ITUPublications

International Telecommunication Union
Development Sector

Global Digital Regulatory Outlook 2026

From regulatory readiness to real-world outcomes



Acknowledgements

This report was developed by the Telecommunication Development Bureau (BDT) of the International Telecommunication Union (ITU), Through the Regulatory and Market Environment Division in the Digital Knowledge Skills Department, under the ITU-D priority on Enabling policy and regulatory environment.

For queries related to the **Digital Readiness Framework** or the **2026 Global Digital Regulatory Outlook**, please contact treg@itu.int.

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ISBN

978-92-61-43771-8 (PDF version)
978-92-61-43781-7 (EPUB version)



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Global Digital Regulatory Outlook 2026

From regulatory readiness to real-world outcomes

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Foreword



Three years ago, the 2023 edition of the Global Digital Regulatory Outlook made a simple claim: The quality of a country's digital policy, law, and governance is not a bureaucratic formality, but a determinant of whether a digital transformation is successful. That report unveiled the analytical instrument that has since become the Digital Readiness Framework, a unified benchmark built on the established ITU ICT Regulatory Tracker and G5 Benchmark. The framework reviews the instruments, institutions, and governance practices a country has in place, rather than counting the boxes it has ticked.

This report takes the next step. With five comparable datasets for 194 countries, we can move from describing the state of regulation to testing whether it is working. The question that this edition aims to address is if regulatory readiness is high, do the outcomes that matter to countries follow? And in places where this has not been the case, what should regulators do differently? These questions matter because the work is far from finished. Some 76 percent of people worldwide are now online, but 2 billion remain unconnected, and entry-level broadband is still out of reach in more than half of low- and middle-income country.

The findings are encouraging in places and sobering in others. While every benchmark has shown improvement, the gains have been concentrated in instruments that are easier to adopt, such as national strategies and digital-market laws, while the more challenging work of stakeholder engagement, cross-agency coordination, and enforcement lags behind. The data also show that digital readiness is measurably associated with better coverage, greater investment, and faster technology adoption. That premium is measurable, so the task becomes to make it reach every country, not only the most advanced ones.

The outlook is written for regulators and policy-makers who must act, not just observe. Its final chapters are deliberately short and prescriptive, and the report closes with a one-page self-diagnostic. A regulator can use it to see how their country is performing, identify the relevant priorities, and begin efforts anew. We offer our findings in that spirit, and we look forward to the debate it provokes.



Dr Cosmas Luckyson Zavazava
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Acronyms and abbreviations

Abbreviation	Definition
AI	Artificial intelligence
ANPD	Autoridade Nacional de Proteção de Dados (Brazil national data protection authority)
APEC	Asia-Pacific Economic Cooperation
ASEAN	Association of Southeast Asian Nations
CERT	Computer emergency response team
CIS	Commonwealth of Independent States
FDI	Foreign direct investment
FE	Fixed effects (regression model)
G5	Fifth-generation (collaborative) regulation; G5 Benchmark
GDP	Gross domestic product
GSR	Global Symposium for Regulators
GTMI	GovTech Maturity Index (World Bank)
ICT	Information and communication technology
IMT	International Mobile Telecommunications
IoT	Internet of things
ITU	International Telecommunication Union
LDC	Least developed country
LGPD	Lei Geral de Proteção de Dados Pessoais (Brazil general data protection law)
LLDC	Landlocked developing country
NGSO	Non-geostationary orbit (satellite)
NRI	Network Readiness Index
OLS	Ordinary least squares (regression)
SDG	Sustainable Development Goal
SIDS	Small island developing State
SMP	Significant market power
UNCTAD	UN Trade and Development
UPI	Unified Payments Interface (India)
WTO	World Trade Organization

Summary and key messages

This Outlook reads five years of comparable data on national digital policy, law and governance, and asks one question. Does regulatory readiness translate into the outcomes countries care about? The short answer is that it does. The chief obstacle is no longer writing the rules, but making them work. The messages below distil what the data is telling us, and what we should do about it.

The Digital Readiness Framework at a glance

The Digital Readiness Framework is ITU's digital policy benchmarking tool. It assesses the readiness of national legal, policy and governance frameworks for digital transformation in 194 countries, using 117 indicators grouped into nine thematic benchmarks. Each benchmark score, and the overall score, is the percentage of targets a country has met, with partial attainment counted at half weight. Presented on a 0 to 100 scale, the overall score places each country in one of four readiness tiers (Low, Intermediate, High and Very High). Because the dataset provides comparable annual scores from 2021 to 2025, the benchmarks are used throughout this Outlook to pinpoint where readiness has moved since 2021 and where it has not.

The nine benchmarks, referred to throughout the report, are:

B1 National digital policy agenda

B2 Regulatory capacity

B3 Good governance

B4 Institutional collaboration

B5 Stakeholder engagement

B6 Legal instruments for ICT/telecom markets

B7 Legal instruments for digital markets

B8 Market rules

B9 Regional and international cooperation

Chapter 1 explains the Framework, and Table 1 lists what each benchmark measures.

Connecting everyone, everywhere remains the unfinished task

Around six billion people are online, but 2 billion are not, and the divide still tracks income, gender, age and geography.[1] Readiness is the lever that closes that gap, or fails to. This edition therefore judges regulation not by how complete it looks, but by whether it moves the outcomes that connectivity depends on.

Readiness is rising everywhere, but the 'easy' instruments are moving fastest

Across 194 countries, average overall readiness climbed from 53 to 60 on a 100-point scale between 2021 and 2025, and every one of the nine benchmarks improved. Yet the gains are concentrated in the instruments that are quickest to adopt. The national digital policy agenda

[1] ITU, *Measuring Digital Development: Facts and Figures 2026* (Geneva: ITU, November 2026), https://www.itu.int/itu-d/reports/statistics/facts-figures-2026/.

rose 21 points and digital-market law 13 points, while the process and enforcement benchmarks that make those instruments impactful moved far less.[2]

The central tension is adoption versus implementation

The 2023 Outlook framed the future around five tensions in how regulation is made. The 2026 data surfaces one tension above the rest. Countries are doing the 'easy' regulatory work, writing strategies and passing laws, far faster than the 'hard' work of consultation, coordination and enforcement that turns a statute into a result.[3] Resolving that tension is the organising task of this Outlook. It is also the test of whether the readiness premium reaches the countries that most need it.

Digitally ready countries enjoy a real, measurable outcome premium

Digital readiness is significantly associated with better connectivity, higher investment and faster technology adoption.[4] After controlling for income, more digitally ready countries in 2021 are estimated to have reached 42 per cent average 5G coverage by 2024, against 31 per cent for the less-ready group. The association is robust, though it has limitations, which Chapter 4 sets out.[5]

The strength and weakness pattern is global, not regional

Countries tend to perform well on regulatory capacity (B2, world average score about 75), market rules (B8), legal instruments for ICT/telecom markets (B6), and good governance (B3). They tend to perform less well on stakeholder engagement (B5, the lowest benchmark), institutional collaboration (B4) and regional cooperation (B9). Foundations developed during three decades of telecom liberalisation, such as established regulators, market rules and basic telecom laws, are in place. The process, cooperation and digital-era enforcement layers lag, almost everywhere.[6]

Five strategies will convert readiness into outcomes

Echoing the 2023 Outlook's call for concrete strategies, the evidence in this edition points to five moves that surface in almost every region and profile.[7]

1. **Close the implementation gap behind the strategy wave.** Pair every new strategy with funding, a delivery body and monitoring.
2. **Build enforcement capability under digital-market law.** Capability, not adoption, is now the binding constraint on B7.

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2 ITU, *Digital Readiness Framework*, gen5.digital, interactive charts and analytics (accessed June 2026), https://app.gen5.digital/unified-framework/charts. Figures reflect the analysis of the 2021–2025 dataset.

3 ITU, *Global Digital Regulatory Outlook 2023* (Geneva: ITU, 2023), https://www.itu.int/dms_pub/itu-d/opb/pref/D-PREF-BB.REG_OUT01-2023-PDF-E.pdf.

4 Correlation coefficients of readiness with 5G coverage (r = 0.68), 4G coverage (r = 0.5), higher telecommunications investment per capita (r = 0.57) and technology adoption readiness (r = 0.80 to 0.82 against the GovTech and Network Readiness indices). Outcome data is from 2025 or the most recent data available for countries. All correlations are significant at the 5% level.

5 ITU, *Digital Readiness Framework*, gen5.digital, interactive charts and analytics (accessed June 2026), https://app.gen5.digital/unified-framework/charts. Figures reflect the analysis of the 2021–2025 dataset.

6 Idem.

7 ITU, *Global Digital Regulatory Outlook 2023* (Geneva: ITU, 2023), https://www.itu.int/dms_pub/itu-d/opb/pref/D-PREF-BB.REG_OUT01-2023-PDF-E.pdf.

3. **Lift the weakest process benchmarks.** Stakeholder engagement, institutional collaboration and regional cooperation are the most direct readiness gains to adopt.
4. **Stand up the scaffolding before the mandate.** Set up inter-agency coordination on cybersecurity, content and emerging tech early.
5. **Prioritise the upgrade of telecom regulatory frameworks and market rules where investment is the binding constraint.** The telecom-era foundations tracked by B6 and B8 carry the tightest investment and connectivity linkage.

Regional gaps are structural and specific, and no single global checklist will work

Africa lags on digital-market law and international cooperation. The Arab States lag on foreign-ownership liberalisation, and the Americas on stakeholder engagement. The Commonwealth of Independent States (CIS) lag on regulatory capacity, telecom legal instruments and inter-governmental collaboration. Reforms must be sequenced against each region's binding constraint, not a universal template.[8]

So what, for two main audiences

- **For regulators:** your benchmark shape, not your average, defines your priorities. Find the three benchmarks furthest below your overall score and act on those first. The self-diagnostic in Chapter 5 shows how.
- **For development partners:** the highest-return support is no longer drafting strategies. It is financing implementation, meaning enforcement capacity, inter-agency coordination and consultation machinery. ITU estimates that at least USD 1.6 trillion is needed to close the digital infrastructure investment gap and reach universal and meaningful connectivity by 2030, with the most acute needs in developing countries, against barely USD 15 billion of greenfield ICT investment in 2024.[9]

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[8] ITU, *Digital Readiness Framework*, gen5.digital, interactive charts and analytics (accessed June 2026), https://app.gen5.digital/unified-framework/charts. Figures reflect the analysis of the 2021–2025 dataset.

[9] ITU, *Digital Infrastructure Investment: Closing the digital infrastructure investment gap by 2030*. Whitepaper (2025), https://www.itu.int/dms_pub/itu-s/opb/dii/S-DII-DIII.WHITEPAPER-2025-PDF-E.pdf.

Chapter 1. Introduction and approach

This chapter sets the scene. It explains where this Outlook comes from and what data it rests on, sets out the Digital Readiness Framework and the four readiness tiers that anchor the analysis, and describes how the report reads the data, moving from readiness, to outcomes, to action.

Box 1: The Outlook and its data: a short history

The *Global Digital Regulatory Outlook* is the latest in a line of ITU flagship analyses of policy and regulation that began with the *Global ICT Regulatory Outlook* in 2017. The series has always had a dual purpose, to give regulators a comparative read on a fast-moving field and to anchor reform in evidence rather than fashion. The 2023 edition refreshed that mission for the digital era. It also introduced a new measurement instrument, originally the 'Unified Framework', now the Digital Readiness Framework.

That Framework is itself a consolidation of years of ITU benchmarking. It integrates two long-running tools. The first is the *ICT Regulatory Tracker*, ITU's established measure of the maturity of telecom and ICT regulation. The second is the *G5 Benchmark*, which captures the fifth-generation, collaborative-governance agenda refined through the annual Global Symposium for Regulators.[1] Both rest on ITU's 'generations of regulation' model, which traces how frameworks evolve from first-generation command-and-control toward the collaborative 'gold standard' of Gen 5.

The extended dataset behind this Outlook is drawn from official ITU surveys of Member State institutions, datasets compiled by international organisations, and desk research against official government sources. It covers 194 countries and more than 500 indicators, 117 of which make up the Framework. The underlying indicator sets are refreshed on a rolling cycle (annually or biannually).[2]

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1 ITU, *Global Symposium for Regulators (GSR): Best Practice Guidelines* (Geneva: ITU, 2023–2024), https://www.itu.int/en/ITU-D/Regulatory-Market/Pages/bestpractices.aspx.

2 ITU, *Digital Readiness Framework: Primer* (Geneva: ITU, March 2026), secs. 5–6, https://app.gen5.digital/doc/ITU_DigitalPolicyReadinessFramework_Primer_2026.pdf.

1.1 State of play: digital policy readiness in 2026

Digital transformation depends on an enabling environment that no country can assemble by accident. Universal and meaningful connectivity trusted digital public services and home-grown digital innovation all rest on the combined effect of policy choices, legal instruments, institutional capacity and governance arrangements.[10] The connectivity record shows both how far the world has come and how far it has to go. By 2026 6.3 billion people, roughly three-quarters of humanity, were using the Internet. Yet about 2 billion remained offline, and the divide still tracked income, gender, age and geography.[11]

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10 Idem.

11 ITU, *Measuring Digital Development: Facts and Figures 2026* (Geneva: ITU, November 2026), https://www.itu.int/itu-d/reports/statistics/facts-figures-2026/.

Affordability shows why the enabling environment matters. The Broadband Commission's 2025 target is for entry-level broadband to cost less than two per cent of monthly gross national income per capita in low- and middle-income countries. On the mobile-broadband basket, 138 of 202 economies now meet that target. On fixed broadband, only 91 of 192 do. Across low- and middle-income economies, just one in two meet the target for even one of the two baskets, and in over a third of low-income countries a 5 GB mobile plan still costs more than a tenth of average monthly income.[12] Price is not set by markets alone. It is shaped by licensing, competition policy, spectrum and taxation, the very instruments the Framework measures, and the reason a readiness benchmark is worth testing against real outcomes.

The state of play in 2026 is one of broad but shallow progress. Every benchmark has improved since 2021, and the number of countries with a coherent national digital strategy has risen sharply. But readiness remains modest in absolute terms. Roughly two-thirds of countries still sit in the Low or Intermediate tiers, and the instruments that have spread fastest, strategies and digital-market laws, are precisely those that are easiest to adopt and hardest to implement.[13] The defining tension of this edition is therefore between adoption and implementation, and Chapter 4 puts it to an empirical test.

1.2 The Digital Readiness Framework explained

The Digital Readiness Framework is a policy benchmarking tool. It assesses the readiness of national legal, policy and governance frameworks for digital transformation. First introduced in the 2023 Outlook as the 'Unified Framework', it integrates and builds on two established ITU instruments, the ICT Regulatory Tracker and the G5 Benchmark, and is supported by ITU policy and regulatory data covering 194 countries and more than 500 indicators.[14] It is grounded in ITU's Generations of Regulation model, which describes how regulatory frameworks evolve from first-generation command-and-control rule-setting toward the collaborative, innovation-enabling posture of the fifth generation. Gen 5 is the 'gold standard', framed around collaboration across sectors, cooperation across borders, and engagement across the board.

The Framework assesses readiness across three related domains: ICT and digital law, digital policy, and digital governance. These are organised into nine thematic benchmarks that group 117 indicators, or 'targets'. Each benchmark score, and the overall score, corresponds to the percentage of targets a country has met, with partial attainment counted at half weight. No weights are applied, so strength in one area can offset weakness in another. Two methodological choices give the dataset its analytical value. First, missing responses are treated by default as an implicit negative and corroborated through desk research, so the scores reward instruments that demonstrably exist. Second, a carry-forward rule preserves longitudinal consistency across the five annual series. Importantly, the Framework measures the enabling environment, not outcomes directly. The outcome data that the Framework is tested against comes from independent sources, not from the scores themselves, making the synthesis in Chapter 4 a genuine test.

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12 Broadband Commission for Sustainable Development, *2025 Advocacy Targets* (Geneva: ITU/UNESCO, updated 2024), Target 2, https://broadband.itu.int/advocacy-targets/; affordability data from ITU, *Facts and Figures 2026*, *and ITU, Global Connectivity Report 2025, chapter 4 (Geneva: ITU, 2025), https://www.itu.int/itu-d/reports/statistics/2025/11/17/gcr-2025-chapter-4/*.

13 ITU, *Digital Readiness Framework*, gen5.digital, interactive charts and analytics (accessed June 2026), https://app.gen5.digital/unified-framework/charts. Figures reflect the analysis of the 2021–2025 dataset.

14 ITU, *Digital Readiness Framework: Primer* (Geneva: ITU, March 2026), secs. 5–6, https://app.gen5.digital/doc/ITU_DigitalPolicyReadinessFramework_Primer_2026.pdf

Table 1: The nine thematic benchmarks of the Digital Readiness Framework

	Benchmark	Indicators	What it measures
B1	National digital policy agenda	13	National digital strategies, SDG alignment, target-group and innovation policies
B2	Regulatory capacity	17	Existence, autonomy, accountability and mandate reach of the sector regulator
B3	Good governance	11	Accountability, transparency, appeal mechanisms and evidence-based regulatory practice
B4	Institutional collaboration	16	Cross-institutional coordination on digital and telecom policy
B5	Stakeholder engagement	5	Public consultation, sandboxes and multi-stakeholder participation in rule-making
B6	Legal instruments: ICT/telecom markets	17	Competition, licensing, interconnection, spectrum and consumer protection
B7	Legal instruments: digital markets	16	Data protection, cybersecurity, digital ID, emerging tech, e-government, e-commerce
B8	Market rules	17	Competition levels, SMP/dominance frameworks, foreign-ownership regimes, taxation
B9	Regional and international cooperation	5	Regional integration, trade commitments, cross-border data and emergency-telecom conventions
All	Overall readiness	117	Composite score translated into four readiness tiers: Low, Intermediate, High, Very High

Source: ITU, Digital Readiness Framework: Primer (2026); benchmark indicator counts as published.

Every country falls into one of four readiness tiers based on its overall score. These tiers are the spine of the synthesis in Chapter 4 and of the self-diagnostic in Chapter 5. They are bands of capability, not league positions, and a country's benchmark shape within a tier matters more than its rank.

Table 2: The four readiness tiers

Tier	Score	What it signifies
Low	0 to <40	Limited foundations; key instruments absent, fragmented or at an early stage.
Intermediate	40 to <70	Some core instruments in place; coverage partial; gaps in governance and coordination.
High	70 to <90	Broadly coherent environment; arrangements operational; clear mandates and evidence-based decisions.

Table 2: The four readiness tiers (continued)

Tier	Score	What it signifies
Very High	90 and above	Mature, comprehensive frameworks; instruments systematically designed and aligned across institutions.

Source: ITU, Digital Readiness Framework: Primer (2026), sec. 6.

1.3 How the Outlook reads the data

The report follows a single analytical logic, from readiness to associated outcomes, to the actions required. Chapters 2 and 3 establish where countries stand and how they have moved. Chapter 4 tests whether that readiness co-moves with the outcomes countries care about. Chapter 5 works backwards from the linkage to priority actions, and Chapter 6 looks over the horizon to the issues now arriving on every regulator's desk.

Because the Framework deliberately does not measure outcomes, the synthesis can draw on independent external data without double counting. The analysis below uses ITU connectivity, price and investment series, UNCTAD investment and trade statistics, the World Bank GovTech Maturity Index, which covers 197 economies across four dimensions of public-sector digital maturity, and the Network Readiness Index, which assesses 127 economies across technology, people, governance and impact.[15]

Box 2: What the Framework can and cannot measure

A benchmark is only as good as a clear reading of its limits. The Digital Readiness Framework measures the enabling environment as it appears on the statute book and in the institutional record. It is, in the main, a *de jure* instrument. It asks whether a law, institution or arrangement exists, not how well it is enforced or how good it is in practice. The central finding of this Outlook, that adoption has outrun implementation, is therefore inferred from the gap between readiness and outcomes in Chapter 4, not measured directly. Readers should treat the scores as a map of what is in place, and the synthesis as the test of whether it is working.

Three caveats follow, and the report flags them where they materially affect the analysis. First, data is self-reported by administrations, then validated and complemented through desk research using relevant information available from official government sources. Where an answer is missing and no relevant official information can be identified online, the indicator target is treated by default as 'not met'. In countries where adopted instruments are not systematically published online and where administrations do not submit data to ITU, this approach may bias scores toward countries with greater administrative capacity to respond – which is itself associated with better outcomes. It is worth noting, nevertheless, that publishing adopted decisions and instruments is recognized as best practice. Second, no benchmark is immune to gaming. Once tiers become reputational, there is an incentive to legislate for the score rather than for the result, which is the very behaviour this edition warns against. Third, the Framework rewards the presence of instruments, so a higher score can be read as implying 'more regulation'. Good regulation is often a matter of restraint and proportionality, and a higher score is therefore not always a better outcome.

[15] World Bank, *GovTech Maturity Index, 2025 Update* (Washington, DC: World Bank, 2025), https://www.worldbank.org/en/programs/govtech/gtmi-2025-update-2025-update; Portulans Institute, *Network Readiness Index 2025* (Washington, DC: Portulans Institute, 2025), https://networkreadinessindex.org/.

To separate readiness from wealth, the analysis uses a wealth-adjusted digital readiness index, a country's readiness relative to what its per-capita income would predict. We classify countries scoring above 1.2 as more digitally ready than their income would suggest, between 0.8 and 1.2 as performing as expected, and below 0.8 as less ready. This lets the report read the linkage as a readiness premium. The Outlook does not claim that the Framework causes the outcomes. It tests how readiness and its movement co-move with them, and reads the gaps to locate priorities.

1.4 The approach and style of this edition

This Outlook is written for regulators and policymakers first and foremost. Its style is direct and analytical by design. Where the data support a finding, the text says so plainly. Where a reading goes beyond the data and draws on regulatory practice and experience, the text signals that too, with phrases such as 'the likely driver' or 'our reading is', so that a reader can tell evidence from interpretation.

Four conventions follow. Every figure in the report rests on the Framework dataset or on a named external source, cited in the footnotes. The relationships reported in Chapter 4 are associations rather than proof of causation, and their limits are set out in Box 5 and Annex B. The report takes positions on what the data mean for priorities, because a benchmark that does not lead to action is of little use to the administrations that supply the data. And it uses the benchmark codes (B1 to B9) as shorthand throughout, so that readiness can be discussed at the level where reform happens, one instrument or institution at a time.

Readers who want the underlying data and evidence without the interpretation will find the indicator charts (Figures 8, 10 through 17) in Chapter 3, the empirical tests in Annex B and the full country tables in Annex C.

Chapter 2. Cross-cutting trends, 2021–2025

This chapter establishes the global picture and the regional patterns that the thematic and synthesis chapters then explain. It reads the world trajectory first, covering what has moved and what has not. It then sets the six regions side by side, before turning to the development-status groups that sit consistently below the regional averages. Throughout, the unit of analysis is the benchmark score: a percentage of targets met, comparable across countries, regions and years.

2.1 Global trends

The world-level picture is one of rising but concentrated readiness. Average readiness improved across every benchmark between 2021 and 2025, with the overall score climbing from 53 to 60, corresponding to global readiness of 6 out of 10, in 2025. But the absolute level of readiness remains modest, and the gains are concentrated in a handful of benchmarks rather than spread evenly.[16] Figure 1 traces the world trajectory of all nine benchmarks and the overall score.

Figure 1: World-level readiness trajectory by benchmark, 2021–2025



Source: ITU, Digital Readiness Framework (gen5.digital); authors' analysis.

Note: Each panel shows the world average score (0–100) for one benchmark; the horizontal line marks the 50-point reference.

Two features of global digital readiness stand out. The first is the steep climb of the national digital policy agenda (B1) and legal instruments for digital markets (B7), each rising off a low base. A strategy can be drafted and a law enacted within a single political cycle, by a single ministry, without the sustained inter-agency machinery that other reforms demand. In the language of this report, they are the 'easy' instruments: high-visibility acts that a government can complete and announce. They are 'easy' only in relative institutional terms though: strategies and laws are critical enablers, but adopting them is generally less complex than building the capabilities, coordination mechanisms and enforcement practices needed to make them effective. The second feature is the near-horizontal line of regulatory capacity (B2), which starts high and stays there, suggesting saturation rather than stagnation. Most countries established an autonomous regulator years ago, so the benchmark has little headroom left, and the remaining gains depend on harder, qualitative improvements in accountability and mandate that the indicator set captures only coarsely.

[16] ITU, Digital Readiness Framework, gen5.digital, interactive charts and analytics (accessed June 2026), https://app.gen5.digital/unified-framework/charts. Figures reflect analysis of the 2021–2025 dataset.

Reading the benchmarks by their level reveals a stable strength and weakness pattern. Countries are strongest on the telecom-era foundations and the institutions that administer them. Regulatory capacity (B2) scores around 75, with near-universal separate regulators. Market rules (B8) is the next highest-scoring benchmark, reflecting widespread competition in mobile and broadband. Good governance (B3) is broadly present through dispute-resolution and appeal mechanisms, and the foundational telecom law captured by B6 is mature in most countries.[17] These are the accumulated dividend of three decades of telecom liberalisation, which is why the strongest benchmarks are also the oldest.

The weaknesses are equally consistent, and they cluster around process rather than substance. Stakeholder engagement (B5) is the weakest benchmark, with consultation-feedback practice particularly thin. institutional collaboration (B4) is improving but from a low base, and is weakest in coordination with the finance, energy and transport regulators. Regional and international cooperation (B9) is slow-moving, with cross-border data agreements still largely a European phenomenon. The weakest benchmarks are those that require a regulator to work with others, whether the public, sister agencies or neighbouring states, rather than to act alone. Coordination is harder to legislate than a strategy and complex to mainstream in governance practice, and that, more than any regional or income factor, is what the pattern suggests is holding readiness back.

Table 3: Benchmark scores and 2021–2025 movement (world average)

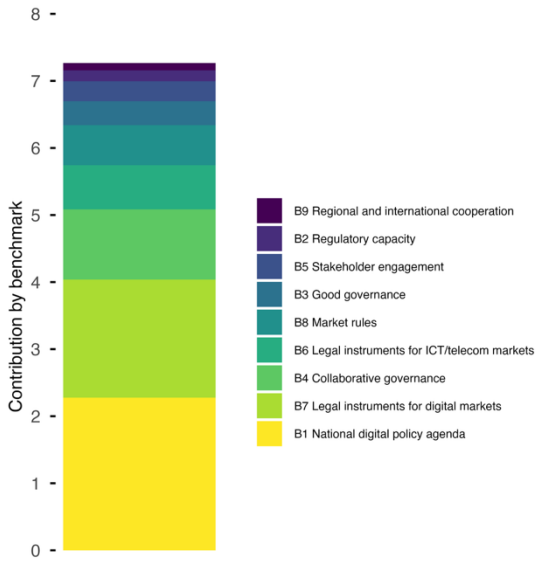
	Benchmark	2021	2025	Overview
B1	National digital policy agenda	31	52	Largest gain (+21); 2023 wave of digital strategies.
B2	Regulatory capacity	74	76	Highest-scoring but flat; near-universal separate regulators.
B3	Good governance	59	63	Dispute-resolution and appeal mechanisms widely present.
B4	Institutional collaboration	45	53	Improving from a low base.
B5	Stakeholder engagement	34	41	Weakest benchmark; consultation-feedback practice thin.
B6	Legal instruments for ICT/telecom markets	59	63	Foundational telecom law broadly mature in most countries.
B7	Legal instruments for digital markets	38	51	Second-largest gain (+13); enforcement is the binding gap.
B8	Market rules	65	69	Second highest-scoring; broad competition in mobile and broadband.
B9	Regional and international cooperation	51	54	Slow-moving; cross-border data agreements largely Europe-only.
Overall	Overall readiness	53	60	Digital readiness improved across countries, albeit modest.

Source: ITU, Digital Readiness Framework charts (gen5.digital), authors' analysis of the 2021–2025 dataset.

[17] Idem.

Figure 2 shows that the increase in overall digital readiness is mainly driven by the gains in national digital policy agenda and the legal instruments for digital markets. Average attainment of the national digital policy agenda benchmark (B1) rose from 31 to 52 per cent, the largest gain of any benchmark, driven by a wave of broad-based, multi-sector digital strategies in 2023. Average performance against the legal instruments for digital markets benchmark (B7) rose from 38 to 51 per cent, the second largest gain, as digital identity, cybersecurity, data protection and e-government rules all advanced.[18]

Figure 2: Trend decomposition of the rise in overall digital readiness, 2021-2025



Source: ITU, Digital Readiness Framework (gen5.digital); authors' analysis.

Note: The contributions were estimated using the increase in the world average benchmark score from 2021 to 2025 and weighted by the benchmark's share of indicators.

Tier movements since 2021 are mostly from Low to Intermediate (20 countries) or Intermediate to High (26) and are observed across every region. Seven countries also moved from High to Very High status, in 2025. Most countries are steadily improving their overall digital readiness, even if the majority remained within their initial tiers.

2.2 Regional patterns and within-region variation

Regional readiness has been steadily increasing. Figure 3 compares the regions side by side across all nine benchmarks. Europe leads on every benchmark, reflecting the cumulative nature of regulatory maturity. Its lead is broad rather than narrow for the institutional practices that lift one benchmark, such as an independent regulator, routine consultation and participation in cross-border agreements, also impact the others.

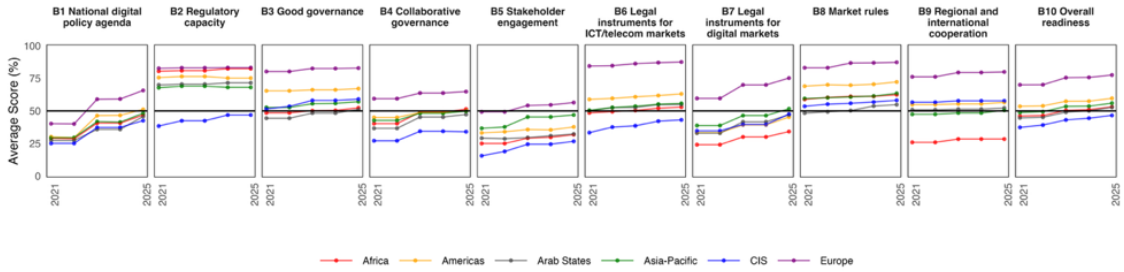
In contrast, the Commonwealth of Independent States (CIS) lags on regulatory capacity, telecom legal instruments and institutional collaboration, a cluster that points to a shared structural cause. Regulators that are less often separated from ministries have weaker mandates to modernise

[18] Idem.

telecom law and fewer arms-length relationships to coordinate across agencies. Where the institutional foundation is thin, several benchmarks move together, which is also why catch-up, when it comes, tends to arrive as a broad lift rather than a single reform.

In sum, each region carries a distinct structural lag. Africa is weakest on digital-market law and international cooperation. The CIS lags on regulatory capacity, telecom legal instruments and institutional collaboration. The Arab States have the most restrictive foreign-ownership regimes and score second lowest on the national digital policy agenda. Asia-Pacific shows the widest variation in regulator independence. The Americas are strong on governance and market rules but lag on stakeholder engagement, and Europe is a saturated leader whose frontier now lies in platform and AI governance.

Figure 3: Readiness by region across the nine benchmarks, 2021–2025



Source: ITU, Digital Readiness Framework (gen5.digital); authors' analysis.

Note: Each panel shows the regional average score for one benchmark; lines are Africa, Americas, Arab States, Asia-Pacific, CIS and Europe.

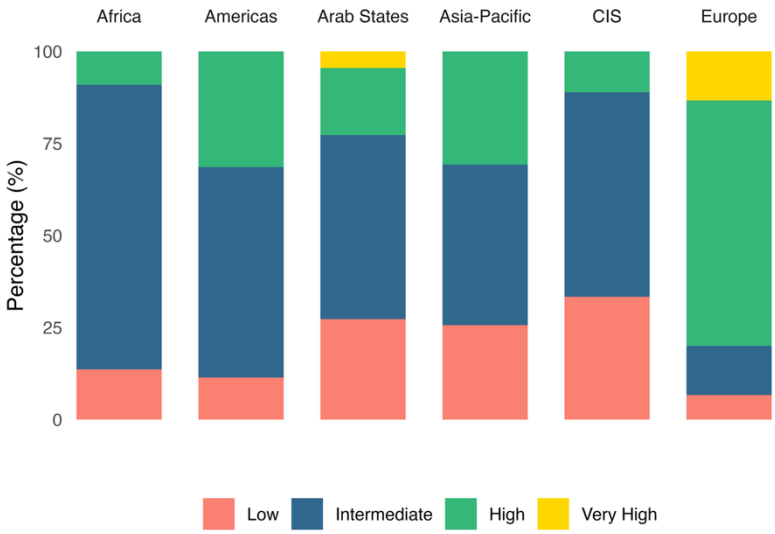
The 2025 tier distribution makes the concentration explicit. Roughly 65 per cent of countries are at Low or Intermediate readiness, about one-third are High, and only seven are Very High. Europe alone accounts for just over half of the High and Very High tiers, while the Arab States, Asia-Pacific, Africa and CIS each hold a mix of Low, Intermediate and High countries (Table 4 and Figure 4).

Table 4: Readiness tier distribution by region, 2025 (number of economies)

Region	Low	Intermediate	High	Very High	Total
Africa	6	34	4	0	44
Americas	4	20	11	0	35
Arab States	6	11	4	1	22
Asia-Pacific	10	17	12	0	39
CIS	3	5	1	0	9
Europe	3	6	30	6	45
Total	32	93	62	7	194

Source: ITU, Digital Readiness Framework (gen5.digital), 2025.

Figure 4: Distribution of economies across readiness tiers (%), 2025



Source: ITU, Digital Readiness Framework (gen5.digital), 2025.

Seven countries reached the Very High tier in 2025: Saudi Arabia in the Arab States, and Finland, Germany, Portugal, the United Kingdom, France and Norway in Europe. Saudi Arabia is the only non-European economy at the top of the table, and the highest-scoring country overall at 94 points.[19] Saudi Arabia's move from the High to the Very High tier in 2024 shows that the top tier is reachable through deliberate, well-resourced reform rather than a long incremental history, an encouraging signal for ambitious reformers elsewhere.

[19] International Telecommunication Union, Digital Readiness Framework, gen5.digital, benchmark and country dataset (accessed June 2026), https://app.gen5.digital/unified-framework/about.

Box 3: Saudi Arabia: a deliberate climb to the top tier

Saudi Arabia entered the Very High tier in 2024 with an overall readiness score of 90.0, the fifth economy to cross the 90-point threshold and the only one outside Europe. It did not stop there. In 2025 it scored 94.2, the highest of the 194 economies covered, up from 83.6 and ninth place in 2021. The two instruments behind the Framework tell the same story. Its ICT Regulatory Tracker score rose from 94 to 97 out of 100 between 2022 and 2024, and its G5 Benchmark score from 81.8 to 97.8 between 2021 and 2025.

The reforms behind the tier change were specific and market-facing. The 2024 crossing rested on three steps: the opening of local and long-distance fixed services to full competition, the same for leased lines, and number portability required from fixed-line operators. Together these lifted market rules (B8) from 79 to 85 and legal instruments for ICT/telecom markets (B6) to 97. They built on groundwork laid in 2023, when regulatory decisions were brought under the general administrative procedures law, taking good governance (B3) from 73 to 82; when data-protection rules covering digital services, a cross-sector infrastructure-sharing initiative and an Internet-of-Things strategy took legal instruments for digital markets (B7) from 81 to a full 100; and when formal collaboration was established between the regulator and both the data-protection and competition authorities, lifting institutional collaboration (B4) from 78 to 91. In 2025 the agenda widened again as competition law was extended to digital markets and sector-specific telecom taxes removed (B8 to 97), a connectivity initiative for persons with disabilities and universal-service financing for school connectivity took the national digital policy agenda (B1) from 79 to 90, and accession to the Tampere Convention took regional and international cooperation (B9) to 100.

What made that pace possible is that the institutional capacity was already in place. Regulatory capacity (B2) has stood at 94 since 2021 and has not moved once. On the Tracker, Saudi Arabia scores full marks on both the regulatory mandate cluster (22 of 22) and the regulatory regime cluster (30 of 30). The regulator is autonomous in decision-making; its budget is approved by its own board and drawn from licence, spectrum, numbering and regulatory fees and from fines; it holds its own enforcement powers and the full sanctions ladder, from monetary fines through licence modification, suspension and revocation; public consultation is mandatory; and every traditional and new mandate sits with the same body, from quality of service, licensing, interconnection and tariffs, spectrum assignment and monitoring and universal service through to broadcasting, Internet content, IT and consumer affairs. The lesson for ambitious reformers is one of sequencing. A fully mandated, and fee-financed regulator, driven by high political momentum, is what allows a legislative agenda to be executed in three years rather than fifteen. Saudi Arabia's remaining gap, good governance (B3) at 82, is now the lowest of its nine benchmark scores.

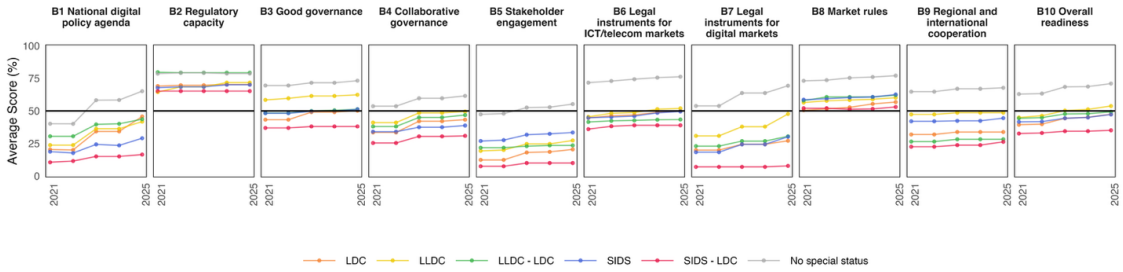
Other studies have shown that special-status groups face unique challenges in advancing network rollout given geographic and development constraints. Across all nine benchmarks, the least developed countries (LDCs), landlocked developing countries (LLDCs) and small island developing states (SIDS) sit consistently below the group of countries with no special-status, with the SIDS that are also LDCs persistently lowest (Figure 5).[20] However, after controlling for income in our empirical tests, the gap largely disappears and the special-status groups score no differently from other countries on eight of the nine benchmarks. The exception is regional and international cooperation (B9), where they still score significantly lower.[21] LDCs, SIDS-LDCs and LLDC-LDCs likely lack the institutional capacity and administrative resources to join regional

[20] ITU, Digital Readiness Framework, gen5.digital, interactive charts and analytics (accessed June 2026), https://app.gen5.digital/unified-framework/charts. Figures reflect the analysis of the 2021–2025 dataset.

[21] See Annex B. Empirical Tests.

ICT initiatives, ratify international cybersecurity treaties, or sign agreements on cross-border data flows.

Figure 5: Readiness of special development-status groups across the nine benchmarks, 2021–2025



Source: ITU, Digital Readiness Framework (gen5.digital); authors' analysis.

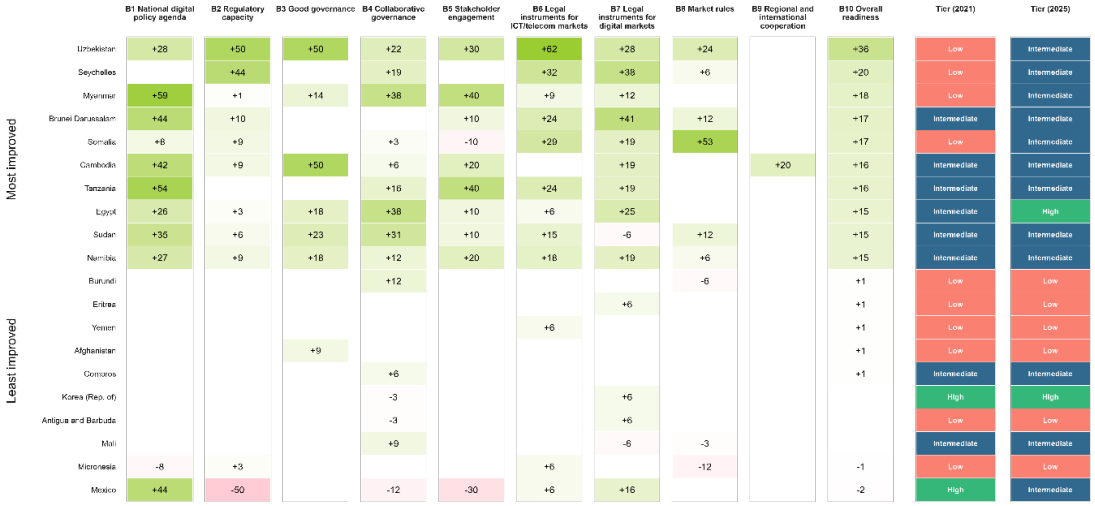
Note: Groups shown are LDC, LLDC, LLDC–LDC, SIDS, SIDS–LDC, and 'NA' (countries in no special group).

2.3 Most and least improved countries

Figure 6 below shows the ten most and least improved countries in terms of digital readiness between 2021 and 2025. The majority of the most improved countries started from a relatively low base. Uzbekistan from CIS is most improved, growing its overall readiness score from 21 to 57 (+36), by implementing broad-based reforms in regulatory capacity, good governance and legal instruments for ICT/telecom markets. In Asia-Pacific, Myanmar, Brunei Darussalam and Cambodia have made notable strides in the national digital policy agenda, as has Tanzania in Africa. Other African countries showed their biggest gains in other benchmarks such as Seychelles in regulatory capacity and Somalia in market rules, while Sudan and Namibia registered modest gains in a broader set of benchmarks. Only Egypt from the Arab States started off from a higher base, rising from 66 to 80.

The least improved countries slid on certain benchmarks or only made minimal gains since 2021. Where a score fell, the cause was typically the expiry of an existing instrument or a structural reform still under way, such as the restructuring of a regulator, which offset gains elsewhere in the benchmark set.

Figure 6: Ten most and least improved countries, 2021-2025 change in benchmark score



Source: ITU, Digital Readiness Framework (gen5.digital); authors' analysis.

Note: Each cell contains the 2021-2025 change in each benchmark score for the selected countries. Lower scores may result from the expiry of existing instruments or from ongoing structural reforms.

Box 4: Uzbekistan: the most improved economy, 2021-2025

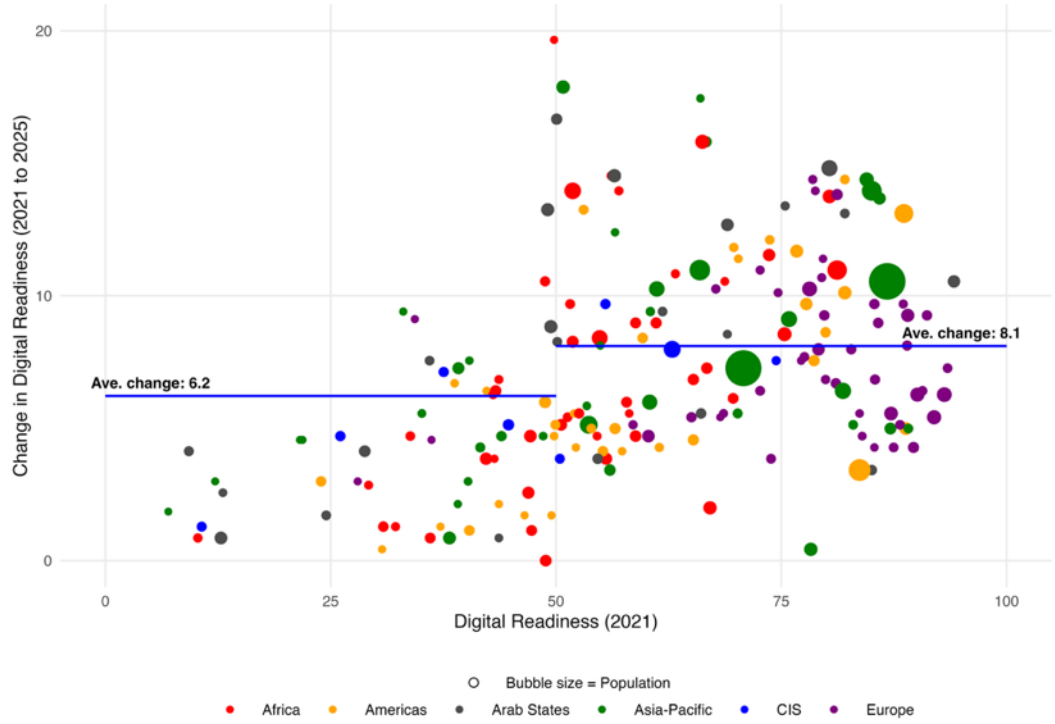
Uzbekistan is the most improved economy in the series. Its overall readiness score rose from 21.4 in 2021 to 57.1 in 2025, a gain of 35.6 points, nearly double the next-largest improvement (Seychelles, +19.7). It moved from 183rd to 105th of 194 economies and from the Low tier to Intermediate in 2023. The underlying instruments show the same trajectory: its ICT Regulatory Tracker score went from 18.5 out of 100 in 2018 and 27.5 in 2020 to 45 in 2022 and 72.5 in 2024, and its G5 Benchmark score from 20.2 to 51.3. Uzbekistan now scores above the world average on the national digital policy agenda (62 against 52), good governance (68 against 63) and legal instruments for ICT/telecom markets (74 against 63).

Three benchmarks carried the gain. Legal instruments for ICT/telecom markets (B6) rose furthest, from 12 to 74: quality-of-service monitoring, permitted mobile infrastructure sharing and band migration arrived in 2022; an ICT accessibility framework for persons with disabilities in 2023; and in 2024 operators were required to publish reference interconnection offers and make interconnection prices public, infrastructure sharing and co-location were mandated, unbundled access to the local loop was required and mobile number portability was completed. Regulatory capacity (B2) rose from 19 to 69, almost all of it in 2024, when Uzbekistan established a separate telecom/ICT regulator, gave it autonomy for all decisions and kept government appropriation below a third of its budget, consolidating in the new body the mandates for interconnection and price regulation, spectrum assignment and monitoring, broadcasting, IT, universal access and consumer affairs. Good governance (B3) rose from 18 to 68, through a dispute-resolution mechanism and an appeals process in 2022, followed in 2023 by bringing regulatory decisions under the general administrative procedures law, opening appeals to market players, adopting technology- and service-neutral frameworks and putting ethics rules in place for regulatory staff. Beyond these three, the national digital policy agenda (B1) rose from 33 to 62 as the digital strategy acquired implementation mechanisms and sectoral coverage, and legal instruments for digital markets (B7) from 16 to 44 with a digital identity framework, cybersecurity legislation, child online protection and an artificial intelligence policy.

The pattern is instructive, though not yet complete. Uzbekistan built the legal-instrument and mandate layers first and the collaborative layer barely at all. Institutional collaboration (B4) stands at 28 against a world average of 53, stakeholder engagement (B5) at 30 against 41, and regional and international cooperation (B9) has not moved from 50 since 2021. Seven cross-institutional collaboration links were recorded in 2023, but all at partial rather than full strength; a regulatory sandbox appeared only in 2025; public consultation is still not mandatory; and the regulator, though now separate and autonomous, does not yet hold its own enforcement powers or sanctioning authority. That combination is this Outlook's central warning in miniature: the statute book has been rewritten considerably faster than the institutional practice behind it. Closing the remaining 13 points to the High tier will depend less on new instruments than on the consultative and enforcement capacity to apply the ones already in force.

Figure 7 below shows that the digital readiness gap is widening: countries that already had high readiness in 2021 also recorded larger gains by 2025. Closing this gap will be important in the immediate term to ensure that all countries are well-positioned to reap the benefits of AI and emerging technologies, and to effectively participate in the digital economy.

Figure 7: Widening of the digital readiness gap



Source: ITU, Digital Readiness Framework (gen5.digital); authors' analysis.

Note: The horizontal lines indicate the average improvement for the countries based on their readiness in 2021: low readiness group (average change of 6.2) and high readiness group (average change of 8.1) for countries scoring below / at or above 50 in 2021.

Chapter 3. Thematic analysis of the nine benchmarks

This chapter examines each of the nine benchmarks in turn. For each, it sets out what the benchmark captures, what 'good' looks like, and how scores moved between 2021 and 2025. The detailed indicator charts behind each section are included in the discussion of each benchmark.

3.1 Benchmark 1: National digital policy agenda

What it captures and what 'good' looks like

Benchmark 1 (13 indicators) assesses whether national digital priorities are defined, coherent and operationalised through strategies, plans and coordinating mechanisms, including for target groups.[22] 'Good' is not a strategy document but an operational agenda. It includes a national plan, broadband embedded in the universal-access definition, explicit links to the Sustainable Development Goals, inclusive provisions for women and girls, persons with disabilities and young people, and an implementation mechanism with a budget and a monitoring body that turns the plan into action.

2021–2025 trajectory

Benchmark 1 recorded the largest relative gain of any benchmark, rising from a world score of 31 in 2021 to 52 in 2025, driven by a marked 2023 jump in broad-based, multi-sector digital strategies. The adoption of innovation policy is now widespread.

Figure 8 tells the fuller story. The left-hand columns, the existence of a national plan and of innovation policy, were largely green in 2021 and have moved little since. The columns capturing implementation mechanisms, SDG linkage and inclusive provisions for target groups remain stubbornly lacking. The difference between the surge and the stagnation likely reflects the strong reputational and diplomatic incentives to publish a national digital strategy, a visible, low-cost signal to investors, voters and development partners. The incentives to fund the delivery body and monitoring framework that would make the strategy live are weaker. In short, around the world, countries are writing plans faster than they are resourcing them, and Benchmark 1's headline gain should be read with that caveat.

A national plan now exists in most countries, and broadband is typically included in the universal-access or universal-service definition. But the strategy or implementation mechanism is often missing, so plans rarely translate into action. In Figure 9 below, 87 countries have all three elements in place: a national plan that covers broadband, an overarching national digital strategy, and an implementation mechanism. Meanwhile, 20 countries mention broadband in their national plans and have a strategy but lack the mechanisms to implement them. At the other end, 45 countries include broadband only in their national plan, and 23 countries have neither a plan nor a strategy that covers broadband.

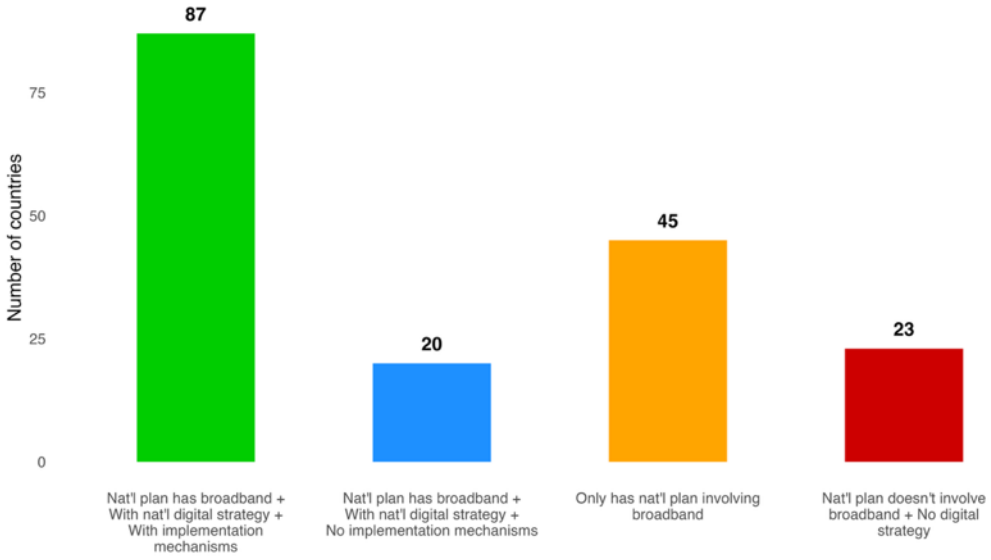
[22] ITU, Digital Readiness Framework: Primer (Geneva: ITU, March 2026), secs. 5–6, https://app.gen5.digital/doc/ITU_DigitalPolicyReadinessFramework_Primer_2026.pdf.

Figure 8: Benchmark 1 (B1) National Digital Policy Agenda: indicator adoption by region and year



Source: ITU, Digital Readiness Framework (gen5.digital); authors' analysis.

Figure 9: Countries with Digital Plans and Strategies, and Implementation Mechanisms, 2025



Source: ITU, Digital Readiness Framework (gen5.digital); authors' analysis.

Note: The 19 remaining countries belong in the following: (a) national plan doesn't involve broadband but has digital strategy and mechanisms (10 countries); (b) national plan doesn't involve broadband, has a digital strategy but no mechanisms (7); (c) national plan doesn't involve broadband but has a digital strategy and partial mechanisms (1); (d) national plan has broadband and a digital strategy exists with partial mechanisms (1).

Inclusive policies for women and girls, persons with disabilities and young people remain lacking in many countries. Except in Europe, national plans are rarely linked to the SDGs, forgoing a ready-made monitoring scaffold that the framework's own SDG-contribution measures could supply.[23]

3.2 Benchmark 2: Regulatory capacity

What it captures and what 'good' looks like

Benchmark 2 (17 indicators) assesses the mandate, resources, skills and tools of the institutions responsible for ICT and digital regulation. 'Good' is a regulator that is separate from the ministry, holds a distinct and adequately resourced mandate, is accountable through arms-length reporting, budgeting and appointment arrangements, and whose mandate reaches the new domains of internet content and IT-infrastructure oversight.

2021–2025 trajectory

Benchmark 2 is the highest scoring benchmark, at around 75. But it is high and flat rather than rising, with a persistent structural gap in the CIS (Figure 10).

Figure 10 shows near-uniform green across the establishment-and-mandate columns, set against patchier accountability columns. This suggests the benchmark is flat because most countries have already met the foundational indicators and have little headroom left, not because reform

[23] ITU, Digital Readiness Framework, gen5.digital, interactive charts and analytics (accessed June 2026), https://app.gen5.digital/unified-framework/charts. Figures reflect the analysis of the 2021–2025 dataset.

has stalled. Most countries created an autonomous regulator during the liberalisation wave of the 1990s and 2000s, so the foundational indicators were already met by 2021 and could not rise further. What has not been solved, as the accountability columns convey, is the concentration of reporting, budgeting and appointment powers in a single entity. That is a harder reform, because it touches the balance of power between the regulator and its parent ministry. The CIS gap has the same root. Where the regulator is not fully separated from the ministry, both autonomy and accountability indicators stay grey together. Capacity is now a qualitative problem, and the benchmark's indicators capture the remaining gains only imperfectly.

Outside the CIS, regulators are separate from ministries in most countries and hold mandates distinct from those ministries. Yet across all regions, regulators are not viewed as highly accountable, because reporting, budgeting and appointment are often concentrated in the same entity. Regulating internet content is a growing mandate, with less appetite in the Americas and the CIS, and a new mandate is appearing for IT-infrastructure oversight covering cybersecurity, cloud, IoT and domain names.[24]

3.3 Benchmark 3: Good governance

What it captures and what 'good' looks like

Benchmark 3 (11 indicators) assesses governance practices that support regulatory quality, accountability, transparency, predictability and integrity, and that enable evidence-based decision-making. 'Good' is the routine use of regulatory impact assessment and ex-post review, technology- and service-neutral frameworks, accessible published law, appeal rights against regulator decisions, and ethics rules for regulatory staff.

2021–2025 trajectory

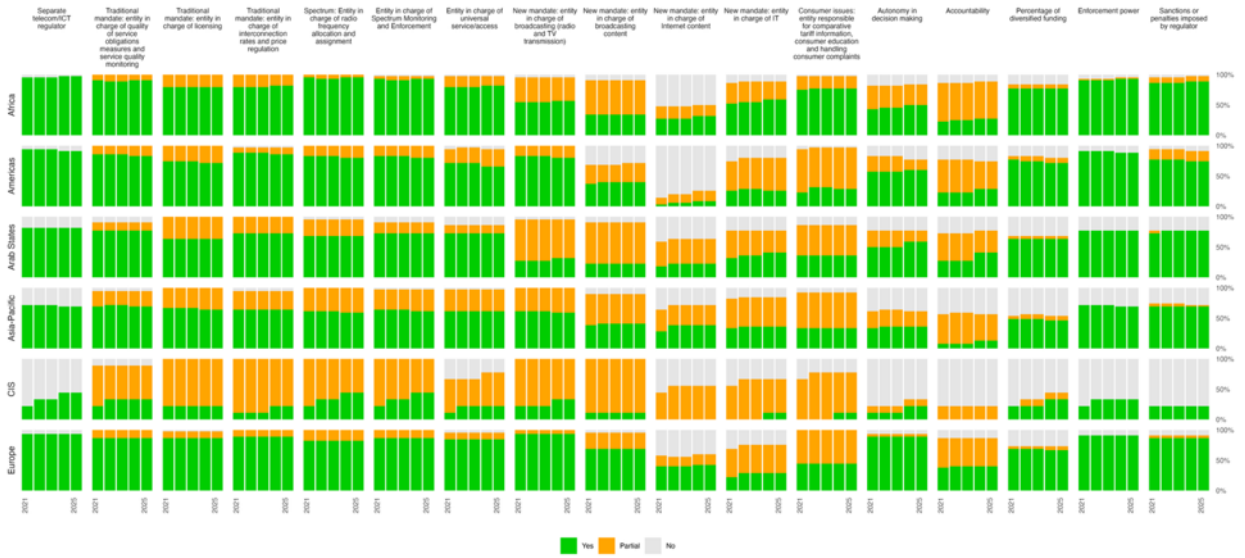
Governance quality is broadly present where it concerns dispute resolution and the right to appeal a regulator's decision. But the more demanding practices, such as impact assessment, neutrality and transparency, remain uneven and have improved only slowly (Figure 11).

Figure 11 separates two kinds of governance. The procedural rights that protect regulated firms, such as dispute resolution and the right to appeal, are widely green. They were built into the licensing bargains that accompanied market liberalisation, and they serve a constituency, the operators, with both the motive and the means to demand them. The analytical disciplines that improve rule quality, such as regulatory impact assessment, ex-post review and technology-neutrality, are far patchier, because they call for resources inside the regulator, and no outside party presses for them in the way operators advocate for appeal rights. This is the likeliest reason governance 'quality' advances slowly. The practices that an organised interest asks for are in place, while those that depend on a regulator's own capacity lag. The half of Africa where laws are not published online, and the CIS gap on ethics rules, point to the same underlying constraint of administrative capacity.

Dispute resolution and appeals against the ICT regulator are present in many countries. But appeals against the decisions of other sector regulators, such as transport and energy, are far less available. Ex-ante regulatory impact assessment as well as ex-post, and rolling, policy reviews remain a challenge for many countries. Technology- and service-neutral frameworks

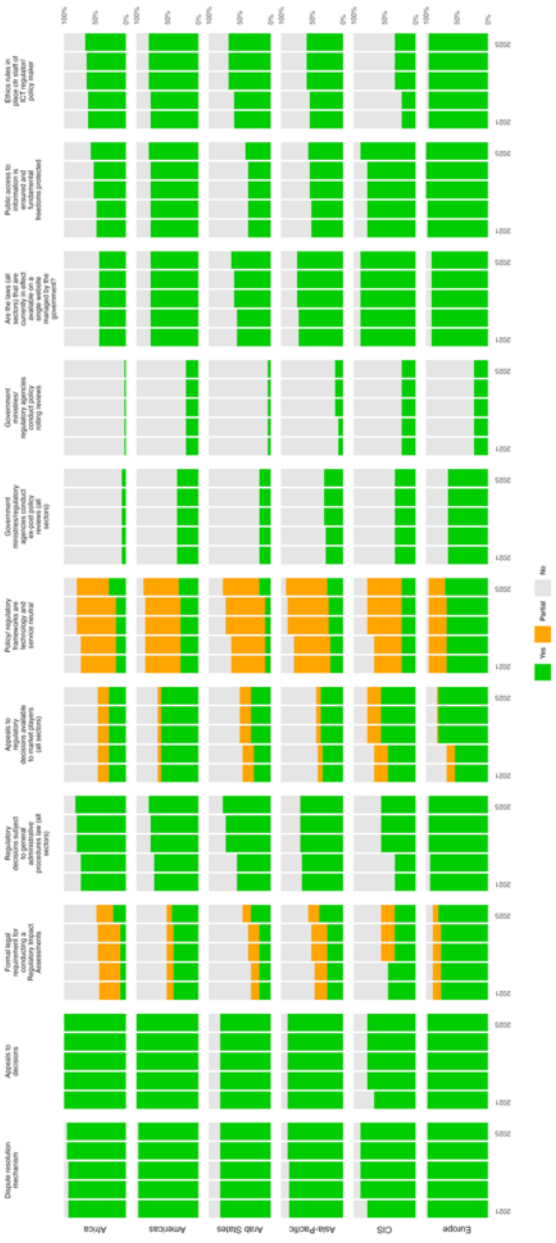
[24] Idem.

Figure 10: Benchmark 2 (B2) Regulatory Capacity: indicator adoption by region and year



Source: ITU, Digital Readiness Framework (gen5.digital); authors' analysis.

Figure 11: Benchmark 3 (B3) Good Governance: indicator adoption by region and year



Source: ITU, Digital Readiness Framework (gen5.digital); authors' analysis.

are not yet a staple outside Europe. Laws are not available on a single government website in more than half of Africa, in a quarter of the Americas and about a third of the Arab States, and ethics rules for regulators are lacking across most of the CIS.[25]

3.4 Benchmark 4: Institutional collaboration

What it captures and what 'good' looks like

Benchmark 4 (16 indicators) assesses the whole-of-government and cross-institution coordination mechanisms needed for digital transformation, including shared mandates and joint implementation. 'Good' is formal and informal coordination linking the ICT regulator to the spectrum authority, the competition authority, the cybersecurity agency and CERTs, the data protection authority, and the finance, energy and transport regulators whose infrastructure decisions shape digital deployment. Collaborative regulation across sectors is the organising idea of the fifth generation of regulation.[26]

2021–2025 trajectory

Benchmark 4 is improving but from a low base, and remains weakest precisely where it matters most for infrastructure coordination with the finance, energy and transport regulators (Figure 12).

The pattern in Figure 12 is best explained by institutional distance. Collaboration is more widespread for the bodies whose remit overlaps the regulator's own, such as the spectrum and competition authorities, with which cooperation dates from the early days of telecom regulation, and increasingly the cybersecurity agency. It is less prevalent with the finance, energy and transport regulators and with data protection authorities, where the need for coordination arose only in the past two decades. Coordination is easiest where agencies already share a vocabulary, a legal base and, often, a supervising ministry. It is hardest across the boundary into utilities and finance, where mandates, cultures and reporting lines diverge and no single actor owns the interface. That matters more than it might seem. The cross-sector links that are most lacking are exactly the ones that govern dig-once rules, infrastructure sharing and energy provisioning for networks. The likely driver of Benchmark 4's slow climb is not indifference but the absence of a standing institutional home for cross-sector coordination, which has to be deliberately created rather than assumed.

The strongest collaboration is between the ICT regulator and the spectrum-management authority, often a shared mandate. Collaboration with the cybersecurity agency is rising, though links to CERTs and data protection authorities lag. Collaboration with a dedicated digital agency is increasing except in the CIS, and there is a noticeable jump in formal and informal collaboration with the competition authority.

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25 Idem.

26 ITU, Global Symposium for Regulators (GSR): Best Practice Guidelines (Geneva: ITU, 2023–2024), https://www.itu.int/en/ITU-D/Regulatory-Market/Pages/bestpractices.aspx.

Figure 12: Benchmark 4 (B4) Institutional collaboration: indicator adoption by region and year



Source: ITU, Digital Readiness Framework (gen5.digital); authors' analysis.

3.5 Benchmark 5: Stakeholder engagement

What it captures and what 'good' looks like

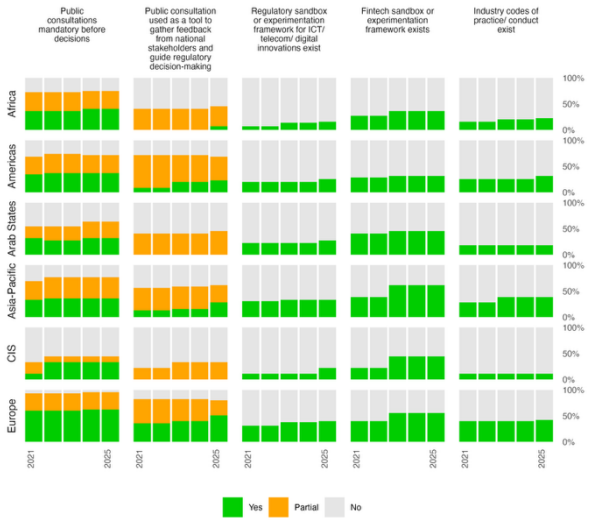
Benchmark 5 (5 indicators) assesses consultation practices and mechanisms for engaging industry and other stakeholders, including approaches to policy experimentation and self-regulatory arrangements. 'Good' is routine public consultation, a published practice for responding to feedback, regulatory and fintech sandboxes, and industry codes of practice. Because Benchmark 5 has only five indicators (Benchmark 9 is the other with five), each one accounts for a fifth of the score, so a single instrument adopted or lapsed can move a country's benchmark score by up to 20 points.

2021–2025 trajectory

Benchmark 5 rose from 34 to 41 and is the lowest-scoring benchmark in 2025, the single weakest point in the global readiness picture. Sandboxes are spreading, with a faster pace for fintech than for general regulatory sandboxes, but the core practice of consultation remains thin (Figure 13).

Figure 13 makes the binding constraint plain. The consultation column shows real progress, but the feedback-response column, the commitment to publish what was heard and how it changed the decision, is lacking across most of every region. Holding a consultation is a light lift and reputationally rewarding. Closing the loop is costly, exposes the regulator to challenge, and creates an accountability trail. Our reading is that engagement stalls at the point where it would start to constrain the regulator, which is also the point at which it would start to add value. The faster spread of fintech sandboxes than general ones reinforces the interpretation. Engagement advances fastest where a powerful, well-organised industry actively wants it, and slowest where the beneficiaries, the diffuse public, cannot easily press their case.

Figure 13: Benchmark 5 (B5) Stakeholder Engagement: indicator adoption by region and year



Source: ITU, Digital Readiness Framework (gen5.digital); authors' analysis.

Public consultations are routinely practised in only about a third of countries in most regions (around 60 per cent in Europe), with another third consulting less consistently. A clear practice for

responding to feedback is far less widespread than the consultations themselves. The feedback loop, not the consultation, is the binding gap, and it is the difference between consultation as ritual and consultation as a regulatory instrument.[27] Industry codes of practice are ticking up in Asia-Pacific, the Americas and Africa, are most widespread in Europe, and least common in the CIS.

3.6 Benchmark 6: Legal instruments for ICT/telecom markets

What it captures and what 'good' looks like

Benchmark 6 (17 indicators) assesses the legal and regulatory instruments shaping telecom and ICT markets, including licensing, authorisations, access frameworks, interconnection, spectrum and consumer protection. 'Good' is mature, technology-neutral telecom law: unified or global licensing, mandated infrastructure sharing and co-location, local-loop unbundling, spectrum secondary trading, Wi-Fi licence exemption and a national emergency telecom plan. This is the legal layer on which decades of network investment have been built.

2021–2025 trajectory

Benchmark 6 is the foundational legal layer and is broadly mature in most countries. But its more advanced instruments, such as local loop unbundling, secondary spectrum trading and simplified licensing, remain concentrated in Europe (Figure 14).

Figure 14 shows a mature core and an advanced frontier. The basic licensing, interconnection and consumer-protection columns are broadly in place, the legacy of liberalisation, while the frontier instruments, such as local-loop unbundling, secondary spectrum trading and unified licensing, predominantly green only in Europe, with the Americas some way behind. The likely driver is market structure rather than legal fashion. Unbundling and spectrum trading presuppose a competitive, infrastructure-rich market with multiple players to trade and share, conditions that do not yet hold in many smaller or state-dominated markets. Restrictive, specific-service licensing in the CIS points the same way, reflecting a market model in which the state retains close control. Benchmark 6 is mature where markets matured early and thin where they did not, which is why section 4.3 expects it to carry a strong historical link to connectivity and investment.

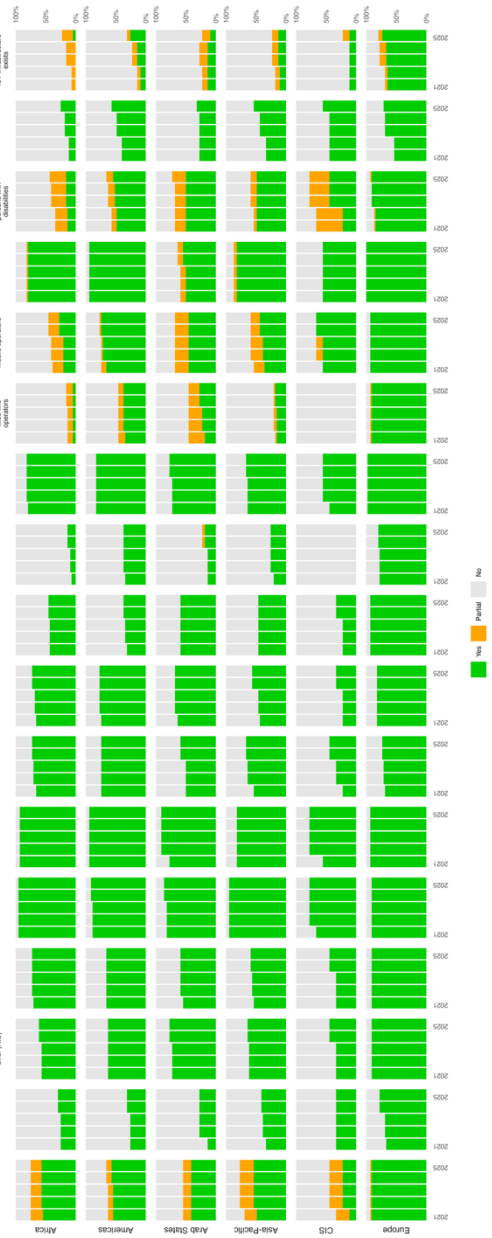
More countries are mapping ICT infrastructure, though the overall level remains low. Competition instruments are increasingly adopted, but gaps persist in mandating infrastructure sharing and co-location across the CIS, Asia-Pacific and the Arab States. Local-loop unbundling is required in fewer than half of countries of every region except Europe, where it is near-universal, and the Arab States, where a small majority require it. On licensing, the CIS is most restrictive, using specific-service licences, while Europe is most liberal, using unified or global licences. Wi-Fi licence exemption is far less prevalent outside Europe, spectrum secondary trading is common only in Europe, permitted in fewer than half of the countries in the Americas and Asia-Pacific, and is absent in the CIS, and national emergency telecom plan adoption is rising.[28]

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[27] Idem.

[28] ITU, Digital Readiness Framework, gen5.digital, interactive charts and analytics (accessed June 2026), https://app.gen5.digital/unified-framework/charts. Figures reflect the analysis of the 2021–2025 dataset.

Figure 14: Benchmark 6 (B6) Legal Instruments for ICT/Telecom Markets: indicator adoption by region and year



Source: ITU, Digital Readiness Framework (gen5.digital); authors' analysis.

3.7 Benchmark 7: Legal instruments for digital markets

What it captures and what 'good' looks like

Benchmark 7 (16 indicators) assesses the legal and regulatory instruments shaping digital markets and services, including data protection, cybersecurity, digital identity, emerging-technology policy, e-government and e-commerce. 'Good' is not merely the existence of these laws but the capability to administer them: a data protection authority that can act, a cybersecurity regime that is operational, and a digital-ID system that is deployed and trusted. The distinction between a law passed and a law enforced is the central theme of this benchmark.

2021–2025 trajectory

Benchmark 7 recorded the second-largest gain of any benchmark, rising from 38 in 2021 to 51 in 2025, as digital identity, cybersecurity, data protection and e-government rules all advanced sharply (Figure 15).

The rapid greening of Figure 15 is the clearest example in the report of adoption outrunning capability. Several forces plausibly drove the wave. One is the demonstration effect of the European Union's data-protection regime, which many countries adapted closely. Another is the security imperative that followed a global rise in cyber-incidents. A third is the pandemic-era push for digital identity and e-government. The clearest counter-trend, declining e-Health policies in Africa and the Arab States, likely reflects the lapse of emergency pandemic measures rather than deliberate repeal.

Digital-identity adoption is rising, with Africa at the lowest level. Emerging-technology policy for IoT, cloud and AI shows a marked rise, but such policies are not yet in place for most of Africa, the Americas and the CIS. Cybersecurity and data-protection rules show a clear upward trend, and e-government is rising sharply. E-government, which the Framework measures through the United Nations E-Government Development Index, is Very High in Europe, while Africa lags at the Low to Middle levels, a pattern the World Bank's GovTech Maturity Index independently confirms.[29]

3.8 Benchmark 8: Market rules

What it captures and what 'good' looks like

Benchmark 8 (17 indicators) assesses the market-facing rules and enforcement mechanisms that enable effective competition and predictable conditions for innovation and investment. 'Good' is full or partial competition across market segments, a robust significant-market-power or dominance framework, liberal foreign-ownership rules and proportionate sector taxation.

[29] United Nations Department of Economic and Social Affairs, *E-Government Survey 2024: Accelerating Digital Transformation for Sustainable Development* (New York: United Nations, 2024), https://publicadministration.un.org/egovkb/en-us/Reports/UN-E-Government-Survey-2024. The E-Government Development Index groups countries into Very High, High, Middle and Low levels; World Bank, *GovTech Maturity Index, 2025 Update* (Washington, DC: World Bank, 2025), https://www.worldbank.org/en/programs/govtech/gtmi.

Figure 15: Benchmark 7 (B7) Legal Instruments for Digital Markets: indicator adoption by region and year



Source: ITU, Digital Readiness Framework (gen5.digital); authors' analysis.

2021–2025 trajectory

Benchmark 8 is the second highest-scoring benchmark, reflecting widespread competition in mobile and fixed broadband, and foreign-ownership regimes are trending more liberal across regions and segments (Figure 16). Figure 16 is the greenest grid in the chapter for the competitive-mobile and market dominance-framework columns. Mobile competition delivered visible consumer benefits quickly, giving governments every incentive to entrench it. The grey cells are instructive in two places. The first is the basic-services and international-gateway columns outside Europe, where incumbent or state interests have most to lose from competition and have resisted longest. The second is the digital-markets column. Outside Europe, competition rules designed specifically for digital platforms remain rare, and few countries have adopted a Digital Markets Act-style instrument, although many try to apply their general competition law to digital markets. That gap is less about capacity than about novelty and political economy. Platform competition is a new, contested and globally fraught frontier, and most authorities have not yet decided how, or whether, to enter it. Benchmark 8 is therefore strong on the settled questions of telecom competition and silent on the open question of digital-market competition.

Full or partial competition exists in most markets for IMT and fixed broadband, with some CIS consolidation in 2021–22. Less competitive segments remain leased lines, international gateways and basic services in Africa, the Arab States, Asia-Pacific and the CIS. Foreign-ownership restrictions are tightest for basic services, and most restrictive in the Arab States, then Asia-Pacific and the CIS. A significant-market-power or dominance definition is widely adopted and in most regions it is backed by explicit criteria for assessing dominance. The CIS is the exception, where the definition exists in most countries but the assessment criteria are only partially in place.[30]

3.9 Benchmark 9: Regional and international cooperation

What it captures and what 'good' looks like

Benchmark 9 (5 indicators) assesses participation in regional and international cooperation and harmonisation efforts. 'Good' is membership of a regional integration initiative with an ICT chapter, cross-border data-flow agreements, international cybersecurity agreements, adherence to the Tampere Convention on emergency telecommunications, and WTO trade-in-telecom commitments. Like Benchmark 5, it has only five indicators, so each carries substantial weight.

2021–2025 trajectory

Benchmark 9 is among the slowest-moving benchmarks, rising only from 51 to 54, and cross-border data flows remain concentrated in Europe (Figure 17). Benchmark 9 moves slowly because, almost uniquely among the benchmarks, no single country can improve its score on its own. Signing a cross-border data agreement, joining a regional integration initiative or ratifying the Tampere Convention requires counterparties and negotiation, a far higher bar than passing a domestic law. The concentration of green in the European columns of Figure 17 is therefore best read as the product of a uniquely deep regional legal order, rather than as a model that other regions can simply copy. The Tampere gap in disaster-prone Asia-Pacific is the most striking. It suggests that even a low-cost, high-value humanitarian instrument struggles to spread

[30] ITU, *Digital Readiness Framework*, gen5.digital, interactive charts and analytics (accessed June 2026), https://app.gen5.digital/unified-framework/charts. Figures reflect the analysis of the 2021–2025 dataset.

Figure 16: Benchmark 8 (B8) Market Rules: indicator adoption by region and year



Source: ITU, Digital Readiness Framework (gen5.digital); authors' analysis.

without an organising regional champion. In short, Benchmark 9 is held back by a collective-action problem, and collective action usually requires a strong regional body to organise it.[31]

Figure 17: Benchmark 9 (B9) Regional and International Cooperation: indicator adoption by region and year



Source: ITU, Digital Readiness Framework (gen5.digital); authors' analysis.

Cross-border data-flow agreements remain concentrated in Europe. Outside of Europe they are found mainly in Asia-Pacific economies (through ASEAN and APEC arrangements) and a handful of countries in the Americas, and are almost absent in Africa, the Arab States and the CIS. Many African countries are not part of a regional integration initiative with an ICT chapter. More countries have signed international cybersecurity agreements, but sizeable gaps remain in Asia-Pacific, the Americas and Africa. Around three-quarters of African and Arab States, just under half of the CIS and around a third of Asia-Pacific countries have not made WTO commitments on trade in telecommunication services.[32]

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31 ITU, *Tampere Convention on the Provision of Telecommunication Resources for Disaster Mitigation and Relief Operations* (Geneva: ITU, 1998; entered into force 8 January 2005), https://www.itu.int/en/ITU-D/Emergency-Telecommunications/Pages/TampereConvention.aspx.

32 ITU, *Digital Readiness Framework*, gen5.digital, interactive charts and analytics (accessed June 2026), https://app.gen5.digital/unified-framework/charts. Figures reflect the analysis of the 2021–2025 dataset.

Chapter 4. Synthesis: from regulatory readiness to real-world outcomes

This chapter presents the analytical core of the Outlook. It tests whether readiness moves the outcomes countries care about, namely investment, connectivity, technology adoption and innovation, and then works backwards from the linkage to the priority actions with the highest expected impact.

Box 5: How to read the evidence in this chapter

The findings in this chapter are based on correlations and panel regression models using the 2021-2025 Digital Readiness Framework dataset and supplemented by external data from the World Bank, ITU, and UN Trade and Development (UNCTAD).

Regression models, in contrast to simple correlations, allow us to better isolate the association of digital readiness with our outcomes by controlling for confounders such as countries' differences in income, population, and urbanisation, among other things. While we find significant links of digital readiness to the outcomes, three limitations should be kept in mind.

First, the time period of 5 years may be relatively short for some aspects of digital readiness to have a noticeable effect on certain outcomes. For instance, regional cooperation measures might take a longer timeframe to concretely affect outcomes. We suspect that data covering a longer time period will allow us to tease out the impact of certain digital readiness aspects more clearly.

Second, regression models exploit variations in the data (either cross-country or within-country) to establish significant associations. If there are minimal variations in the data, the models will not be able to pick up the association. To illustrate, many European countries in the time period considered already have high 4G coverage rates and high scores, say, in the market rules benchmark. If we analysed only European countries, the regressions would not allow us to see the significance of the benchmark.

Third, country scores on the benchmarks are highly correlated, which may affect the robustness of the results. With these limitations, the chapter is best read as a first systematic test of the relationship between digital readiness and outcomes such as investment, connectivity and technology adoption, offering initial evidence rather than settled findings. Please see Annex B on Empirical Tests for more details.

A note on the terms used in this chapter. A correlation coefficient (r) measures how closely two things move together, from -1 (perfect negative relationship) to 0 (no relationship) to 1 (a perfect positive one). In cross-country data of this kind, values above about 0.5 indicate a strong relationship. 'Controlling for' income, population or other factors means the comparison is made between countries that are alike on those factors, so that a readiness effect is not simply a wealth effect in disguise. 'Significant at the 5 per cent level' means there is less than a one-in-twenty chance that a relationship of that size would appear if none existed. 'Predicted' values are the model's estimate of an outcome for a typical country at a given readiness level, with all other factors held at their average.

4.1 The chain: readiness -- outcomes -- action

The synthesis follows a three-link chain. The first link is regulatory readiness, meaning where a country sits on the Framework: its overall score, its benchmark profile, and the wealth-adjusted readiness index. The second link is external outcomes: investment, connectivity, technology adoption and innovation capacity, measured from independent data so the test is not circular. The third link is priority actions, the regulatory moves with the highest expected outcome impact, identified by working backwards from the linkage.

The benchmarks are best read as a package rather than as a checklist. A mature telecom law (B6) allows networks to be built, market rules (B8) give operators a reason to build them, a national digital policy agenda (B1) sets the direction, and stakeholder engagement (B5) brings users and innovators into the process. The sections that follow suggest that outcomes tend to follow when the package is in place, and that individual benchmarks matter in different ways at different stages, with the telecom-era foundations driving investment and 4G coverage, the policy and engagement layers 5G, and the digital-market instruments technology adoption.

Income is a major confounder in any reading of readiness and outcomes: richer countries tend to be more digitally ready, as the figure below shows. The wealth-adjusted readiness index accounts for this. Given a country's per-capita income in 2021, the analysis computes a wealth-adjusted readiness score in 2021. Figure 18 plots each country's 2021 readiness score against its income per capita. The blue line shows the readiness score the model predicts at each income level, so countries above the line are more digitally ready than their income would suggest and countries below it is less ready. The wealth-adjusted readiness index is the ratio of a country's actual score to the score predicted by the line. We classify countries with an index above 1.2 as More Ready, between 0.8 and 1.2 as Performing as Expected, and below 0.8 as Less Ready. On this basis 37 countries are Less Ready, 108 Performing as Expected and 45 More Ready (Table C.3 in Annex C), with the index unavailable for four countries. The index is constructed for 2021 so that the analysis can test whether readiness predicts better outcomes after 2021. The adjustment itself is applied in the regressions that follow. The analysis shows that Income explains much of the variation in digital readiness, but does not fully determine outcomes: countries at similar income levels can perform very differently, suggesting that policy, regulatory and institutional choices matter.

Figure 18: Income per capita versus digital readiness, 2021



Source: ITU, Digital Readiness Framework (gen5.digital); authors' analysis.

Note: Each point is a country in 2021. The centre line shows the readiness score predicted from GDP per capita (Annex B). Countries above the line are more digitally ready than their income would suggest, those below it less ready.

The next sub-chapters begin by examining the correlations between readiness and outcomes, exploring which pillars are driving the linkage, and testing whether a readiness premium compared to income peers translates to better outcomes.

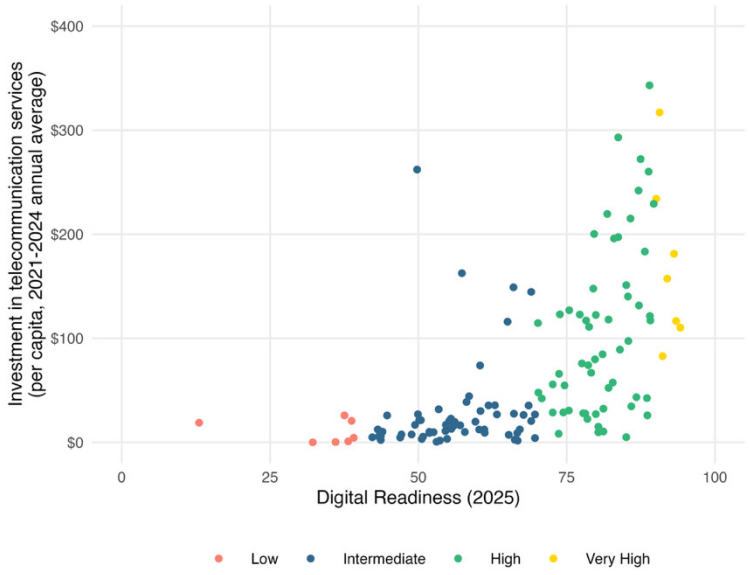
4.2 Does readiness track investment?

Figure 19 shows that annual telecom investment per capita correlates positively with digital readiness (correlation coefficient or r = 0.57) in 2025. Income is a potential confounder: richer countries typically have more resources to invest in telecommunications, which lifts investment per capita.

In our regressions, we find that the positive relationship between digital readiness and investment holds after controlling for a country's income, level of urbanisation and population: a 5-point improvement in readiness is associated with 18 per cent higher investment the following year.[33] The analysis suggests that digital readiness is associated with higher telecom investment even after accounting for income and other structural factors, indicating that stronger policy and regulatory readiness may help create conditions that attract or support investment.

[33] Significant at the 5.2% level. See Annex B for complete estimates.

Figure 19: Annual telecom investment per capita versus digital readiness



Source: ITU, Digital Readiness Framework (gen5.digital); authors' analysis.

Note: r = 0.57 significant at the 5% level.

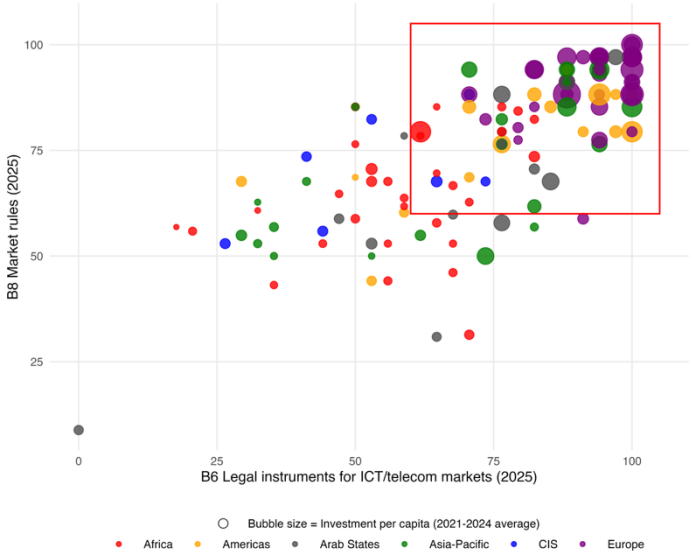
Which benchmarks are driving the linkage? The hypothesis is that the two strongest-scoring legal and market benchmarks carry the investment linkage: market rules (B8) and ICT/telecom legal instruments (B6). Strategy proliferation (B1) and digital-market law (B7) are expected to show weaker linkage, since adoption alone does not move investor decisions.

We find that B6 and B8 do carry the strongest linkage. Countries with more mature ICT/telecom legal instruments record higher investment per capita, and improvements in market rules are strongly associated with higher investment the following year. In Figure 20, countries with the highest scores in B6 and B8 tend to have the largest investment per capita in 2025.

The external evidence reinforces the findings. UNCTAD (2025) finds that investors prioritise transparent, stable and predictable regulatory environments and access to digital skills, the qualities that B6 and B8 measure. It also finds that developing countries with more mature digital-economy frameworks attract higher digital FDI, even though nearly 80 per cent of the USD531 billion in digital-economy greenfield investment announced in developing countries between 2020 and 2024 went to just ten of them.[34]

[34] UNCTAD, *World Investment Report 2025: International Investment in the Digital Economy* (Geneva: UNCTAD, 2025), https://unctad.org/publication/world-investment-report-2025; and UNCTAD, *International Investment in the Digital Economy: A Toolkit for Policymakers* (Geneva: UNCTAD, 2025), https://unctad.org/publication/international-investment-digital-economy-toolkit-policymakers.

Figure 20: ICT/telecom legal instruments and market rules as drivers of telecoms investment per capita

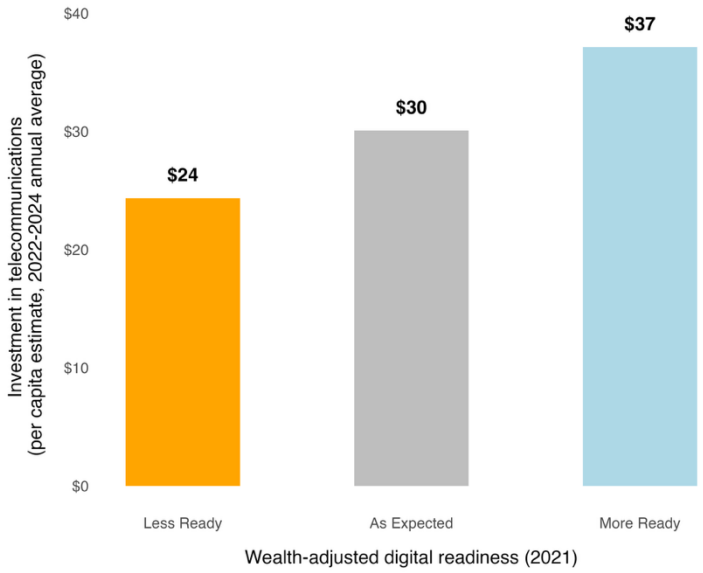


Source: ITU, Digital Readiness Framework (gen5.digital); authors' analysis.

Note: Based on the ICT/telecom legal instruments (B6) and market rules (B8) benchmarks of the Digital Readiness Framework.

Digital readiness also predicts subsequent investment. Wealth-adjusted digital readiness in 2021 significantly predicts average telecom investment per capita by 2022-2024. Given income peers, less ready countries are estimated to average USD 24 in investment per capita, while more ready countries average USD 37 per capita (Figure 21). Whatever its income, a country with the right ICT and digital policies and mechanisms in place is better positioned to compete for and attract investment. In practical terms, readiness appears to matter independently of wealth: at comparable income levels, stronger policy and regulatory readiness is associated with more than 50 per cent higher subsequent telecom investmen.

Figure 21: Wealth-adjusted digital readiness in 2021 and predicted telecom investment per capita by 2022-2024



Source: ITU, Digital Readiness Framework (gen5.digital); authors' analysis.

Notes: We estimate an OLS model regressing a country's average telecom investment per capita (2022-2024) on its wealth-adjusted digital readiness in 2021 and controlling for a country's GDP, level of urbanisation and population. To construct the predictions, we use the average of the control variables.

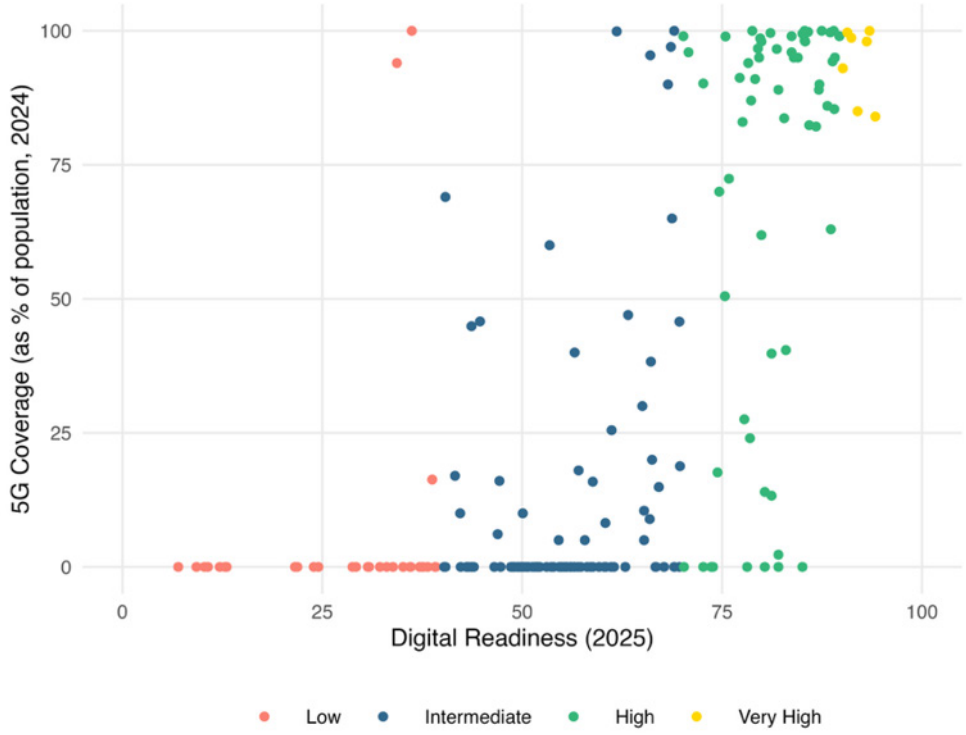
4.3 Does readiness track connectivity?

In 2025, digital readiness is positively correlated with various connectivity measures such as the share of individuals using the Internet (r = 0.47), fixed broadband subscriptions (r = 0.55), 4G coverage (r = 0.5), and the strongest link emerges for 5G coverage (r = 0.68) as shown in Figure 22.[35] One reason for this is timing, as many countries sought to rapidly expand their 5G coverage between 2021 and 2025, with some advanced countries even reallocating spectrum from legacy technologies, including 4G, in favour of 5G. For this reason, we focus on 5G, and to a lesser extent 4G, as our connectivity measure.

Similarly, income is a potential confounder for the readiness and connectivity relationship since richer countries are quicker to roll out network infrastructure given their resources. In our regressions, we find that digital readiness is associated with higher 4G and 5G coverage after controlling for a country's income per capita, population, level of urbanisation and electrification, and median age.

[35] ITU, *Digital Readiness Framework*, gen5.digital, interactive charts and analytics (accessed June 2026), https://app.gen5.digital/unified-framework/charts. Figures reflect the analysis of the 2021–2025 dataset. See Annex B. Empirical Tests.

Figure 22: 5G coverage versus digital readiness score



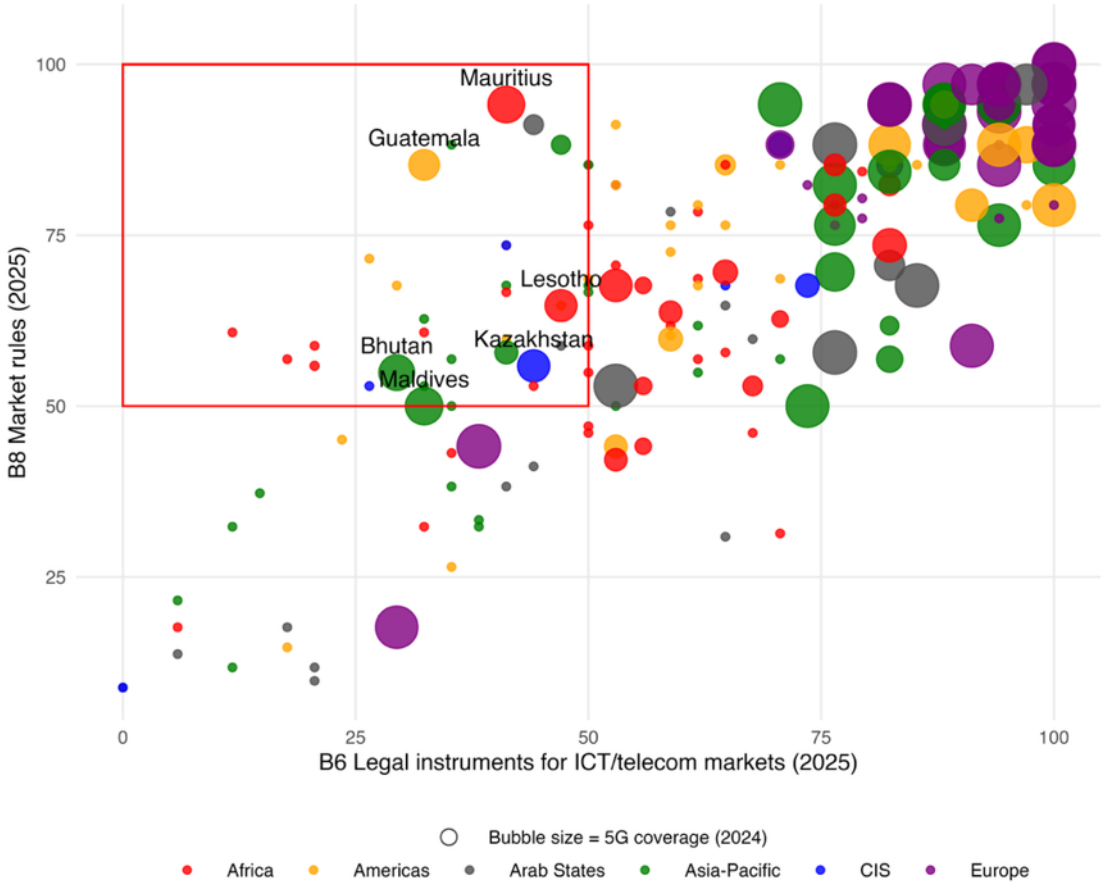
Source: ITU, Digital Readiness Framework (gen5.digital); authors' analysis.
Datasets: Readiness: ITU Digital Readiness Framework (gen5.digital). 5G coverage: ITU connectivity data. Note: Points coloured by readiness tier; r = 0.68, significant at 5%.

Cross-sectionally, countries with mature ICT/telecom legal instruments (B6) tend to have higher 4G coverage, while countries with higher scores in national digital policy agenda (B1) and stakeholder engagement (B5) have higher 5G coverage. The interpretation is that B6 allows countries to deploy 4G towers and network infrastructure, while B1 equips countries with a national digital policy agenda, along with strategies and mechanism, to repurpose existing towers to 5G and re-farm the required spectrum. Under B5, public consultation and regulatory sandboxes encouraged the trialling and rollout of 5G technologies and applications. Market rules (B8) appear to be the strongest policy lever: improvements in this benchmark translate into an almost one-to-one increase in 5G coverage.

Considering market rules alongside legal foundations helps explain some of the variation in 5G coverage. Figure 23 shows the relation between B6, B8 and a country's 5G coverage. Both foundational pillars are significantly correlated with 5G coverage: market rules (B8) at r = 0.51 and ICT/telecom legal instruments (B6) at r = 0.64.[36] The most revealing part of Figure 23 is the upper-left quadrant. A minority of countries with relatively weak telecom-law scores (B6) but strong market rules (B8), among them Mauritius and Guatemala, nonetheless achieve sizeable coverage, shown by their large bubbles. The hypothesis is that an open and genuinely competitive market can substitute, at least partly, for gaps in the formal legal layer. Where operators face real competitive pressure, they invest and innovate even without every advanced legal instrument in place. A more cautionary case is its mirror image, strong law on paper but weak competition in practice, which delivers far less. Competition may be the more powerful of the two levers, though the readiest countries have both.

[36] Idem.

Figure 23: Market rules (B8) and ICT/telecom legal instruments (B6): relationship with 5G coverage

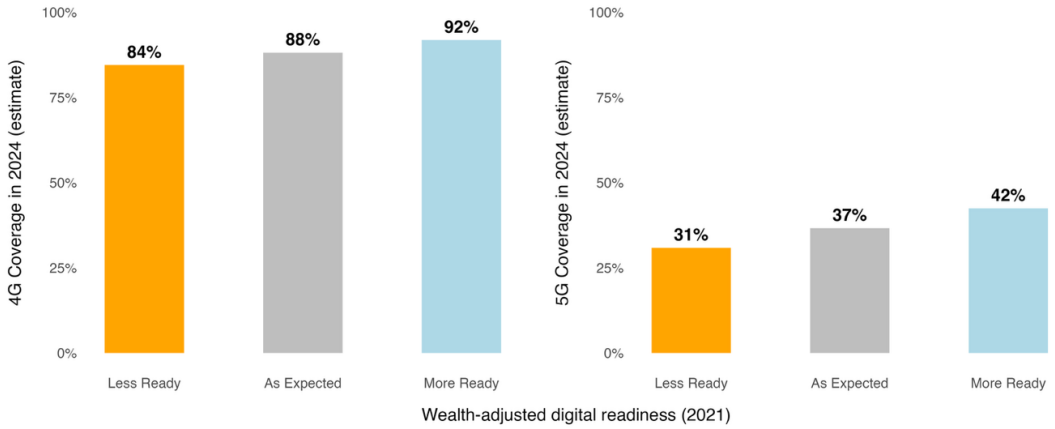


Source: ITU, Digital Readiness Framework (gen5.digital); authors' analysis.
Datasets: ITU Digital Readiness Framework (gen5.digital). 5G coverage: ITU connectivity data.

Note: r with 5G coverage = 0.64 (B6) and 0.51 (B8), both significant at 5%.

To explore the relationship between digital readiness and 5G coverage further, the analysis asks whether, among countries with broadly comparable structural conditions, being more digitally ready than expected for a given level of wealth is associated with higher subsequent mobile broadband coverage. Splitting countries by their 2021 wealth-adjusted readiness, those that were more digitally ready than their income predicted, are estimated to have higher 5G coverage by 2024 than the less-ready group, at 42 per cent against 31 per cent. The same is true for 4G coverage, where digitally ready countries are estimated to have reached 92 per cent against 84 per cent for the less-ready group. In essence, at comparable income levels, stronger digital readiness is associated with higher subsequent mobile broadband coverage – an 8 percentage-point gap for 4G and an 11 percentage-point gap for 5G between Less Ready and More Ready countries. The stronger gradient for 5G suggests that readiness may matter particularly for the adoption and diffusion of newer technologies, where policy, regulatory and institutional conditions play a larger role.

Figure 24: Wealth-adjusted digital readiness in 2021 and predicted 4G and 5G coverage by 2024



Source: ITU, Digital Readiness Framework (gen5.digital); authors' analysis.
Datasets: ITU Digital Readiness Framework (gen5.digital). 4G and 5G coverage: ITU connectivity data.

Notes: We estimate an OLS model regressing a country's 4G/5G coverage in 2024 on its wealth-adjusted digital readiness in 2021 and controlling for a country's GDP per capita, population, level of urbanisation and electrification. To construct the predictions, we use the average of the control variables.

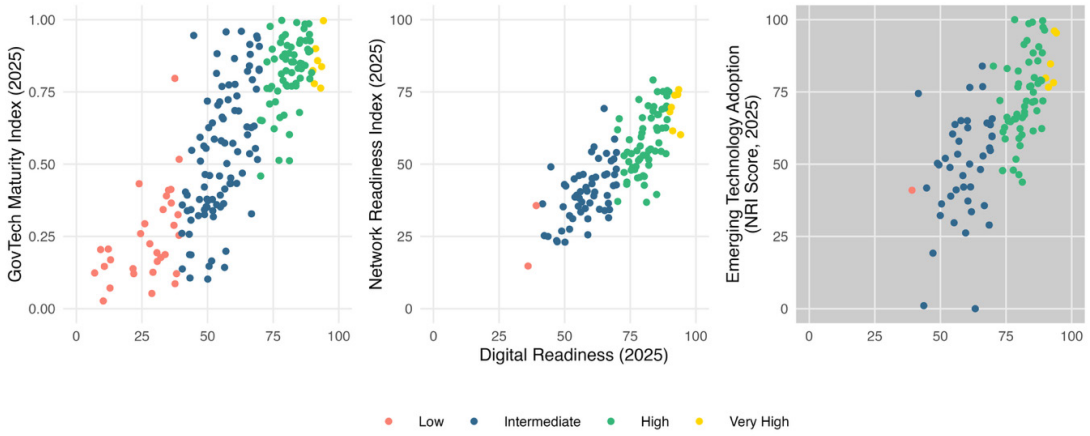
4.4 Does readiness track technology adoption?

Technology adoption is harder to observe directly than coverage or investment, so this section starts with a consistency check before turning to adoption itself. If the Framework is measuring something real, countries that score well on it should also score well on independent measures of network readiness, e-government maturity and adoption of emerging technologies. That is the case. In 2025, digital readiness correlates strongly with the Portulans Institute Network Readiness Index (NRI, 127 economies) and the World Bank GovTech Maturity Index (GTMI, 197 economies).[37] The correlation with NRI (r = 0.80) and GTMI (r = 0.82) suggests consistency with other widely-used indicators. While these external indices partly capture similar indicators to the Framework, the tight relationship shows that a country's digital and network readiness, as well as e-government maturity, go hand in hand. Further, one of the indicators tracked by the NRI is the adoption of emerging technologies across countries.[38] Business leaders are surveyed on their country's level of adoption of AI, big data, virtual and augmented realities, robots and autonomous systems. We find that digital readiness closely associates with countries' adoption of emerging technologies (r = 0.7), and the close relationship survives after controlling for income, population and urbanisation. While intuitive, the result provides further evidence that digital readiness translate into adoption: countries with stronger policy, regulatory and institutional foundations tend to show higher uptake of emerging technologies.

[37] Portulans Institute, *Network Readiness Index 2025 (Washington, DC: Portulans Institute, 2025)*, https://networkreadinessindex.org/.

[38] The indicator is taken from the World Economic Forum's Executive Opinion Survey (EOS) and is a simple average of two questions: (a) "In your country, how common is the adoption of the following key technologies [1 = Not adopted at all; 7 = Greatly adopted]: Information processing (AI, big data, VR and AR)" and (b) "In your country, how common is the adoption of the following key technologies [1 = Not adopted at all; 7 = Greatly adopted]: Robots and autonomous systems". NRI scores are then normalised from 0 to 100.

Figure 25: Digital Readiness Framework score versus GovTech Maturity Index, Network Readiness Index (NRI), and the NRI's adoption of emerging technologies, 2025



Source: ITU, Digital Readiness Framework (gen5.digital); authors' analysis.
Datasets: ITU Digital Readiness Framework (gen5.digital), World Bank GovTech Maturity Index (2025 update) and Portulans Institute Network Readiness Index (2025 update).

Note: GTMI at r = 0.82, NRI at r = 0.80, and NRI's adoption of emerging tech at r = 0.70, significant at 5%

We find that almost all benchmarks partly contribute to technology adoption but legal instruments for digital markets (B7) and national digital policy agenda (B1) appear to carry the strongest link.[39] Countries with higher scores in B7 and B1 report greater adoption of new technologies. The likely explanation is that an overarching national digital strategy (B1) and policies on AI, IoT and cloud computing (B7) create the direction, skills and legal certainty that let firms adopt these technologies.

Digital readiness also tracks a broader technology-adoption measure (Figure 26): exports of digitally deliverable services (r = 0.53). The positive association holds after controlling for income, population, trade openness and educational attainment of the population. The benchmarks driving the relationship include market rules (B8) and ICT/telecom laws (B6), largely through their effect on connectivity, along with stakeholder engagement (B5), regulatory capacity (B2) and good governance (B3), possibly through regulatory certainty and a predictable business environment. The results suggest that digital readiness is linked not only to technology adoption at home, but also to countries' ability to participate in and benefit from the global digital economy.

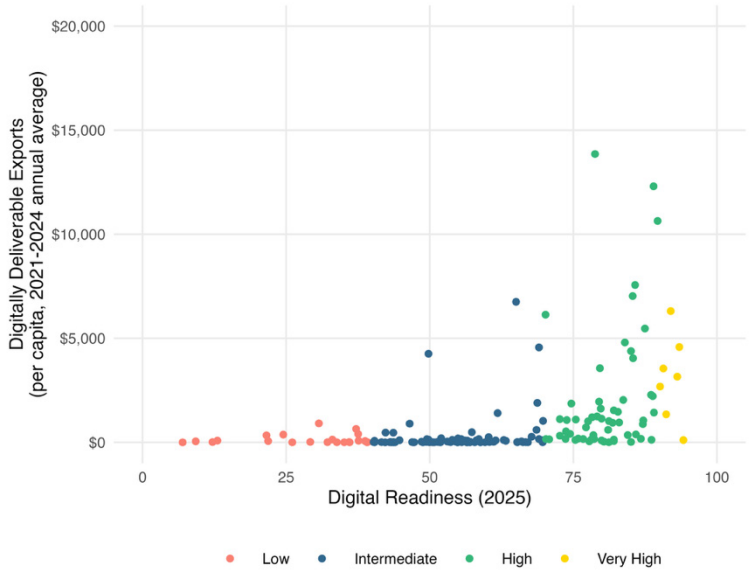
Digitally deliverable services are services that can be delivered remotely over computer networks, including insurance and financial services, computer and information services, and research and development. They are one of the fastest-growing engines of international trade. In 2023, developing economies crossed the USD 1 trillion mark in digitally deliverable services exports for the first time, against global exports of USD 4.5 trillion. Yet only 20 per cent of services exports in least developed countries are digitally delivered, against 56 per cent worldwide.[40] Part of that gap is a readiness gap waiting to be closed.

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[39] B7 carries the highest coefficient in single pillar regressions, though it loses its significance in models where all the pillars are jointly specified. B1 retains its significance at the 10% level in jointly specified models.

[40] UN Trade and Development (UNCTAD), "Developing economies surpass $1 trillion mark in digitally deliverable services exports" (Geneva: UNCTAD, 2024), https://unctad.org/news/developing-economies-surpass-1-trillion-mark-digitally-deliverable-services-exports.

Figure 26: Digitally deliverable exports versus digital readiness score

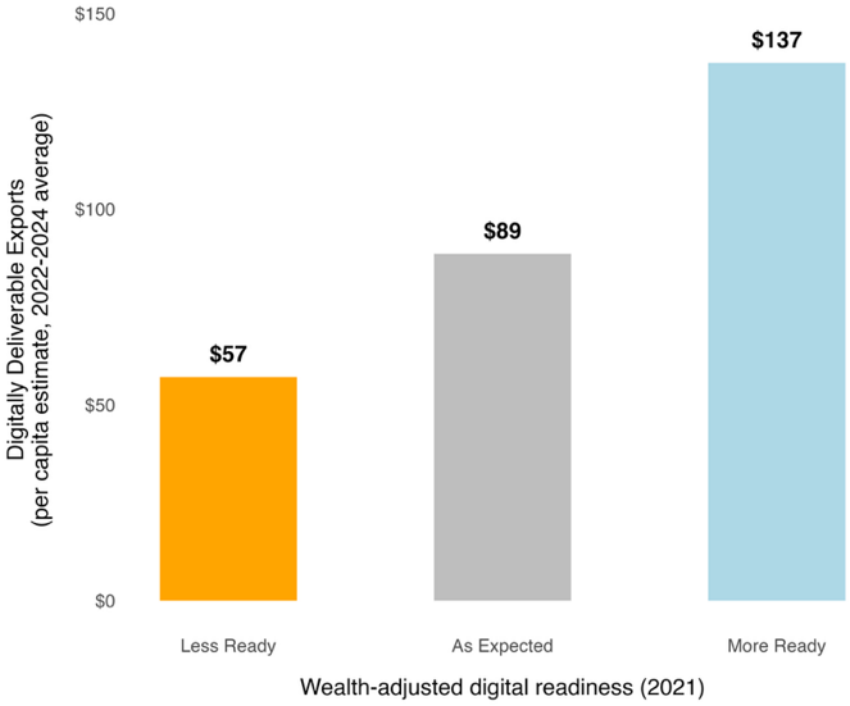


Source: ITU, Digital Readiness Framework (gen5.digital); authors' analysis.
Datasets: ITU Digital Readiness Framework (gen5.digital), Digitally deliverable exports: UNCTAD.

Note: r = 0.53 significant at the 5% level.

Compared to their income peers, more digitally ready countries in 2021 are predicted to have higher exports of digitally deliverable services at USD 137 per capita against USD 57 for less-ready countries (Figure 27). The analysis suggest that digital readiness is associated with a substantially greater capacity to translate digital capabilities into export performance: at comparable income levels, More Ready countries are predicted to export more than twice as much in digitally deliverable services per capita as Less Ready countries.

Figure 27: Wealth-adjusted digital readiness in 2021 and predicted digitally delivered exports (2022-2024 average)



Source: ITU, Digital Readiness Framework (gen5.digital); authors' analysis.
Datasets: ITU Digital Readiness Framework (gen5.digital), Digitally deliverable exports: UNCTAD.

Notes: An OLS model is estimated by regressing a country's digitally delivered exports in 2022-2024 (average) on its wealth-adjusted digital readiness in 2021 and controlling for a country's GDP per capita, population, trade openness and educational attainment. To construct the predictions, we use the average of the control variables.

4.5 Regulatory profiles and their priority actions

Readiness tiers say where a country stands. They do not say what it should do next, because two countries with the same overall score can have very different benchmark shapes and very different trajectories. The regulatory profiles in this section fill that gap. They group countries by the shape of their benchmark scores and by how those scores have moved since 2021. A regulator can see which countries share its starting point and direction of travel, and which actions have the best chance of moving outcomes from that position. While the tier is a snapshot of a level at a point in time, the profiles are a pattern and trajectory.

The regulatory profiles in this edition are derived empirically from the dataset. A k-means cluster analysis groups all 194 countries using their benchmark scores (the 2021 and 2025 levels and the change between them, standardised to limit the influence of outliers). The number of groups was chosen on the basis of standard diagnostics and interpretability. The 'elbow' test, which identifies the point beyond which adding a further group explains little additional variation, points to three groups, and three also give the most readily interpretable result. (see Annex B for more details) Outcome variables were deliberately excluded from the clustering, so the relationship between profile and outcomes reported below can be seen as a test of the readiness–outcome chain. Three profiles emerge, and together they partition the whole Framework: every country belongs to exactly one. (Table C.3 in Annex C gives each country's profile, and Annex B lists the countries by profile)

The **foundation-builders** (35 countries) combine the lowest scores on every benchmark with the smallest improvement on every benchmark but one over 2021–2025. Their deepest deficits sit in the process and digital layers, stakeholder engagement (B5) and digital-market law (B7), with the telecom-era legal core (B6) not far behind. Nearly all are in the Low readiness tier, and most are less ready given income peers. Performance on outcomes is positive (4G coverage rose and the price of a 5GB mobile broadband basket fell) but from the lowest bases. The risk it faces is divergence: without a deliberate push, the readiness gap to the other two profiles will widen.

The **broad-based improvers** (81 countries) are the converging middle. Almost entirely Intermediate tier, this group improved more than any other on the foundations (regulatory capacity (B2), good governance (B3), institutional collaboration (B4), ICT/telecom legal instruments (B6) and market rules (B8)). Outcomes followed: the group posted the strongest gains on the two outcomes with the most complete data, lifting 4G coverage by 14 percentage points and cutting the price of the 5 GB basket. Its weak point is equally clear: stakeholder engagement (B5) is its lowest benchmark, the process layer lagging the instrument layer.

The **frontier movers** (78 countries) hold the High and Very High tiers, with a minority of Intermediates. They score highest on every benchmark, and their improvement is concentrated at the digital frontier: the national digital policy agenda (B1), legal instruments for digital markets (B7), stakeholder engagement (B5) and international cooperation (B9) (the benchmarks the other groups have not yet reached) along with the largest gains in overall readiness. Their telecom-era outcomes are close to saturation (4G coverage is effectively universal and the 5 GB basket is already inexpensive) so momentum has shifted to 5G roll-out, and they show the highest emerging-technology adoption and investment per capita of the three groups, though investment is plateauing.

Table 5: Regulatory Profiles based on Clustering Analysis

Profile	Defining signature, 2021-2025	Outcome record	Priority actions
Foundation-builders 35 countries	Lowest scores on every benchmark and, on eight of the nine, the smallest 2021–2025 gains of any group. Deepest deficits in stakeholder engagement (B5), digital-market law (B7) and ICT/telecom legal instruments (B6). Nearly all Low tier; most score below what income alone would predict.	4G coverage rose and the 5 GB basket price fell over the period, but from the lowest bases.	Sequence the telecom-era foundations: licensing, interconnection, and spectrum (B6) and a workable competition framework (B8) before advanced digital-market law.
Broad-based improvers 81 countries	Almost entirely Intermediate tier. Largest gains of any group on the foundations, namely regulatory capacity (B2), good governance (B3), institutional collaboration (B4), B6 and B8. Weakest benchmark: stakeholder engagement (B5).	Strongest movement on the two best-measured outcomes: 4G coverage up roughly 14 percentage points and the 5 GB basket price down markedly; most members score as their income would predict on the wealth-adjusted index.	Consolidate foundation gains; make stakeholder engagement (B5) the next lever; close the enforcement gap behind newly adopted digital-market law.

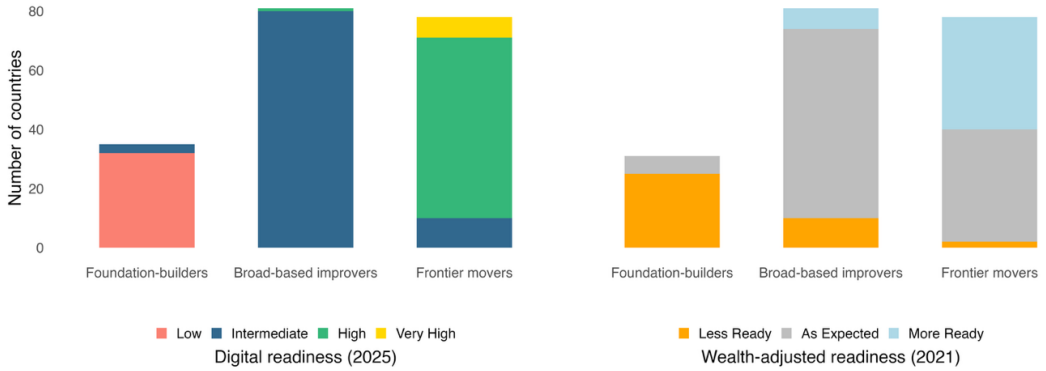
Table 5: Regulatory Profiles based on Clustering Analysis (continued)

Profile	Defining signature, 2021-2025	Outcome record	Priority actions
Frontier movers 78 countries	High and Very High tiers, with a minority of Intermediates. Highest levels on all benchmarks; gains concentrated at the digital frontier in the policy agenda (B1), digital-market legal instruments (B7), stakeholder engagement (B5) and international cooperation (B9), together with the largest overall-score gains.	4G effectively saturated and 5 GB prices already low; roll-out momentum has shifted to 5G. Highest emerging-technology adoption and investment per capita of the three groups, with investment plateauing.	Extend competition policy to digital markets; legislate forward on data, AI and platforms; share practice with regulators earlier in the curve (B9).

Source: Authors' k-means cluster analysis of ITU Digital Readiness Framework benchmark scores, 2021–2025 (gen5.digital; 194 countries). Method and diagnostics in Annex B.

Two checks give the profiles their standing. First, the algorithm was never shown the readiness tiers, yet it recovers them almost exactly: the foundation-builders are nearly all Low tier, the broad-based improvers Intermediate, the frontier movers High and Very High. Because the clustering used only the benchmark scores and their changes, this close match is a useful cross-check. It shows that the tier thresholds, which are set by convention, correspond to natural groupings in the data. The profiles then add what a tier cannot show, namely which benchmarks are moving in each group and how fast. Second, mapped against the wealth-adjusted readiness index, the groups fall where the income story predicts: most foundation-builders are less ready than their income would suggest, most broad-based improvers are where expected, and around half of the frontier movers are more ready than income alone would explain.

Figure 28: Regulatory profiles, framework tiers and wealth-adjusted readiness



Source: ITU, Digital Readiness Framework (gen5.digital); authors' k-means cluster analysis.

What the profiles do not do is determine outcomes. Within every profile, some countries perform better on outcomes than their wealth-adjusted readiness would predict and some perform worse, and the shares vary by outcome (Table C.3 in Annex C). That position is the second element of the action logic in Chapter 5. The profile sets the sequence of priorities. Whether a country's outcomes are ahead of, behind or in line with its readiness sets the emphasis, with consolidation where outcomes track readiness, enforcement where they lag it, and formalisation of the compensating factors where they run ahead of it.

Taken together, the two diagnostics answer different questions: the profile shows which capabilities need attention, while outcome performance shows whether the emphasis should be on consolidation, enforcement or institutionalizing what already works.

Chapter 5. What needs to be done: priorities for regulators and policymakers

5.1 Cross-cutting messages: what matters almost everywhere

Five priorities follow from the evidence in Chapters 2 to 4, and they apply in almost every region and profile, with one universal caution. The Framework rewards the presence of instruments, so it is tempting to read every gap as a call for a new rule. In reality, good regulation is often a matter of restraint and proportionality, and for a low-capacity administration the right move is sometimes to enforce one instrument well rather than to adopt three more. The priorities below should be read as 'do these well', not 'legislate for the score'.

1. **Close the implementation gap behind the strategy wave.** Pair every new digital strategy with funding, an implementation body and a monitoring mechanism. The surge in national digital policy agendas (B1) will not move outcomes on its own.
2. **Build enforcement capabilities.** Cybersecurity, data-protection and digital-ID law without enforcement capacity will not move outcomes. Capability, not adoption, is now the binding constraint on digital-market laws (B7), and it is where development finance has the highest return.
3. **Lift the weakest process benchmarks.** Stakeholder engagement (B5), institutional collaboration (B4) and regional cooperation (B9) are the three process benchmarks that lag almost everywhere, and where immediate gains can be made. Structured consultation with a published feedback practice is the single most under-used regulatory instrument.[41]
4. **Resolve the new-mandate scaffolding gap.** Set up inter-agency coordination on cybersecurity, content, IT infrastructure and emerging technology before assuming the mandate, not after.
5. **Prioritise legal instruments for ICT/telecommunications (B6) and market rules (B8) where investment is the binding constraint.** Market rules and ICT/telecom legal instruments carry the tightest investment and connectivity linkage in the data. In low-investment contexts they come first, and an open competitive market can partly compensate for gaps elsewhere. Where the binding constraint is commercial viability rather than rules, recognise that regulation enables investment but cannot manufacture it.

5.2 Priorities by regulatory profile

Each of the three empirical profiles from section 4.5 carries a sequenced action set. A regulator should first locate its profile (Table C.3 in Annex C, in addition to the country profiles on gen5.digital) and then check whether its outcomes are running ahead of or behind what its readiness would predict, which sets the emphasis within the sequence.

- **Foundation-builders (35 countries):** sequence the telecom-era foundations first (licensing and authorisation, interconnection and spectrum management (B6)) and stand up a workable competition framework (B8). These two benchmarks carry the tightest investment and connectivity linkage in the data, and the telecom-era legal core (B6) is among this

[41] ITU, *Global Symposium for Regulators (GSR): Best Practice Guidelines* (Geneva: ITU, 2023–2024), https://www.itu.int/en/ITU-D/Regulatory-Market/Pages/bestpractices.aspx.

profile's deepest deficits.. Defer advanced digital-market law until the foundations bear weight. Protect the momentum that exists: even in this profile, 4G coverage rose and the 5 GB basket price fell over the period. Because this is the only profile that improved least on eight of the nine benchmarks, it is also where pooled regulation and development-partner support will matter most.

- **Broad-based improvers (81 countries):** consolidate the foundation gains (this profile improved most on B2, B3, B4, B6 and B8) and address the two weaknesses the data identifies. First, make stakeholder engagement (B5), the profile's lowest benchmark, a regulatory instrument: publish consultations, commit to feedback timelines, use sandboxes to calibrate rules. It is the quickest marginal readiness gain on offer. Second, close the enforcement gap behind newly adopted digital-market law: fund the data-protection authority and the cybersecurity regime, and build the B4 coordination that operationalizes laws. For countries whose outcomes lag their readiness (instruments ahead of implementation) that second task comes first.
- **Frontier movers (78 countries):** the next gains lie at the digital frontier, not the telecom core. With 4G effectively saturated and the 5 GB basket already affordable across most of this profile, extend competition policy to digital markets, legislate forward on data, AI and platforms (B7), and keep 5G roll-out moving. Investment per capita is the highest of the three profiles but plateauing, so the investment case increasingly rests on demand-side measures and cross-sector uses. This profile's strength in engagement and cooperation (B5, B9) is also a system asset: share practice with regulators earlier in the curve, bilaterally and through regional bodies.

Across all three profiles, the comparison of outcomes with readiness refines the emphasis. A country overperforming its predicted outcomes should identify and formalise the compensating factors (often an open, competitive market) before the gains erode. A country underperforming them should redirect effort from adoption to implementation and enforcement, the pattern of instruments running ahead of results. A country whose outcomes are in line with its readiness should hold its profile's sequence.

5.3 Priorities by region

- **Africa:** prioritise digital-market law (B7) with the capacity to administer it, and join or deepen regional integration with ICT chapters and cross-border data arrangements (B9).
- **CIS:** separate regulators from ministries and strengthen autonomy (B2), modernise telecom legal instruments toward unified licensing and infrastructure sharing (B6), and build institutional collaboration (B4).
- **Arab States:** liberalise foreign-ownership regimes, especially for basic services (B8), and link national plans to measurable delivery and the SDGs (B1).
- **Asia-Pacific:** strengthen regulator independence where it varies, and close the Tampere Convention and emergency-telecom gap given the region's disaster exposure (B9).
- **Americas:** build structured stakeholder engagement and feedback practice (B5), the region's clearest relative lag.
- **Europe:** as the saturated leader, focus on the digital frontier, meaning platform and AI governance, and on sharing practice with regions earlier in the curve.

5.4 The binding constraint: capacity, financing and pooled regulation

For many of the lowest-scoring countries, the principal constraint is not identifying appropriate reforms, but having the institutional capacity and financial resources to implement them. A regulator with twenty professionals cannot staff a data protection authority, a competition unit

for digital markets, a cybersecurity function and a spectrum team at once, however sound the advice. Three responses deserve more attention than they usually receive.

First, finance the regulator properly. The most resilient authorities are funded from the sector they oversee, through spectrum fees, numbering and licence fees, and a modest levy on revenues, with the autonomy to retain and spend those funds against a published budget. Predictable, ring-fenced funding is the difference between a regulator that can hire specialists and one that loses them to the firms it regulates. Donor-funded technical assistance can seed capacity, but it cannot substitute for a sustainable domestic funding model.

Second, build capability through shared and pooled arrangements rather than asking every administration to do everything. Secondments, regional centres of expertise, peer review through bodies such as the regional regulatory associations, and shared sandboxes let small administrations reach scale they cannot reach alone. The Framework's collaborative-governance and cooperation benchmarks (B4 and B9) are, in part, a measure of how well a country uses these mechanisms.

Third, for small states the most consequential option is pooled regulation. Where a single national market is too small to justify a depth of expertise on all issues and topics, neighbouring states may find ways to cooperate, sharing resources. For the Small Island Developing States and Least Developed Countries that sit lowest in the Framework, pooling is not a second-best compromise. It is often the only realistic route to a regulator with the depth to license modern services, attract investment and stand up to large operators.

5.5 For development partners and the regional/global community

The highest-return support is shifting from drafting strategies and laws to financing their implementation: enforcement capacity, inter-agency coordination machinery, consultation infrastructure, and the pooled and regional arrangements described above. Development partners should target the countries whose readiness scores run ahead of their outcomes (Table C.3 in Annex C), where the instruments exist but the delivery capacity does not, and should treat the three laggard process benchmarks as fundable programmes rather than soft governance. Given that nearly 80 per cent of announced digital-economy investment between 2020 and 2024 concentrated in ten countries, the equity case for directing support toward the readiness-thin, outcome-poor group is strong.[42]

5.6 What good implementation looks like: two cases

The 2021-2025 digital readiness dataset locates the implementation gap but it does not show how to close it. Two cases below, drawn from different regions and income levels, illustrate administrations that did the hard, unglamorous work behind a headline reform and saw it begin to deliver.

[42] UNCTAD, *World Investment Report 2025: International Investment in the Digital Economy* (Geneva: UNCTAD, 2025), https://unctad.org/publication/world-investment-report-2025; and UNCTAD, *International Investment in the Digital Economy: A Toolkit for Policymakers* (Geneva: UNCTAD, 2025), https://unctad.org/publication/international-investment-digital-economy-toolkit-policymakers.

Box 6: Building enforcement behind a data-protection law: Brazil

Passing a data-protection law is the easy part, as the B7 evidence shows. Brazil is a case of building the capability behind it. The General Data Protection Law (LGPD) was enacted in 2018, but the decisive steps came later: the National Data Protection Authority (ANPD) was structured in 2020, its sanctioning powers entered into force in 2021, and it was given autonomous status in 2022 and consolidated as an independent agency thereafter. Enforcement activity and guidance have grown year on year as the institution matured.[1]

The lesson for countries whose instruments run ahead of their outcomes is precise. The score moved when the law passed; the outcome moves when the authority can investigate, guide and sanction. Sequencing the institution, its funding and its powers is the work that turns a B7 point into protection that citizens and firms can rely on.

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1 Brazil, *Lei Geral de Proteção de Dados Pessoais* (Law 13.709/2018); National Data Protection Authority (ANPD), sanctioning powers in force from 2021 and autonomous status from 2022, https://www.gov.br/anpd/pt-br.

Box 7: From digital public infrastructure to measured adoption: India

India is a case of strategy and digital-markets instruments translated into outcomes at scale. Its digital public infrastructure, including the Aadhaar identity system and the Unified Payments Interface (UPI), turned policy intent into used services: in 2023–24 UPI accounted for nearly 80 per cent of digital-payment transaction volume in the country, far ahead of cards. The Digital Personal Data Protection Act followed in 2023, and its enforcement machinery is still being stood up.[1]

India shows both halves of this Outlook's argument at once. Where instruments were paired with delivery, in payments and identity, adoption followed; where the law is newer, in data protection, implementation is still catching up. The example is a reminder that the goal is not the instrument but the used service behind it.

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1 Reserve Bank of India, *Annual Report 2023-2024*, 2024, https://www.rbi.org.in/Scripts/AnnualReportPublications.aspx?year=2024.

5.7 A one-page self-diagnostic for regulators

The analysis in this edition yields more than a set of findings. It gives any regulator a way to locate itself within them. The benchmark scores and tiers of Chapter 2, the benchmark-by-benchmark evidence of Chapter 3 and the profiles and outcome linkages of Chapter 4 can be read together as a self-diagnostic, and that is what makes the Outlook usable rather than merely descriptive. In four steps, a regulator can locate their country in the Framework and read off their priority actions. The country-level scores and benchmark profiles needed for steps 1 and 2 are available in the interactive country profiles on the gen5.digital platform or in the tables in Annex C.[43]

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43 International Telecommunication Union, *Digital Readiness Framework*, gen5.digital, benchmark and country dataset (accessed June 2026), https://app.gen5.digital/unified-framework/about.

1. **Locate yourself.** Read your overall readiness score and tier (Table C.2, with the tier bands in Table 2). Compare it with the regional and special-group averages on the relevant dashboard (Figures 3 and 5).
2. **Identify your shape.** Look at your benchmark profile: which of the nine benchmarks sit above and below your overall score. The shape, not the average, defines your profile.
3. **Read your outcome gap.** Compare your 2021–2025 readiness movement with your movement on investment, connectivity and technology-adoption measures from Chapter 4. Are your outcomes ahead of, behind, or in line with what your readiness would predict? Table C.3 in Annex C gives the position for each country.
4. **Reach for the action set.** Match your shape to a profile in section 4.5 (Table 5 Regulatory Profiles based on Clustering Analysis) and pick the top three actions to prioritize reforms.

Chapter 6. On the horizon: issues on every regulator's radar screen

The 2023 Outlook closed with nine issues on every regulator's radar screen, ranging from internet and AI regulation to cybersecurity, sandboxes and the sustainable use of earth orbits.[44] Three years on, several of those issues have moved from the horizon to the current 'inbox' requiring immediate action. The readiness data in this edition helps explain why they are so demanding. Each sits in the process, enforcement and cooperation layers that the benchmarks show to be weakest. This short chapter looks ahead to the questions that will shape the next editions of the Framework. It is written not to resolve them but to keep them on the agenda.

Artificial intelligence: from principles to capability

AI governance is the clearest case of the adoption-and-implementation tension arriving early. Emerging-technology policies, including for AI, are spreading fast within B7, yet they are not in place across most of Africa, the Americas and the CIS. Even where adopted they rarely come with the technical capacity to audit models or enforce obligations. The regulatory questions are familiar from the 2023 edition but more urgent. How can a regulator govern systems that cross borders and evolve faster than lawmakers? How should scarce AI expertise be shared across agencies? And how can countries avoid a new divide in which only the most capable states can govern the technology at all? There is also a proportionality risk. A low-capacity administration that rushes a comprehensive AI law it cannot enforce may simply add another instrument to the paper pile. Future assessments will need to track not just whether an AI policy exists, but whether the capability to apply it does. The broader lesson is to treat AI as a stress test of this report's central proposition, that advanced mandates deliver only when the underlying connectivity, institutions, coordination and enforcement capacity are in place, rather than as a priority that sits above the wider digital-policy agenda.

Digital markets and platform competition

As Chapter 3 showed, competition rules designed specifically for digital platforms remain rare outside Europe, and few countries have adopted a Digital Markets Act-style instrument. The open question is whether and how national regulators, many of them small and all of them facing globally dominant platforms, can shape competition in markets that are intrinsically cross-border. This is where B8's settled telecom-competition success runs out, and where the next decade of market-rules reform will be contested.

Cybersecurity, data protection and digital trust

Cybersecurity and data-protection laws are among the fastest-rising instruments in B7, but the binding constraint is the operational capability behind them: a data protection authority that can investigate, a national CERT that can respond, a digital-ID system that citizens trust. The collaborative-governance data (B4) shows that links to CERTs and data protection authorities

[44] ITU, *Global Digital Regulatory Outlook 2023* (Geneva: ITU, 2023), https://www.itu.int/dms_pub/itu-d/opb/pref/D-PREF-BB.REG_OUT01-2023-PDF-E.pdf.

still lag, which is precisely the scaffolding these mandates require. Trust, once lost to a breach or a misused identity system, is slow to rebuild, which makes the implementation gap here unusually costly.

Satellites, NGSO constellations and the sustainable use of orbits.

The 2023 Outlook flagged the sustainable use of earth orbits. The intervening rise of non-geostationary (NGSO) satellite constellations has made it a live licensing question for many administrations, touching spectrum, market access, cross-border service and emergency communications at once. For most regulators the issue is no longer whether to engage but how to license, coordinate and price access in a way that protects competition and orbital sustainability. The broader challenge is to ensure that regulatory frameworks evolve fast enough to address technologies that span markets, jurisdictions and policy domains.

The twin green and digital transition

The energy demand of networks and data centres, the e-waste of devices, and the role of digital tools in the wider green transition all sit at the boundary between ICT regulation and environmental policy. That is exactly the cross-sector boundary where institutional collaboration (B4) is weakest. As the data-centre footprint of AI grows, the coordination between ICT, energy and environmental regulators that B4 measures will move from good practice to necessity.

None of these issues is a reason to defer the core agenda of this Outlook. If anything, they raise its stakes. Each depends on the same process, enforcement and cooperation capabilities that the readiness data identifies as the binding constraints today. A regulator that closes the implementation gap, builds enforcement capability and learns to coordinate across sectors and borders will be ready for the issues on the radar screen. One that does not, will meet them unprepared.

Annexes

Annex 0: Indicator definitions and scoring methodology, ITU Digital Readiness Framework

Unified benchmark to assess national readiness across digital law, policy & governance, Edition 2025

In order to provide a single frame of reference for assessing the advancement of government efforts towards digital transformation, ITU has designed a Digital Readiness Framework[45] and a set of benchmarks for enabling policy, legal and governance frameworks at the national, regional and global levels – which leverage the two established metrics for the maturity of policy, legal and governance frameworks for ICT and digital markets: the ICT Regulatory Tracker and the G5 Benchmark, both well-established tools.

The Digital Readiness Framework provides a blueprint for policy, regulation and governance enabling the digital transformation and a global assessment of the level of national capacities and readiness for the digital transformation of government, the economy and society based on nine thematic benchmarks which offer insights into trends and gaps in specific areas, at a more granular level.

[45] The original version of this framework was launched under the name 'Unified Framework'; this designation has now been replaced by the name 'Digital Readiness Framework.'

Benchmark 1: NATIONAL DIGITAL POLICY AGENDA				
Code	**Indicator**	**Possible values**	**Score**	**Data source**
T-36	Has the regulatory authority or sector ministry adopted a national plan/ initiative/ policy/ strategy or similar document for the promotion of the ICT sector/ connectivity/ market/s (e.g., national broadband plan, ICT policy not including Telecom/ ICT Act)?	Yes	2	ITU Telecommunication/ICT Regulatory Database
		No OR Expired	0	
B-III01a	Strategy design and implementation: Is there an overarching national digital strategy/digital transformation policy in place (in addition to and independent from ICT sector-specific strategies)?	Yes	2	ITU Telecommunication/ICT Regulatory Database and desktop research
		No	0	
B-III13	Does the national digital strategy (identified under III01a) explicitly refer to the Sustainable Development Goals (SDGs) OR does it mention other international or regional development goals (e.g., Millennium Development Goals, World Summit on the Information Society goals, African Union Agenda 2063, European Union strategic objectives)?	Yes	2	ITU Telecommunication/ICT Regulatory Database and desktop research
		No	0	
B-IV08a	Does the national digital strategy (identified under III01a) include specific arrangements, mechanisms or initiatives for multiple sectors of the economy?	Yes	2	ITU Telecommunication/ICT Regulatory Database and desktop research
		No	0	
B-III14	Are there policy instruments aimed at supporting the shift to sustainable consumption and production, OR a coordination mechanism for sustainable consumption and production?	Yes	2	UNDESA, Global SDG Indicators Database
		No	0	
B-III15	Is there a developed and operationalized global strategy for youth employment and for implementation of the Global Jobs Pact of the International Labour Organization (ILO)?	Yes	2	International Labour Organization and UNDESA, Global SDG Indicators Database, desktop research
		Developed, not yet operationalized	1	
		No	0	

(continued)

Benchmark 1: NATIONAL DIGITAL POLICY AGENDA				
Code	**Indicator**	**Possible values**	**Score**	**Data source**
B-III01b	Strategy design and implementation: Does the digital strategy have mechanisms for implementation/operational objectives (e.g., funding and coordination mechanisms, monitoring and evaluation mechanisms and objectives)?	Yes	2	ITU Telecommunication/ICT Regulatory Database and desktop research
		- Yes, partially, OR - The strategy has expired (for less than 2 years)	1	
		- No, no operational objectives or implementation mechanisms are included in the strategy, OR - No strategy exists	0	
B-III02	Is broadband considered as part of the definition of universal access/service?	Yes	2	ITU Telecommunication/ICT Regulatory Database and desktop research
		- No, the universal access/service definition does not include broadband, OR - There is no universal access/service policy or universal access/service is not clearly defined	0	
B-III16a	Strategies for targeted groups: Are there nationwide government programmes/ initiatives for the promotion of meaningful connectivity* for women and girls? *Meaningful connectivity is defined as a level of connectivity that allows users to have a safe, satisfying, enriching and productive online experience at an affordable cost; it has a dual focus on the quality and use of connectivity.	Yes	2	ITU Telecommunication/ICT Regulatory Database and desktop research
		No	0	
B-III16b	Strategies for targeted groups: Are there nationwide government programmes/ initiatives for the promotion of meaningful connectivity* for persons with disabilities?	Yes	2	ITU Telecommunication/ICT Regulatory Database and desktop research
		No	0	
B-III16c	Strategies for targeted groups: Are there nationwide government programmes/ initiatives for the promotion of meaningful connectivity* for young people?	Yes	2	ITU Telecommunication/ICT Regulatory Database and desktop research
		No	0	

(continued)

Benchmark 1: NATIONAL DIGITAL POLICY AGENDA				
Code	**Indicator**	**Possible values**	**Score**	**Data source**
B-IV03	Is there a national innovation policy?	Yes	2	ITU Telecommunication/ICT Regulatory Database and desktop research
		Planned or at the drafting stage or not clearly implemented	1	
		No	0	
B-IV07a†	Policies for specific sectors: Education Does the definition of universal service/access include connectivity for telecentres or schools (primary, secondary and post-secondary)?	Yes	2	ITU Telecommunication/ICT Regulatory Database and desktop research
		No	0	
B-IV07b†	Policies for specific sectors: Education Has the government financed projects for connecting schools to the Internet (primary, secondary, post-secondary, universities, specialized training institutions, etc.), through a Universal Service Fund or other financial mechanisms?	Yes	2	ITU Telecommunication/ICT Regulatory Database and desktop research
		No	0	
B-IV07c†	Policies for specific sectors: Education Does the national digital strategy (identified under III01a) include specific arrangements, mechanisms or initiatives for the education sector?	Yes	2	ITU Telecommunication/ICT Regulatory Database and desktop research
		No	0	

Benchmark 2: REGULATORY CAPACITY				
T-1	Does a separate (independent in terms of finance, structure, and decision making from the operator(s) and the sector Ministry) Regulatory Authority exist for Telecommunication or Information and Communication Technology (ICT)?	Yes	2	ITU Telecommunication/ICT Regulatory Database
		No separate Regulatory Authority exists	0	

(continued)

Benchmark 2: REGULATORY CAPACITY				
T-2	Is the Regulatory Authority autonomous in decision-making?	Yes, for all decisions	2	ITU Telecommunication/ICT Regulatory Database
		Yes, for some decisions OR the sector Ministry can overturn/ overrule any decision	1	
		No	0	
T-3	Accountability of the regulatory authority 1) What are the reporting requirements of the Regulatory Authority? 2) Who is responsible for approving the budget of the regulator? 3) Who appoints the Members and the Head?	3 different entities/powers (responsible for the 3 sub-areas)	2	ITU Telecommunication/ICT Regulatory Database
		2 different entities/powers	1	
		Same entity/power for all	0	
T-4	Sources of the Regulator's annual budget and the percentage of annual budget financed from each source (the last completed financial year)	Mainly coming from independent funding (e.g., licensing and regulatory fees, cost recovery) [≥66% of annual budget comes from own/independent funding; ≤33% come from government appropriation]	2	ITU Telecommunication/ICT Regulatory Database
		Coming from mixed sources [≥33% ≤ 66% of annual budget coming from independent funding]	1	
		Mainly coming from general government appropriation [≥66% of annual budget come from government appropriation]	0	
T-6	Does the separate regulator have enforcement powers*? * Note: Enforcement powers refers to the authority and ability to ensure that operators and service providers comply with laws, regulations, licence conditions and other legally binding obligations, as well as the authority to apply sanctions if these obligations are not met.	Yes	2	ITU Telecommunication/ICT Regulatory Database
		No	1	

(continued)

Benchmark 2: REGULATORY CAPACITY				
T-7	What sanctions or penalties can the separate regulator impose?	Strong sanctions (e.g., licence suspension or revocation)	2	ITU Telecommunication/ICT Regulatory Database
		Moderate sanction (e.g., monetary fines, additional licence conditions)	1	
		No or symbolic sanction	0	
T-11	Does the separate regulator have mandate to: 1) enforce quality of service obligations measures 2) monitor service quality?	Both	2	ITU Telecommunication/ICT Regulatory Database
		Either one	1	
		None	0	
T-12	Which entities have mandate for licensing of telecommunication/ICT and digital services*? *A licence or authorization issued to authorize a person to provide telecommunications services or to operate telecommunications facilities.	Regulatory Authority (independently or in conjunction with the sector ministry)	2	ITU Telecommunication/ICT Regulatory Database
		Government ministry	1	
		Not regulated	0	
T-13	Who is responsible for 1) Setting interconnection rates 2) Price regulation	Regulatory Authority responsible for both or both have been deregulated	2	ITU Telecommunication/ICT Regulatory Database
		Regulatory Authority responsible for one and Government ministry responsible for the other	1.5	
		Government ministry is responsible for both	1	
		Government ministry responsible for one and the other is not regulated	0.5	
		Not regulated	0	

(continued)

Benchmark 2: REGULATORY CAPACITY				
T-14	Who is responsible for radio frequency 1) allocation 2) assignment (licensing)?	Regulatory Authority responsible for both	2	ITU Telecommunication/ICT Regulatory Database
		Regulatory Authority responsible for one and Government ministry responsible for the other	1.5	
		Government ministry responsible for both	1	
		Government ministry responsible for one and the other is not regulated	0.5	
		Not regulated	0	
T-15	Which entities have responsibility for spectrum monitoring and enforcement?	Regulatory Authority	2	ITU Telecommunication/ICT Regulatory Database
		Sub-group Government	1	
		Sub-group Not regulated	0	
T-16	Which entities have responsibility for Universal Service/Access?	Regulatory Authority	2	ITU Telecommunication/ICT Regulatory Database
		Government ministry	1	
		Not regulated	0	
T-17	Who is responsible for broadcasting (radio and TV transmission)?	Regulatory Authority (separate ICT regulator or separate broadcasting regulator)	2	ITU Telecommunication/ICT Regulatory Database
		Government ministry	1	
		Not regulated	0	

(continued)

Benchmark 2: REGULATORY CAPACITY				
T-18	Who is responsible for overseeing broadcasting content?	Regulatory Authority (separate ICT regulator or separate media/ broadcasting regulator)	2	ITU Telecommunication/ICT Regulatory Database
		Government ministry/ Entity reporting to Head of State/ Semi-autonomous entity	1	
		No regulatory oversight	0	
T-19	Who is responsible for overseeing Internet content?	Regulatory Authority (separate ICT, media or other regulator)	2	ITU Telecommunication/ICT Regulatory Database
		Government ministry	1	
		No regulatory oversight	0	
T-20	Which entities have mandate/responsibility for Information Technology (e.g., Internet top-level domain names, cloud computing, cybersecurity, Internet of Things)?	Regulatory Authority (separate ICT regulator or technical agency)	2	ITU Telecommunication/ICT Regulatory Database
		Government ministry	1	
		No regulatory oversight	0	

(continued)

Benchmark 2: REGULATORY CAPACITY				
T-21	Is the Regulatory Authority responsible for: 1a) handling consumer complaints 1b) informing consumers of their rights (consumer education) 2) providing comparative tariff information?	Cumulative (as below, one score per sub-indicator):		ITU Telecommunication/ICT Regulatory Database
		ICT Regulator has mandate/activities for handling consumer complaints	1	
		ICT Regulator has mandate or consumer education campaigns	0.5	
		ICT Regulator has mandate for or providing comparative tariff information	0.5	
		No mandate, no activities in any	0	
		Sector Ministry has mandate/activities for handling consumer complaints	0.5	
		Sector Ministry has mandate or consumer education campaigns	0.25	
		Sector Ministry has mandate for or providing comparative tariff information	0.25	

(continued)

Benchmark 3: GOOD GOVERNANCE				
B-II02	Is there a formal legal requirement for conducting a regulatory impact assessment (RIA)* before major regulatory decisions are made for all/multiple government agencies (all sectors)? * RIA is a systemic approach to critically assessing the positive and negative effects of proposed and existing regulations and non-regulatory alternatives. It encompasses a range of methods and is an important element of an evidence-based policy making.	Yes	2	World Bank Global Indicators of Regulatory Governance, ITU Telecommunication/ICT Regulatory Database and desktop research
		Yes, but not consistently applied to all decisions/ all sectors	1	
		No	0	
B-II03	Are the decisions of regulatory authorities (or entities in charge of regulation) subject to a general administrative-procedure law* applicable to all/multiple government agencies? * General administrative procedures law refers to a law that governs the processes by which government agencies (all sectors) propose, establish and implement regulation, as well as provides for the review of regulatory and administrative decisions.	Yes	2	ITU Telecommunication/ICT Regulatory Database and desktop research
		No	0	
B-II04	Can affected parties (i.e. infrastructure or service providers, not individual users of digital services) request reconsideration or appeal adopted regulations/regulatory decisions to the relevant administrative agency (all sectors), including major dispute* resolution or enforcement decisions? * Major disputes refer to disputes other than disputes relating to small claims. Major disputes would include, for example, different commercial disputes, interconnection disputes, interference disputes between radiocommunications providers, disputes between telecom operators and OTTs, etc. Such disputes might involve several (independent) regulators or other government agencies.	Yes, administrative review by an independent body/ the judiciary	2	World Bank Global Indicators of Regulatory Governance and desktop research
		Yes, administrative review by the regulatory bodies (all sectors)	1	
		- No, appeals are not allowed through general provisions for all parts of government, OR - Unclear institutional mandates	0	

(continued)

Benchmark 3: GOOD GOVERNANCE				
T-8	Does the regulatory framework set up clear dispute resolution* mechanisms to resolve disputes between service providers, market players (e.g., on interconnection issues, infrastructure sharing/open access, number portability)? *Note: Disputes refers to disputes other than disputes relating to small claims. Disputes would include, for example, interconnection disputes, interference disputes between radio communication providers, etc.	Yes	2	ITU Telecommunication/ICT Regulatory Database
		No	0	
T-9	Are appeals allowed to the decision of the Regulatory Authority (entity in charge of regulation/ responsible ministry where a separate ICT regulator does not exist)?	Yes	2	ITU Telecommunication/ICT Regulatory Database
		No	0	
B-II05	Are national policy and regulatory frameworks technology- and service-neutral (e.g., licensing frameworks)?	Yes, for both authorizations/operating licences and spectrum	2	ITU Telecommunication/ICT Regulatory Database and desktop research
		- Yes, for authorization/operating licences OR spectrum, but not for both - Yes, they are technology neutral, but not service neutral - Yes, they are service neutral, but not technology neutral - There are exceptions to which bands of the spectrum are technology neutral	1	
		No	0	
B-II07a	Policy reviews: Do government ministries/ regulatory agencies conduct ex-post policy reviews (all sectors)?	Yes	2	World Bank Global Indicators of Regulatory Governance and desktop research
		No	0	
B-II07b	Policy reviews: Do government ministries/ regulatory agencies conduct rolling policy reviews and commission policy implementation monitoring reports (all sectors)?	Yes	2	World Bank Global Indicators of Regulatory Governance and desktop research
		No	0	

(continued)

Benchmark 3: GOOD GOVERNANCE				
B-II08	Transparency: Are national laws (all sectors) that are currently in effect available on a single website managed by the government?	Yes	2	World Bank Global Indicators of Regulatory Governance and desktop research
		No	0	
B-II09	Transparency: Is public access to information ensured and fundamental freedoms protected (i.e. freedom of information and expression), in accordance with national legislation and international agreements?	Yes	2	UNDESA, Global SDG Indicators Database
		No	0	
B-II10	Transparency: Are there rules ethics rules applying to the staff of national regulatory authorities, including the head/chair and members/commissioners (e.g., improper acceptance of gifts, personal and financial conflicts of interest and post-employment obligations)?	Yes	2	ITU Telecommunication/ICT Regulatory Database and desktop research
		No	0	

(continued)

Benchmark 4: INSTITUTIONAL COLLABORATION				
B-I01	Collaboration between the (separate) ICT regulator and the (independent) spectrum management authority	- Formal framework for collaboration such as a Memorandum of Understanding or Agreement (MoU or MoA), OR - Public joint program or committee exists, OR - ICT regulator has the mandate/ same authority	2	ITU Telecommunication/ICT Regulatory Database and desktop research
		- Informal collaboration (no legal framework but informal collaboration channels exist), OR - Semi-formal collaboration (i.e., internal program or committee exist), OR - Collaboration may occur in the framework of a general multi-party committee or mechanism, OR - No (separate) ICT regulator exists, and activities are carried out under the same ministry	1	
		No collaboration or no entity in charge	0	
B-I02	Collaboration between the (separate) ICT regulator and the (Independent) broadcasting (content) authority	- Formal framework for collaboration such as a Memorandum of Understanding or Agreement (MoU or MoA), OR - Public joint program or committee exists, OR - ICT regulator has the mandate/ same authority	2	ITU Telecommunication/ICT Regulatory Database and desktop research
		- Informal collaboration (no legal framework but informal collaboration channels exist), OR - Semi-formal collaboration (i.e., internal program or committee exist), OR - Collaboration may occur in the framework of a general multi-party committee or mechanism, OR - No (separate) ICT regulator exists, and activities are carried out under the same ministry	1	
		No collaboration or no entity in charge	0	

(continued)

Benchmark 4: INSTITUTIONAL COLLABORATION				
B-I03	Collaboration between the (separate) ICT regulator and the cybersecurity agency	- Formal framework for collaboration such as a Memorandum of Understanding or Agreement (MoU or MoA), OR - Public joint program or committee exists, OR - ICT regulator has the mandate/ same authority	2	ITU Telecommunication/ICT Regulatory Database and desktop research ITU Telecommunication/ICT Regulatory Database and desktop research
		- Informal collaboration (no legal framework but informal collaboration channels exist), OR - Semi-formal collaboration (i.e., internal program or committee exist), OR - Collaboration may occur in the framework of a general multi-party committee or mechanism, OR - No (separate) ICT regulator exists, and activities are carried out under the same ministry	1	
		No collaboration or no entity in charge	0	
B-I04	Collaboration between the (separate) ICT regulator and the national Computer Emergency Response Team (CERT)/ Computer Incident Response Team (CIRT)	- Formal framework for collaboration such as a Memorandum of Understanding or Agreement (MoU or MoA), OR - Public joint program or committee exists, OR - ICT regulator has the mandate/ same authority	2	
		- Informal collaboration (no legal framework but informal collaboration channels exist), OR - Semi-formal collaboration (i.e., internal program or committee exist), OR - Collaboration may occur in the framework of a general multi-party committee or mechanism, OR - No (separate) ICT regulator exists and activities are carried out under the same ministry	1	
		No collaboration or no entity in charge	0	

(continued)

Benchmark 4: INSTITUTIONAL COLLABORATION				
B-I05	Collaboration between the (separate) ICT regulator and the (Independent) data protection authority	- Formal framework for collaboration such as a Memorandum of Understanding or Agreement (MoU or MoA), OR - Public joint program or committee exists	2	ITU Telecommunication/ICT Regulatory Database and desktop research
		- Informal collaboration (no legal framework but informal collaboration channels exist), OR - Semi-formal collaboration (i.e., internal program or committee exist), OR - Collaboration may occur in the framework of a general multi-party committee or mechanism, OR - ICT regulator has the mandate/ same authority, OR - No (separate) ICT regulator exists and activities are carried out under the same ministry	1	
		No collaboration or no entity in charge	0	
B-I06	Collaboration between ICT policy body (e.g., telecom/ICT/communication Ministry) OR ICT regulator, AND a dedicated Digital (transformation) agency/ National agency in charge of (coordination of) the implementation of digital policies/strategies, OR similar	- Formal framework for collaboration such as a Memorandum of Understanding or Agreement (MoU or MoA), OR - Public joint program or committee exists	2	ITU Telecommunication/ICT Regulatory Database and desktop research
		- Informal collaboration (no legal framework but informal collaboration channels exist), OR - Semi-formal collaboration (i.e., internal program or committee exist), OR - Collaboration may occur in the framework of a general multi-party committee or mechanism	1	
		No collaboration or no entity in charge	0	

(continued)

Benchmark 4: INSTITUTIONAL COLLABORATION				
B-I07	Collaboration between ICT policy body (e.g., telecom/ICT/communication Ministry) OR ICT regulator, AND (independent) the financial regulatory authority	Collaboration between (separate) regulatory authorities OR between a regulatory authority and a ministry: - Formal framework for collaboration such as a Memorandum of Understanding or Agreement (MoU or MoA), OR - Public joint program or committee exists; Inter-ministerial collaboration: - Public joint program or committee exists, OR - Other outcome of such collaboration is on public record	2	ITU Telecommunication/ICT Regulatory Database and desktop research
		- Informal collaboration (no legal framework but informal collaboration channels exist), OR - Semi-formal collaboration (i.e., internal program or committee exist), OR - Collaboration may occur in the framework of a general multi-party committee or mechanism, OR - No (separate) ICT regulator exists, but ICT policy body collaborating with the ministry of finance	1	
		- No collaboration or no entity in charge	0	

(continued)

Benchmark 4: INSTITUTIONAL COLLABORATION				
B-I08	Collaboration between ICT policy body (e.g., telecom/ICT/communication Ministry) OR ICT regulator, and the energy regulatory authority	Collaboration between (separate) regulatory authorities OR between a regulatory authority and a ministry: - Formal framework for collaboration such as a Memorandum of Understanding or Agreement (MoU or MoA), OR - Public joint program or committee exists; Inter-ministerial collaboration: - Public joint program or committee exists, OR - Other outcome of such collaboration is on public record; OR - (separate) ICT regulator has the mandate/ same authority	2	ITU Telecommunication/ICT Regulatory Database and desk-top research
		- Informal collaboration (no legal framework but informal collaboration channels exist), OR - Semi-formal collaboration (i.e., internal program or committee exist), OR - Collaboration may occur in the framework of a general multi-party committee or mechanism, OR - No (separate) ICT regulator exists and activities are carried out under the same ministry, OR - No (separate) ICT regulator exists, but ICT policy body collaborating with the ministry of energy	1	
		No collaboration or no entity in charge	0	

(continued)

Benchmark 4: INSTITUTIONAL COLLABORATION				
B-I09	I09: Collaboration between ICT policy body (e.g., telecom/ICT/communication Ministry) OR ICT regulator, AND the transport regulatory authority	Collaboration between (separate) regulatory authorities OR between a regulatory authority and a ministry: - Formal framework for collaboration such as a Memorandum of Understanding or Agreement (MoU or MoA), OR - Public joint program or committee exists; Inter-ministerial collaboration: - Public joint program or committee exists, OR - Other outcome of such collaboration is on public record; OR - (separate) ICT regulator has the mandate/ same authority	2	ITU Telecommunication/ICT Regulatory Database and desk-top research
		- Informal collaboration (no legal framework but informal collaboration channels exist), OR - Semi-formal collaboration (i.e., internal program or committee exist), OR - Collaboration may occur in the framework of a general multi-party committee or mechanism, OR - No (separate) ICT regulator exists and activities are carried out under the same ministry, OR - No (separate) ICT regulator exists, but ICT policy body collaborating with the ministry of transport	1	
		No collaboration or no entity in charge	0	

(continued)

Benchmark 4: INSTITUTIONAL COLLABORATION				
B-I10	Collaboration between ICT policy body (e.g., telecom/ICT/communication Ministry) OR ICT regulator, AND the (Independent) competition authority	Collaboration between (separate) regulatory authorities OR between a regulatory authority and a ministry: - Formal framework for collaboration such as a Memorandum of Understanding or Agreement (MoU or MoA), OR - Public joint program or committee exists; Inter-ministerial collaboration: - Public joint program or committee exists, OR - Other outcome of such collaboration is on public record	2	ITU Telecommunication/ICT Regulatory Database and desktop research
		- Informal collaboration (no legal framework but informal collaboration channels exist), OR - Semi-formal collaboration (i.e., internal program or committee exist), OR - Collaboration may occur in the framework of a general multi-party committee or mechanism, OR - ICT regulator has the mandate for both ex-ante and ex-post competition in telecom and digital markets/ same authority, OR - No (separate) ICT regulator exists OR no (independent) Competition authority exists but the respective entities responsible for regulation collaborate	1	
		No collaboration or no entity in charge	0	

(continued)

Benchmark 4: INSTITUTIONAL COLLABORATION				
B-I11	Collaboration between ICT policy body (e.g., telecom/ICT/communication Ministry) OR ICT regulator, AND the entity in charge of postal regulation (i.e., ministry or independent authority)	Collaboration between (separate) regulatory authorities OR between a regulatory authority and a ministry: - Formal framework for collaboration such as a Memorandum of Understanding or Agreement (MoU or MoA), OR - Public joint program or committee exists; Inter-ministerial collaboration: - Public joint program or committee exists, OR - Other outcome of such collaboration is on public record; OR - (separate) ICT regulator has the mandate/ same authority	2	ITU Telecommunication/ICT Regulatory Database and desktop research
		- Informal collaboration (no legal framework but informal collaboration channels exist), OR - Semi-formal collaboration (i.e., internal program or committee exist), OR - Collaboration may occur in the framework of a general multi-party committee or mechanism, OR - No (separate) ICT regulator exists, and activities are carried out under the same ministry	1	
		No collaboration or no entity in charge	0	

(continued)

Benchmark 4: INSTITUTIONAL COLLABORATION				
B-I12	Collaboration between ICT policy body (e.g., telecom/ICT/communication Ministry) OR ICT regulator, AND the (independent) consumer protection authority	Collaboration between (separate) regulatory authorities OR between a regulatory authority and a ministry: - Formal framework for collaboration such as a Memorandum of Understanding or Agreement (MoU or MoA), OR - Public joint program or committee exists; OR Inter-ministerial collaboration: - Public joint program or committee exists, OR - Other outcome of such collaboration is on public record; OR - (separate) ICT regulator has the mandate/ same authority	2	ITU Telecommunication/ICT Regulatory Database and desk-top research
		- Informal collaboration (no legal framework but informal collaboration channels exist), OR - Semi-formal collaboration (i.e., internal program or committee exist), OR - Collaboration may occur in the framework of a general multi-party committee or mechanism, OR - ICT regulator has the mandate/ same authority, OR - No (separate) ICT regulator exists, and activities are carried out under the same ministry, OR - No (separate) ICT regulator exists OR no (independent) Consumer protection authority exists but the respective entities responsible for regulation collaborate	1	
		No collaboration or no entity in charge	0	

(continued)

Benchmark 4: INSTITUTIONAL COLLABORATION				
B-I13	Collaboration between ICT policy body (e.g., telecom/ICT/communication Ministry) OR ICT regulator, AND the ministry responsible for Health (e-health)	Collaboration between (separate) ICT regulator and the ministry of health: - Formal framework for collaboration such as a Memorandum of Understanding or Agreement (MoU or MoA), OR - Public joint program or committee exists; OR Inter-ministerial collaboration: - Public joint program or committee exists, OR - Other outcome of such collaboration is on public record	2	ITU Telecommunication/ICT Regulatory Database and desktop research
		- Informal collaboration (no legal framework but informal collaboration channels exist), OR - Semi-formal collaboration (i.e., internal program or committee exist), OR - Collaboration may occur in the framework of a general multi-party committee or mechanism, OR - No (separate) ICT regulator exists AND the ICT Policy body collaborates with the Health ministry	1	
		No collaboration or no entity in charge	0	

(continued)

Benchmark 4: INSTITUTIONAL COLLABORATION				
B-I14	Collaboration between ICT policy body (e.g., telecom/ICT/communication Ministry) OR ICT regulator, AND the ministry responsible for education (e-education)	Collaboration between (separate) ICT regulator and the ministry of education: - Formal framework for collaboration such as a Memorandum of Understanding or Agreement (MoU or MoA), OR - Public joint program or committee exists; Inter-ministerial collaboration: - Public joint program or committee exists, OR - Other outcome of such collaboration is on public record	2	ITU Telecommunication/ICT Regulatory Database and desktop research
		- Informal collaboration (no legal framework but informal collaboration channels exist), OR - Semi-formal collaboration (i.e., internal program or committee exist), OR - Collaboration may occur in the framework of a general multi-party committee or mechanism, OR - No separate ICT regulator exists AND the ICT Policy body collaborates with the Education ministry	1	
		No collaboration or no entity in charge	0	

(continued)

Benchmark 4: INSTITUTIONAL COLLABORATION				
B-I15	Collaboration between ICT policy body (e.g., telecom/ICT/communication Ministry) OR ICT regulator, AND the ministry responsible for the environment (e-waste)	Collaboration between (separate) ICT regulator and the ministry responsible for e-waste: - Formal framework for collaboration such as a Memorandum of Understanding or Agreement (MoU or MoA), OR - Public joint program or committee exists; OR Inter-ministerial collaboration: - Public joint program or committee exists, OR - Other outcome of such collaboration is on public record; OR - ICT regulator/Ministry has the mandate/ same authority	2	ITU Telecommunication/ICT Regulatory Database and desk-top research
		- Informal collaboration (no legal framework but informal collab-oration channels exist), OR - Semi-formal collaboration (i.e., internal program or committee exist), OR - Collaboration may occur in the framework of a general multi-party committee or mechanism, OR - No separate ICT regulator exists, and activities are carried out under the same ministry, OR - No separate ICT regulator exists, but the ICT Policy body collaborates with the Ministry responsible for e-waste	1	
		No collaboration or no entity in charge	0	

(continued)

Benchmark 4: INSTITUTIONAL COLLABORATION				
B-I16	Collaboration between ICT policy body (e.g., telecom/ICT/communication Ministry) OR ICT regulator, AND the ministry responsible for economic development OR similar focusing on a single or multiple economic sector/s, (e.g., industry, agriculture, fishery)	Collaboration between the separate ICT regulator and the ministry responsible for industrial sector/s or similar: - Formal framework for collaboration such as a Memorandum of Understanding or Agreement (MoU or MoA), OR - Public joint program or committee exists; Inter-ministerial collaboration: - Public joint program or committee exists, OR - Other outcome of such collaboration is on public record	2	ITU Telecommunication/ICT Regulatory Database and desktop research
		- Informal collaboration (no legal framework but informal collaboration channels exist), OR - Semi-formal collaboration (i.e., internal program or committee exist), OR - Collaboration may occur in the framework of a general multi-party committee or mechanism, OR - No separate ICT regulator exists, but the ICT Policy body collaborates with the Ministry responsible for industrial sector/s or similar	1	
		No collaboration or no entity in charge	0	

Benchmark 5: STAKEHOLDER ENGAGEMENT				
T-5	Are public consultations practiced (legally mandatory or not) before major regulatory decisions are made?	Yes	2	ITU Telecommunication/ICT Regulatory Database
		In certain cases (discretionary or inconsistent practice) OR Required by law but not applied	1	
		No	0	

(continued)

Benchmark 5: STAKEHOLDER ENGAGEMENT				
B-II01	Do official guidelines exist on designing public consultations as a tool to gather feedback from national stakeholders and guide regulatory decision-making (e.g., clear deadlines and sufficient time to contribute, the process for consultations is clearly defined and requirements to publish and respond to stakeholder comments are in place)?	Yes	2	ITU Telecommunication/ICT Regulatory Database and desktop research
		Yes, however either: - there is no requirement to publish and/or respond to comments received, OR - the timeline for consultation is less than 30 days, OR - it is unclear what the timeline and process is and whether the regulator incorporates results in their decision-making, OR - there is no obligation to consider/respond to all comments, OR - such guidelines are not publicly available.	1	
		No rules/guidelines exist for public consultations and such are not undertaken	0	
B-IV12	Self-regulation: Are there industry codes of conduct* or codes of practice (voluntary or enforceable/required by or designed with regulator/s)? * A (regulatory or industry) code of conduct is a documented set of principles, standards, and operational rules that organizations commit to follow in a given market or activity, typically to ensure responsible behavior, consumer protection, fair competition, and compliance with applicable law. From a regulatory perspective, codes of conduct are usually a form of soft law/self- or co-regulation: they may be voluntary and enforced by an industry body, or formally recognized/endorsed by the regulator, sometimes with monitoring, reporting, and sanctions for non-compliance.	Yes	2	Desktop research
		No	0	

(continued)

Benchmark 5: STAKEHOLDER ENGAGEMENT				
B-II06a	Regulatory experimentation: Is there a regulatory sandbox* or a regulatory experimentation framework for ICT/ telecom/ digital innovations? * Note: A regulatory sandbox is defined here as a regulatory approach or regime that allows live, time-bound prototyping of innovations under a regulator's oversight. New ICT technologies, services, products and business models can be tested under a set of rules, supervision requirements and appropriate safeguards.	Yes	2	ITU Telecommunication/ICT Regulatory Database and desktop research
		No	0	
B-II06b	Regulatory experimentation: Is there a fintech regulatory sandbox or a regulatory experimentation framework for digital financial services?	Yes	2	Desktop research
		No	0	

Benchmark 6: LEGAL INSTRUMENTS FOR ICT/TELECOM MARKETS				
B-III06	Does a regulatory framework exist for ICT accessibility for persons with disabilities?	Yes	2	ITU Telecommunication/ICT Regulatory Database and desktop research
		Partial framework (or elements in other regulatory instruments)	1	
		No	0	
B-III11b	Emergency telecommunications: Does a National Emergency (Telecommunications) Plan exist?	Yes	2	ITU Telecommunication/ICT Regulatory Database and desktop research
		No	0	

(continued)

Benchmark 6: LEGAL INSTRUMENTS FOR ICT/TELECOM MARKETS				
B-III12a	Infrastructure sharing: Does an official mapping system exist of all telecommunication/ICT infrastructure and providing information about multiple aspects such as quality of service, coverage and network capacity (including a publicly available register of all infrastructure components and data processing guidelines)?	Yes	2	ITU Telecommunication/ICT Regulatory Database and desktop research
		- Yes, but only for some infrastructure, OR - Yes, but the register is not publicly available (or not for all infrastructure components), OR - Yes, but evidence is unclear	1	
		No	0	
T-22	What types of licences* are provided in your country? *A license or authorization is issued to authorize a person to provide telecommunications services or to operate telecommunications facilities.	Unified/global licences, General authorizations or Simple notification regime	2	ITU Telecommunication/ICT Regulatory Database
		Only multi-service individual licenses	1	
		Only Service-specific individual licenses	0	
T-23	Is there a licence exempt regime* for the provision of spectrum-based services to the public (e.g., Wi-Fi)? *Note: "Licence-exempt regime" covers radiocommunication devices exempt from individual licensing, as they have been already authorized in a general manner to operate under a specific regulatory framework (also named Generic Use Licensing, or similar; i.e. Wi-Fi devices) different from the standard licensing framework for commercial telecommunications providers.	Yes	2	ITU Telecommunication/ICT Regulatory Database
		No	0	
T-24	Do you require any telecommunication operators to publish Reference Interconnection Offer (RIO)?	Yes	2	ITU Telecommunication/ICT Regulatory Database
		No	0	
T-25	Are interconnection prices made public?	Yes	2	ITU Telecommunication/ICT Regulatory Database
		No	0	

(continued)

Benchmark 6: LEGAL INSTRUMENTS FOR ICT/TELECOM MARKETS				
T-26	Is quality of service monitoring required for telecommunication services?	Yes	2	ITU Telecommunication/ICT Regulatory Database
		No	0	
T-27	Is infrastructure sharing for mobile operators permitted (e.g., Mobile Virtual Network Operators)?	Yes	2	ITU Telecommunication/ICT Regulatory Database
		No	0	
T-28	Is infrastructure sharing mandated (e.g., towers, base stations, posts, ducts) or is granting of access and use to public telecommunication networks (e.g., fibre, wireless) required by monopoly or dominant operators?	Yes	2	ITU Telecommunication/ICT Regulatory Database
		No	0	
T-29	Is co-location/site sharing regulated/mandated or actively incentivized (e.g., through regulatory guidelines)?	Yes	2	ITU Telecommunication/ICT Regulatory Database
		No	0	
T-30	Is unbundled access to the local loop required?	Yes	2	ITU Telecommunication/ICT Regulatory Database
		No	0	
T-31	Is secondary spectrum trading* allowed? *Secondary Trading is the trading of spectrum rights or licenses directly between original licensed holders and buyers or leasers.	Yes	2	ITU Telecommunication/ICT Regulatory Database
		Yes, but the approval of the regulator is required	1	
		No	0	

(continued)

Benchmark 6: LEGAL INSTRUMENTS FOR ICT/TELECOM MARKETS				
T-32	Is band migration/ spectrum refarming* allowed? *Note: "Refarming" refers to the process of reallocating a frequency band from a service to another one, and the subsidiary task of releasing such a band from the current licensed networks of the older service, by migrating them to other frequency band(s) and/or other technological option(s) (e.g. when migrating from 2G to 3G or from 3G to 4G services).	Yes	2	ITU Telecommunication/ICT Regulatory Database
		No	0	
T-33	1) Is number portability required from fixed-line operators by law/regulation? 2) Is the service currently available to fixed-line subscribers?	FNP required and implemented (available to consumers)	2	ITU Telecommunication/ICT Regulatory Database
		FNP required but not yet implemented	1	
		FNP not required, not available to consumers	0	
T-34	1) Is number portability required from mobile service operators by law/regulation? 2) Is the service currently available to mobile subscribers?	MNP required and implemented (available to consumers)	2	ITU Telecommunication/ICT Regulatory Database
		MNP required but not yet implemented	1	
		MNP not required, not available to consumers	0	
T35	1) Are individual users allowed to make voice over IP (VoIP)/ Internet telephony phone calls? 2) Are there explicit regulatory restrictions to the provision of international VoIP services?	VoIP services are legal to provide and use	2	ITU Telecommunication/ICT Regulatory Database
		Use of VoIP services is legal but provision is illegal	1	
		VoIP Services are illegal for both provision and use	0	

(continued)

Benchmark 7: LEGAL INSTRUMENTS FOR DIGITAL MARKETS				
B-IV08b	Policies for specific sectors: Has your country adopted any policy/legislation/regulation related to industry 4.0, OR an e-agriculture strategy, OR similar industrial digital policy?	Yes, for either Industry 4.0 or e-agriculture	2	ITU Telecommunication/ICT Regulatory Database and desktop research
		No	0	
B-IV09a	Industry 4.0: Is there a strategy/policy, regulation/ standard, programme/initiative position or approach focusing on the Internet of Things (IoT), including aspects such as M2 M standards, permanent data roaming, spectrum for IoT devices?	Yes	2	ITU Telecommunication/ICT Regulatory Database and desktop research
		No	0	
B-IV09b	Industry 4.0: Is there a policy/ legislation/ regulation related to cloud computing or guidance for the use of/ cloud-based e-government platforms?	Yes	2	ITU Telecommunication/ICT Regulatory Database and desktop research
		No	0	
B-IV09c	Industry 4.0: Is there a national strategy/policy/road-map/plan for Artificial Intelligence (AI)?	Yes	2	ITU Telecommunication/ICT Regulatory Database and desktop research
		No	0	
B-IV05	Is there a forward-looking or innovative national strategy/ policy/ initiative/ outlook or roadmap focusing on spectrum (e.g., IMT-2000, 5/6G, Fixed Wireless Access - FWA, satellite and space technologies, OR a mix of technologies)?	Yes	2	ITU Telecommunication/ICT Regulatory Database and desktop research
		No	0	
B-III03	Is there a digital identity policy/legislative framework, OR an operational digital-ID system in place?	Yes	2	ITU Telecommunication/ICT Regulatory Database and desktop research
		No	0	
B-III04	What is the level of e-government development?	Very high development	2	United Nations Department of Economic and Social Affairs, E-Government Development Index
		High development	1	
		Medium development	0	
		Low development	0	

(continued)

Benchmark 7: LEGAL INSTRUMENTS FOR DIGITAL MARKETS				
B-III05	Are there e-waste regulations or e-waste management standards in place?	Yes	2	ITU & desktop research
		No	0	
B-III10a	Data protection: Are there formal national data protection rules covering digital services and content (e.g., laws and regulations)?	There is a law, and a data protection agency has been established	2	ITU Telecommunication/ICT Regulatory Database, UNCTAD and desktop research
		There is a law, but either: - a data protection agency has not yet been established, OR - the law is not yet implemented, OR - the law covers only a limited number of areas/activities	1	
		No	0	
B-III07	Are there legislation/ regulation/ government-endorsed guidelines for child online protection?	Yes	2	ITU Telecommunication/ICT Regulatory Database and desktop research
		No	0	
B-III08a	Public services: Is there a smart city policy/framework or a government-led programme/initiative implemented for smart cities, smart villages or smart islands?	Yes	2	ITU Telecommunication/ICT Regulatory Database and desktop research
		No	0	
B-III08b	Public services: Is there a policy/ strategy/ legislation related to e-health or smart health?	Yes	2	ITU Telecommunication/ICT Regulatory Database and desktop research
		No	0	
B-III08c	Public services: Is there a policy/ strategy/ legislation related to ICT in education/ e-education/ e-learning?	Yes	2	ITU Telecommunication/ICT Regulatory Database and desktop research
		No	0	

(continued)

Benchmark 7: LEGAL INSTRUMENTS FOR DIGITAL MARKETS				
B-III09a	Cybersecurity: Is there a publicly available stand-alone cybersecurity strategy or legislation?	Yes	2	ITU Global Cybersecurity Index (GCI)
		No	0	
B-III12b	Infrastructure sharing: Are there any cross-sector (ICT and energy, rail or other) infrastructure sharing or fibre co-deployment requirements/ regulations or promotion initiatives?	Yes	2	ITU Telecommunication/ICT Regulatory Database and desktop research
		No	0	
B-IV06	Are there an e-commerce/e-transactions legislation?	Yes	2	ITU Telecommunication/ICT Regulatory Database, UNCTAD, and desktop research
		- Rules exist at the regional level exist (e.g., EU), but national rules have not yet been formulated, OR - National rules have limited provisions (e.g., e-signatures only)	1	
		No	0	

Benchmark 8: MARKET RULES				
T-37	What is the level of competition in Basic services (Local fixed line services, Domestic fixed long distance, International fixed long distance?	Competition	2	ITU Telecommunication/ICT Regulatory Database
		Partial competition	1	
		Monopoly	0	

(continued)

Benchmark 8: MARKET RULES				
T-38	What is the level of competition in IMT services (e.g., 3G, 4G)?	Competition	2	ITU Telecommunication/ICT Regulatory Database
		Partial competition	1	
		Monopoly	0	
T-39	What is the level of competition in Internet services? 1) Fixed-line networks: DSL, fiber 2) Cable: cable modem, cable TV 3) Wireless/Mobile broadband: Fixed Wireless Access, satellite services, mobile broadband	Full competition legally permissible AND/OR Multiple providers in a competitive environment	2	ITU Telecommunication/ICT Regulatory Database
		Partial competition legally permissible OR De facto duopoly OR Oligopoly OR high market concentration	1	
		Monopoly or a de facto monopoly (single incumbent provider)	0	
T-40	What is the level of competition in Leased lines?	Full competition legally permissible AND/OR Multiple providers in a competitive environment	2	ITU Telecommunication/ICT Regulatory Database
		Partial competition legally permissible OR De facto duopoly OR Oligopoly OR high market concentration	1	
		Monopoly or a de facto monopoly (single incumbent provider)	0	
T-41	What is the level of competition in International Gateways?	Full competition legally permissible AND/OR Multiple providers in a competitive environment	2	ITU Telecommunication/ICT Regulatory Database
		Partial competition legally permissible OR De facto duopoly OR Oligopoly OR high market concentration	1	
		Monopoly or a de facto monopoly (single incumbent provider)	0	
T-42	What is the status of the main fixed line operator* (former or current state-owned incumbent)? *Note: The main fixed-line operator or the incumbent is the operator with the largest market share and/or geographic coverage.	Fully privatized/private (state ownership <10%)	2	ITU Telecommunication/ICT Regulatory Database
		Partially privatized/ partially private	1	
		State-owned (90% or more)	0	

(continued)

Benchmark 8: MARKET RULES				
T-43	Does the national anti-trust/competition law recognizes the concept of "dominance" or Significant Market Power (SMP)?	Yes	2	ITU Telecommunication/ICT Regulatory Database
		No	0	
T-44	What criteria used in determining market dominance or significant market power (e.g., geographical, market share, control of essential facilities, easy access to financial resources, strength of the countervailing power of consumers, economies of scale and scope)?	Three or more different criteria required	2	ITU Telecommunication/ICT Regulatory Database
		One or two different criteria	1	
		No criteria required in law	0	
T-45	Are there restrictions to foreign participation/ownership? Facilities-based operators	Loose control (no restriction to foreign ownership or state ownership required 50%)	2	ITU Telecommunication/ICT Regulatory Database
		Moderate control (state ownership required 50 -90%)	1	
		Full control (state ownership required >90%)	0	
T-46	Are there restrictions to foreign participation/ownership? Spectrum-based operators	Loose control (no restriction to foreign ownership or state ownership required <50%)	2	ITU Telecommunication/ICT Regulatory Database
		Moderate control (state ownership required 50-90%)	1	
		Full control (state ownership required >90%)	0	

(continued)

Benchmark 8: MARKET RULES				
T-47	Are there restrictions to foreign participation/ownership? National service operators (Local service operators & Long-distance service operators)	Loose control (no restriction to foreign ownership or state ownership required 50%)	2	ITU Telecommunication/ICT Regulatory Database
		Moderate control (state ownership required 50 -90%)	1	
		Full control (state ownership required >90%)	0	
T-48	Are there restrictions to foreign participation/ownership? International service operators	Loose control (no restriction to foreign ownership or state ownership required 50%)	2	ITU Telecommunication/ICT Regulatory Database
		Moderate control (state ownership required 50 -90%)	1	
		Full control (state ownership required >90%)	0	
T-49	Are there restrictions to foreign participation/ownership? Internet Service Providers (ISP)	Loose control (no restriction to foreign ownership or state ownership required 50%)	2	ITU Telecommunication/ICT Regulatory Database
		Moderate control (state ownership required 50 -90%)	1	
		Full control (state ownership required >90%)	0	
T-50	Are there restrictions to foreign participation/ownership? Value-added service providers	Loose control (no restriction to foreign ownership or state ownership required 50%)	2	ITU Telecommunication/ICT Regulatory Database
		Moderate control (state ownership required 50 -90%)	1	
		Full control (state ownership required >90%)	0	

(continued)

Benchmark 8: MARKET RULES				
IV04	Are there forward-looking competition policy/ law/ regulation/ guidelines applied to digital markets (ex-ante or ex post)?	Yes	2	ITU Telecommunication/ICT Regulatory Database and desktop research
		- Planned (draft document publicly available), OR - A general competition law exists which contains specific provisions for digital markets	1	
		No	0	
IV10	Are there sector-specific taxes on the telecom/digital sector (supply side) OR on Internet services/devices/SIM cards/airtime recharge (demand side)?	Yes	0	ITU Tariff Policies database and desktop research
		No	2	
IV11	Are there regulatory incentives aimed at telecommunication network operators or digital market players?	Yes, for all	2	ITU Telecommunication/ICT Regulatory Database and desktop research
		Yes, but only for some	1	
		No	0	

Benchmark 9: REGIONAL AND INTERNATIONAL COOPERATION				
B-IV01	Does the country belong to regional integration initiatives with ICT chapters?	Yes	2	Desktop research
		Yes, partial/ in some aspects	1	
		No	0	

(continued)

Benchmark 9: REGIONAL AND INTERNATIONAL COOPERATION				
B-IV02	Has the country made a commitment to facilitate trade in telecommunication services under the WTO General Agreement on Trade in Services (GATS)?	Yes	2	World Trade Organization
		No	0	
B-III09b	Cybersecurity: Has the country signed or ratified international/regional instruments in the field of cybersecurity? The following instruments apply: - the Convention on Cybercrime (aka Budapest Convention) - the African Union Convention on Cyber Security and Personal Data Protection (aka Malabo convention) - Arab Convention on Combating Information Technology Offences - Shanghai Cooperation Organization Agreement on Cooperation in the Field of International Information Security - Commonwealth of Independent States Agreement on Cooperation in the Fight Against Crimes in the Field of Information Technologies (aka Dushanbe Agreement)	Yes, either of the instruments is ratified	2	Depending on the instrument/region: - Council of Europe - African Union - League of Arab States - Shanghai Cooperation Organization - Commonwealth of Independent States
		No, none of the instruments is ratified	0	
B-III10b	Data protection: Has the country signed international agreements determining jurisdiction and/or managing cross-border flows for data privacy?	Yes, determining jurisdiction and managing cross-border flows	2	Desktop research
		Yes, either determining jurisdiction or managing cross-border flows	1	
		No	0	
B-III11a	Emergency telecommunications: Has the country signed or ratified the Tampere Convention (the Convention on the Provision of Telecommunication Resources for Disaster Mitigation and Relief Operations)?	Yes	2	United Nations Treaty Collection
		No	0	

Annex A: Methodology of data use and interpretation in this report

The Digital Readiness Framework assesses 194 countries across nine thematic benchmarks grouping 117 indicators, organised into three domains: ICT and digital law, digital policy, and digital governance. Each benchmark score, and the overall score, corresponds to the percentage of targets a country has met, with partial attainment counted at half weight. The score is presented on a 0–100 scale. No weights are applied to benchmarks or indicators. This lets strength in one area offset weakness in another and recognises that countries may pursue different, equally valid pathways. It also means the unweighted composite is influenced by how many indicators each benchmark contains, which readers comparing the composite across countries should bear in mind.[46]

Readiness data is drawn from official ITU surveys to Member State institutions, datasets compiled by international organisations, and desk research based on official government sources, with self-reported data verified to the extent reasonably feasible. Missing responses are treated by default as an implicit negative and coded as not met, subject to a structured validation and triangulation process. As Box 2 notes, this is a largely de jure measure of the enabling environment and not a measure of enforcement quality or outcomes.[47]

Two features of the time series deserve a note. The underlying indicator sets are refreshed on a rolling cycle, with ICT Regulatory Tracker indicators updated one year and G5 Benchmark indicators the next, and a carry-forward rule holds the last reported value where a country does not respond in a given cut. Both choices support comparability, but they mean that some of the 2021–2025 movement reflects the refresh schedule and the carry-forward rule rather than real-world change. Year-on-year shifts in any single benchmark should therefore be read as indicative, and trends are more reliable than point changes.[48]

Outcome data in Chapter 4 is drawn from independent sources so the synthesis is not circular: connectivity, investment and price series from the ITU World Telecommunication/ICT Indicators database and ITU/Broadband Commission affordability data; digitally deliverable services trade from UNCTAD; public-sector digital maturity from the World Bank GovTech Maturity Index (2025 update); and network-economy performance from the Portulans Institute Network Readiness Index (2025 update). Country coverage varies by indicator and year, so correlations and regressions are estimated using the available economies, typically between 120 and 190. For the correlations, we use the most recent outcome data during the 2021-2025 period if 2025 data is not yet available. Correlations are reported as Pearson coefficients, significant at the 5 percent level. Regressions results reported in the text are also significant at the 5 percent level, unless stated otherwise. As set out in Box 5 of Chapter 4, the results have limitations and should be read as initial evidence of the association between readiness and outcomes.[49]

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46 ITU, *Digital Readiness Framework: Primer* (Geneva: ITU, March 2026), secs. 5–6, https://app.gen5.digital/doc/ITU_DigitalPolicyReadinessFramework_Primer_2026.pdf.

47 ITU, *Digital Readiness Framework: Primer* (Geneva: ITU, March 2026), secs. 5–6, https://app.gen5.digital/doc/ITU_DigitalPolicyReadinessFramework_Primer_2026.pdf.

48 ITU, *Digital Readiness Framework: Primer* (Geneva: ITU, March 2026), secs. 5–6, https://app.gen5.digital/doc/ITU_DigitalPolicyReadinessFramework_Primer_2026.pdf.

49 ITU, *Measuring Digital Development: Global Connectivity Report 2025* (Geneva: ITU, 2025), https://www.itu.int/dms_pub/itu-d/opb/ind/D-IND-ICT_MDD.GCR-2025-4-PDF-E.pdf.

Annex B: Empirical Tests

Wealth-adjusted Digital Readiness

The wealth-adjusted digital readiness index is calculated by regressing countries' overall digital readiness score on their GDP per capita plus a squared term. We then compare a country's predicted readiness from the model and its actual readiness, by dividing the latter with the former. To illustrate, if a country's actual readiness is 80 but the model predicts only 60 given its GDP per capita, the country has a wealth-adjusted readiness index of 1.33 and is classified as "More Ready" (index > 1.2). All values are from 2021. The index is not available for four countries (i.e. Cuba, Eritrea, South Sudan and Yemen) due to the lack of GDP per capita data in 2021.

Regressions

In Sections 4.1 to 4.4, we use panel regression models to explore the link between readiness and outcomes, and to determine which pillars are driving the association. Two types of models are used: Ordinary Least Squares (OLS) and Fixed Effects (FE) models. OLS models allow us to exploit cross-country variations, while FE models only rely on within-country variations but are generally seen as more robust because they absorb the time-invariant country factors that may be driving outcome changes.

The models estimated follow the specification below, where ***i*** refers to the country, and ***t*** refers to the year. ***Outcome*** refers to investment, connectivity, and technology adoption measures, while ***Readiness*** can either refer to the B10 (overall) score or the B1-B9 scores. ***Controls*** vary by the modelled outcome measure but generally include income, population, and urbanization indicators. Standard errors are clustered at the country-level.

$$Outcome_{it} = \beta_0 + \beta_1 Readiness_{it} + \beta_2 \Sigma Controls_{it} + Region_i + Year_t + u_{it} (OLS)$$

$$Outcome_{it} = \beta_0 + \beta_1 Readiness_{it} + \beta_2 \Sigma Controls_{it} + Country_i + Year_t + u_{it} (FE)$$

The pillar scores are highly correlated as shown in Figure B.1, which can affect the model's precision and stability. To mitigate this, we ran various models: a) single pillar models, wherein a single pillar is included at a time (e.g. B1 score only) and a b) full model, wherein all pillars from B1-B9 are jointly included. Pillars that remain significant in various specifications can be read as more robustly linked to the outcomes.

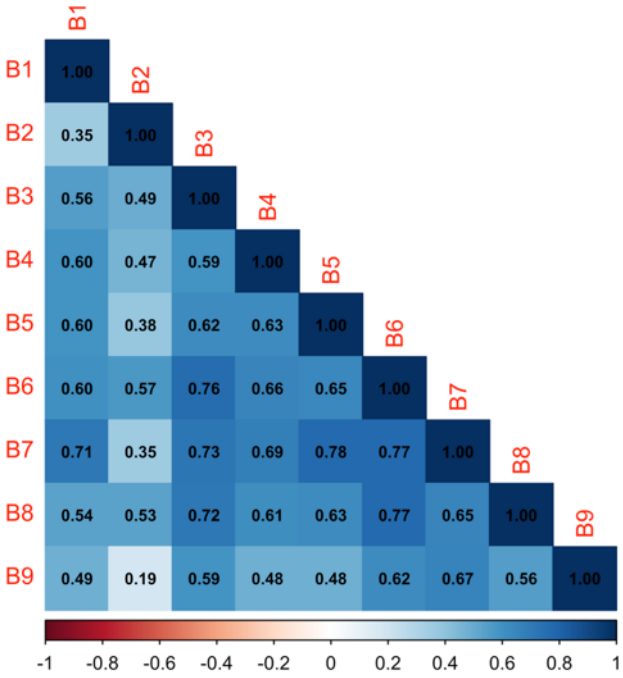
Residual Analysis

In Section 4.5, a country's outcome performance is assessed by comparing their actual performance to their predicted performance based on its 2021 wealth-adjusted readiness index and controlling for other variables. The model specification is as follows with controls similar as the previous section.

$$Outcome_{i,post\text{-}2021} = \beta_0 + \beta_1 Wealth\text{-}Adjusted\ Readiness_{i,\ \mathbf{2021}} + \beta_2 \Sigma Controls_{i,post\text{-}2021} + u_i (OLS)$$

We use the studentized residual to assess whether countries are overperforming (>1 studentized residual) or underperforming (< -1) based on model expectations.

Figure B1: Correlation matrix for the B1-B9 pillars



Notes: Numbers are correlation coefficients, significant at the 5% level. All scores from 2021-2025 are used.

Table B1: Does readiness track investment?

Dependent variable: Log investment per capita							
	OLS		FE			FE	
	Single pillar regressions	Pillars are jointly specified	Single pillar regressions	Pillars are jointly specified		Single pillar regressions	Pillars are jointly specified
B1					Lag B1		
B2			0.013*		Lag B2		
B3					Lag B3		
B4					Lag B4		
B5					Lag B5		
B6	0.017+	0.022*			Lag B6		
B7		-0.011**			Lag B7		
B8			0.015+	0.015+	Lag B8	0.029***	0.032***
B9					Lag B9		
B10					Lag B10	0.036+	
R2		0.753		0.953			0.959
N		434		426			302

Notes: The numbers in the cells are estimated coefficients (+ significant at 10% level, * 5%, ** 1%, *** 0.1%). Green highlights a positive relationship while orange means negative relationship. Darker cells indicate significance at least at the 5% level. Control variables: Log (GDP), urbanisation and log(population).

Table B2: Does readiness track connectivity?

	Mobile broadband subscriptions				Fixed broadband subscriptions				Households Internet Access			
	OLS	OLS	FE	FE	OLS	OLS	FE	FE	OLS	OLS	FE	FE
	Single pillar regressions	Pillars are jointly specified	Single pillar regressions	Pillars are jointly specified	Single pillar regressions	Pillars are jointly specified	Single pillar regressions	Pillars are jointly specified	Single pillar regressions	Pillars are jointly specified	Single pillar regressions	Pillars are jointly specified
B1										-0.086*		
B2									0.094*	0.093+		
B3	0.407*							0.052+		-0.107+		
B4	0.262+								0.081+	0.095*		0.069+
B5		-0.266*										
B6	0.291*					0.066+	0.080+	0.062+	0.087*	0.105+		
B7	0.384*		-0.195+	-0.193+					-0.065+			
B8	0.550*							-0.029+		-0.114+		
B9												0.069+
B10	0.683*											
R2		0.477		0.958		0.853		0.997		0.835		0.987
N		734		734		679		677		698		694

Notes: The numbers in the cells are estimated coefficients (+ significant at 10% level, * 5%, ** 1%, *** 0.1%). Green highlights a positive relationship while orange means negative relationship. Darker cells indicate significance at least at the 5% level. Control variables: Log (GDP per capita), log(population), urbanisation, electrification, median age of population (level and squared term).

Table B3: Does readiness track connectivity?

	Internet Use of individuals				4G Coverage				5G Coverage			
	OLS	OLS	FE	FE	OLS	OLS	FE	FE	OLS	OLS	FE	FE
	Single pillar regressions	Pillars are jointly specified	Single pillar regressions	Pillars are jointly specified	Single pillar regressions	Pillars are jointly specified	Single pillar regressions	Pillars are jointly specified	Single pillar regressions	Pillars are jointly specified	Single pillar regressions	Pillars are jointly specified
B1									0.321**	0.203*		0.198+
B2					0.118+						-0.267***	-0.233*
B3		-0.083*										
B4	0.060+	0.071+							0.229*			
B5									0.257***	0.195*		
B6		0.077+		0.064+	0.133*							
B7					0.136+		-0.224*	-0.243*	0.311**			
B8					0.118+				0.221*		0.851*	0.966*
B9									0.274**	0.184+		
B10					0.224*				0.507*			
R2		0.92		0.993		0.593		0.89		0.717		0.906
N		708		705		712		712		532		486

Notes: The numbers in the cells are estimated coefficients (+ significant at 10% level, * 5%, ** 1%, *** 0.1%). Green highlights a positive relationship while orange means negative relationship. Darker cells indicate significance at least at the 5% level. Control variables: Log (GDP per capita), log(population), urbanisation, electrification, median age of population (level and squared term).

Table B4: Does readiness track technology adoption?

	Adoption of emerging tech		Investment in emerging tech	
	OLS		OLS	
	Single pillar regressions	Pillars are jointly specified	Single pillar regressions	Pillars are jointly specified
B1	0.154***	0.083+	0.206***	0.131*
B2		-0.153+		-0.198*
B3				
B4	0.151**			
B5	0.124***		0.219***	0.172**
B6	0.156**			
B7	0.252***		0.276***	0.166+
B8	0.185**		0.221**	
B9	0.105*			
B10	0.411***		0.341*	
R2		0.752		0.64
N		235		260

Notes: The numbers in the cells are estimated coefficients (+ significant at 10% level, * 5%, ** 1%, *** 0.1%). Green highlights a positive relationship while orange means negative relationship. Darker cells indicate significance at least at the 5% level. Control variables: Log (GDP), log(population), urbanisation.

Table B5: Does readiness track technology adoption?

	Log of digitally deliverable exports			
	OLS		FE	
	Single pillar regressions	Pillars are jointly specified	Single pillar regressions	Pillars are jointly specified
B1	0.009+			
B2				0.008*
B3			0.010*	0.010*
B4		-0.013+		
B5	0.017***	0.011*		
B6			0.024*	0.023**
B7	0.025**			
B8	0.031***	0.025**		
B9	0.012*			
B10	0.026*		0.023+	
R2		0.884		0.996
N		285		237

Notes: The numbers in the cells are estimated coefficients (+ significant at 10% level, * 5%, ** 1%, *** 0.1%). Green highlights a positive relationship while orange means negative relationship. Darker cells indicate significance at least at the 5% level. Control variables: Log (GDP per capita), log(population), urbanisation, trade as percent of GDP, and tertiary educational attainment of the population.

Clustering Analysis

In Table C.3 (Annex C), we use k-means clustering, an unsupervised machine learning technique, to group countries based on their regulatory profiles. K-means clustering starts with randomly initialized cluster centres or centroids, assigns each observation to the nearest cluster, and repeatedly adjusts the clusters until the total distance between observations and their assigned cluster is minimized. We use scaled country scores from B1-B10 in 2021, 2025 and their changes. Determining the optimal number of clusters is based on established diagnostics and interpretability. The "elbow" method or the within-cluster sum of squares gives 3 as the optimal cluster while other diagnostics such as the gap and silhouette statistics gives 2 as the optimal.[50] We choose 3 clusters based on interpretability grounds. The stability of country assignments is robust to running the k-means clustering 100 times.[51]

Country assignments by profile, as listed in Table C.3 (Annex C):

Foundation-builders (35): Afghanistan; Andorra; Antigua and Barbuda; Belarus; Burundi; Central African Rep.; Cuba; Djibouti; Equatorial Guinea; Eritrea; Guinea-Bissau; Haiti; Kazakhstan; Kiribati; Lao P.D.R.; Lebanon; Libya; Marshall Islands; Micronesia; Monaco; Nauru; Nepal (Republic of); Palau; Palestine; Saint Kitts and Nevis; San Marino; South Sudan; Suriname; Syrian Arab Republic; Tajikistan; Timor-Leste; Tonga; Turkmenistan; Tuvalu; Yemen.

Broad-based improvers (81): Algeria; Angola; Azerbaijan; Bahamas; Bangladesh; Barbados; Belize; Benin; Bhutan; Bolivia (Plurinational State of); Bosnia and Herzegovina; Botswana; Brunei Darussalam; Burkina Faso; Cabo Verde; Cambodia; Cameroon; Chad; Comoros; Congo (Rep. of the); Côte d'Ivoire; Dem. Rep. of the Congo; Dominica; Ecuador; El Salvador; Eswatini; Ethiopia; Fiji; Gabon; Gambia; Georgia; Grenada; Guatemala; Guinea; Guyana; Honduras; Iran (Islamic Republic of); Iraq; Jamaica; Jordan; Kuwait; Kyrgyzstan; Lesotho; Liberia; Madagascar; Malawi; Maldives; Mali; Mauritania; Mongolia; Morocco; Mozambique; Myanmar; Namibia; Nicaragua; Niger; Papua New Guinea; Paraguay; Rwanda; Saint Lucia; Saint Vincent and the Grenadines; Samoa; Sao Tome and Principe; Senegal; Seychelles; Sierra Leone; Solomon Islands; Somalia; Sudan; Tanzania; Togo; Trinidad and Tobago; Tunisia; Uganda; Ukraine; Uzbekistan; Vanuatu; Venezuela; Viet Nam; Zambia; Zimbabwe.

Frontier movers (78): Albania; Argentina; Armenia; Australia; Austria; Bahrain; Belgium; Brazil; Bulgaria; Canada; Chile; China; Colombia; Costa Rica; Croatia; Cyprus; Czech Republic; Denmark; Dominican Rep.; Egypt; Estonia; Finland; France; Germany; Ghana; Greece; Hong Kong, China; Hungary; Iceland; India; Indonesia; Ireland; Israel; Italy; Japan; Kenya; Korea (Rep. of); Latvia; Liechtenstein; Lithuania; Luxembourg; Malaysia; Malta; Mauritius; Mexico; Moldova; Montenegro; Netherlands; New Zealand; Nigeria; North Macedonia; Norway; Oman; Pakistan; Panama; Peru; Philippines; Poland; Portugal; Qatar; Romania; Russian Federation; Saudi Arabia;

[50] K-means clustering involves the use of randomly initialized clusters. Hence, we ran the elbow method 100 times to check for stability of results. The elbow method suggests the optimal cluster as 2 in 34 runs and 3 in 66 runs.

[51] Due to the collinearity of the B1-B10 scores and as a robustness check, we ran the clustering analysis by dropping the B10 scores. This time, the elbow method suggests optimal clusters as 2 in 75 runs and 3 in 25 runs. We opted for 3 based on interpretability. Country assignments are similar as when the B10 score was included. Only Haiti changed clusters from a foundation-builder to a broad-based improver.

Serbia; Singapore; Slovakia; Slovenia; South Africa; Spain; Sri Lanka; Sweden; Switzerland; Thailand; Türkiye; United Arab Emirates; United Kingdom; United States; Uruguay.

Figure B2: Clustering Results with Average Scores in 2021, 2025 and Changes

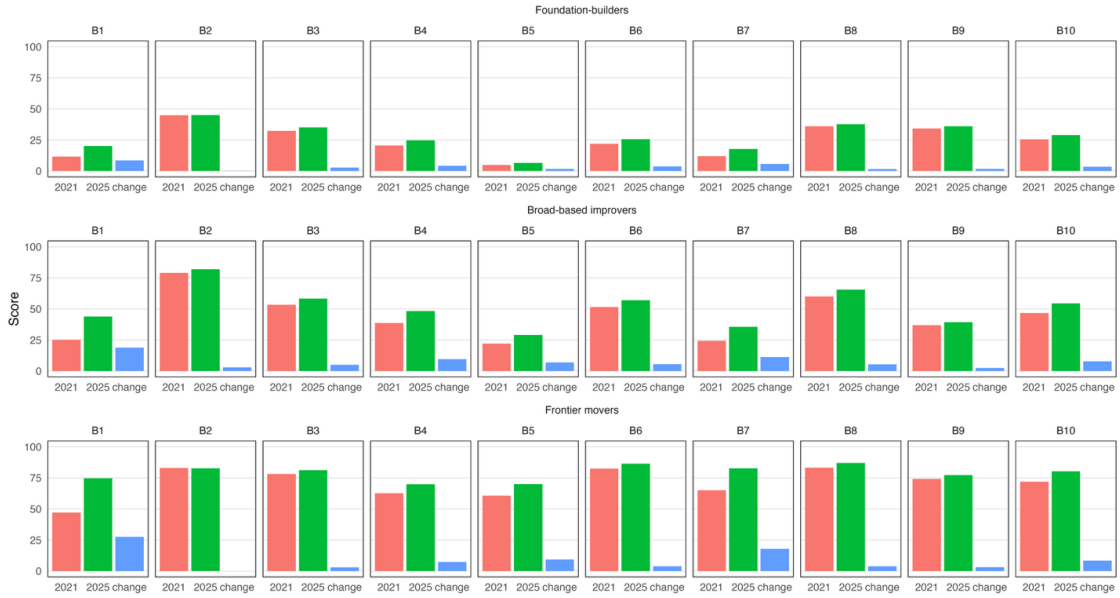
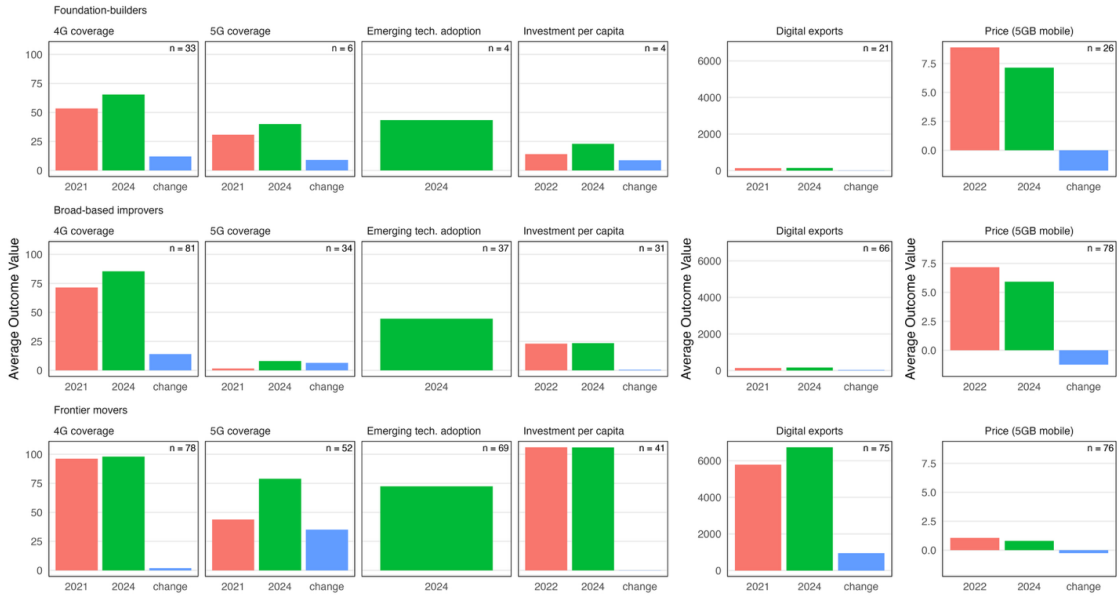


Figure B3: Clustering Results with Outcome Scores in 2021, 2024/2025 and Changes



Notes: Per outcome, we only use countries with complete observations (i.e. has initial 2021/2022 data, 2024 data, and change). Outcome with the most complete data are 4G coverage and the price of a mobile broadband 5GB basket.

Annex C: Country Scores and Profiles

Table C.1: Average Digital Readiness Scores, 2025

	B1	B2	B3	B4	B5	B6	B7	B8	B9	Over-all
World	52	76	63	53	41	63	51	69	54	60
By region:										
Africa	47	82	52	51	32	53	34	62	28	53
Americas	51	75	67	50	38	63	45	72	57	60
Arab States	46	72	51	47	32	55	47	55	52	53
Asia-Pacific	48	68	57	50	47	56	52	63	51	56
CIS	43	47	59	34	27	43	48	58	58	47
Europe	66	83	83	65	56	88	75	87	80	78
By status:										
LDC	46	70	50	43	20	50	27	57	34	47
LLDC	42	72	62	50	27	52	48	60	49	54
LLDC - LDC	44	79	51	47	24	43	31	62	28	49
SIDS	29	70	51	39	33	50	30	63	44	47
SIDS - LDC	17	65	38	31	10	39	8	53	26	35

Table C.2: Country Digital Readiness Scores

				2021	2025									
	Country	Region	Status	Over-all	Over-all	Tier	B1	B2	B3	B4	B5	B6	B7	B8	B9
1	Afghanistan	Asia-Pacific	LLDC - LDC	37	38	Low	8	82	50	13	0	32	25	63	40
2	Albania	Europe		64	78	High	95	91	73	63	50	82	63	85	100
3	Algeria	Arab States		41	49	Intermediate	41	84	50	56	0	65	34	31	40
4	Andorra	Europe		25	34	Low	59	26	50	31	20	29	41	18	40
5	Angola	Africa	LDC	42	47	Intermediate	22	82	41	38	40	59	19	64	40
6	Antigua and Barbuda	Americas	SIDS	30	31	Low	8	34	45	38	0	24	22	45	60
7	Argentina	Americas		65	77	High	100	93	64	56	40	82	75	71	100
8	Armenia	CIS	LLDC	67	74	High	56	90	82	75	30	71	63	88	100
9	Australia	Asia-Pacific		82	87	High	67	90	91	72	100	100	100	85	80
10	Austria	Europe		79	85	High	67	87	91	78	80	94	88	94	80
11	Azerbaijan	CIS	LLDC	46	55	Intermediate	44	54	50	47	40	53	63	82	40
12	Bahamas	Americas	SIDS	53	57	Intermediate	29	87	68	28	60	76	41	76	20
13	Bahrain	Arab States		60	69	Intermediate	54	84	50	53	90	76	69	88	40
14	Bangladesh	Asia-Pacific	LDC	49	54	Intermediate	31	81	64	44	20	53	66	50	40
15	Barbados	Americas	SIDS	48	52	Intermediate	15	60	64	47	70	59	34	73	60
16	Belarus	CIS		30	38	Low	59	34	59	25	0	26	28	53	40
17	Belgium	Europe		77	86	High	68	94	91	59	80	94	94	97	90

Table C.2: Country Digital Readiness Scores (continued)

				2021	2025										
	Country	Region	Status	Over-all	Over-all	Tier	B1	B2	B3	B4	B5	B6	B7	B8	B9
18	Belize	Americas	SIDS	36	42	Intermediate	23	88	55	31	40	35	38	26	40
19	Benin	Africa	LDC	52	58	Intermediate	40	85	77	69	10	56	53	44	50
20	Bhutan	Asia-Pacific	LLDC - LDC	48	53	Intermediate	51	91	64	56	70	29	34	55	20
21	Bolivia (Plurinational State of)	Americas	LLDC	51	60	Intermediate	46	94	95	59	0	59	34	60	40
22	Bosnia and Herzegovina	Europe		53	59	Intermediate	31	91	64	44	20	74	28	82	60
23	Botswana	Africa	LLDC	52	63	Intermediate	58	100	55	78	40	53	47	68	20
24	Brazil	Americas		75	89	High	90	91	86	84	90	97	88	88	70
25	Brunei Darussalam	Asia-Pacific		49	66	Intermediate	69	93	50	78	50	74	50	50	60
26	Bulgaria	Europe		66	73	High	69	85	86	38	20	88	56	94	100
27	Burkina Faso	Africa	LLDC - LDC	54	59	Intermediate	68	91	64	44	30	53	31	82	20
28	Burundi	Africa	LLDC - LDC	35	36	Low	14	71	27	34	0	32	13	61	40
29	Cabo Verde	Africa	SIDS	53	58	Intermediate	42	88	68	53	30	53	34	71	70
30	Cambodia	Asia-Pacific	LDC	51	67	Intermediate	77	85	86	69	60	41	53	68	60
31	Cameroon	Africa		44	52	Intermediate	37	91	36	50	20	68	38	46	40
32	Canada	Americas		84	89	High	82	81	91	81	100	100	100	79	100
33	Central African Rep.	Africa	LLDC - LDC	29	34	Low	14	72	36	41	10	21	0	59	20
34	Chad	Africa	LLDC - LDC	37	43	Intermediate	29	85	32	66	0	35	19	43	40

Table C.2: Country Digital Readiness Scores (continued)

				2021	2025										
	Country	Region	Status	Over-all	Over-all	Tier	B1	B2	B3	B4	B5	B6	B7	B8	B9
35	Chile	Americas		71	79	High	92	74	68	59	60	82	88	88	90
36	China	Asia-Pacific		64	71	High	72	32	45	72	90	76	100	82	80
37	Colombia	Americas		72	82	High	77	85	95	59	100	82	88	85	80
38	Comoros	Arab States	SIDS - LDC	43	44	Intermediate	19	72	45	34	0	59	6	78	30
39	Congo (Rep. of the)	Africa		42	52	Intermediate	77	82	36	53	20	41	13	67	50
40	Costa Rica	Americas		68	82	High	100	88	82	72	80	97	69	79	50
41	Côte d'Ivoire	Africa		52	56	Intermediate	15	88	41	88	30	50	41	59	60
42	Croatia	Europe		73	80	High	69	88	82	69	40	94	69	97	80
43	Cuba	Americas	SIDS	21	24	Low	27	29	18	44	0	18	19	15	40
44	Cyprus	Europe		65	79	High	79	85	73	53	40	94	75	93	100
45	Czech Republic	Europe		71	80	High	72	82	95	72	40	88	69	91	90
46	Dem. Rep. of the Congo	Africa	LDC	46	55	Intermediate	74	71	55	66	10	50	13	76	40
47	Denmark	Europe		83	87	High	72	91	91	59	100	100	94	100	80
48	Djibouti	Arab States	LDC	10	13	Low	19	7	9	34	0	0	6	9	50
49	Dominica	Americas	SIDS	45	47	Intermediate	21	63	50	38	20	59	16	76	60
50	Dominican Rep.	Americas	SIDS	71	80	High	85	91	73	69	50	100	66	88	60
51	Ecuador	Americas		61	65	Intermediate	49	74	68	78	20	65	50	85	60

Table C.2: Country Digital Readiness Scores (continued)

				2021	2025										
	Country	Region	Status	Over-all	Over-all	Tier	B1	B2	B3	B4	B5	B6	B7	B8	B9
52	Egypt	Arab States		66	80	High	85	91	68	81	60	76	91	79	60
53	El Salvador	Americas		49	54	Intermediate	49	66	55	53	10	53	28	82	60
54	Equatorial Guinea	Africa		26	29	Low	28	68	27	13	20	32	13	32	0
55	Eritrea	Africa	LDC	9	10	Low	0	18	9	19	0	6	6	18	0
56	Estonia	Europe		79	84	High	50	84	100	72	60	94	94	97	90
57	Eswatini	Africa	LLDC	50	55	Intermediate	18	91	45	75	50	56	34	68	0
58	Ethiopia	Africa	LLDC - LDC	38	52	Intermediate	86	62	55	63	20	21	50	56	20
59	Fiji	Asia-Pacific	SIDS	44	49	Intermediate	29	59	45	59	0	62	34	62	40
60	Finland	Europe		86	93	Very High	72	97	91	88	100	100	100	97	100
61	France	Europe		84	90	Very High	97	90	86	63	100	100	100	88	100
62	Gabon	Africa		37	43	Intermediate	41	79	41	34	0	50	28	47	10
63	Gambia	Africa	LDC	43	57	Intermediate	76	82	41	72	50	50	38	55	10
64	Georgia	Europe		57	68	Intermediate	38	84	77	63	30	94	44	88	40
65	Germany	Europe		87	93	Very High	97	87	100	91	60	100	94	97	90
66	Ghana	Africa		62	74	High	90	85	55	81	80	50	72	85	50
67	Greece	Europe		74	81	High	72	85	91	69	60	94	69	94	80
68	Grenada	Americas	SIDS	42	44	Intermediate	10	78	41	34	20	47	22	65	60

Table C.2: Country Digital Readiness Scores (continued)

				2021	2025										
	Country	Region	Status	Over-all	Over-all	Tier	B1	B2	B3	B4	B5	B6	B7	B8	B9
69	Guatemala	Americas		52	57	Intermediate	97	62	64	47	20	32	28	85	60
70	Guinea	Africa	LDC	46	47	Intermediate	5	85	41	47	0	62	25	69	40
71	Guinea-Bissau	Africa	SIDS - LDC	31	32	Low	4	62	45	41	20	18	6	57	10
72	Guyana	Americas	SIDS	45	50	Intermediate	0	84	64	66	10	41	28	74	40
73	Haiti	Americas	SIDS - LDC	39	40	Intermediate	3	75	45	59	0	41	6	60	30
74	Honduras	Americas		51	55	Intermediate	71	72	68	56	10	71	6	69	30
75	Hong Kong, China	Asia-Pacific		65	70	High	18	84	82	72	70	71	78	94	20
76	Hungary	Europe		75	83	High	64	91	91	81	60	88	75	91	90
77	Iceland	Europe		68	80	High	74	91	77	66	50	88	63	97	100
78	India	Asia-Pacific		76	87	High	96	82	68	78	100	88	97	94	70
79	Indonesia	Asia-Pacific		55	66	Intermediate	67	32	77	66	60	47	94	88	60
80	Iran (Islamic Republic of)	Asia-Pacific		54	60	Intermediate	36	91	68	50	20	82	53	62	20
81	Iraq	Arab States		36	49	Intermediate	36	99	68	34	30	44	31	41	40
82	Ireland	Europe		83	88	High	74	97	77	75	80	100	94	97	80
83	Israel	Europe		60	65	Intermediate	53	40	82	50	70	71	81	88	40
84	Italy	Europe		82	87	High	31	100	100	78	100	100	88	100	90
85	Jamaica	Americas	SIDS	57	61	Intermediate	36	69	77	72	70	53	34	91	40

Table C.2: Country Digital Readiness Scores (continued)

				2021	2025										
	Country	Region	Status	Over-all	Over-all	Tier	B1	B2	B3	B4	B5	B6	B7	B8	B9
86	Japan	Asia-Pacific		75	82	High	69	34	91	88	100	94	100	94	80
87	Jordan	Arab States		61	66	Intermediate	49	91	64	34	50	82	72	71	60
88	Kazakhstan	CIS	LLDC	40	45	Intermediate	33	32	64	28	20	44	63	56	60
89	Kenya	Africa		67	80	High	96	97	68	63	90	76	78	85	60
90	Kiribati	Asia-Pacific	SIDS - LDC	37	39	Low	19	81	18	44	0	35	25	50	40
91	Korea (Rep. of)	Asia-Pacific		78	78	High	56	51	86	81	100	94	94	76	80
92	Kuwait	Arab States		52	62	Intermediate	41	97	64	44	50	53	81	53	60
93	Kyrgyzstan	CIS	LLDC	47	50	Intermediate	23	74	68	34	30	41	41	74	60
94	Lao P.D.R.	Asia-Pacific	LLDC - LDC	37	42	Intermediate	49	35	23	59	10	41	25	58	60
95	Latvia	Europe		65	75	High	72	82	82	47	40	88	75	88	70
96	Lebanon	Arab States		23	25	Low	12	35	27	41	0	21	22	10	60
97	Lesotho	Africa	LLDC - LDC	37	44	Intermediate	33	78	32	34	40	47	13	65	30
98	Liberia	Africa	LDC	46	53	Intermediate	53	88	64	38	20	62	19	57	20
99	Libya	Arab States		5	9	Low	0	18	0	6	0	6	9	14	40
100	Liechtenstein	Europe		63	68	Intermediate	49	76	50	50	20	88	69	88	100
101	Lithuania	Europe		79	89	High	79	99	82	81	80	94	81	97	100
102	Luxembourg	Europe		78	84	High	67	87	91	72	90	82	88	94	90

Table C.2: Country Digital Readiness Scores (continued)

				2021	2025										
	Country	Region	Status	Over-all	Over-all	Tier	B1	B2	B3	B4	B5	B6	B7	B8	B9
103	Madagascar	Africa	LDC	44	47	Intermediate	47	78	55	44	0	56	19	53	20
104	Malawi	Africa	LLDC - LDC	59	67	Intermediate	53	90	59	81	40	65	50	85	20
105	Malaysia	Asia-Pacific		72	86	High	85	91	86	91	90	76	97	76	80
106	Maldives	Asia-Pacific	SIDS	33	40	Intermediate	15	81	32	41	40	32	28	50	20
107	Mali	Africa	LLDC - LDC	49	49	Intermediate	51	85	55	56	0	44	19	53	30
108	Malta	Europe		81	85	High	64	91	91	84	70	88	88	91	90
109	Marshall Islands	Asia-Pacific	SIDS	17	22	Low	18	19	41	28	20	12	6	32	30
110	Mauritania	Arab States	LDC	42	50	Intermediate	59	76	45	44	10	47	31	59	50
111	Mauritius	Africa	SIDS	58	69	Intermediate	59	93	55	69	80	41	63	94	60
112	Mexico	Americas		72	70	Intermediate	92	32	100	50	0	91	75	79	80
113	Micronesia	Asia-Pacific	SIDS	39	38	Low	0	97	32	53	20	35	6	38	20
114	Moldova	Europe	LLDC	62	73	High	64	85	82	66	20	79	69	80	70
115	Monaco	Europe		32	36	Low	26	26	36	50	0	38	41	44	40
116	Mongolia	Asia-Pacific	LLDC	51	60	Intermediate	36	93	68	47	40	62	69	55	50
117	Montenegro	Europe		70	77	High	72	85	77	78	30	88	59	91	80
118	Morocco	Arab States		56	69	Intermediate	69	90	68	69	10	76	47	76	80
119	Mozambique	Africa	LDC	38	42	Intermediate	44	66	50	13	30	68	13	53	20

Table C.2: Country Digital Readiness Scores (continued)

				2021	2025										
	Country	Region	Status	Over-all	Over-all	Tier	B1	B2	B3	B4	B5	B6	B7	B8	B9
120	Myanmar	Asia-Pacific	LDC	33	51	Intermediate	74	51	36	44	40	50	19	85	40
121	Namibia	Africa		42	56	Intermediate	56	88	64	56	50	71	41	31	20
122	Nauru	Asia-Pacific	SIDS	17	22	Low	36	34	27	3	10	15	6	37	20
123	Nepal (Republic of)	Asia-Pacific	LLDC - LDC	32	39	Low	55	82	45	0	10	38	34	33	30
124	Netherlands	Europe		85	90	High	74	87	91	88	90	100	88	97	90
125	New Zealand	Asia-Pacific		78	83	High	79	78	91	56	100	88	100	85	80
126	Nicaragua	Americas		40	53	Intermediate	44	87	68	34	0	50	41	69	40
127	Niger	Africa	LLDC - LDC	45	51	Intermediate	36	76	55	50	10	59	31	62	30
128	Nigeria	Africa		70	81	High	77	100	55	84	90	82	88	82	40
129	North Macedonia	Europe	LLDC	63	69	Intermediate	46	90	77	72	30	91	47	59	90
130	Norway	Europe		84	91	Very High	79	93	91	78	100	100	100	94	70
131	Oman	Arab States		69	82	High	62	91	59	81	70	88	94	91	80
132	Pakistan	Asia-Pacific		71	85	High	96	100	77	66	70	88	84	91	70
133	Palau	Asia-Pacific	SIDS	9	12	Low	8	22	36	0	0	12	3	12	20
134	Palestine	Arab States		28	36	Low	29	34	45	41	20	41	28	38	40
135	Panama	Americas		62	74	High	85	81	86	56	60	71	66	85	60
136	Papua New Guinea	Asia-Pacific	SIDS	39	44	Intermediate	21	84	59	28	60	32	19	53	60

Table C.2: Country Digital Readiness Scores (continued)

				2021	2025										
	Country	Region	Status	Over-all	Over-all	Tier	B1	B2	B3	B4	B5	B6	B7	B8	B9
137	Paraguay	Americas	LLDC	45	50	Intermediate	44	78	68	38	20	29	41	68	40
138	Peru	Americas		68	78	High	77	65	95	59	80	88	69	94	80
139	Philippines	Asia-Pacific		67	76	High	51	81	73	78	100	76	88	70	80
140	Poland	Europe		71	79	High	56	78	91	69	20	100	81	91	90
141	Portugal	Europe		82	91	Very High	82	91	86	88	60	100	100	97	90
142	Qatar	Arab States		62	75	High	97	84	73	63	80	76	91	58	40
143	Romania	Europe		67	81	High	85	94	82	53	40	94	75	94	90
144	Russian Federation	CIS		55	63	Intermediate	72	34	86	38	90	65	75	68	80
145	Rwanda	Africa	LLDC - LDC	64	70	Intermediate	59	97	73	66	70	62	66	78	20
146	Saint Kitts and Nevis	Americas	SIDS	36	37	Low	4	68	36	0	20	62	16	68	40
147	Saint Lucia	Americas	SIDS	48	50	Intermediate	28	84	50	13	30	62	34	79	30
148	Saint Vincent and the Grena-dines	Americas	SIDS	46	52	Intermediate	33	79	77	19	40	65	22	76	40
149	Samoa	Asia-Pacific	SIDS	47	55	Intermediate	49	81	55	41	40	71	38	57	40
150	San Marino	Europe		25	28	Low	0	46	73	6	0	6	28	50	40
151	Sao Tome and Principe	Africa	SIDS - LDC	39	43	Intermediate	21	82	50	28	20	65	6	58	20
152	Saudi Arabia	Arab States		84	94	Very High	90	94	82	94	90	97	100	97	100
153	Senegal	Africa	LDC	52	61	Intermediate	74	85	45	25	20	79	41	84	60

Table C.2: Country Digital Readiness Scores (continued)

				2021	2025										
	Country	Region	Status	Over-all	Over-all	Tier	B1	B2	B3	B4	B5	B6	B7	B8	B9
154	Serbia	Europe		70	74	High	62	87	73	66	60	94	63	77	60
155	Seychelles	Africa	SIDS	30	50	Intermediate	19	75	32	31	20	62	53	79	20
156	Sierra Leone	Africa	LDC	38	49	Intermediate	54	87	55	56	20	50	13	46	20
157	Singapore	Asia-Pacific	SIDS	84	89	High	85	93	82	88	90	88	100	94	60
158	Slovakia	Europe		70	78	High	46	78	91	66	40	91	75	97	100
159	Slovenia	Europe		69	79	High	85	94	91	44	30	94	81	85	80
160	Solomon Islands	Asia-Pacific	SIDS - LDC	37	40	Intermediate	18	75	50	19	30	50	6	68	20
161	Somalia	Arab States	LDC	33	50	Intermediate	26	90	45	25	20	44	31	91	40
162	South Africa	Africa		67	75	High	59	94	100	53	100	82	75	74	30
163	South Sudan	Africa	LLDC - LDC	30	31	Low	15	75	59	16	0	12	0	61	0
164	Spain	Europe		80	89	High	74	74	100	78	100	100	100	91	100
165	Sri Lanka	Asia-Pacific		53	56	Intermediate	87	35	55	50	60	35	72	57	80
166	Sudan	Arab States	LDC	42	56	Intermediate	37	78	68	72	10	65	25	65	50
167	Suriname	Americas	SIDS	32	39	Low	29	74	55	13	0	53	16	44	40
168	Sweden	Europe		76	85	High	79	91	91	66	80	82	94	94	90
169	Switzerland	Europe		81	89	High	95	90	91	72	100	100	88	88	80
170	Syrian Arab Republic	Arab States		25	29	Low	21	74	32	19	0	18	25	18	40

Table C.2: Country Digital Readiness Scores (continued)

				2021	2025										
	Country	Region	Status	Over-all	Over-all	Tier	B1	B2	B3	B4	B5	B6	B7	B8	B9
171	Tajikistan	CIS	LLDC	21	26	Low	19	18	55	19	0	15	34	26	70
172	Tanzania	Africa	LDC	50	66	Intermediate	82	91	73	66	60	65	44	70	0
173	Thailand	Asia-Pacific		70	84	High	92	94	73	84	100	82	81	84	60
174	Timor-Leste	Asia-Pacific	SIDS - LDC	30	35	Low	41	66	50	22	10	38	6	32	40
175	Togo	Africa	LDC	47	53	Intermediate	51	79	77	28	10	68	25	67	20
176	Tonga	Asia-Pacific	SIDS	24	33	Low	10	29	32	16	20	50	9	67	80
177	Trinidad and Tobago	Americas	SIDS	59	70	High	51	97	68	63	80	85	34	85	60
178	Tunisia	Arab States		51	55	Intermediate	54	81	73	19	30	68	34	60	70
179	Türkiye	Europe		68	78	High	82	87	68	66	30	100	88	79	40
180	Turkmenistan	CIS	LLDC	9	11	Low	15	18	0	13	0	0	19	9	20
181	Tuvalu	Asia-Pacific	SIDS - LDC	5	7	Low	8	9	0	0	0	6	0	22	20
182	Uganda	Africa	LLDC - LDC	65	67	Intermediate	54	91	64	69	50	76	44	79	40
183	Ukraine	Europe		56	60	Intermediate	22	76	86	31	50	79	50	77	60
184	United Arab Emirates	Arab States		82	85	High	92	97	73	97	90	85	94	68	40
185	United Kingdom	Europe		87	92	Very High	95	93	91	91	100	94	88	97	70
186	United States	Americas		80	84	High	67	78	91	66	100	94	94	88	90
187	Uruguay	Americas		58	70	Intermediate	82	78	68	72	10	59	88	60	80

Table C.2: Country Digital Readiness Scores (continued)

				2021	2025										
	Country	Region	Status	Over-all	Over-all	Tier	B1	B2	B3	B4	B5	B6	B7	B8	B9
188	Uzbekistan	CIS	LLDC	21	57	Intermediate	62	69	68	28	30	74	44	68	50
189	Vanuatu	Asia-Pacific	SIDS	44	57	Intermediate	51	94	50	44	30	35	34	88	60
190	Venezuela	Americas		43	49	Intermediate	47	96	50	44	10	26	16	72	50
191	Viet Nam	Asia-Pacific		51	61	Intermediate	51	63	68	44	0	82	81	57	60
192	Yemen	Arab States	LDC	12	13	Low	15	9	18	0	0	21	13	12	40
193	Zambia	Africa	LLDC - LDC	58	65	Intermediate	67	85	82	50	40	71	66	63	20
194	Zimbabwe	Africa	LLDC	50	59	Intermediate	63	91	59	66	60	53	50	42	20

Table C.3: Country Regulatory Profile, Wealth-adjusted Readiness, Performance in Outcomes

	Country	Regulatory profile	Wealth-adjusted index (2021)		Outcome Performance	4G Coverage	5G Coverage	Investment per capita	Digital exports	Emerging tech. adoption	Price (5GB mobile basket)
1	Afghanistan	Foundation builder	0.84	As Expected							
2	Albania	Frontier mover	1.29	More Ready	Outcome-poor						
3	Algeria	Broad-based improver	0.86	As Expected	Mixed						
4	Andorra	Foundation builder	0.36	Less Ready	Outcome-rich						
5	Angola	Broad-based improver	0.92	As Expected	Outcome-poor						
6	Antigua and Barbuda	Foundation builder	0.53	Less Ready	As expected						
7	Argentina	Frontier mover	1.25	More Ready	As expected						
8	Armenia	Frontier mover	1.40	More Ready	Outcome-poor						
9	Australia	Frontier mover	1.05	As Expected	Outcome-poor						
10	Austria	Frontier mover	1.04	As Expected	As expected						
11	Azerbaijan	Broad-based improver	0.95	As Expected	Outcome-poor						
12	Bahamas	Broad-based improver	0.82	As Expected	Outcome-poor						
13	Bahrain	Frontier mover	0.97	As Expected	Outcome-rich						
14	Bangladesh	Broad-based improver	1.05	As Expected	Outcome-rich						
15	Barbados	Broad-based improver	0.81	As Expected	As expected						
16	Belarus	Foundation builder	0.61	Less Ready	Mixed						

Table C.3: Country Regulatory Profile, Wealth-adjusted Readiness, Performance in Outcomes (continued)

	Country	Regulatory profile	Wealth-adjusted index (2021)		Outcome Performance	4G Coverage	5G Coverage	Investment per capita	Digital exports	Emerging tech. adoption	Price (5GB mobile basket)
17	Belgium	Frontier mover	1.03	As Expected	As expected						
18	Belize	Broad-based improver	0.74	Less Ready	As expected						
19	Benin	Broad-based improver	1.15	As Expected	Outcome-rich						
20	Bhutan	Broad-based improver	1.02	As Expected	As expected						
21	Bolivia (Plurinational State of)	Broad-based improver	1.09	As Expected	Outcome-poor						
22	Bosnia and Herzegovina	Broad-based improver	1.08	As Expected	As expected						
23	Botswana	Broad-based improver	1.05	As Expected	Outcome-poor						
24	Brazil	Frontier mover	1.51	More Ready	As expected						
25	Brunei Darussalam	Broad-based improver	0.75	Less Ready	Mixed						
26	Bulgaria	Frontier mover	1.23	More Ready	Outcome-rich						
27	Burkina Faso	Broad-based improver	1.21	More Ready	Outcome-poor						
28	Burundi	Foundation builder	0.79	Less Ready	Mixed						
29	Cabo Verde	Broad-based improver	1.11	As Expected	Outcome-rich						
30	Cambodia	Broad-based improver	1.11	As Expected	As expected						

Table C.3: Country Regulatory Profile, Wealth-adjusted Readiness, Performance in Outcomes (continued)

	Country	Regulatory profile	Wealth-adjusted index (2021)		Outcome Performance	4G Coverage	5G Coverage	Investment per capita	Digital exports	Emerging tech. adoption	Price (5GB mobile basket)
31	Cameroon	Broad-based improver	0.96	As Expected	As expected						
32	Canada	Frontier mover	1.11	As Expected	As expected						
33	Central African Rep.	Foundation builder	0.65	Less Ready	Mixed						
34	Chad	Broad-based improver	0.82	As Expected	Mixed						
35	Chile	Frontier mover	1.27	More Ready	As expected						
36	China	Frontier mover	1.19	As Expected	Outcome-rich						
37	Colombia	Frontier mover	1.47	More Ready	Outcome-poor						
38	Comoros	Broad-based improver	0.94	As Expected	Outcome-rich						
39	Congo (Rep. of the)	Broad-based improver	0.91	As Expected	As expected						
40	Costa Rica	Frontier mover	1.26	More Ready	Outcome-poor						
41	Côte d'Ivoire	Broad-based improver	1.12	As Expected	Mixed						
42	Croatia	Frontier mover	1.28	More Ready	As expected						
43	Cuba	Foundation builder									
44	Cyprus	Frontier mover	0.98	As Expected	Outcome-rich						
45	Czech Republic	Frontier mover	1.12	As Expected	As expected						
46	Dem. Rep. of the Congo	Broad-based improver	1.04	As Expected	Outcome-poor						
47	Denmark	Frontier mover	1.03	As Expected	As expected						

Table C.3: Country Regulatory Profile, Wealth-adjusted Readiness, Performance in Outcomes (continued)

	Country	Regulatory profile	Wealth-adjusted index (2021)		Outcome Performance	4G Coverage	5G Coverage	Investment per capita	Digital exports	Emerging tech. adoption	Price (5GB mobile basket)
48	Djibouti	Foundation builder	0.23	Less Ready	Outcome-rich						
49	Dominica	Broad-based improver	0.89	As Expected	As expected						
50	Dominican Rep.	Frontier mover	1.41	More Ready	Outcome-poor						
51	Ecuador	Broad-based improver	1.25	More Ready	Outcome-poor						
52	Egypt	Frontier mover	1.39	More Ready	Outcome-poor						
53	El Salvador	Broad-based improver	1.03	As Expected	As expected						
54	Equatorial Guinea	Foundation builder	0.53	Less Ready	Outcome-poor						
55	Eritrea	Foundation builder									
56	Estonia	Frontier mover	1.26	More Ready	As expected						
57	Eswatini	Broad-based improver	1.06	As Expected	As expected						
58	Ethiopia	Broad-based improver	0.85	As Expected	Outcome-poor						
59	Fiji	Broad-based improver	0.92	As Expected	Outcome-poor						
60	Finland	Frontier mover	1.14	As Expected	Outcome-rich						
61	France	Frontier mover	1.18	As Expected	As expected						
62	Gabon	Broad-based improver	0.73	Less Ready	Mixed						
63	Gambia	Broad-based improver	0.96	As Expected	Outcome-poor						

Table C.3: Country Regulatory Profile, Wealth-adjusted Readiness, Performance in Outcomes (continued)

	Country	Regulatory profile	Wealth-adjusted index (2021)		Outcome Performance	4G Coverage	5G Coverage	Investment per capita	Digital exports	Emerging tech. adoption	Price (5GB mobile basket)
64	Georgia	Broad-based improver	1.20	As Expected	Outcome-poor						
65	Germany	Frontier mover	1.16	As Expected	As expected						
66	Ghana	Frontier mover	1.35	More Ready	Outcome-rich						
67	Greece	Frontier mover	1.27	More Ready	Outcome-rich						
68	Grenada	Broad-based improver	0.81	As Expected	As expected						
69	Guatemala	Broad-based improver	1.08	As Expected	As expected						
70	Guinea	Broad-based improver	1.02	As Expected	As expected						
71	Guinea-Bissau	Foundation builder	0.69	Less Ready	Outcome-poor						
72	Guyana	Broad-based improver	0.88	As Expected	Outcome-poor						
73	Haiti	Foundation builder	0.86	As Expected	Outcome-poor						
74	Honduras	Broad-based improver	1.10	As Expected	Outcome-poor						
75	Hong Kong, China	Frontier mover	0.87	As Expected	As expected						
76	Hungary	Frontier mover	1.30	More Ready	As expected						
77	Iceland	Frontier mover	0.84	As Expected	Outcome-rich						
78	India	Frontier mover	1.66	More Ready	Outcome-rich						
79	Indonesia	Frontier mover	1.16	As Expected	Mixed						

Table C.3: Country Regulatory Profile, Wealth-adjusted Readiness, Performance in Outcomes (continued)

	Country	Regulatory profile	Wealth-adjusted index (2021)		Outcome Performance	4G Coverage	5G Coverage	Investment per capita	Digital exports	Emerging tech. adoption	Price (5GB mobile basket)
80	Iran (Islamic Republic of)	Broad-based improver	1.14	As Expected	As expected						
81	Iraq	Broad-based improver	0.75	Less Ready	Mixed						
82	Ireland	Frontier mover	0.97	As Expected	Outcome-rich						
83	Israel	Frontier mover	0.80	Less Ready	Outcome-rich						
84	Italy	Frontier mover	1.20	More Ready	As expected						
85	Jamaica	Broad-based improver	1.18	As Expected	Outcome-poor						
86	Japan	Frontier mover	1.08	As Expected	As expected						
87	Jordan	Broad-based improver	1.28	More Ready	Outcome-rich						
88	Kazakhstan	Foundation builder	0.77	Less Ready	Outcome-poor						
89	Kenya	Frontier mover	1.46	More Ready	As expected						
90	Kiribati	Foundation builder	0.81	As Expected	As expected						
91	Korea (Rep. of)	Frontier mover	1.14	As Expected	Outcome-rich						
92	Kuwait	Broad-based improver	0.79	Less Ready	Outcome-poor						
93	Kyrgyzstan	Broad-based improver	1.03	As Expected	Outcome-rich						
94	Lao P.D.R.	Foundation builder	0.81	As Expected	Outcome-rich						
95	Latvia	Frontier mover	1.10	As Expected	As expected						

Table C.3: Country Regulatory Profile, Wealth-adjusted Readiness, Performance in Outcomes (continued)

	Country	Regulatory profile	Wealth-adjusted index (2021)		Outcome Performance	4G Coverage	5G Coverage	Investment per capita	Digital exports	Emerging tech. adoption	Price (5GB mobile basket)
96	Lebanon	Foundation builder	0.48	Less Ready	Outcome-rich						
97	Lesotho	Broad-based improver	0.82	As Expected	Mixed						
98	Liberia	Broad-based improver	1.03	As Expected	As expected						
99	Libya	Foundation builder	0.11	Less Ready	Outcome-rich						
100	Liechtenstein	Frontier mover	1.21	More Ready							
101	Lithuania	Frontier mover	1.30	More Ready	Outcome-poor						
102	Luxembourg	Frontier mover	0.94	As Expected	Outcome-rich						
103	Madagascar	Broad-based improver	1.00	As Expected	Outcome-poor						
104	Malawi	Broad-based improver	1.33	More Ready	Outcome-rich						
105	Malaysia	Frontier mover	1.38	More Ready	As expected						
106	Maldives	Broad-based improver	0.64	Less Ready	Mixed						
107	Mali	Broad-based improver	1.09	As Expected	As expected						
108	Malta	Frontier mover	1.18	As Expected	As expected						
109	Marshall Islands	Foundation builder	0.35	Less Ready	As expected						
110	Mauritania	Broad-based improver	0.92	As Expected	As expected						
111	Mauritius	Frontier mover	1.14	As Expected	Outcome-rich						

Table C.3: Country Regulatory Profile, Wealth-adjusted Readiness, Performance in Outcomes (continued)

	Country	Regulatory profile	Wealth-adjusted index (2021)		Outcome Performance	4G Coverage	5G Coverage	Investment per capita	Digital exports	Emerging tech. adoption	Price (5GB mobile basket)
112	Mexico	Frontier mover	1.39	More Ready	Outcome-poor						
113	Micronesia	Foundation builder	0.83	As Expected	As expected						
114	Moldova	Frontier mover	1.28	More Ready	As expected						
115	Monaco	Foundation builder	0.91	As Expected	As expected						
116	Mongolia	Broad-based improver	1.07	As Expected	As expected						
117	Montenegro	Frontier mover	1.36	More Ready	Outcome-rich						
118	Morocco	Broad-based improver	1.20	As Expected	Outcome-rich						
119	Mozambique	Broad-based improver	0.86	As Expected	Outcome-rich						
120	Myanmar	Broad-based improver	0.73	Less Ready	Outcome-rich						
121	Namibia	Broad-based improver	0.88	As Expected	As expected						
122	Nauru	Foundation builder	0.31	Less Ready	As expected						
123	Nepal (Republic of)	Foundation builder	0.71	Less Ready	Outcome-rich						
124	Netherlands	Frontier mover	1.10	As Expected	As expected						
125	New Zealand	Frontier mover	1.05	As Expected	Mixed						
126	Nicaragua	Broad-based improver	0.87	As Expected	Outcome-poor						
127	Niger	Broad-based improver	1.02	As Expected	Outcome-poor						

Table C.3: Country Regulatory Profile, Wealth-adjusted Readiness, Performance in Outcomes (continued)

	Country	Regulatory profile	Wealth-adjusted index (2021)		Outcome Performance	4G Coverage	5G Coverage	Investment per capita	Digital exports	Emerging tech. adoption	Price (5GB mobile basket)
128	Nigeria	Frontier mover	1.52	More Ready	As expected						
129	North Macedonia	Frontier mover	1.26	More Ready	Mixed						
130	Norway	Frontier mover	0.99	As Expected	As expected						
131	Oman	Frontier mover	1.19	As Expected	Outcome-poor						
132	Pakistan	Frontier mover	1.57	More Ready	Mixed						
133	Palau	Foundation builder	0.17	Less Ready							
134	Palestine	Foundation builder	0.61	Less Ready	Mixed						
135	Panama	Frontier mover	1.11	As Expected	Outcome-poor						
136	Papua New Guinea	Broad-based improver	0.85	As Expected	Outcome-poor						
137	Paraguay	Broad-based improver	0.92	As Expected	Outcome-poor						
138	Peru	Frontier mover	1.38	More Ready	Outcome-poor						
139	Philippines	Frontier mover	1.43	More Ready	Outcome-rich						
140	Poland	Frontier mover	1.24	More Ready	As expected						
141	Portugal	Frontier mover	1.34	More Ready	As expected						
142	Qatar	Frontier mover	0.76	Less Ready	Outcome-poor						
143	Romania	Frontier mover	1.23	More Ready	Outcome-poor						
144	Russian Federation	Frontier mover	1.03	As Expected	As expected						
145	Rwanda	Broad-based improver	1.42	More Ready	Outcome-rich						

Table C.3: Country Regulatory Profile, Wealth-adjusted Readiness, Performance in Outcomes (continued)

	Country	Regulatory profile	Wealth-adjusted index (2021)		Outcome Performance	4G Coverage	5G Coverage	Investment per capita	Digital exports	Emerging tech. adoption	Price (5GB mobile basket)
146	Saint Kitts and Nevis	Foundation builder	0.63	Less Ready	As expected						
147	Saint Lucia	Broad-based improver	0.92	As Expected	Outcome-poor						
148	Saint Vincent and the Grenadines	Broad-based improver	0.92	As Expected	Outcome-poor						
149	Samoa	Broad-based improver	0.99	As Expected	As expected						
150	San Marino	Foundation builder	0.33	Less Ready							
151	Sao Tome and Principe	Broad-based improver	0.86	As Expected	Outcome-rich						
152	Saudi Arabia	Frontier mover	1.28	More Ready	Mixed						
153	Senegal	Broad-based improver	1.15	As Expected	Outcome-rich						
154	Serbia	Frontier mover	1.36	More Ready	Outcome-poor						
155	Seychelles	Broad-based improver	0.55	Less Ready	Outcome-rich						
156	Sierra Leone	Broad-based improver	0.85	As Expected	As expected						
157	Singapore	Frontier mover	1.01	As Expected	Outcome-rich						
158	Slovakia	Frontier mover	1.17	As Expected	As expected						
159	Slovenia	Frontier mover	1.08	As Expected	As expected						
160	Solomon Islands	Broad-based improver	0.82	As Expected	Outcome-poor						

Table C.3: Country Regulatory Profile, Wealth-adjusted Readiness, Performance in Outcomes (continued)

	Country	Regulatory profile	Wealth-adjusted index (2021)		Outcome Performance	4G Coverage	5G Coverage	Investment per capita	Digital exports	Emerging tech. adoption	Price (5GB mobile basket)
161	Somalia	Broad-based improver	0.75	Less Ready	Outcome-rich						
162	South Africa	Frontier mover	1.36	More Ready	As expected						
163	South Sudan	Foundation builder									
164	Spain	Frontier mover	1.23	More Ready	As expected						
165	Sri Lanka	Frontier mover	1.11	As Expected	Outcome-poor						
166	Sudan	Broad-based improver	0.94	As Expected	Outcome-poor						
167	Suriname	Foundation builder	0.67	Less Ready	As expected						
168	Sweden	Frontier mover	0.97	As Expected	As expected						
169	Switzerland	Frontier mover	0.95	As Expected	As expected						
170	Syrian Arab Republic	Foundation builder	0.55	Less Ready							
171	Tajikistan	Foundation builder	0.48	Less Ready	Outcome-rich						
172	Tanzania	Broad-based improver	1.12	As Expected	As expected						
173	Thailand	Frontier mover	1.42	More Ready	Outcome-rich						
174	Timor-Leste	Foundation builder	0.64	Less Ready	Outcome-poor						
175	Togo	Broad-based improver	1.05	As Expected	Outcome-rich						
176	Tonga	Foundation builder	0.49	Less Ready	As expected						
177	Trinidad and Tobago	Broad-based improver	1.04	As Expected	Outcome-poor						

Table C.3: Country Regulatory Profile, Wealth-adjusted Readiness, Performance in Outcomes (continued)

	Country	Regulatory profile	Wealth-adjusted index (2021)		Outcome Performance	4G Coverage	5G Coverage	Investment per capita	Digital exports	Emerging tech. adoption	Price (5GB mobile basket)
178	Tunisia	Broad-based improver	1.08	As Expected	As expected						
179	Türkiye	Frontier mover	1.32	More Ready	As expected						
180	Turkmenistan	Foundation builder	0.19	Less Ready	As expected						
181	Tuvalu	Foundation builder	0.11	Less Ready							
182	Uganda	Broad-based improver	1.45	More Ready	As expected						
183	Ukraine	Broad-based improver	1.16	As Expected	Outcome-rich						
184	United Arab Emirates	Frontier mover	1.14	As Expected	Outcome-rich						
185	United Kingdom	Frontier mover	1.18	As Expected	As expected						
186	United States	Frontier mover	0.99	As Expected	As expected						
187	Uruguay	Frontier mover	1.02	As Expected	Outcome-poor						
188	Uzbekistan	Broad-based improver	0.47	Less Ready	Outcome-rich						
189	Vanuatu	Broad-based improver	0.95	As Expected	As expected						
190	Venezuela	Broad-based improver	0.94	As Expected	Outcome-poor						
191	Viet Nam	Broad-based improver	1.08	As Expected	Outcome-rich						
192	Yemen	Foundation builder									
193	Zambia	Broad-based improver	1.30	More Ready	As expected						

Table C.3: Country Regulatory Profile, Wealth-adjusted Readiness, Performance in Outcomes (continued)

	Country	Regulatory profile	Wealth-adjusted index (2021)		Outcome Performance	4G Coverage	5G Coverage	Investment per capita	Digital exports	Emerging tech. adoption	Price (5GB mobile basket)
194	Zimbabwe	Broad-based improver	1.08	As Expected	Outcome-poor						

Legend: green = outcome above the level predicted from 2021 wealth-adjusted readiness (studentized residual above 1), red = below (residual below -1), grey = as expected, blank = no data
Note: Each outcome column shows whether a country's actual result after 2021 was clearly better than (green), clearly worse than (red) or about the same as (grey) the result predicted from its 2021 wealth-adjusted readiness, after allowing for income, population and the other controls in Annex B. Blank means no data. The Outcome Performance label sums up the six columns: better on at least one outcome and worse on none is Outcome-rich, worse on at least one and better on none is Outcome-poor, better on some and worse on others is Mixed, and about as predicted on every outcome with data is As expected. Countries with no outcome data have no label.
Note: The Wealth-adjusted index is displayed rounded to two decimals for display.

Annex D: References

All sources are cited in full in the footnotes throughout this report. The consolidated list below gives each principal source with its live URL (all accessed July 2026).

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ISBN 978-92-61-43771-8

Published in Switzerland
Geneva, 2026

Photo credits: Adobe Stock