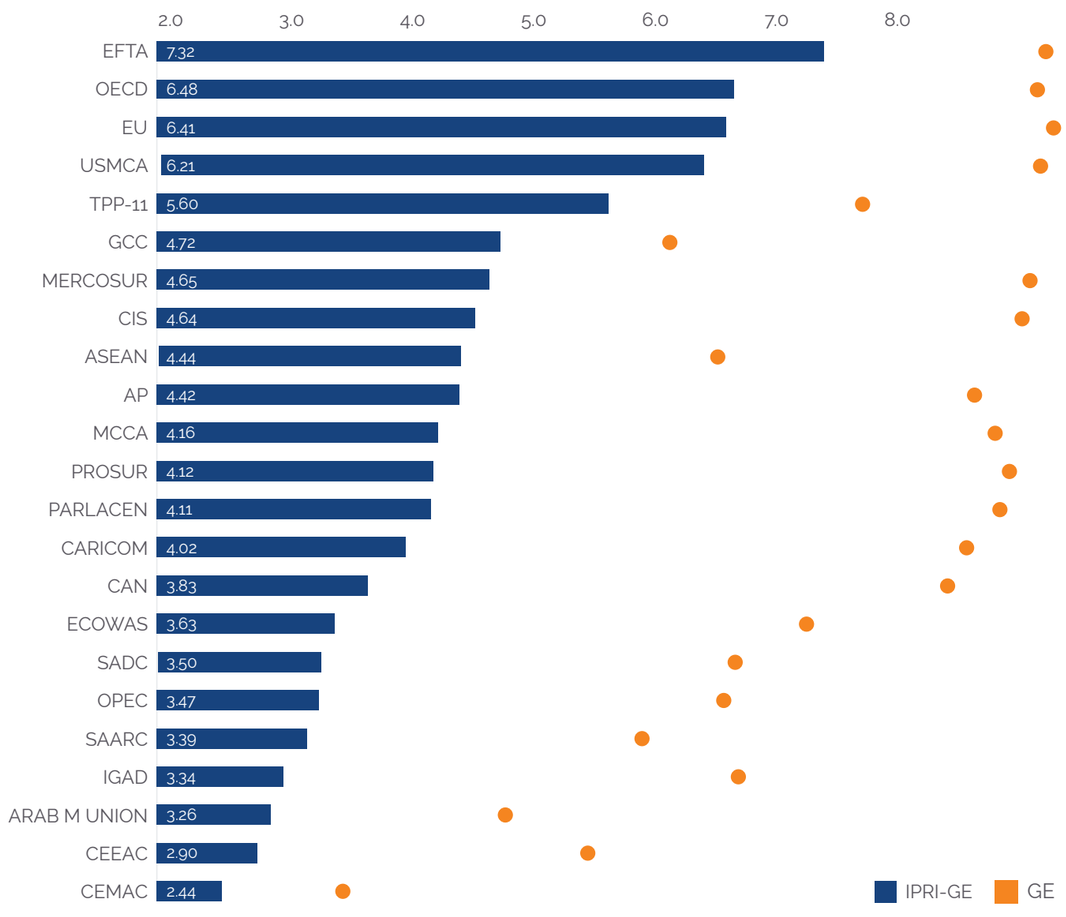


Figure 30. 2024 IPRI-GE and GE: Integration Agreements Groups Scores.



6

2024 IPRI & TAXES

Property taxes, according to the OECD, encompass both recurrent and non-recurrent taxes on the use, ownership, or transfer of property. These taxes include taxes on real estate or net worth, duties on change of ownership through inheritance or gift, and taxes on financial and capital transactions. This indicator pertains to the entire government (all levels) and is measured as a percentage of both GDP and total taxation (source: data.oecd.org/tax/tax-on-property.htm). It is undeniable that property tax represents a constraint or limitation on property rights. Therefore, an adjustment to the IPRI is necessary to account for these impacts (see Methodological Appendix, Section 6).

Results show that on average, the IPRI-PT score for these countries is 5.76% lower than their IPRI scores, with an important dispersion from -0.6% to -15%. 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 lower of less than 2%. On the other end of the distribution, we find South Korea (-15.1%), Canada (-11.92%), USA (-11.4%), UK (-11.36%), Israel (-11.17%), Luxembourg (-10.02%), and Australia (-10.07%) displaying constraints over 10%.

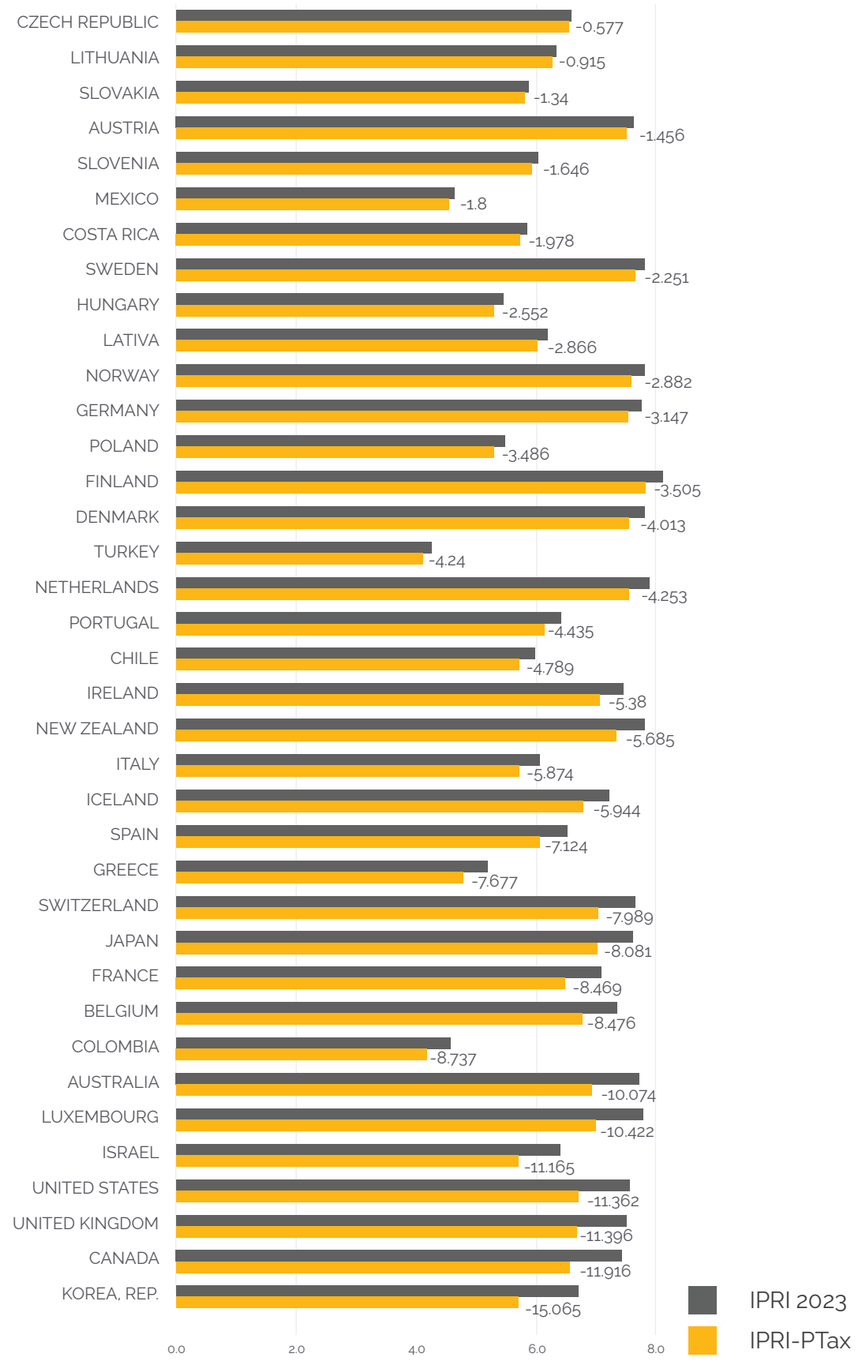


Figure 31. 2024 IPRI vs 2024 IPRI-PT: OECD countries.

7

2024 IPRI & A DYNAMIC ENVIRONMENT

Property rights are a key institutional arrangement, part of a complex web of interwoven relationships of a virtuous ecosystem. Hence the importance to show the relationships among them, since they characterize the institutional environments that favor the increase in the quality of life of citizens. Property rights also act as promoters of an active and proactive social dynamic, which is oriented to the future with freedom and responsibility. With that in mind, we calculated a set of correlations with a group of 14 indices or variables organized into three groups for their analysis. For details please refer to the Methodological Appendix, Section 7.

7.1 ENTREPRENEURIAL IMPULSE

Seeking a broad and comprehensive approach to developing a virtuous and promising ecosystem, we looked at those elements grasping the productive drive that economies offer their citizens. We included 6 categories for 7 items:

- **Production**: Using the Gross Domestic Product (GDP)[14] in constant USD (2015=100) *per capita* terms and also adjusted by the GINI Coefficient to capture income inequality.

- **Investment**: Using the Domestic Investment 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.

- **Attractiveness**: Using the Global Attractiveness Index, GAI, which measures the attractiveness of a country using primarily quantitative indicators that represent the various aspects of a country's attractiveness, dynamism, and sustainability. Specifically, the Index analyzes attractiveness from a dual perspective: internal—the ability to retain resources already present in the area; and external—the ability to attract new resources from the outside. From a statistical point of view, the GAI is based on a reclassification of KPIs in the following sub-indices: a Positioning Index (IP), a Dynamism Index (ID), a Sustainability Index (IS), an index related to Growth Expectations, and a Conflict Exposure Index (measuring country's degree of economic dependence with areas directly involved in the ongoing conflict in Eastern Europe).

- **Talent**: Using the Global Talent Competitiveness Index (GTCI) that measures how countries and cities grow, attract, and retain talent. It provides information for decision-makers to understand the global talent competitiveness picture and develop strategies to boost their economies. The GTCI defines talent competitiveness as the set of policies and practices that enable a country to develop, attract, and empower the human capital that contributes to productivity and prosperity.

- **Prosperity**: Using the Legatum Prosperity Index which offers an insight into how prosperity is forming and changing across the world. This index defines prosperity as when all people have the opportunity and freedom to thrive. It is organized into 12 pillars gathered in 3 dimensions: Open Economies, Empowered People, and Inclusive Societies.

- **Progress**: Using the Social Progress Index which concentrates on the non-economic aspects of global social performance, providing transparent and actionable data and comprehensive insights into the state of our society. It uses its 12 components and 57 indicators to measure the social performance of 170 countries.

We found that correlations among these variables and the IPRI and its components were significant and relevant[15], and the direction of the correlations was as expected. It should be highlighted that for the IPRI all the correlations were strong. All the items included showed significant results, pointing to property rights as building blocks of a robust and dynamic economy.

For Production, we found that GDP per capita and the GDP adjusted by the GINI Coefficient show strong correlations with the IPRI and good correlations for the IPRI components. Domestic investments showed strong correlations with the IPRI and LP components while good correlations with the PPR and IPR components. Similar behavior is shown in the Global Attractiveness Index.

The Legatum Prosperity Index and the Global Talent Competitiveness Index stand out with strong correlations for IPRI and all the components, reaching levels of 0.93, close to a perfect correlation. And for the Social Progress Index, just the PPR component showed good correlations while the IPRI and the other two components were strong.

	GDP PER CAPITA	GDP PER CAPITA * GINI	GDP PER CAPITA * GINI	LEGATUM PROSPERITY INDEX	GLOBAL ATTRACTIVENESS INDEX	SOCIAL PROGRESS INDEX	GLOBAL TALENT COMPETITIVENESS INDEX
IPRI	0.8372	0.8223	0.8284	0.9321	0.8000	0.8433	0.9246
LP	0.8073	0.7819	0.8028	0.9207	0.7215	0.8358	0.8857
PPR	0.7994	0.7897	0.7940	0.8357	0.7687	0.7418	0.8490
IPR	0.7575	0.7849	0.7356	0.8898	0.7937	0.8184	0.8739

Figure 32. Pearson's Correlation Coefficients: Prosperity & Competitivity.

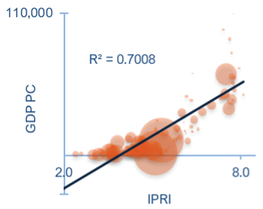
14. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It was calculated without making deductions for depreciation or for depletion and degradation of natural resources.

15. 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.

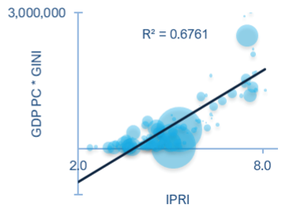
Figures 33 and 34 show the best-fit curve for the IPRI and its components with each element considered for Prosperity and Competitivity analysis and the coefficients of determination[16] (R2).

Figure 33 displays the relationship with a demographic impact. The proportion of population is represented by the radius of each circle.

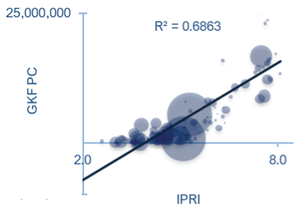
IPRI vs GDR per capita (GDP PC)



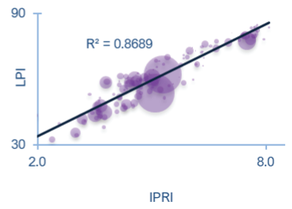
IPRI vs GDR per capita * GINI (GDP PC * GINI)



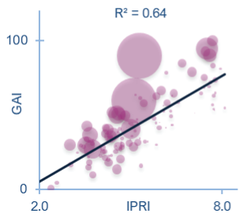
IPRI vs Gross Capital Formation per capita (GKF PC)



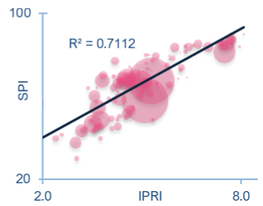
Legathum Prosperity Index (LPI)



IPRI vs Global Attractiveness Index (GAI)



IPRI vs Social Progress Index (SPI)



IPRI vs Global Talent Competitiveness Index (GTCI)

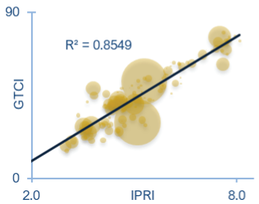




Figure 33. Prosperity & Competitivity and IPRI Correlations (w/Demographic impact).

16. The coefficient of determination (R2) represent the proportion of the variance in the dependent variable that is predictable from the independent variable. It ranges from 0 to 1.

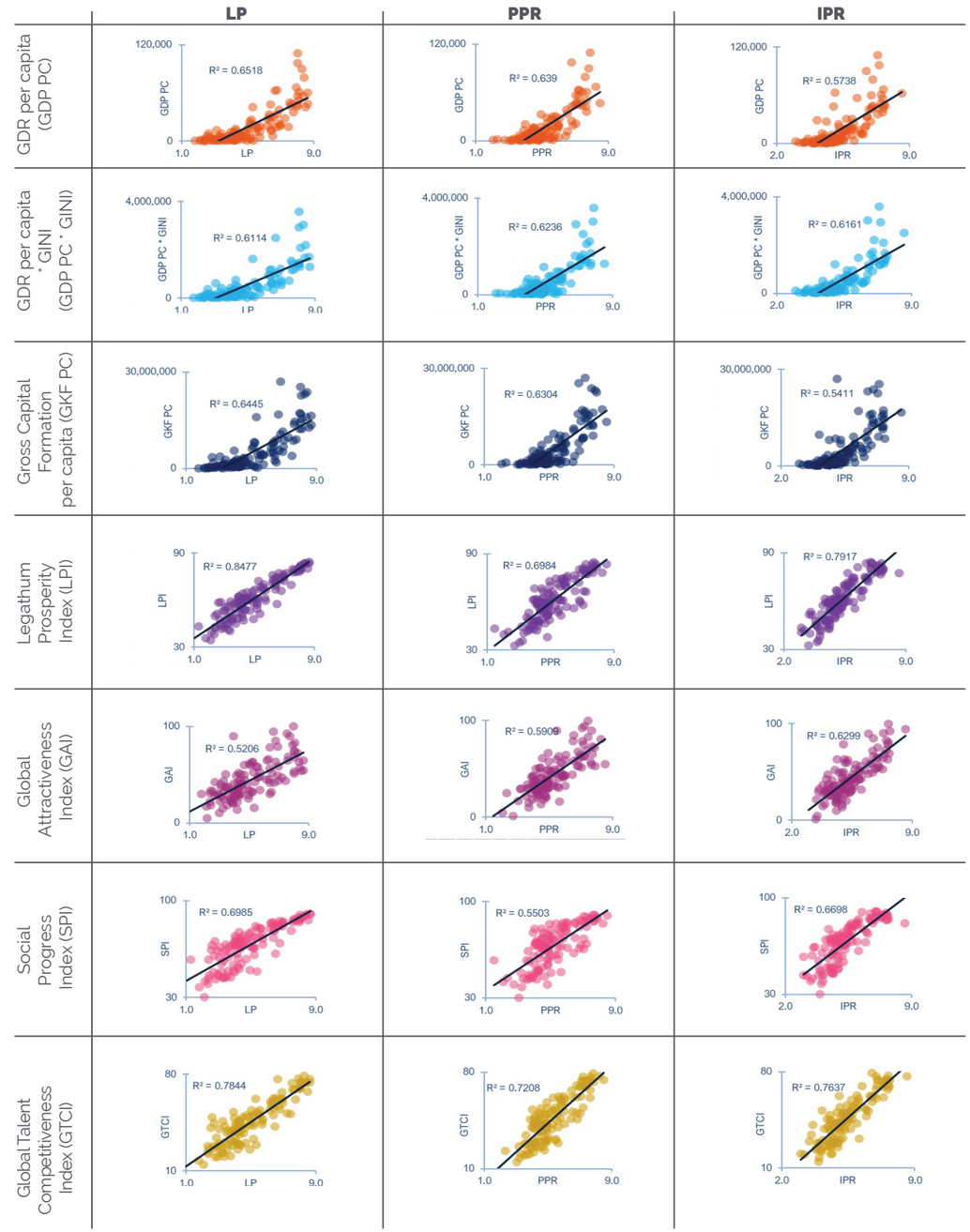


Figure 34. Prosperity & Competitivity and IPRI Components Correlations.

Figure 35 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 remains the same as last year but is reduced from 2022 when it was 21 times.

Statistics are based on the averages of 2024-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.

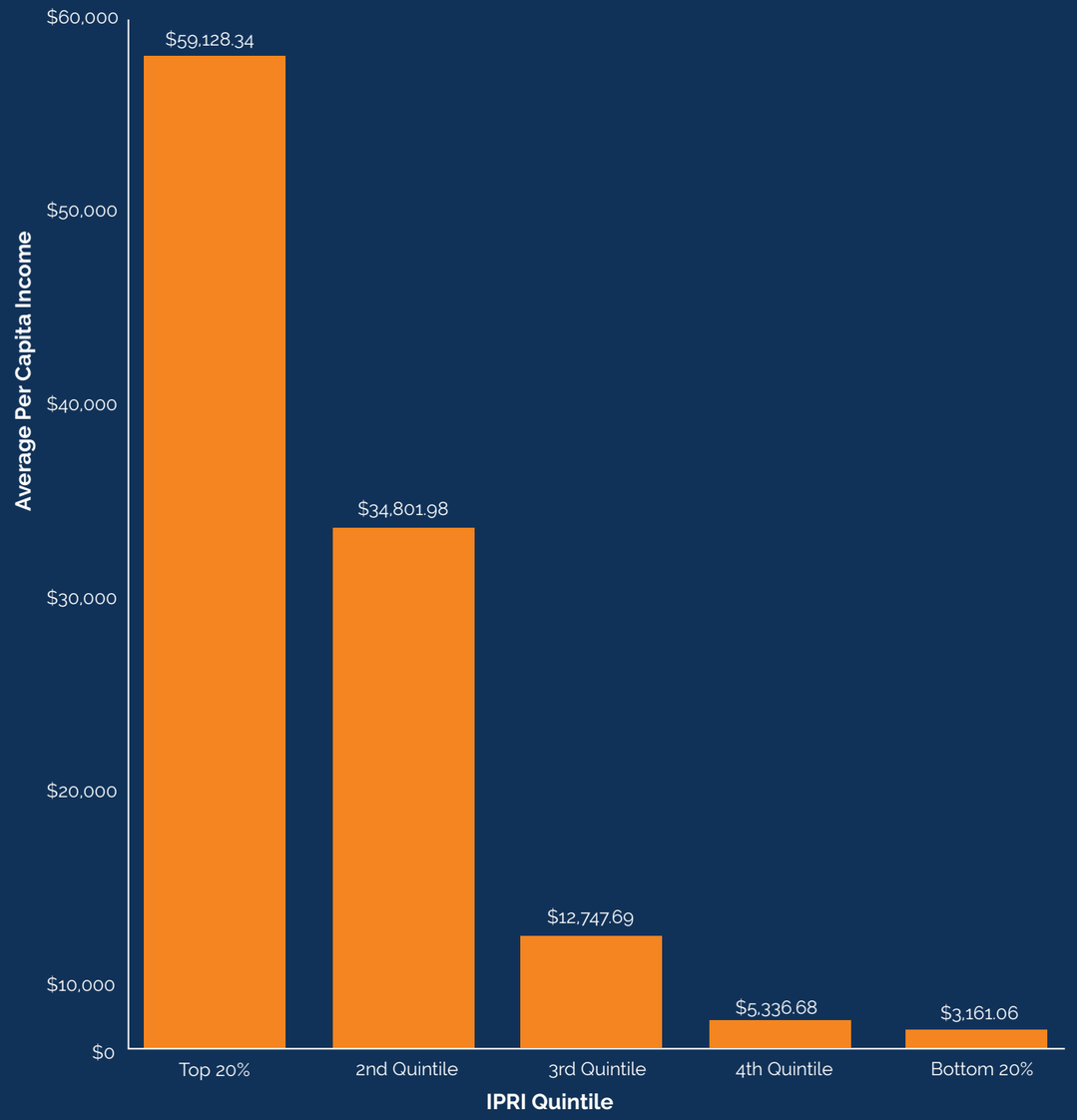


Figure 35: Average Income per capita: by 2024-IPRI Quintiles.

7.2 ENTREPRENEURIAL IMPULSE

- Entrepreneurship is a key driver of economic and social progress, fostering innovation, growth, and prosperity. Entrepreneurship is not just about starting new businesses; it also encompasses the ability to innovate within existing businesses, driving growth and creating value. Entrepreneurs often exhibit traits such as creativity, leadership, resilience, and a willingness to take risks. They play a crucial role in driving economic growth, creating jobs, and fostering innovation in societies. Increasingly, countries develop policies to promote entrepreneurship and creativity. Given the former, we evaluated the entrepreneurship ecosystem using 3 indices:

- The Entrepreneurship Index by CEOWORLD magazine is an annual ranking that evaluates countries based on their entrepreneurship environment. It considers factors such as infrastructure, economic freedom, innovation, access to funding, and entrepreneurial culture. The scores range from 0 to 100, with higher scores indicating a more favorable environment for entrepreneurship.

- A higher score suggests that a country has better conditions and support systems for entrepreneurs to start and grow their businesses.

It is based on six key categories: innovation, competitiveness, labor skills, infrastructure, access to capital, and openness for business, including 18 indicators. Each individual indicator was given equal weighting within each of the six categories, and some indicators were comprised of 2-3 sub-indicators that were also weighted equally.

- **The Global Entrepreneurship Index,** GEI, of The Global Entrepreneurship and Development Institute (GEDI) 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.

- **Mastercard Index of Women Entrepreneurs** (MIWE), The Mastercard Index of Women Entrepreneurs analyzes how women in business progress globally, highlighting the socioeconomic factors propelling and inhibiting their success, and providing a performance ranking for the economies measured. Its methodology involves an analysis across 12 indicators and 25 sub-indicators spanning Advancement Outcomes, Knowledge Assets & Financial Access, and Supporting Entrepreneurial Conditions – the index ranks each economy according to its performance over the past year.

	THE MASTERCARD INDEX OF WOMEN ENTREPRENEURS	ENTREPRENEURSHIP INDEX CEOWORLD	GLOBAL ENTREPRENEURSHIP INDEX
IPRI	0.6964	0.5602	0.8992
LP	0.6780	0.4638	0.8478
PPR	0.5836	0.5203	0.8484
IPR	0.6948	0.6390	0.8465

Figure 36. Pearson's Correlation Coefficients: Entrepreneurship Impulse.

Highlights the strong correlation between the Global Entrepreneurship Index and the IPRI and its components, the MIWE shows good correlations for the IPRI and the LP and IPR components, while the Entrepreneurship Index of *CEOWORLD* shows a moderate correlation, while it is good for the IPR component.

Figures 37 and 38 show the best-fit curve for the IPRI and its components with each element considered for Entrepreneurship Impulse analysis and the coefficients of determination[17] (R^2). Figure 37 displays the relationship with a demographic impact. The proportion of population is represented by the radius of each circle.

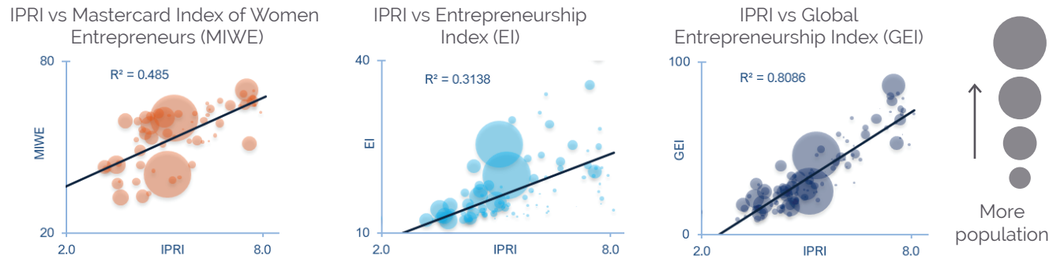


Figure 37. Entrepreneurship Impulse and IPRI Correlations (w/Demographic impact).

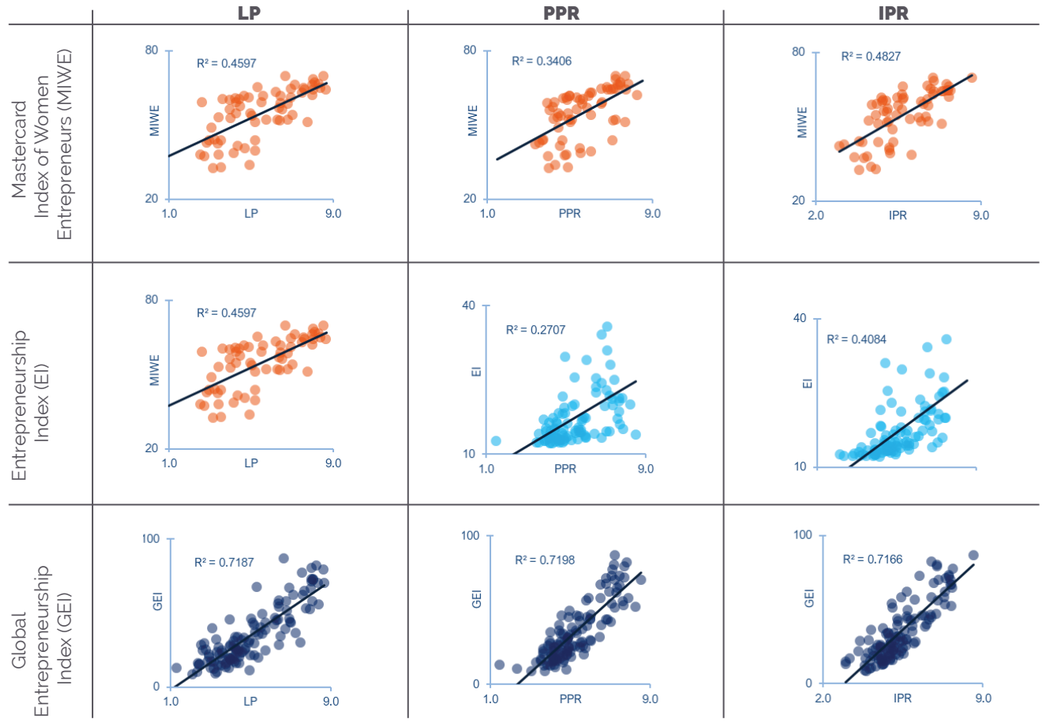


Figure 38. Entrepreneurship Impulse and IPRI Components' Correlations

17. The coefficient of determination (R^2) represents the proportion of the variance in the dependent variable that is predictable from the independent variable. It ranges from 0 to 1.

7.3 FUTURE TRENDS

Living in times of accelerated and vertiginous changes demands us to evaluate the appropriateness and relevance of property rights systems for this emerging society which requires openness, alertness, and innovation capabilities. With this in mind, we examined the relationship of the IPRI and its components with the following indices:

- **The Global Innovation Index,** GII, captures the innovation ecosystem performance and tracks the most recent global innovation trends.

- **AI Alertness:** As AI is promising to improve efficiency, ensuring fairer access and enhancing experiences, foundations are needed to integrate AI using it with ethical responsibility. To grasp this element we used two indices:

  a. **Government AI Readiness:** The Oxford Insights Government AI Readiness Index seeks to grasp how ready governments are to implement AI for delivering public services.

  b. **Index,** by Tortoise, is a ranking of over 60 countries, according to their level of investment, innovation, and implementation of artificial intelligence. It is underpinned by 111 indicators, collected from 28 different public and private data sources, and 62 governments. These are split across seven sub-pillars: Talent, Infrastructure, Operating Environment, Research, Development, Government Strategy and Commercial. Its scale is 0-100, the higher the better.

- **Open Data Inventory**, ODIN, measures how complete a country's statistical offerings are and whether their data meet international standards of openness. Data assessed must be official country data published on the national statistics office's website or any other official country website that is linked from the NSO website. Coverage scores are based on the availability of key indicators and appropriate disaggregations over time and for geographic subdivisions. Openness scores are based on whether data can be downloaded in machine-readable and non-proprietary formats, are accompanied by metadata, and whether download options exist such as bulk download and user-selection or APIs, and have an open term of use or data license.

- **Digital Nomad Index,** DigiNomad, is a comprehensive ranking system evaluating and ranking countries based on their suitability for digital nomads. This index considers various factors critical for remote workers who travel and live in different countries. Factors in this scoring system include Active Visa Availability, Internet Speed, Taxation Policies and Tax-Free Length, Income Requirements for Visa Applications, Cost of Living in Euros, Global Health Score (GHS), and Tourism Popularity. This metric gives sensitive information in times when teleworking is each day more important.

	GLOBAL INNOVATION	GOVERNMENT AI READINESS INDEX	THE GLOBAL AI INDEX	THE OPEN DATA INVENTORY	THE DIGITAL NOMAD INDEX
IPRI	0.8798	0.8549	0.5311	0.7311	0.7097
LP	0.8103	0.7959	0.3891	0.6907	0.7168
PPR	0.7997	0.8109	0.4910	0.6719	0.5984
IPR	0.8844	0.8287	0.6659	0.7183	0.6759

Figure 39. Pearson's Correlation Coefficients: Future Trends.

The robustness of a property rights system shows a relevant and positive relationship with those features of the emerging society, and it was to be expected since it is a guarantee offered to the innovative efforts to improve the population's living conditions.

Stand outs include strong correlations with the Global Innovation Index and the Government AI Readiness Index.

It is also important to highlight the good correlations with the Open Data Inventory and Digi-Nomad, while it is moderate with the Global AI Index.

Figures 40 and 41 show the best-fit curve for the IPRI and its components with each element considered for Entrepreneurship Impulse analysis and the coefficients of determination[18] (R2). Figure 40 displays the relationship with a demographic impact. The proportion of population is represented by the radius of each circle.

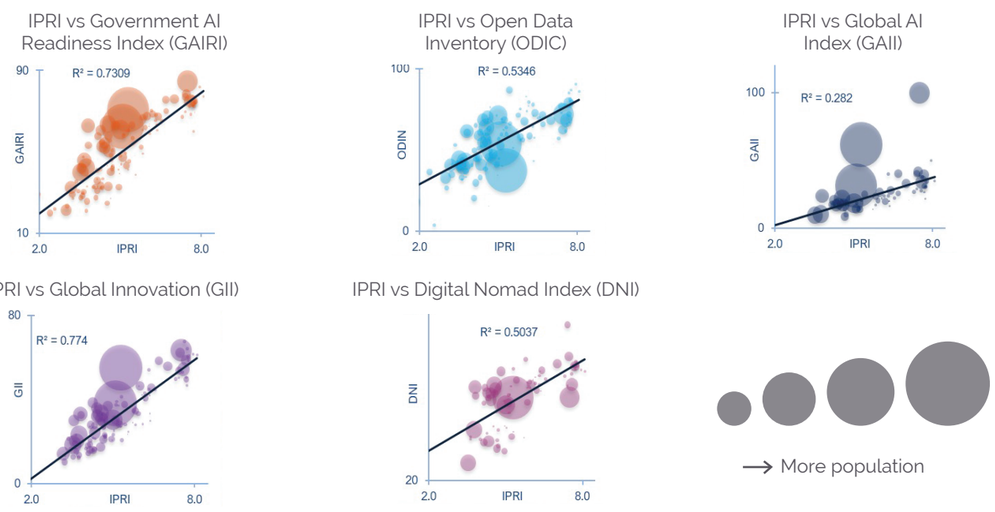


Figure 41. Future Trends and IPRI Components' Correlations.

18. 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.



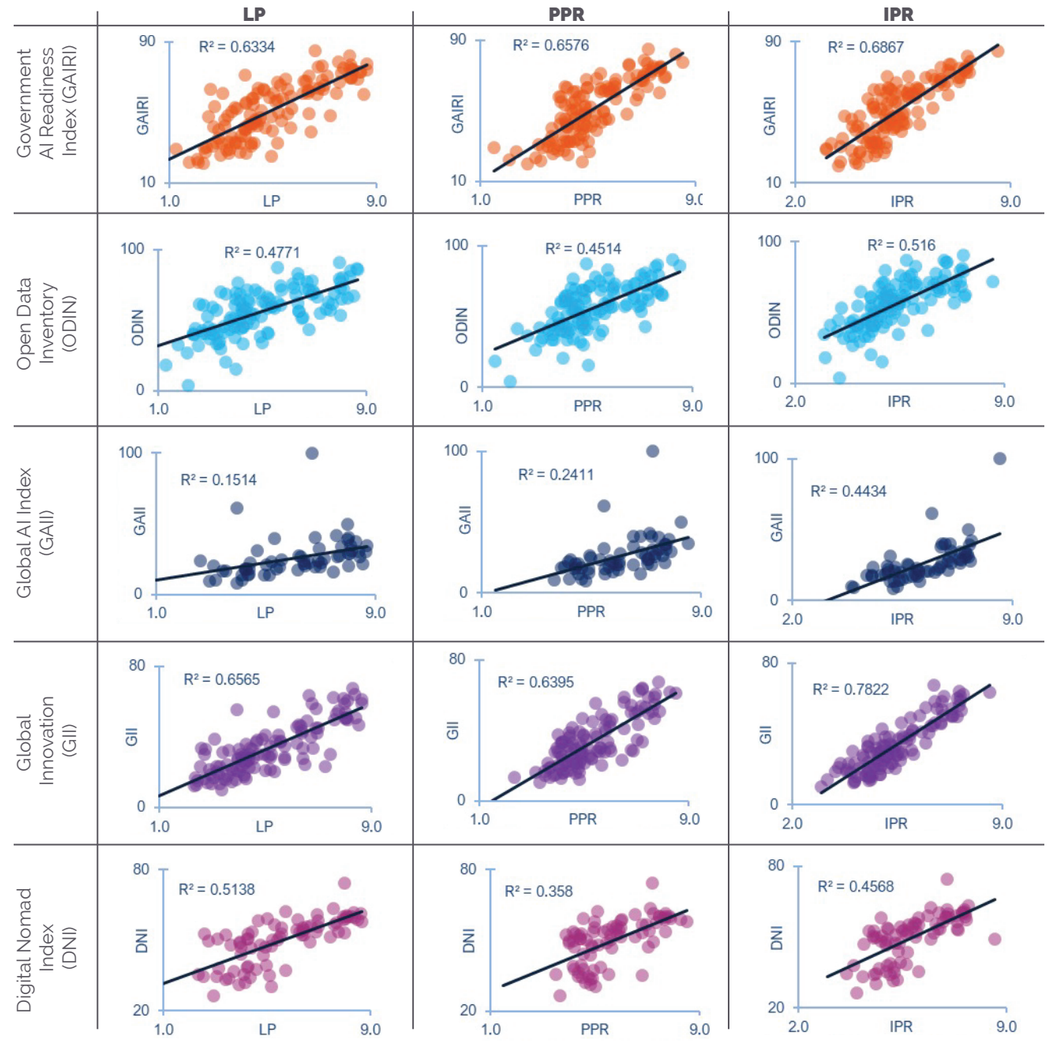


Figure 41. Future Trends and IPRI Components' Correlations.



8

CLUSTER ANALYSIS

Cluster analysis is a valuable method for grouping similar entities. It classifies individuals into groups that are as homogeneous as possible based on predefined variables. For this report, we performed a cluster analysis for all 125 countries according to the IPRI components' scores (LP, PPR, IPR).

Additionally, we included illustrative variables that do not influence the cluster formation but contribute significantly to describing them. These variables were used to calculate correlations (section VII), primarily to highlight conditions or features within the resulting clusters. For details see Methodological Appendix, Section 8.

8.1 CLUSTERS' DEFINITION

The analysis demonstrated that three clusters were sufficient to explain the grouping of countries, with observed inertia within each group not exceeding the inertia among groups: meaning clusters are well-defined and internally homogeneous (Fig. 42)[19]. The distribution of countries is as follows: Cluster 1 has 38 countries, Cluster 2 with 51, and Cluster 3 includes 36 countries. Compared to the IPRI 2023 edition we found a transfer of number of countries to the upper cluster: Cluster 1 reduced from 48 to 38 countries, Cluster 2 from 52 to 51 countries, while Cluster 3 increased from 25 to 36 countries. In the first approach, it looks like a positive result (as countries in cluster 3 show a better overall ecosystem), but this rearrangement is a consequence of an overall movement of the three clusters' centers to the left. The members of the clusters are displayed in Figures 43 and 44.

	INERTIA	COUNTRIES (#)	DISTANCE CENTROID FROM ORIGIN	COORDINATES OF CENTROIDS		
				FACTOR 1	FACTOR 2	FACTOR 3
BETWEEN-CLUSTERS	2.25479					
WITHIN CLUSTER						
CLUSTER 1	0.19251	38	3.10160	-1.76032	-0.03965	0.03624
CLUSTER 2	0.25645	51	0.03546	-0.18651	0.02449	-0.00849
CLUSTER 3	0.29625	36	4.50500	2.12233	0.00716	-0.02622

Figure 42. Cluster Analysis: Inertia and Coordinates.

19. The results of the Principal Component Analysis (PCA) indicate that the three IPRI components (LP, PPR, and IPR) define a primary dimension called IPRI, which accounts for 89.14% of the inertia. The second and third factors, with inertias of 6.65% and 4.21% respectively, represent the residual inertia. These latter factors do not significantly contribute to the first factor's inertia and are generally close to the origin of the first factor. They can be further subdivided, with the second factor being more associated with the PPR dimension and the third factor being more associated with the LP and IPR dimensions.

Although the first factor accounts for 89.14% of inertia, which is sufficient to illustrate the formation of the clusters, Figure 23 shows Factors 1 and 2 as well as the centroids of the three clusters (yellow). The size of each centroid depends on the number of countries in the cluster.

Cluster 1 includes countries (red) located in the negative coordinates of the first factor, indicating low values of LP, PPR, and IPR. Cluster 2 consists of countries (yellow) near the origin, showing average values of LP, PPR, and IPR. Cluster 3 (blue) includes countries in the positive coordinates of the first factor, with high values of LP, PPR, and IPR.

The second factor consists mostly of countries in Cluster 2, including those with scores close to the average, neighboring both Cluster 1 and Cluster 3. Clusters 1 and 3 are polar opposites, with their members not directly associated with each other.

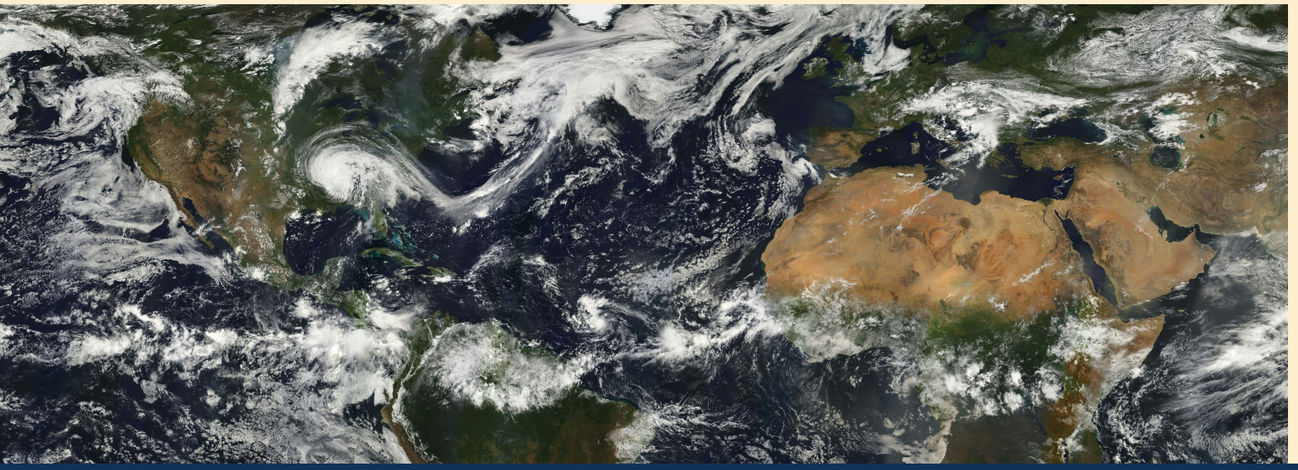
Figure 44 also shows each country's contribution to the inertia explained by the factors: the larger the dot representing a country, the greater its contribution.

The proximity of countries indicates their similarity while increasing distances indicates the opposite. Countries within the central circle have no statistically significant contribution to defining the factors. As mentioned, these countries are near the average and mostly belong to Cluster 2.

The arrows represent each of the three dimensions of the IPRI. The arrows' directions indicate the direct relationship with the individuals: countries aligned with the vector have a higher relationship with this dimension, while those diverging from the vector have a decreasing, potentially opposite, relationship.

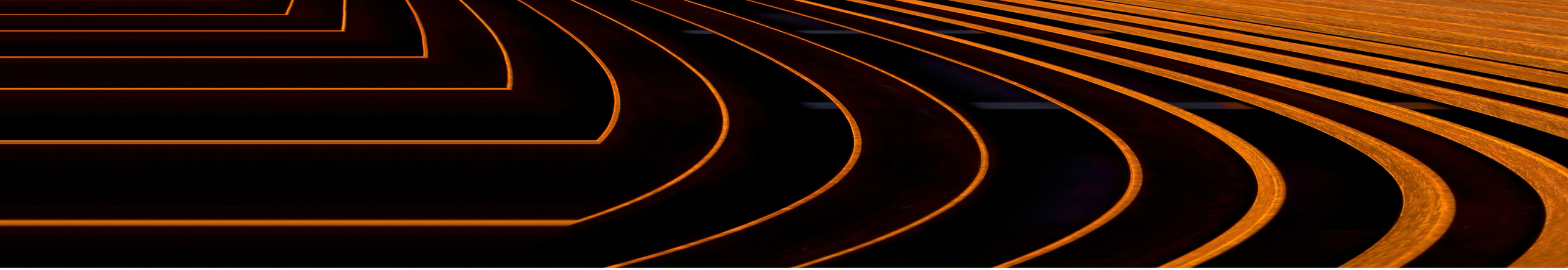
Figure 45 a-d shows the composition of the clusters based on income, population, participation in economic and regional integration agreements, and regional and development criteria, with font size indicating the frequency of groups within the cluster. Analyzing each cluster helps describe the internal characteristics of the countries within it. Figure 46 presents the features that are statistically significant in each group.

Additional information is shown in Figures 47-49.



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

Figure 43. Clusters' Members.



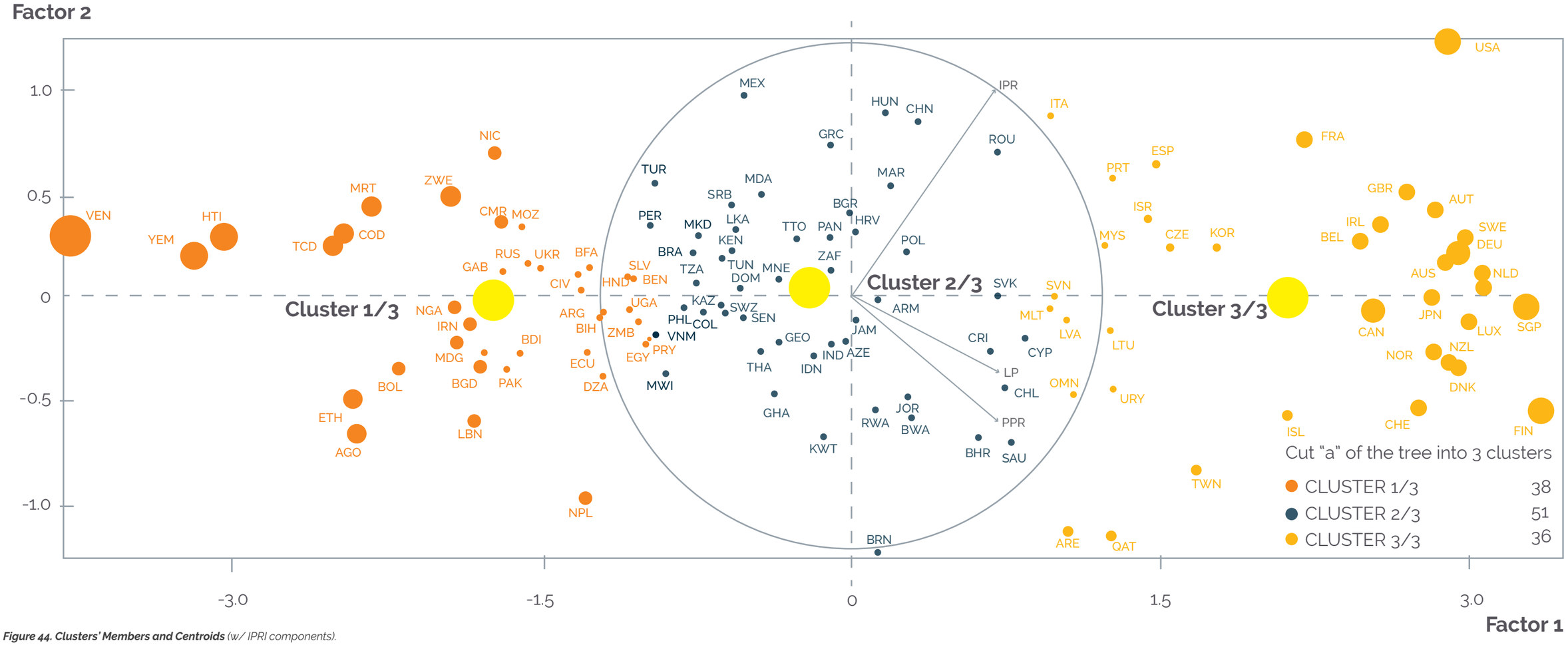


Figure 44. Clusters' Members and Centroids *(w/ IPRI components).*

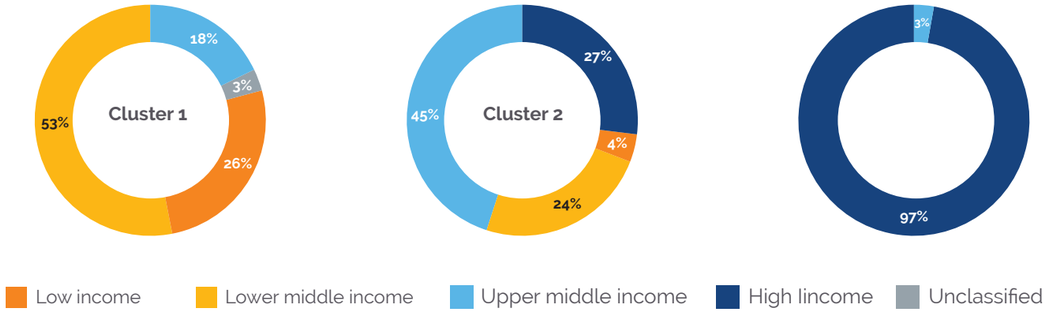


Figure 45a. Clusters' Composition by Income Classification.

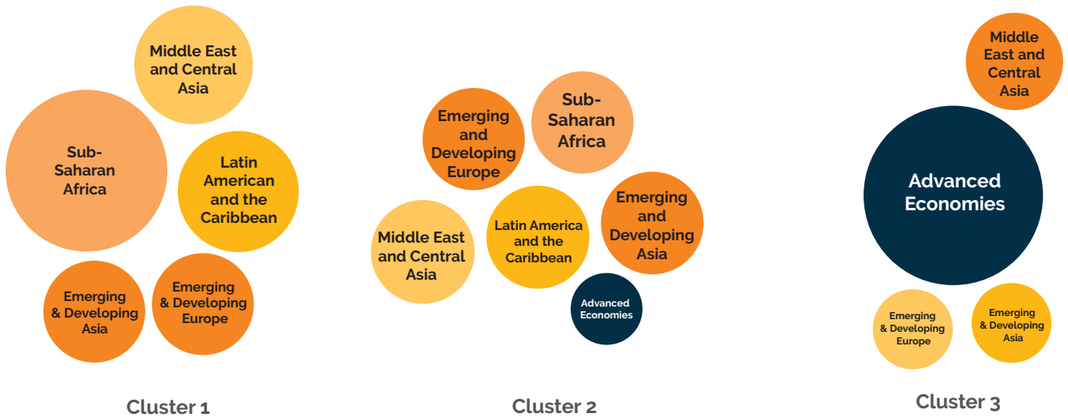


Figure 45b. Clusters' Composition by Regional and Development Criteria.

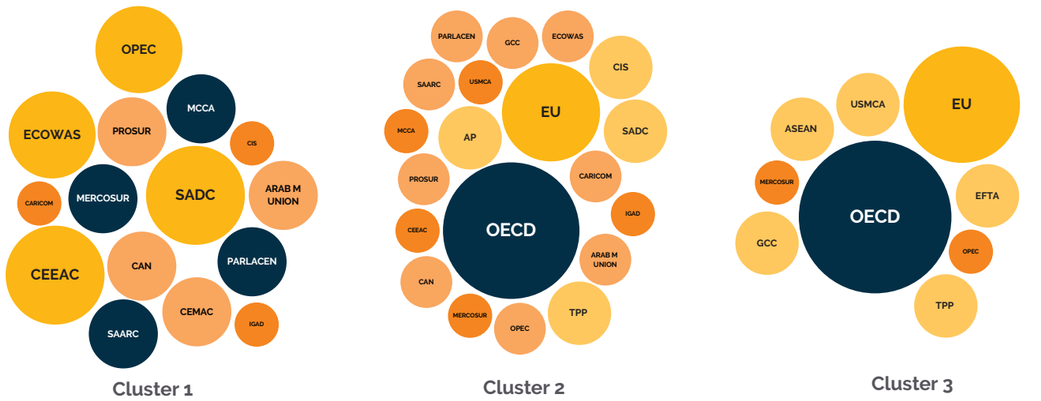


Figure 45c. Clusters' Composition by Economic and Regional Integration Agreements.

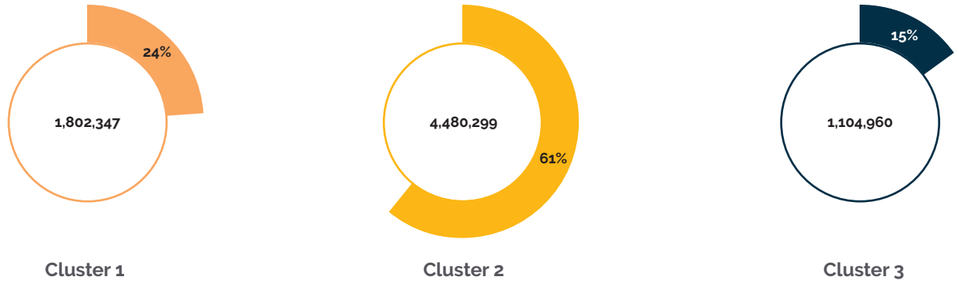


Figure 45d. Clusters' Composition and Population Weight (thousands).

CLUSTER 1			CLUSTER 2			CLUSTER 3		
Characteristic variables	Test-value	Probability	Characteristic variables	Test-value	Probability	Characteristic variables	Test-value	Probability
POPUL	-0.47	0.319	POPUL	1.46	0.072	IPRIGE	8.91	0
GAII	-1.75	0.04	ODIN	0.89	0.187	LP	8.89	0
EI	-3.51	0	GEN	0.33	0.369	GDPPC	8.77	0
DNI	-3.92	0	SPI	0.12	0.453	GEI	8.77	0
GEN	-4.24	0	LPI	-0.51	0.305	GTCI	8.65	0
MIWE	-4.42	0	GAIRI	-0.6	0.273	IPR	8.57	0
GDPGINI	-4.69	0	IPR	-0.81	0.21	PPR	8.57	0
GKFPC	-4.81	0	LP	-1.02	0.155	LPI	8.54	0
GDPPC	-4.88	0	MIWE	-1.06	0.144	GKFPC	8.54	0
GAI	-6.06	0	PPR	-1.16	0.123	GII	8.42	0
GEI	-6.07	0	IPRIGE	-1.2	0.115	GDPGINI	8.32	0
GII	-6.52	0	GAI	-1.5	0.067	GAIRI	8.16	0
GTCI	-6.95	0	GTCI	-1.62	0.052	GAI	7.57	0
ODIN	-7.11	0	GII	-1.93	0.027	SPI	7.56	0
PPR	-7.19	0	EI	-2.33	0.01	ODIN	6.26	0
GAIRI	-7.39	0	GAII	-2.47	0.007	DNI	5.71	0
SPI	-7.51	0	GEI	-2.51	0.006	EI	5.31	0
IPRIGE	-7.55	0	DNI	-2.77	0.003	MIWE	4.71	0
IPR	-7.58	0	GDPGINI	-3.09	0.001	GEN	3.91	0
LP	-7.67	0	GDPPC	-3.49	0	GAII	3.35	0
LPI	-7.87	0	GKFPC	-3.51	0	POPUL	-1.11	0.135

Figure 46. Clusters' Illustrative Variables Stats (Statistically significant if Value-Test ≥ 1.96).

7.2 CLUSTER DESCRIPTION

CLUSTER 1 ANALYSIS

Cluster 1 is composed of 38 countries with a combined population exceeding 1.8 billion people. The countries closest to its centroid are Nigeria, followed by Iran, Gabon, Madagascar, and Bangladesh. The Bolivarian Republic of Venezuela is the most remote from the cluster's centroid, followed by the Republic of Yemen, Haiti, Mauritania, and Nepal (see Figure 47).

A closer examination of Cluster 1 countries' coordinates reveals that Zambia and Paraguay are the closest to Cluster 2's centroid. In a comparison of Cluster 1 and Cluster 2, the countries nearest to Cluster 2 from Cluster 1 are Paraguay, Vietnam, Egypt, and Zambia, indicating similarities in conditions (see Figure 44).

Countries in Cluster 1 are statistically significant for their low scores (below the overall mean) in the LP, PPR, and IPR components. The same applies to the IPRI-GE. Cluster 1 countries also show below-average levels in the three dimensions analyzed for correlations: Prosperity and Competitiveness, Entrepreneurship Impulse, and Future Trends. This reflects poor or inadequate policies to enhance key elements for progress and development, and thus also reflects lack of a robust property rights system.

Using the Regional and Development classification criteria of the IMF and the Income criteria of the World Bank, the Sub-Saharan Africa group (17/26), Latin America and the Caribbean (9/20), Middle East and Central Asia (7/20), and the Low Income (10/12) and Lower-Middle Income (20/32) countries are highly represented in this cluster.

The Southern African Development Community (6/11 members) and La Communauté Économique des États de l'Afrique Centrale (6/7 members) are the most common Economic and Regional Integration Agreements in this cluster, followed by the Economic Community of West African States (5/7 members), the Organization of the Petroleum Exporting Countries (5/8 members), the Central African Economic and Monetary Community (3/3 members), the Central American Parliament (3/5 members), the South Asian Association for Regional Cooperation (3/5 members), the Central American Common Market (3/4 members), and the Forum for the Progress and Development of South America (3/6 members).

CLUSTER 2 ANALYSIS

Cluster 2 is comprised of 51 countries with a combined population exceeding 4.4 billion people. The country closest to its centroid is Montenegro, followed by South Africa, Georgia, India, and Senegal. Brunei Darussalam is the farthest from the centroid, followed by Saudi Arabia, Azerbaijan, Bahrain, and China. Figure 47 shows that Vietnam, Peru, and the Philippines are the closest countries to the Cluster 1 centroid, while Cyprus and Slovakia are the closest to the Cluster 3 centroid. The nearest countries between Clusters 2 and 3 are Cyprus (Cluster 2) to Latvia (Cluster 3), and Cyprus (Cluster 2) to Malta (Cluster 3).

Using the IMF's Regional and Development criteria, countries within the Middle East and Central Asia, Emerging and Developing Europe, and Latin America and the Caribbean groups represent 59% of this cluster. According to the World Bank's Income criteria, Upper Middle Income and High-Income countries account for over 72% of the cluster. From the perspective of Economic and Regional Integration Agreements, the European Union (with 8/26 members), the Organisation for Economic Co-operation and Development (9/37 members), the Southern African Development Community (5/11 members), the Association of Southeast Asian Nations (5/7 members), and the Trans-Pacific Partnership (5/11 members) have the highest frequency in Cluster 2.

CLUSTER 3 ANALYSIS

Cluster 3 comprises 36 countries with a combined population of over 1.1 billion people. The closest country to its centroid is South Korea, followed by Belgium, Canada, Ireland, and Iceland. The farthest countries from the centroid are the United Arab Emirates, the United States, Italy, Qatar, and Finland. Israel, the Czech Republic, Spain, and South Korea are the closest countries to Cluster 2.

Countries in Cluster 3 exhibit opposite results compared to Cluster 1: all variables are significant, but with positive and high values. This cluster shows strong performances in Prosperity and Competitiveness, Innovation and Technology, and Entrepreneurship.

Using the Regional and Development classification of the IMF, Advanced Economies represent 86% of countries in this cluster, and 97% are within the High Income group. Looking at Economic and Regional Integration Agreements, the Organisation for Economic Co-operation and Development (28 out of 37 members) and the European Union (18 out of 26 members) are highly represented in this cluster.

The data suggest that most integration agreements demonstrate some level of heterogeneity in terms of the strength of property rights systems among their members. Homogeneity would make it easier for an integration agreement to promote common policies to enhance property rights. However, heterogeneity can also be seen as an opportunity, as policies could be tailored to specific members. Integration agreements showing members in just one cluster reveal homogeneity among their property rights systems. Those agreements participating in two clusters show members at the cluster boundaries, suggesting a potential transition from one cluster to another.

It is important to note that the most populous countries in the world, India and China, are part of Cluster 2. These countries have results that are very close to the average in the indicators.

CONCLUSIONS OF THE CLUSTER ANALYSIS

Common Characteristics and Consistency: Each cluster represents more than a mere grouping by variables directly associated with property rights. They are groups with common characteristics within them and different features among clusters. This confirms the consistency of the IPRI and the relevance of property rights systems in influencing societies.

Polar Extremes: Cluster 1 and Cluster 3 represent two extreme poles in terms of the performance of their economies, their institutions, and their innovation, as well as their IPRI scores.

Intermediate Positions: Cluster 2's statistical values reflect its intermediate position. Depending on the decisions made in the present and near future, countries in this cluster will lean towards one of the two polar classes. Those countries that are very close to Cluster 1 should revise their policies regarding property rights, as well as other dimensions, to improve their performance and the well-being of their citizens.

Strengthening Legal and Political Environment: 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. This is crucial to improving the quality of life in their societies.

Bridging the Gap: Countries on the boundaries between two clusters need to make special efforts to bridge the gap, which will place them at a higher level.

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

COUNTRY	ACCR.	CLUSTER	DISTANCE TO CENTROID
NIGERIA	NGA	1	0.02537
IRAN	IRN	1	0.05769
GABON	GAB	1	0.06891
MADAGASCAR	MDG	1	0.08976
BANGLADESH	BGD	1	0.09454
PAKISTAN	PAK	1	0.10985
MALI	MLI	1	0.15357
MOZAMBIQUE	MOZ	1	0.1682
UKRAINE	UKR	1	0.18298
RUSSIA	RUS	1	0.22202
CÔTE D'IVOIRE	CIV	1	0.22498
HONDURAS	HND	1	0.26909
CAMEROON	CMR	1	0.27842
BURKINA FASO	BFA	1	0.32715
ZIMBABWE	ZWE	1	0.33493
ECUADOR	ECU	1	0.33678
BOSNIA AND HERZEGOVINA	BIH	1	0.35426
EL SALVADOR	SLV	1	0.4671
ALGERIA	DZA	1	0.51162
ARGENTINA	ARG	1	0.51241
BENIN	BEN	1	0.51264
UGANDA	UGA	1	0.51526
NICARAGUA	NIC	1	0.59537
ZAMBIA	ZMB	1	0.62331
BURUNDI	BDI	1	0.62779
CHAD	TCD	1	0.63954
PARAGUAY	PRY	1	0.64319
LEBANON	LBN	1	0.65333
CONGO, DEM. REP.	COD	1	0.65514
ETHIOPIA	ETH	1	0.6695
EGYPT	EGY	1	0.73261
ANGOLA	AGO	1	1.06431
NEPAL	NPL	1	1.12945
MAURITANIA	MRT	1	1.20641
HAITI	HTI	1	1.99067
YEMEN, REP.	YEM	1	2.21061
VENEZUELA, BOLIVARIAN REP.	VEN	1	4.49951
MONTENEGRO	MNE	2	0.03307
SOUTH AFRICA	ZAF	2	0.03861
GEORGIA	GEO	2	0.09016
INDIA	IND	2	0.12749
SENEGAL	SEN	2	0.13629
THAILAND	THA	2	0.14457
DOMINICAN REPUBLIC	DOM	2	0.14786
PANAMA	PAN	2	0.16501
BULGARIA	BGR	2	0.1727
TRINIDAD AND TOBAGO	TTO	2	0.17303
TUNISIA	TUN	2	0.22513
KAZAKHSTAN	KAZ	2	0.22745
SRI LANKA	LKA	2	0.22867
SRI LANKA	LKA	2	0.22867
INDONESIA	IDN	2	0.24709
KENYA	KEN	2	0.25111
JAMAICA	JAM	2	0.25495
KINGDOM OF ESWATINI	SWZ	2	0.26093
COLOMBIA	COL	2	0.29445
MOLDOVA	MDA	2	0.31908
TANZANIA	TZA	2	0.32573
SERBIA	SRB	2	0.33313
POLAND	POL	2	0.33563
GHANA	GHA	2	0.34804
ARMENIA	ARM	2	0.38083
RWANDA	RWA	2	0.42127
CROATIA	HRV	2	0.42264
ALBANIA	ALB	2	0.43181
BRAZIL	BRA	2	0.43528
NORTH MACEDONIA	MKD	2	0.47734
KUWAIT	KWT	2	0.50934
JORDAN	JOR	2	0.53807
PHILIPPINES	PHL	2	0.55046
VIETNAM	VNM	2	0.66243
MOROCCO	MAR	2	0.74625
PERU	PER	2	0.75652
SLOVAKIA	SVK	2	0.90159
MALAWI	MWI	2	0.90783
HUNGARY	HUN	2	0.92713
GREECE	GRC	2	0.94392
COSTA RICA	CRI	2	0.96123
BOTSWANA	BWA	2	0.97411
TURKEY	TUR	2	1.01381
MEXICO	MEX	2	1.14085
CHILE	CHL	2	1.15014
CYPRUS	CYP	2	1.19329
ROMANIA	ROU	2	1.33749
CHINA	CHN	2	1.4227
BAHRAIN	BHR	2	1.60484
AZERBAIJAN	AZE	2	1.71443
SAUDI ARABIA	SAU	2	2.00245
BRUNEI DARUSSALAM	BRN	2	2.64829
KOREA, REP.	KOR	3	0.1656
BELGIUM	BEL	3	0.19839
CANADA	CAN	3	0.19946
IRELAND	IRL	3	0.38699
ICELAND	ISL	3	0.40257
CZECH REPUBLIC	CZE	3	0.48013
JAPAN	JPN	3	0.54928
FRANCE	FRA	3	0.58278
NORWAY	NOR	3	0.59675
UNITED KINGDOM	GBR	3	0.60221
AUSTRALIA	AUS	3	0.63178
SWITZERLAND	CHE	3	0.6765
AUSTRIA	AUT	3	0.67859
GERMANY	DEU	3	0.69461
NEW ZEALAND	NZL	3	0.73565
DENMARK	DNK	3	0.80609
SPAIN	ESP	3	0.81208
SWEDEN	SWE	3	0.81801
NETHERLANDS	NLD	3	0.82417
LUXEMBOURG	LUX	3	0.83577
LITHUANIA	LTU	3	0.90209
TAIWAN (CHINA)	TWN	3	0.94024
MALAYSIA	MYS	3	1.10804
ISRAEL	ISR	3	1.18549
URUGUAY	URY	3	1.28034
LATVIA	LVA	3	1.30774
SLOVENIA	SVN	3	1.32215
PORTUGAL	PRT	3	1.37226
MALTA	MLT	3	1.4639
SINGAPORE	SGP	3	1.54399
OMAN	OMN	3	1.60982
FINLAND	FIN	3	1.87349
QATAR	QAT	3	2.14833
ITALY	ITA	3	2.34649
UNITED STATES	USA	3	2.41258
UNITED ARAB EMIRATES	ARE	3	2.53645

Figure 47. Clusters Members' Positions.

	CLUSTER 1.	CLUSTER 2	CLUSTER 3
Total Countries	38	51	36
Total Population (Thousand)	1,802,347	4,480,299	1,104,960
Average IPRI	3.67	5.02	7.01
Average LP	3.04	4.78	7.32
Average PPR	3.84	5.03	6.92
Average IPR	4.13	5.25	6.8
Average GEN	6.77	7.98	8.99
Average IPRIGE	3.09	4.52	6.67
Average GDPPC	2,923.58	9,576.63	46,043.47
Average GDPGINI	111,318.64	301,595.07	1,434,557.32
Average GKFPC	787,965.43	2,706,699.72	12,734,268.66
Average LPI	47.49	60.44	76.62
Average GAI	25.91	40.84	65.91
Average SPI	53.23	68.26	83.9
Average GTCI	29.34	43.05	66.05
Average GAIRI	34.85	50.19	70.08
Average ODIN	40.11	57.53	70.44
Average GAII	15.5	19.93	31.36
Average GII	19.48	30.51	50.53
Average DNI	39.55	46.42	57.62
Average MIWE	43.61	53.13	62.28
Average EI	13.03	15.86	21.98
Average GEI	17.75	30.14	60.19

Figure 48. Illustrative Variables: Averages by Clusters.

ACCR.	REGIONAL INTEGRATION AGREEMENTS	TOTAL	CLUSTER 1	%	CLUSTER 2	%	CLUSTER 3	%
OECD	Organisation for Economic Co-operation and Development	37			9	24.32%	28	75.68%
EU	European Union	26			8	30.77%	18	69.23%
SADC	Southern African Development Community	11	6	54.55%	5	45.45%		
ECOWAS	Economic Community Of West African States	7	5	71.43%	2	28.57%		
ASEAN	Association of Southeast Asian Nations	7			5	71.43%	2	28.57%
PARLACEN	Central American Parliament	5	3	60.00%	2	40.00%		
GCC	Gulf Cooperation Council	6			3	50.00%	3	50.00%
AP	Pacific Alliance	4			4	100.00%		
MERCOSUR	Southern Common Market	4	2	50.00%	1	25.00%	1	25.00%
SAARC	South Asian Association for Regional Cooperation	5	3	60.00%	2	40.00%		
CEMAC	Central African Economic and Monetary Community	3	3	100.00%				
MCCA	Central American Common Market	4	3	75.00%	1	25.00%		
CIS	Commonwealth of Independent States	5	1	20.00%	4	80.00%		
ARAB M UNION	Arab Mahgreb Union	4	2	50.00%	2	50.00%		
CARICOM	Caribbean Community	3	1	33.33%	2	66.67%		
CAN	Andean Community	4	2	50.00%	2	50.00%		
EFTA	European Free Trade Association	3					3	100.00%
IGAD	Intergovernmental Authority on Development	3	2	66.67%	1	33.33%		
USMCA	United States-Mexico-Canada Agreement	3			1	33.33%	2	66.67%
OPEC	Organization of the Petroleum Exporting Countries	8	5	62.50%	2	25.00%	1	12.50%
CEEAC	La Communauté Economique des Etats de l'Afrique Centrale	7	6	85.71%	1	14.29%		
TPP-11	Trans-Pacific Partnership	11			5	45.45%	6	54.55%
PROSUR	The Forum for the Progress and Development of South America	6	3	50.00%	3	50.00%		

Figure 49. Regional Integration Agreements and Clusters.

9

METHODOLOGICAL APPENDIX

9.1 STRUCTURE AND COMPOSITION

The International Property Rights Index, IPRI, follows an institutional approach, as property rights are a linchpin institution for a free society. The Index encompasses 11 items, gathered under the three components:

A. Legal and Political Environment (LP)

B. Physical Property Rights (PPR)

C. Intellectual Property Rights (IPR)

While there are numerous items associated with property rights, the final IPRI is specific to the 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 in time.

The 2024-IPRI keeps previous years' methodology allowing for a full comparison of its results with previous editions, however, there are some changes in the variables used, given the recurring outdatedness of some 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. Their data has a wide geographical scope.

Below is a detail of the components, items, and source of the variables.

A. 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 the stability provided to the 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.

a. 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 concerning individuals' property.

For this item, the chosen source was The Rule of Law Index of the World Justice Project (worldjusticeproject.org/rule-of-law-index/country/2023), using the simple average of two of its factors:

- Civil Justice is Free of Improper Government Influence (7.4) 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 socioeconomic 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.

b. Rule of Law

This element measures agents' confidence and behavior according to 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. The rule of Law complements the Judicial Independence item.

The chosen data source is the Rule of Law dimension of Worldwide Governance Indicators 2022 (2023 update) (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.

c. Political Stability

Political stability endorses incentives to obtain or extend ownership and/or management of properties. The higher the likelihood of government instability, the less likely people will be to obtain property and 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 2022 (2023 update) (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.

d. Control of Corruption

This item combines several indicators that measure the extent to which public power is exercised for private gain. This includes 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 2022 (2023 update) (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.

B. Physical Property Rights (PPR)

A strong property rights regime promotes people's confidence in its effectiveness in protecting private property rights. It also offers an integrated, effective, and efficient system for registering the 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).

a. 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 experts' views of the quality of the judicial protection of private property, including financial assets. Additionally, it incorporates the 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 (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].

b. 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 (worldjustice-project.org/rule-of-law-index/country/2023). 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 (6.3); that measures whether administrative proceedings at the national and local levels are conducted without unreasonable delay; and

- Due process is respected in administrative proceedings (6.4) which 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.

c. 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 (weforum.org/reports/global-competitiveness-report-2019). The original data scale is [1 to 7], where 7 is the best score. The full question and associated for this indicator is:

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

C. 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 the protection of three major forms of intellectual property rights (patents, trademarks, and copyrights) combining a *de jure* and a *de facto* perspective.

a. Protection of Intellectual Property Rights

Capturing citizens' perspectives on the 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 (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 raise the information:

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

b. 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 are the International Patent Index created by Dr. Walter Park in its last edition for 2023[20] advanced with PRA. This index's original data scale is [0 - 1], where 1 is the highest score (propertyrightsalliance.org/wp-content/uploads/Trademarks-and-Patent-Index.pdf). The International Patent Index is built in six clusters:

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



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*.

c. Copyright Protection

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

The data used for this item are the International IP Index, created by the U.S. Chamber of Commerce, edition 2024, whose original scale runs from 0 to 100% as the best score (uschamber.com/intellectual-property/2024-ip-index).

d. 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 are the International Trademark Index, ITI, (propertyrightsalliance.org/wp-content/uploads/Trademarks-and-Patent-Index.pdf). Created by Dr. Walter Park and updated in its more recent edition, 2021, with PRA[21]. 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*.

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

9.2. DATA SOURCE, SCORES AND RANKINGS

The 2024 IPRI scores and rankings are based on data obtained from official sources made publicly available by established international organizations (see below).

For this reason, data come in different styles and scales. Consequently, data are rescaled to accurately compare among countries and within IPRI components and the overall score.

IPRI-2024.	DATA	ORIGINAL SCALE	YEAR (DATA)	SOURCE
Legal and Political Environment (LP)	Judicial Independence	[0-1](best)	2023	World Justice Project, Rule of Law Index (7.4&8.6 avg.)
	Rule of Law	[(-2,5) - (2,5)]best	2022	The Worldwide Governance Indicators 2022 (2023 update)
	Political Stability	[(-2,5) - (2,5)]best	2022	The Worldwide Governance Indicators 2022 (2023 update)
	Control Corruption	[(-2,5) - (2,5)]best	2022	The Worldwide Governance Indicators 2022 (2023 update)
Physical Property Rights (PPR)	Physical Property Protection	[1-7](best)	2019	World Economic Forum.The Global Competitiveness Index 4.0 2019 Dataset | Version 20191004
	Registering Process	[0-1](best)	2023	World Justice Project, Rule of Law Index (6.3&6.4 avg.)
	Access to Financing	[1-7](best)	2019	World Economic Forum.The Global Competitiveness Index 4.0 2019 Dataset | Version 20191004
Intellectual Property Rights (IPR)	Intellectual Property Protection	[1-7](best)	2019	World Economic Forum.The Global Competitiveness Index 4.0 2019 Dataset | Version 20191004
	Patent Protection	[0-6](best)	2023	Patent Index 2023. Chrysa K. Kazakou (Atty), Walter G. Park (PhD)
	Copyright Protection	[0-100%] (best)	2023	Copyrights, Related Rights, and Limitations, % Available Score. International IP Index 2024
	Trademark Protection	[0-1](best)	2021	International Trademark Index 2021. Chrysa K. Kazakou (Atty), Walter G. Park (PhD)

Table A1. Data Source: IPRI 2024

IPRI scale ranges [0 – 10], where 10 is the highest value for a property rights system and 0 is the lowest value (or weakest) 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 11 items are gathered from different sources, which implies that they have different updating frequencies. The applied logic in the analysis has been to include the latest available data sets for the IPRI.

All the information was downloaded on Mar. 21, 2024. Most of the items present a lag of one year, so the time difference among data should not affect the overall analysis.

The rescaling process of the items was done as follows:

1. For bounded data series with the same IPRI 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 the same IPRI 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 to IPRI:

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

IPRI Calculations:

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

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

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

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

In addition to calculating the IPRI scores and its components, countries were ranked according to their scores. Frequently, 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.

Availability of required data is the only factor that determines countries' inclusion in the IPRI. To keep the meaningfulness of the data and analysis, only country-year combinations respecting specific rules have been considered. Since 2013, such a rule is to have at least 2/3 of the data required for each component; if not, will not be included in the analysis.

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 A2, Table A3 and Fig. A1).

		IPRI	LP	PPR	IPR
N	Valid	125	125	125	125
	Missing	0	0	0	0
Mean		5.181	4.983	5.210	5.355
Std. Error of Mean		.1269	.1675	.1265	.1074
Median		5.000	4.500	4.900	5.100
Std. Deviation		1.4191	1.8725	1.4141	1.2006
Variance		2.014	3.506	2.000	1.441
Range		6.2	7.7	7.0	5.6
Minimum		1.9	1.0	1.5	3.0
Maximum		8.1	8.7	8.5	8.6
Percentiles	25	4.150	3.550	4.200	4.500
	50	5.000	4.500	4.900	5.100
	75	6.150	6.450	6.000	6.050

Figure A2. Statistics. 2024 IPRI and Components

		IPRI	LP	PPR	IPR
N		125	125	125	125
Normal Parameters a,b	Mean	5.1808	4.9832	5.2104	5.3552
	Std. Deviation	1.4191	1.8725	1.4141	1.2006
Most Extreme Differences	Absolute	0.0966	0.1103	0.1191	0.0962
	Positive	0.0966	0.1103	0.1191	0.0962
	Negative	-0.0771	-0.0634	-0.0775	-0.0667
Kolmogorov-Smirnov Z		1.0802	1.2329	1.3320	1.0752
Asymp. Sig. (2-tailed)		0.1937	0.0957	0.0575	0.1979

Figure A3. Normality Test. One-Sample Kolmogorov-Smirnov Test
a. Test distribution is Normal. b. Calculated from data

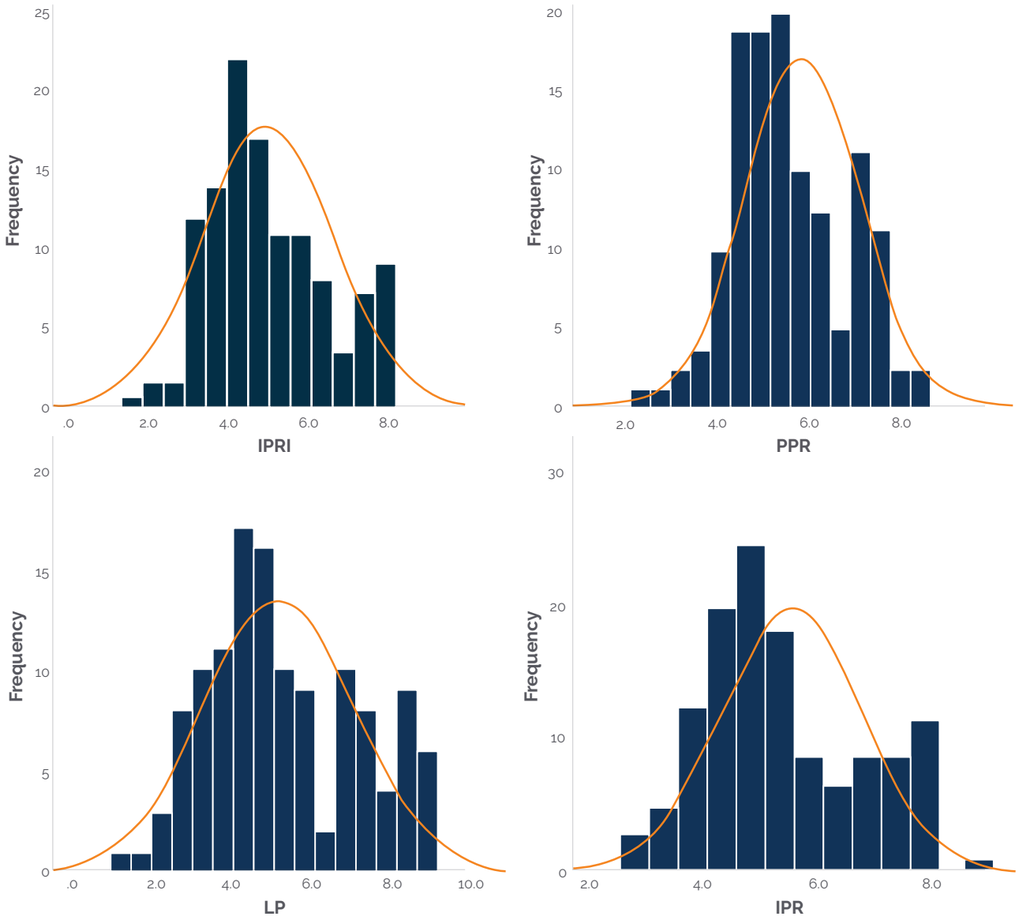


Figure A4. Histogram: 2024 IPRI and its Components.

9.3. COUNTRIES AND GROUPS

All countries were grouped following different criteria, according to the last information available by April 21, 2024:

1. Regional Groups: 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 (following World Bank classification, July 2023): 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 year's we find that:

   - Indonesia and El Salvador change from Lower Middle Income to Upper Middle Income
   - Jordania changes from Upper Middle Income to Lower Middle Income
   - Zambia changes from Low Income to Lower Middle Income
   - Venezuela has been temporarily unclassified in July 2021 pending the release of revised national accounts statistics.

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

   - This year Croatia changed from Emerging and Developing Europe to Advanced Economies.

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 considered:

   - (December 2023) MERCOSUR approved the incorporation of Bolivia, which is in administrative procedures to make it official. Venezuela remains suspended in all the rights and obligations inherent to its status as a MERCOSUR State Party, under the provisions of the second paragraph of Article 5 of the Ushuaia Protocol. mercosur.int/quienes-somos/paises-del-mercosur/.
   - (January 2024) Niger, Burkina Faso, and Mali announced their withdrawal from ECOWAS. The countries had been suspended from ECOWAS due to military takeovers of their respective governments.



In response to the withdrawal, ECOWAS said it is yet to receive any formal notification about the withdrawal and declined further comment. reuters.com/world/africa/niger-mali-burkina-faso-say-they-are-leaving-ecowas-regional-block-2024-01-28/. (February 2024), West African bloc ECOWAS lifted sanctions against Guinea, Mali, Niger. france24.com/en/live-news/20240225-%F0%9F%94%B4-west-african-bloc-ecowas-lifts-its-economic-sanctions-against-guinea-statement, reuters.com/world/africa/west-african-ecowas-bloc-mulls-new-strategy-towards-junta-states-2024-02-24/

» (November 2022) East Timor was admitted to ASEAN as an observer. However, after another change of government, Prime Minister Xanana Gusmão declared in August 2023 that East Timor would not join ASEAN as a democratic state as long as military governments, such as in Myanmar, were accepted in the organization.

» Moldova has suspended participation in CIS. Moldova's government aims to practically conclude all agreements made within the framework of the Commonwealth of Independent States (CIS) by the end of 2024. kyivpost.com/post/25790

» The government of Chile suspended its participation in the Forum for the Progress and Integration of South America (PROSUR) 04.03.2022. dw.com/es/boric-suspende-participaci%C3%B3n-de-chile-en-foro-prosur/a-61348627

» On January 28, 2022 Suriname ceased to be an observer state and became a member of PROSUR.

» (June 2023) Eritrea rejoined IGAD after 16-year absence reuters.com/world/africa/eritrea-rejoins-regional-east-african-bloc-after-16-year-absence-2023-06-13/

» Angola withdrew its OPEC membership, effective 1 January 2024.

» CEEAC suspended Gabon in August 2023, and readmitted it in March 2024, rfi.fr/fr/afrique/20240310-la-ceeac-l%C3%A8ve-ses-sanctions-contre-le-gabon-qui-r%C3%A9int%C3%A8gre-l-instance-r%C3%A9gionale

CLASS	GROUP	#	COUNTRIES
Regional Groupw	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 (UK)
	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 (USA)
	Central America & Caribe	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 (UAE), VIETNAM, YEMEN, REP.
	Oceania	2	AUSTRALIA, NEW ZEALAND

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	12	BURKINA FASO, BURUNDI, CHAD, CONGO, DEM. REP., ETHIOPIA, MADAGASCAR, MALAWI, MALI, MOZAMBIQUE, RWANDA, UGANDA, YEMEN, REP.
	Lower middle income	32	ANGOLA, ALGERIA, BANGLADESH, BENIN, BOLIVIA, CAMEROON, CÔTE D'IVOIRE, EGYPT, ESWATINI, GHANA, HAITI, HONDURAS, INDIA, IRAN, JORDAN, KENYA, LEBANON, MAURITANIA, MOROCCO, NEPAL, NICARAGUA, NIGERIA, PAKISTAN, PHILIPPINES, SENEGAL, SRI LANKA, TANZANIA, TUNISIA, UKRAINE, VIETNAM, ZAMBIA, ZIMBABWE.
	Upper middle income	31	ALBANIA, ARGENTINA, ARMENIA, AZERBAIJAN, BOSNIA AND HERZEGOVINA, BOTSWANA, BRAZIL, BULGARIA, CHINA, COLOMBIA, COSTA RICA, DOMINICAN REPUBLIC, ECUADOR, EL SALVADOR, GABON, GEORGIA, INDONESIA, JAMAICA, KAZAKHSTAN, NORTH MACEDONIA, MALAYSIA, MEXICO, MONTENEGRO, MOLDOVA, PARAGUAY, PERU, RUSSIA, SERBIA, SOUTH AFRICA, THAILAND, TURKEY.
	Unclassified	1	VENEZUELA BOLIVARIAN REPUBLIC OF.
	Advanced economies	35	AUSTRALIA, AUSTRIA, BELGIUM, CANADA, CROATIA, 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 (UK), UNITED STATES (USA).
Region Classification	Emerging & Developing Asia	11	BANGLADESH, BRUNEI DARUSSALAM, CHINA, INDIA, INDONESIA, MALAYSIA, NEPAL, PHILIPPINES, SRI LANKA, THAILAND, VIETNAM.
	Emerging & Developing Europe	13	ALBANIA, BOSNIA AND HERZEGOVINA, BULGARIA, 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 (UAE), YEMEN, REP.
	Sub-Saharan Africa	26	ANGOLA, BENIN, BOTSWANA, BURKINA FASO, BURUNDI, CAMEROON, CHAD, CONGO, DEM. REP., CÔTE D'IVOIRE, ESWATINI, ETHIOPIA, GABON, GHANA, KENYA, MADAGASCAR, MALAWI, MALI, MOZAMBIQUE, NIGERIA, RWANDA, SENEGAL, SOUTH AFRICA, TANZANIA, UGANDA, ZAMBIA, ZIMBABWE.

Regional Integration Agreements	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 (UAE).
	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.
	USMCA	3	CANADA, MEXICO, UNITED STATES (USA).
	OPEC	12	ALGERIA, 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.

Figure A5. Groups conformation

9.4. IPRI-POPULATION

Given the fact that the unit of analysis of the Index is countries/territories might avoid assessing important demographic impacts. Given the former, since 2015 we have included a population incidence in the Index.

The calculation of the IPRI weighted by population, and the incidence is carried out considering the following:

$$\text{IPRI + Population} = \text{IPRI} \times \frac{\text{Population}}{\sum_{i=1}^{n} \text{Population}} \qquad n = \text{sample size}$$

$$\text{IPRI Incidence (\%)} = \frac{\text{IPRI}}{\sum_{i=1}^{n} \text{IPRI}} \times 100 \qquad n = \text{sample size}$$

$$\text{IPRI + Population Incidence (\%)} = \frac{\text{IPRI + Population}}{\sum_{i=1}^{n} \text{IPRI + Population}} \times 100 \qquad n = \text{sample size}$$

Subsequently, the results are grouped into intervals or classes, the number of which has been determined using Sturges' rule:

$$(1) c = 1 + 3{,}3 \times \log_{10}(n)$$

where c is the number of classes in the sample size.

Considering the following criterion: if the integer of the result before rounding is even, it is rounded up and if the integer is odd is rounded down, resulting in an odd number of classes. This allows us to see accumulation near the mean in a normal distribution.

9.5. IPRI-GENDER

The data used to calculate the Gender Equality component for the IPRI are those items more closely related to property rights and their impact on economic development of the Social Institutions and Gender Index, SIGI (by OECD).

It is composed of four dimensions, including 25 variables from the GID-DB, with a range of 0 (no discrimination) to 100 (absolute discrimination) (stats.oecd.org/Index.aspx?DataSetCode=GIDDB2023, downloaded March 01, 2024).

GE	SIGI DIMENSION	OCDE GID-DB VARIABLE
WOMEN'S ACCESS TO BANK LOANS	Access to productive and financial assets	Access to formal financial assets
WOMEN'S ACCESS TO LAND OWNERSHIP	Access to productive and financial assets	Access to land assets
WOMEN'S ACCESS TO PROPERTY OTHER THAN LAND	Access to productive and financial assets	Access to non-land assets
INHERITANCE PRACTICES	Discrimination in the family	Inheritance
WOMEN SOCIAL RIGHTS	Discrimination in the family	Divorce
	Discrimination in the family	Household responsibilities
	Restricted Physical Integrity	Female genital mutilation
	Restricted Physical Integrity	Violence against women
	Restricted civil liberties	Freedom of movement
	Restricted civil liberties	Citizenship rights
	Access to productive and financial assets	Workplace rights

Figure A6. Source: OECD GID-DB

The GE component is organized as follows:

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:

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

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

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

   iv. *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.

   v. *Freedom of movement*: Measures whether women and men have the same rights to apply for national identity cards (if applicable) and passports, and to travel outside the country.

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

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

The final GE score is calculated as the average of the five equally weighted dimensions. Those with more than one item were calculated also as equally weighted. A minimum score (0) means complete discrimination against women, while a 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.

The IPRI incorporates Gender Equality as follows:

$$IPRI - GE = IPRI \times \left[(GE + 10)/20\right]$$

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

NOTE:

Following Russia's war of aggression against Ukraine, Belarus and Russia were excluded from the fifth edition of the SIGI.



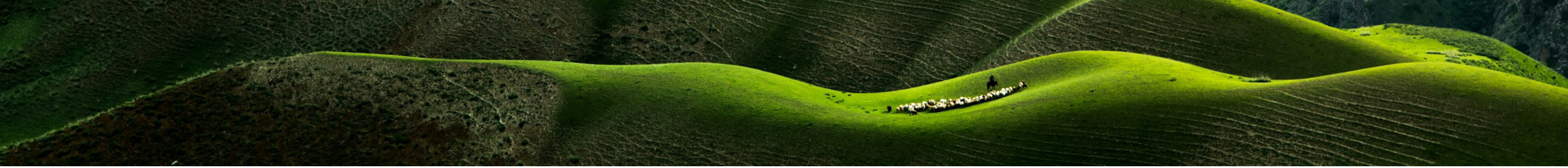
9.6. IPRI-TAX

The property tax implies a constraint, a restriction on property, so an adjustment is made to the IPRI to account for that impact.

OECD defines Tax on Property as recurrent and non-recurrent taxes on the use, ownership, or transfer of property. These include taxes on immovable property or net wealth, taxes on the change of ownership of property through inheritance or gift, and taxes on financial and capital transactions.

This indicator relates to government as a whole (all government levels) and we used the item measured in percentage of total taxation (data.oecd.org/tax/tax-on-property.htm; stats.oecd.org/viewhtml.aspx?datasetcode=REV&lang=en#, Data source 2022, downloaded March 21, 2024), which comes in this range: 0 (Best); 0.5 (Average); 1 (Worst). Calculations are as follows:

$$IPRI - PT = IPRI - \left(\left(IPRI/100\right) \times PT\right)$$



9.7. CORRELATIONS

For the correlations, we used Pearson's coefficient which is a measure of the linear dependence between two variables, to evaluate the associations of different indices and variables with the IPRI and its components. The tranches or correlation ranges we used were as follows: 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].

For the analysis, we calculated the coefficients of determination22 (R2) and evaluated the correlations with a demographic impact. This year's correlation data was downloaded on May 7, 2024, for the following variables:

CLASS	DATA	ORIGINAL SCALE	YEAR	SOURCE	LINK
Prosperity and Competitivity	GDP per capita (constant 2015 US$)	[0-∞](best)	2018-2022 (Last available)	The World Bank Database	data.worldbank.org/indicator/ny.gdp.pcap.kd
	GDP per capita (constant 2015 US$) * GINI	[0-∞](best)	GDP 2018-2022, GINI 2010-2023, Last available	The World Bank Database	data.worldbank.org/indicator/SI.POV.GINI
	Gross capital formation (current US$) per capita	[0-∞](best)	2018-2022 (Last available)	The World Bank Database	data.worldbank.org/indicator/NE.GDI.TOTL.CD
	Legatum Prosperity Index	[0-100](best)	2023	Legatum Institute	prosperity.com/rankings
	Global Attractiveness Index	[0-100](best)	2023	The European House - Ambrosetti (TEHA)	ambrosetti.eu/en/global-attractiveness-index/
	Social Progress Index	[0-100](best)	2024	The Social Progress Imperative	socialprogress.org/2024-social-progress-index/
	Global Talent Competitiveness Index	[0-100](best)	2023	INSEAD, the Business School for the World	insead.edu/global-talent-competitiveness-index
Future Trends	Government AI Readiness Index	[0-100](best)	2023	Oxford Insights	oxfordinsights.com/wp-content/uploads/2023/12/2023-Government-AI-Readiness-Index-2.pdf
	Open Data Inventory (ODIN)	[0-100](best)	2022	Open Data Watch	odin.opendatawatch.com/Report/rankings
	Global AI Index	[0-100](best)	2023	Tortoise Media	tortoisemedia.com/intelligence/global-ai/#rankings
	Global Innovation Index	[0-100](best)	2023	World Intellectual Property Organization (WIPO)	wipo.int/global_innovation_index/en/2023/
	Digital Nomad Index	[0-100](best)	2021	Circle Loop	circleloop.com/nomadindex/
Entrepreneurship Impulse	The Mastercard Index of Women Entrepreneurs	[1-100](best)	2021 (2022 report)	Mastercard	mastercard.com/news/media/phwevxcc/the-mastercard-index-of-women-entrepreneurs.pdf
	Entrepreneurship Index	[0-100](best)	2024	CEOWORLD Magazine	ceoworld.biz/2024/04/05/worlds-most-entrepreneurial-countries-2024/#:~:text=According%20to%20the%20CEOWORLD%20magazine
	Global Entrepreneurship Index	[0-100](best)	2019	The Global Entrepreneurship and Development Institute, GEDI	thegedi.org/2019-global-entrepreneurship-index/

Figure A7. Correlations items source.

22. The coefficient of determination (R^2) represents the proportion of the variance in the dependent variable that is predictable from the independent variable. It ranges from 0 to 1.

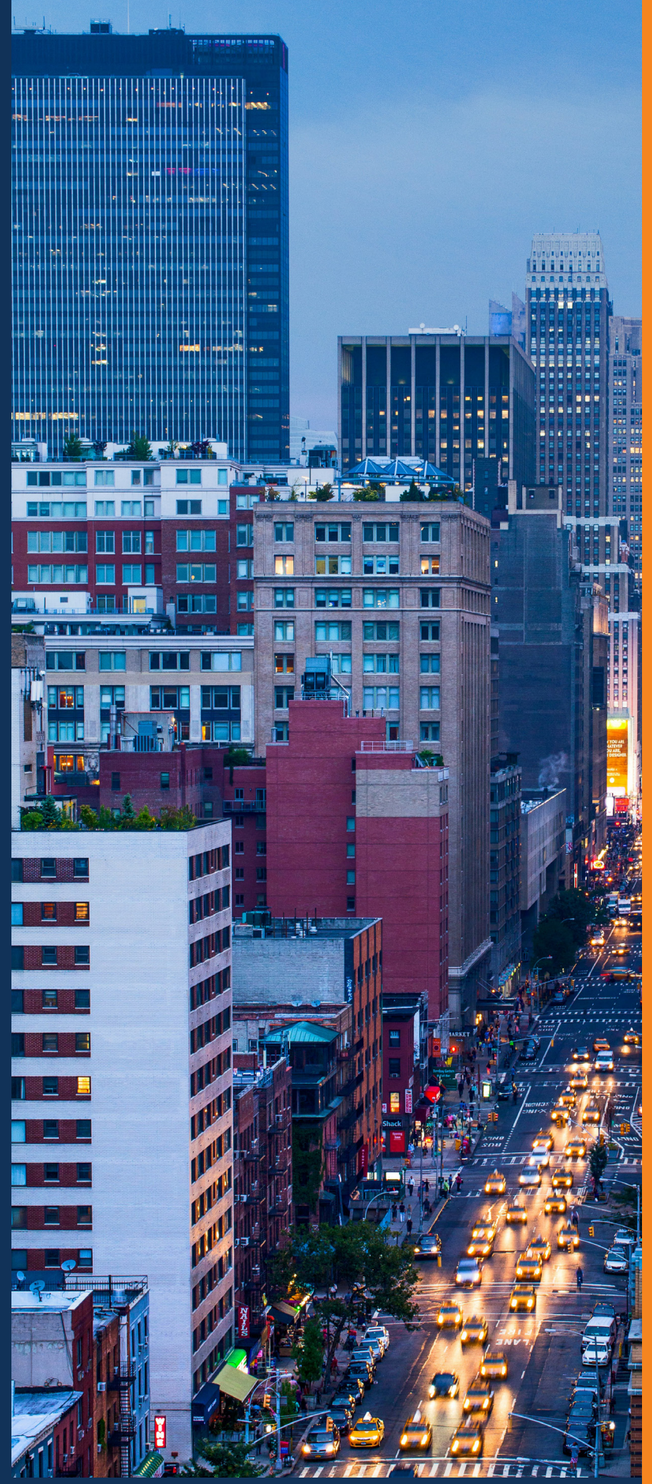
9.8. CLUSTERS

The cluster analysis is useful for gathering similar entities into groups. It gathers individuals as homogeneous as possible based on pre-defined variables in groups. We performed a cluster analysis for all the countries included in the sample, according to the IPRI components' scores (LP, PPR, IPR). Additionally, those variables used for correlation analyses were included to bring additional information to the analysis, but they did not influence the formation of the cluster.

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 correlation among them.

We used the mobile center's algorithm to show inertia within groups and the criteria to decide the optimal number of classes or clusters.

The results of the cluster analysis were crossed with the grouping used in section 3 to enrich the whole analysis.



NOTES


PROPERTY RIGHTS
ALLIANCE