Department of Economic and Social Affairs
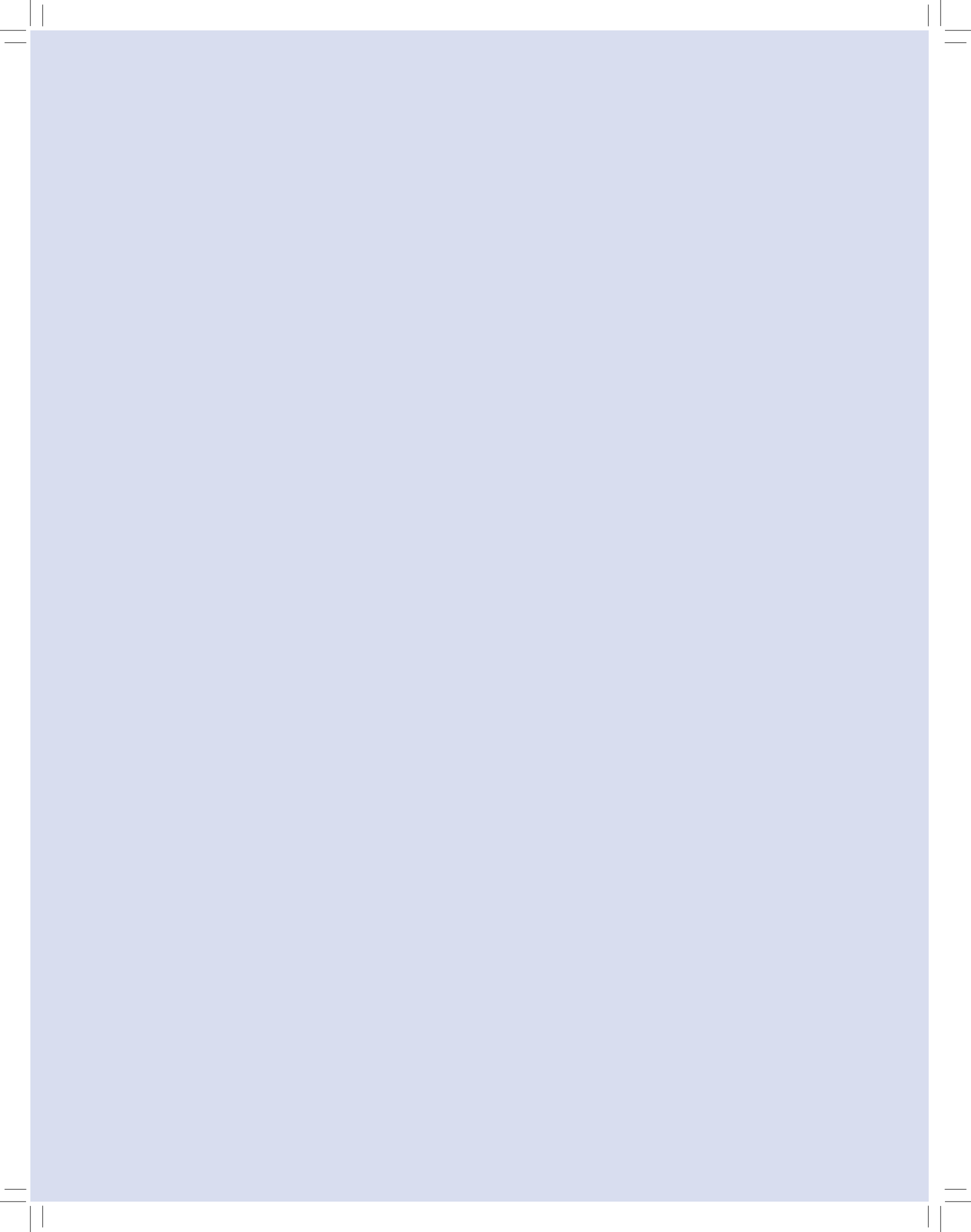
UNITED NATIONS
E-GOVERNMENT
SURVEY 2024

TECHNICAL APPENDIX

United Nations Department of Economic and Social Affairs

The Department of Economic and Social Affairs of the United Nations Secretariat is a vital interface between global policies in the economic, social and environmental spheres and national action. The Department works in three main interlinked areas: (i) it compiles, generates and analyses a wide range of economic, social and environmental data and information on which States Members of the United Nations draw to review common problems and to take stock of policy options; (ii) it facilitates the negotiations of Member States in many intergovernmental bodies on joint course of action to address ongoing or emerging global challenges; and (iii) it advises interested Governments on the ways and means of translating policy frameworks developed in United Nations conferences and summits into programmes at the country level and, through technical assistance, helps build national capacities.

Disclaimers

United Nations E-Government Surveys:
2024 Accelerating Digital Transformation for Sustainable Development
2022 The Future of Digital Government
2020 Digital Government in the Decade of Action for Sustainable Development
2018 Gearing E-Government to support transformation towards sustainable and resilient societies
2016 E-Government for Sustainable Development
2014 E-Government for the Future We Want
2012 E-Government for the People
2010 Leveraging E-Government at a Time of Financial and Economic Crisis
2008 From E-Government to Connected Governance
2005 From E-Government to E-Inclusion
2004 Towards Access for Opportunity
2003 World Public Sector Report: E-Government at the Crossroads
2001 Benchmarking E-Government: A Global Perspective

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Technical Appendix

Explore the interactive United Nations E-government Knowledgebase (UNeGovKB) to review, organize and print information from the United Nations E-Government Survey. The link can be used to download copies of all Surveys, from 2001 up to the most recent 2024 edition. Use the link or QR code to access the online interactive Knowledgebase.

https://publicadministration.un.org/egovkb

1. Introduction

The United Nations E-Government Survey 2024 marks the 13th edition of the United Nations' comprehensive evaluation of the digital government landscape across all 193 Member States. Building on over two decades of research, this Survey ranks countries using the United Nations E-Government Development Index (EGDI), which combines primary data from the United Nations Department of Economic and Social Affairs with secondary data from other UN agencies.

This edition delves into global and regional digital government trends, emphasizing the accelerated digital transformation in the post-pandemic era. It introduces the new Digital Government Model Framework, offering a methodological guide for planning and evaluating digital government initiatives. Additionally, the Survey includes an assessment of local e-government development through the United Nations Local Online Service Index (LOSI) and explores the integration of artificial intelligence (AI) in e-government.

Instead of the extensive annexes featured in previous editions, the 2024 Survey is accompanied by a separate technical appendix. The 2024 United Nations E-Government Survey appendix provides the datasets of a comprehensive evaluation of digital government across Member States, detailing the preparatory process, the key indices that constitute the E-Government Development Index (EGDI), and the methodologies used. The appendix covers the Online Services Index, Telecommunications Infrastructure Index, Human Capital Index, and E-Participation Index, alongside a deep dive into the Local Online Services Index (LOSI), including its updated methodology and changes in 2024. The process workflow highlights volunteer training, data collection, and quality assurance. The appendix also addresses challenges such as methodology limitations, the rapid evolution of digital technologies, and declining Member States' response rates.

Additionally, it includes insights from a pilot study on Open Government Data and explores Complex Network Analysis.

Technical Appendix

1.1 Preparatory process for the 2024 E-Government Survey

The preparations for the 2024 Survey included two expert group meetings during which participants exchanged views, endeavoured to ensure the alignment of the Survey with current trends and the 2030 Agenda, offered key recommendations highlighting the connections between the United Nations E-Government Development Index (EGDI) and the Sustainable Development Goals (SDGs), reevaluated the weights assigned to EGDI components and subindices, and proposed new subindices relating to connection quality, cost and e-government literacy.

The meeting participants also reviewed the methodology for the Local Online Services Index (LOSI), offering suggestions on how to capture national-level services and unique local characteristics. It was proposed that a road map be produced outlining short-, medium-, and long-term methodological changes, including pilot projects and partnerships. The meeting underscored the necessity for continuous improvement to ensure that the Survey remains a relevant tool for assessing progress in digital government development.

2. E-Government Development Index: an overview

The EGDI is a composite measure that assesses a country's readiness, capacity and progress in using e-government for the provision of public services. It has become an essential tool for benchmarking the development of e-government services worldwide.

The EGDI incorporates three key dimensions or components, each represented by its own index; the Online Services Index (OSI) evaluates the scope and quality of online services; the Telecommunications Infrastructure Index (TII) quantifies the development status of the telecommunications infrastructure, and the Human Capital Index (HCI) measures the development of human capital.

The EGDI is calculated as the equally weighted average of the normalized values of these three indices, and each index can be independently extracted and analysed to provide a more detailed understanding of a country's e-government development in specific areas.

$$\text{EGDI} = \frac{1}{3} \; (\text{OSI}_{noramalized} + \text{TII}_{normalized} + \text{HCI}_{normalized}$$

Before the three component indicators are normalized, each one undergoes a Z-score standardization procedure.

This step ensures that the overall EGDI is equally influenced by the three component indices, meaning that each index has a comparable variance after Z-score standardization. Without this standardization function, the EGDI would primarily be determined by the component index with the greatest dispersion. By applying Z-score standardization, the arithmetic average sum becomes a reliable statistical indicator, where "equal weights" genuinely represent "equal importance" in the calculation of the final EGDI value.

This process guarantees that the three components – online services, telecommunications infrastructure, and human capital – contribute equally to the overall assessment of a country's e-government development.

The three components of the E-Government Development Index (EGDI)
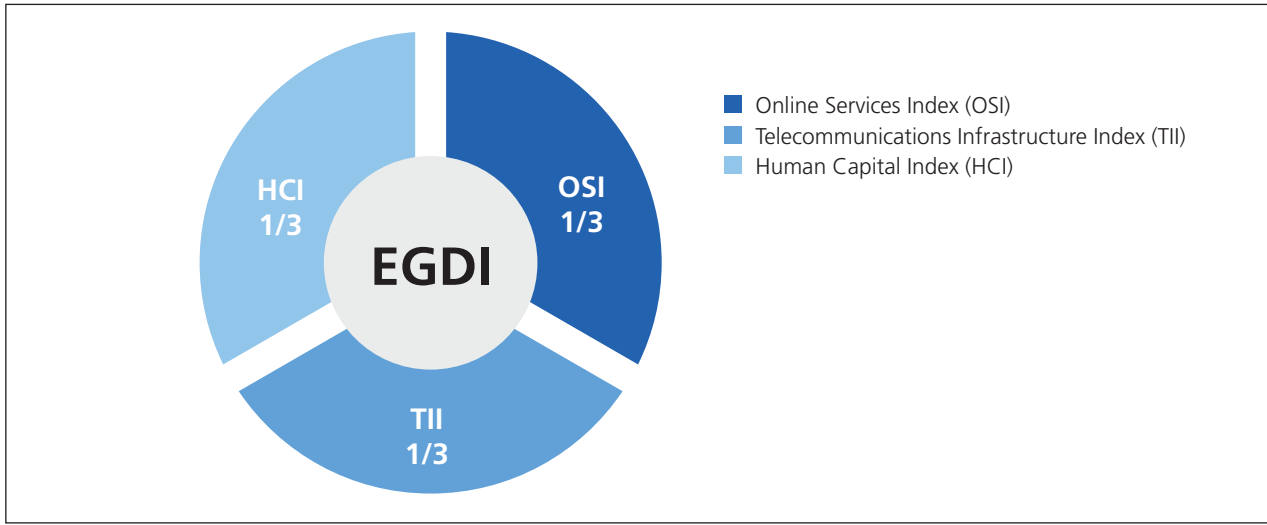
The standard Z-score calculation for each component indicator follows this formula:

$$Z = \frac{x - \mu}{\sigma}$$

where:

Z represents the standard Z-score for the component indicator

x is the raw score that needs to be standardized

μ denotes the mean (average) of the population

σ signifies the standard deviation of the population

The composite value of each component index is normalized to fall within the range of 0 to 1, and the overall EGDI value is calculated by taking the arithmetic average of the three component indices.

Countries are grouped into four levels based on their EGDI values. The inclusive value ranges for these levels are as follows: very high EGDI values range from 0.7500 to 1.000, high EGDI values range from 0.5000 to 0.7499, middle EGDI values range from 0.2500 to 0.4999, and low EGDI values range from 0.0000 to 0.2499. References to these ranges in the E-Government Survey are rounded for the sake of clarity.

To provide a more nuanced analysis of performance within each EGDI level, these groups are further divided into four distinct rating classes. The rating classes within the respective EGDI levels are sequentially classified in descending order, as follows:

VH, V3, V2 and V1 for the very high EGDI group
HV, H3, H2 and H1 for the high EGDI group
MH, M3, M2 and M1 for the middle EGDI group and
LM, L3, L2 L1 for the low EGDI group (see figure A2).

Figure 2   EGDI rating classes
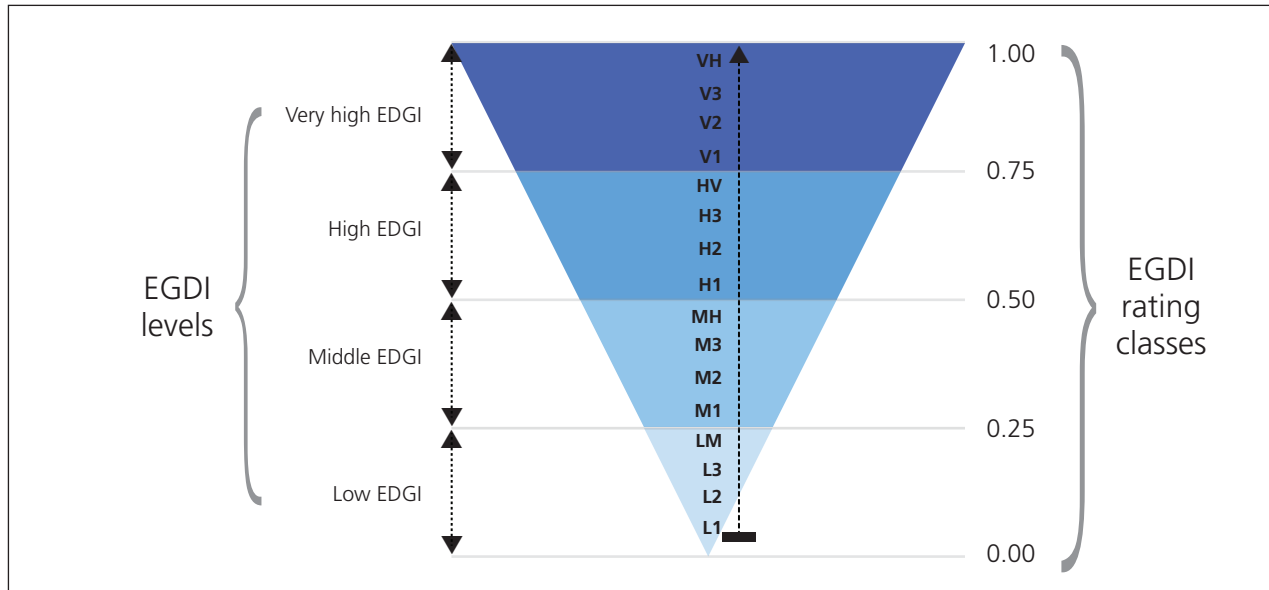
By providing a numerical evaluation and ranking of e-government development, the EGDI serves as a benchmark for the States Members of the United Nations. Although the methodological framework for EGDI has remained consistent throughout the various editions of the United Nations E-Government Survey, each edition has been adapted to reflect the latest trends in e-government strategies, the evolving understanding of best practices in e-government, advancements in technology, and other relevant factors. Furthermore, data collection practices have undergone periodic refinements to ensure that the most accurate and up-to-date information is captured. The EGDI methodology primarily uses the "donor imputation" method, which replaces missing values in a record with corresponding earlier values from a complete and valid record. The EGDI 2024 datasets, including specific breakdowns for Regional and Economic Groupings, Least Developed Countries (LDCs), Landlocked Developing Countries (LLDCs), and Small Island Developing States (SIDS), can be found in Section 11 of this appendix.

3. Online Services Index

The OSI, a proprietary quantitative index developed by UN DESA, evaluates e-government services provision across the 193 Member States. Based on responses to a comprehensive OSI questionnaire about each country's national government portal and key ministerial websites, this vital metric assesses how Governments leverage digital technologies to enhance e-governance and public engagement.

A nuanced scoring system is employed for OSI assessment. For most features, a binary approach is used; readily accessible elements receive a score of 1, while a score of 0 is assigned for absent or inaccessible features. This straightforward method provides a clear, evidence-based snapshot of a country's online services landscape. However, for questions relating to the ability of users to complete government services transactions, a more detailed scale is applied, with scores ranging from 0 to 2; 0 indicates no online service or information, 1 signifies available information but offline transaction completion, and 2 denotes fully online information and transaction capabilities, including payment and document receipt.

This refined scoring approach captures the varying degrees of digital services maturity across countries, offering a comprehensive view of e-government development. By evaluating both the presence of online features and the depth of transactional capabilities, the OSI provides a nuanced understanding of how effectively Governments are embracing digital governance to serve their constituents.

The 2024 E-Government Survey retains the successful OSI calculation introduced in 2022. The OSI assessment questions are categorized into five discrete thematic areas reflected in five subindices – institutional framework (IF), services provision (SP), content provision (CP), technology (TEC), and e-participation (EPI) – with the OSI calculated based on the normalized values for each subindex. This structure enables a more comprehensive and nuanced evaluation of online services delivery.

The OSI questionnaire, which captures accumulated values, undergoes regular updates to reflect the dynamic nature of digital government and to measure global advancements in content and services provision, technology, citizen engagement, and policy and institutional frameworks.

The number of questions (indicators) in the OSI survey increased from 180 in 2022 to 183 in 2024, reflecting the tool's evolving complexity. For a comprehensive list of the indicators measured for the OSI 2024, see section 11 of this appendix.

To ensure OSI 2024 comparability with the 2022 data sets, the weight assigned to each subindex remains the same as in the previous edition, where it was determined based on the proportion of assessment questions within the respective thematic areas (see figure 3). By retaining this methodology, UN DESA underscores its commitment to providing a reliable, adaptable metric for understanding the evolving landscape of digital government services globally.

Figure 3   The five subindices of the Online Services Index
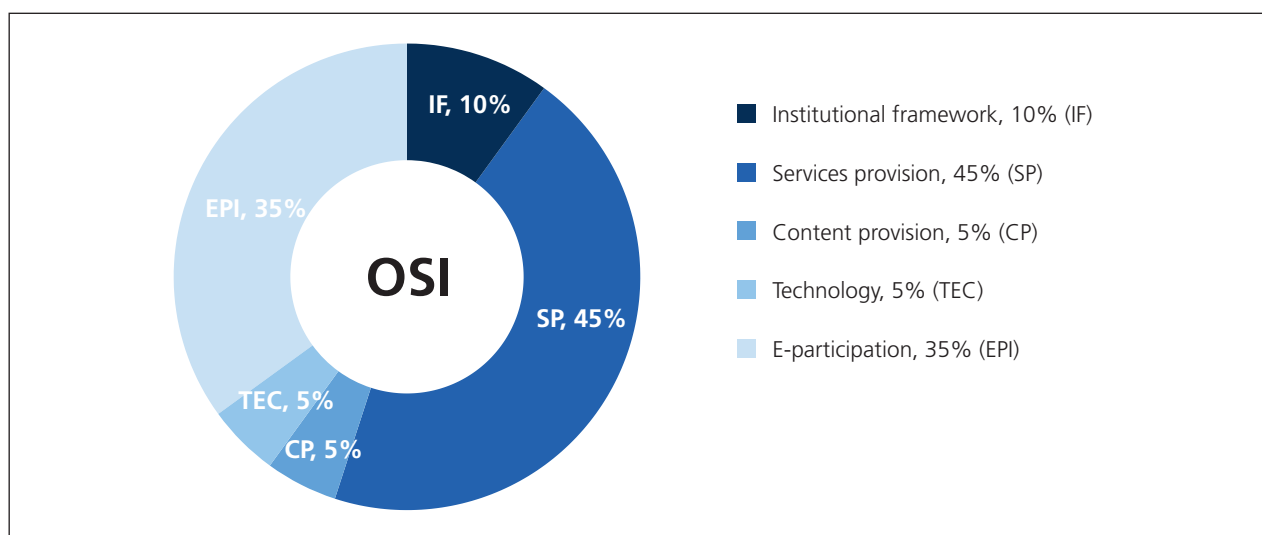
The calculation of the OSI maintains its foundation in normalized values for each subindex, employing consistent standardization and normalization processes. This approach ensures comparability across successive Surveys while also accommodating refinements that reflect the evolving digital governance landscape.

Specifically, the scores for questions within each of the five categories (IF, SP, CP, TEC and EPI) are tallied, and Z-scores are generated for each category and assessed country using the following formula:

$$\text{Z-score X} = \frac{(X-\text{Mean}(X))}{\text{ST.DEV}(X)}$$

where X represents the respective category. The resulting values are a series of standardized subindices reflecting online services provision across the primary thematic dimensions.

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The overall total score for a given country then becomes the sum of the normalized and weighted scores for each of the five subindices:

$$\text{OSI}_{\text{country(i)total score}} = (\text{CP}_{\text{Z-score}} * \text{CP}_{\text{weight}}) + (\text{EPI}_{\text{Z-score}} * \text{EPI}_{\text{weight}}) + (\text{IF}_{\text{Z-score}} * \text{IF}_{\text{weight}}) + \\ (\text{SPZ}_{\text{-score}} * \text{SP}_{\text{weight}}) + (\text{TEC}_{\text{Z-score}} * \text{TEC}_{\text{weight}}) + (\text{CP}_{\text{Z-score}} * \text{CP}_{\text{weight}})$$

In the final step of the process, the weighted actual scores for each country are normalized, yielding each assessed country an OSI value between 0 and 1 according to the following formula:

$$\text{Online Services Index (Country "X")} = \frac{\text{Actual total score-Lowest total score}}{(\text{Range of total scores for all countries})}$$

where the online index value for a given country is equal to the actual total score less the lowest total score, divided by the range of total scores for all countries.

A comprehensive list of the features assessed for the 2024 OSI and OSI Datasets are available in Section 11 of this appendix.

4. E-Participation Index

The EPI, an OSI subindex, is a key part of the EGDI. It evaluates the effectiveness and relevance of the digital information and services offered by Governments to encourage citizen engagement in public policy formulation. It is a vital element of e-government assessment that aims to promote public participation and empowerment using digital tools. As a fundamental aspect of monitoring e-government development, the EPI consistently assesses how prepared Governments are to "ensure responsive, inclusive, participatory and representative decision-making at all levels" (SDG target 16.7).

The EPI has been a crucial component of the Survey since 2003 and remains anchored to a comprehensive framework that employs a three-point scale to differentiate between deliberate actions taken by the Government in three key areas: the e-information indicator assesses government efforts to provide the public with information on significant aspects of public life; the e-consultation indicator evaluates government initiatives aimed at engaging the public in policy matters and/or services delivery consultations at various stages of the process; and e-decision-making measures the government commitment to incorporating and reflecting people's input in decision-making processes (see figure 4).

Figure 4   E-participation framework

E-Information
Enabling participation by providing citizens with public information and access to information without or upon demand

E-consultation
Engaging citizens by facilitation contributions to and deliberations on public policies and services

E-decision-making
Empower citizens through the co-design of policy options and co-production of service components and delivery modalities

Source: 2022 E-government Survey, p.200

Note: This illustration outlines the United Nations E-Government Survey's three key e-participation elements: e-information, e-consultation, and e-decision making. It also showcases the potential outcomes of implementing these concepts and suggests relevant tools for each aspect.

To assess these three key areas, the Survey evaluates government portals and websites for the presence or absence of specific features. These include the integration of participatory budgeting or similar mechanisms; the availability of open government data in general and for six crucial sectors closely linked to SDG implementation (education, employment, environment, health, justice, and social protection); evidence of co-creation or co-production mechanisms for collaborative services provision; indications that people's voices are heard in discussions and decision-making processes related to the formulation and adoption of policies on issues concerning vulnerable populations; and evidence of online consultations (via e-forums, e-polls, e-questionnaires, or other e-participation tools) designed to facilitate the engagement of people in vulnerable situations.

As a comparative measure, the EPI allows countries to reflect on where they stand relative to other countries in the deployment of e-participation mechanisms. The Index does not aim to prescribe specific practices but rather provides insights into how different countries utilize online tools to foster interaction between the Government and its citizens, as well as among the people themselves, for the benefit of all.

It is important to note that the EPI is a qualitative assessment based on the availability and relevance of participatory services offered on government websites. As such, the comparative ranking of countries is primarily for illustrative purposes and serves as an indicator of general trends in promoting citizen engagement.

To calculate the EPI mathematically, the total score for a given country is normalized by subtracting the lowest total score of any country in the Survey and then dividing the result by the range of total scores across all countries, as follows:

$$\text{E-Participation Index (Country X)} = \frac{\text{Total score (Country X)} - \text{Lowest total score}}{\text{Highest total score-Lowest total score)}}$$

The e-participation ranking of countries is determined by their EPI values using the "standard competition ranking" method. In this ranking system, countries with identical EPI values receive the same ranking number, and a gap is left in the ranking numbers. This approach ensures that if two or more countries tie for a position in the ranking, the positions of all those ranked below them remain unaffected. Consider a scenario in which country A ranks ahead of B and C, the latter two have the same EPI value, and all three countries score higher than country D. In this case, country A would be ranked first, countries B and C would both be ranked second, and country D would be ranked fourth.

EPI features assessed and datasets are available in Section 11 of this appendix.

5. Telecommunications Infrastructure Index

By assessing the existing information and communications technology (ICT) infrastructure, the TII plays a vital role in ascertaining a country's capacity for e-government development, as a strong infrastructure is essential for delivering digital services and facilitating online interactions between government and citizens.

The 2024 E-Government Survey has introduced a significant enhancement to the TII, replacing the fixed broadband subscriptions indicator with a new affordability indicator to complement the three existing subindices (estimated number of Internet users per 100 inhabitants, number of mobile subscriptions per 100 inhabitants, and number of wireless broadband subscriptions per 100 inhabitants).

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This replacement was necessary due to the increasing difficulty in collecting reliable data on fixed broadband subscriptions from Member States. The new affordability indicator allows for a more accurate assessment of how easily citizens can financially access ICT services, particularly in relation to their income levels. This improvement was made possible by the recent release from the International Telecommunication Union (ITU) of a comprehensive data set of indicators that measure affordability for all Member States. The change also aligns with past recommendations from expert group meetings and Member States.

Methodologically, affordability was integrated into the TII as a composite of two subindices, mobile broadband data and voice high-consumption basket price and fixed-broadband Internet basket price, expressed as a percentage of gross national income (GNI) for each Member State (see box 1).

Box 1   Affordability subindices within the TII

- Mobile broadband data and voice high-consumption basket price as a percentage of gross national income (GNI) per capita. This basket refers to the cheapest mobile broadband plan (and add-on) providing at least 2 GB of monthly data using at least 3G technology, 140 minutes of voice, and 70 SMS messages.

- Fixed-broadband Internet basket price as a percentage of GNI per capita. Fixed-broadband (wired) Internet traffic is traffic generated by fixed-broadband subscribers and measured at the end-user access point. Such traffic should be measured by tallying up download and upload traffic; this should exclude wholesale traffic, walled garden, Internet Protocol television (IPTV) and cable TV traffic. The indicator is calculated by dividing fixed-broadband Internet traffic by total fixed-broadband subscriptions.

Source: ITU, Measuring Digital Development: ICT Development Index 2024 (Geneva, 2024). p. 37, available at https://www.itu.int/dms_pub/itu-d/opb/ind/D-IND-ICT_MDD-2024-3-PDF-E.pdf

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As in past years, the TII is calculated based on the average composite of four equally weighted subindices (see figure 5). The data for all subindices were sourced from ITU on 14 February 2024.

Figure 5   The four subindices of the Telecommunications Infrastructure Index

- Affordability (AF)
- Internet users (percentage of population) (IU)
- Mobile subscriptions per 100 inhabitants (MS)
- Active mobile-broadband subscriptions per 100 inhabitants (AM)
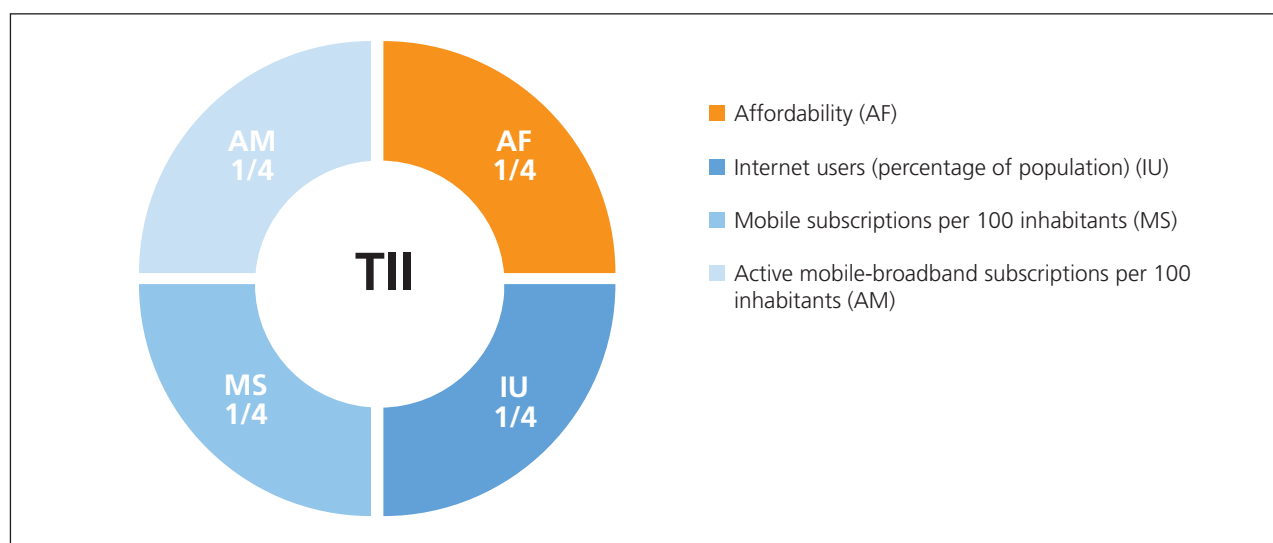
When raw data were processed for the TII, the most recently available data from ITU were used to fill in any missing values for the subindices. Following the data standardization methods applied in the previous two E-Government Surveys, a maximum limit of 120 per cent was set for raw data from ITU on mobile/cellular telephone subscriptions and active mobile broadband subscriptions. Upper and lower limits were set for the affordability data to facilitate comparison across countries, while the percentage of Internet users was kept in its original form using the figures provided directly by ITU. Subsequently, a Z-score was calculated for each subindex. The TII composite value was then derived by taking the arithmetic mean of the Z-scores for the four subindices, as follows:

$$\text{Telecommunications Infrastructure Index composite value} =$$
$$\text{Average (Internet users}_{\text{Zscore}} + \text{mobile or cellular telephone subscriptions}_{\text{Zscore}} +$$
$$\text{active mobile broadband subscriptions}_{\text{Zscore}} + \text{affordabilty}_{\text{Zscore}}$$

The TII value for each country was then computed by normalizing the TII composite value (taking the composite value for a given country, subtracting the lowest composite value in the same data set, and dividing by the range of composite values for all countries), as follows:

$$\text{TII (Country "X")} = \frac{\text{Composite value (Country X) – Lowest composite value}}{\text{Highest composite value – Lowest composite value}}$$

The TII datasets can be accessed in Section 11 of this appendix.

6. Human Capital Index

The HCI is the EGDI component that reflects the human dimension of e-government, underscoring the importance of linking digital government systems to the ability of citizens to utilize them. By assessing literacy rates and other education-related indicators, the HCI gauges a population's readiness to engage with and benefit from e-government initiatives.

For the 2024 Survey, the HCI has been significantly enhanced by the addition of a new subindex – e-government literacy (EGL) – to complement the four existing subindices (see figure 6). The four subindices from the 2022 Survey, all sourced from UNESCO, include adult literacy rate; combined primary, secondary and tertiary gross enrolment ratio; expected years of schooling; and average years of schooling.

The EGL subindex, developed in-house using data from national portal assessments, measures digital literacy skills, which play a crucial role in the effective implementation and utilization of e-government services. As Governments continue to digitalize their operations, the ability people to engage with digital platforms has become increasingly important. EGL goes beyond merely enabling citizens to access online services; it empowers them to participate more fully in digital governance, provide feedback, and engage in civic processes online. By assessing digital literacy levels, Governments can develop tailored digital strategies, identify areas for improvement in user interface design, and develop targeted digital skills training programmes. The incorporation of this indicator provides a more comprehensive view of a country's readiness for and potential to benefit from digital government initiatives (see box 2).

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Box 2   E-government literacy

- In its 2024 edition, the United Nations E-Government Survey introduces e-government literacy (EGL) as new area of assessment. As a subindex of the HCI, the EGL measures the ability of all segments of the population, especially vulnerable groups, to take full advantage of available e-government services and e-participation opportunities.

- The EGL measures the level of e-government literacy within a country by assessing key features on government portals.

- EGL features accessed are: Internal search mechanism, Online user support, Social Networking features, Live chat support with a person, Privacy policy, Information on online services use, Digital identity management, Facilitation of free Internet access, Open data metadata, User Guidance, Service Personalization, Co-creation and/or Co-production (In Health, education, social protection, employment, environment and Justice) and Access to physical spaces.

Source: Chapter 1 of the present Survey.

With the improved HCI structure, all five subindices contribute equally to the HCI component, allowing for a more even influence of the indicators; this represents a departure from the HCI weighting approach applied in the 2022 E-Government Survey.

Figure 6   The five subindices of the Human Capital Index
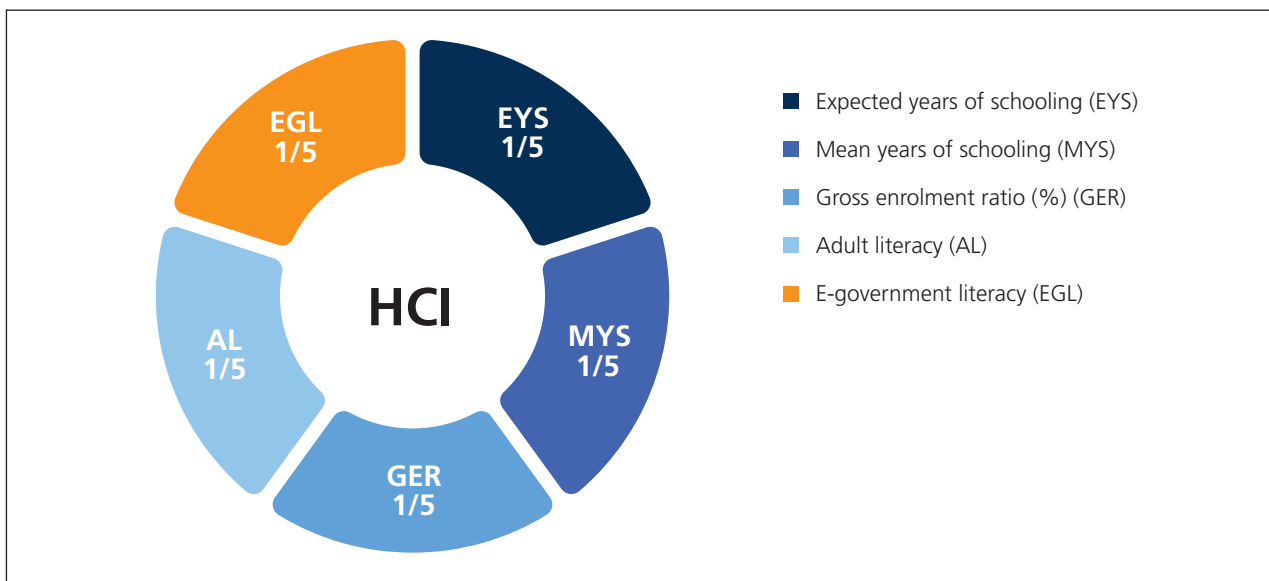
The methodology for calculating this component aligns with the approach employed for the other EGDI components, where each of the five subindices are first standardized using the Z-score procedure. Subsequently, the HCI composite value for country X is derived from the arithmetic mean of the five subindices, with equal weight assigned to each indicator, as follows:

$$
\begin{aligned}
\text{Human Capital Index composite value} \\
= 1/5 \times \text{Adult literacy rate}_{\text{Zscore}} \\
+ 1/5 \times \text{Gross enrollment ratio}_{\text{Zscore}} \\
+ 1/5 \times \text{Estimated years of schooling}_{\text{Zscore}} \\
+ 1/5 \times \text{Mean years of schooling}_{\text{Zscore}} \\
+ 1/5 \times \text{E}\sim\text{government literacy}_{\text{Zscore}}
\end{aligned}
$$

The HCI composite value for each country is then normalized by subtracting the lowest composite value among all countries in the Survey from the country's composite value, then dividing the result by the range of composite values across all countries, as follows:

$$\text{Human Capital Index (Country X)} = \frac{\text{Composite value (Country X) – Lowest composite value}}{\text{Highest composite value – Lowest composite value}}$$

HCI datasets are available in Section 11 of this appendix.

7. Member States Questionnaire

Consistent with previous editions of the Survey, countries were asked through the Member States Questionnaire (MSQ) to provide the website addresses (URLs) of their national portals as well as those of various government ministries. The Questionnaire requested information on efforts supporting e-government development, open government data, e-participation, and the designated authority responsible for e-government policies. It also included questions relating to institutional and legal frameworks, strategies, policies, and development plans. Since 2022, 155 Member States have submitted the MSQ; a total of 110 countries (representing 57 per cent of the United Nations membership) submitted their responses in 2024.

The 2024 MSQ can be accessed through UN DESA portal at https://publicadministration.un.org/egovkb

The MSQs provide valuable insights into policy initiatives and implementation details that may not be immediately apparent from the online portal assessments alone. Robust participation from Member States in completing and submitting the Questionnaire is essential for ensuring the accuracy and richness of the EGDI analysis. The comprehensive collection of data enables a thorough and precise evaluation that reflects the actual progress achieved and challenges faced in the realm of digital government.

Recent surveys have seen a downward shift in MSQ response patterns. This change in participation levels affects the depth and breadth of the contextual information available, which is crucial for ensuring an updated comprehensive analysis of e-government development.

To enhance the accuracy of e-government assessments, it is vital for all Member States to complete and return the MSQ in a timely manner with all the requested information. This comprehensive data collection enables DPIDG to perform a thorough and precise evaluation that reflects the genuine progress achieved and challenges faced in the realm of digital government. Government cooperation and prompt responses are indispensable for achieving a holistic and reliable assessment of global e-government development.

The list of responding countries to Member States Questionnaire (MSQ) is available in Table 20 in section 16 of this appendix.

8. Local Online Services Index

The Local Online Services Index (LOSI) methodology, developed by UN DESA and UNU-EGOV, is designed to assess the effectiveness of local government portals in the most populous cities of 193 UN Member States. The methodology aims to provide a comprehensive understanding of local e-government status, support policy development, and improve e-government services at the local government level. LOSI offers a detailed analysis of how cities are leveraging digital tools to engage citizens and deliver public services.

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In addition to assessing current digital infrastructure, the LOSI methodology identifies critical areas for improvement, helping local governments enhance their e-government offerings. By benchmarking the performance of cities, LOSI fosters both competition and collaboration, encouraging local governments to adopt best practices and achieve higher standards in local e-government. The insights gained from these assessments contribute to the global dialogue on effective digital transformation strategies and shape the future direction of local e-government initiatives, ensuring that cities are better equipped to meet the evolving needs of their populations.

8.1 What has changed in the 2024 LOSI?

The LOSI has undergone some revision to ensure that it continues to provide a comprehensive assessment of local e-government trends. The number of indicators increased from 86 assessed in the previous survey to 95 across six key areas: institutional framework, content provision, services provision, participation and engagement, technology, and newly added subindex e-government literacy (see Table 1).

Table 1   LOSI subindices

	LOSI 2022 indicators	LOSI 2024 indicators
Institutional framework	8	5
Content provision	25	30
Services provision	18	30
Participation and engagement	17	10
Technology	18	10
E-government literacy	-	10
Total	**86**	**95**

The addition of e-government literacy aligns the LOSI more closely with the OSI (used to assess national portals), ensuring consistency in evaluating digital government services at both the local and national levels. This allows for more in-depth evaluation, emphasizing the importance of digital skills for citizens using online government services. The assessment now examines critical features of government websites, aligning with global trends towards increased inclusivity and the preservation of high technical and accessibility standards.

While the institutional framework dimension remains largely unchanged from 2022, improvements in content and services provision criteria enable a more comprehensive assessment of the online offerings of government agencies. The technology dimension, though streamlined to 10 indicators, continues to focus on key technical aspects such as accessibility, functionality, and adherence to standards. This refined approach keeps pace with global trends towards increased public engagement and digital inclusion, building on 2022 foundations while also introducing new elements to reflect the evolving digital landscape.

8.2 LOSI assessment methodology

The 40 cities surveyed for the 2018 pilot LOSI and the 100 cities surveyed for the 2020 LOSI were selected based on geographical location and population distribution. All of the world regions were equitably represented; the number of countries selected from each region was based on the share of that region's population in the global population. For the 2022 E-Government Survey, it was decided that the most populous city, town, municipality or settlement in each of the 193 Member States would be invited to participate in the LOSI assessment process. This methodology has been applied for the 2024 Survey as well. The selection process relies on data from the most recent United Nations

Demographic Yearbook and The World's Cities Data Booklet, focusing on the population of the "city proper" as the sole criterion. This approach ensures consistency and reproducibility in the research while also focusing on the largest possible "sample size" in assessing the reach of e-government services. It is important to note that population figures are used only for city selection and do not influence the assessment of a city's performance.

For countries relatively small in population or geography such as Monaco, Singapore or small island developing states (SIDS), where people often have a single point of access to government services, the LOSI assessment employs an integrated approach. The methodology evaluates all government digital services from the perspective of the end-user, reflecting the lived experience of residents who interact with a single, unified government structure.

The city portals are assessed using the computation method from the previous Survey to ensure continuity and consistency. The scoring system for each indicator remains binary: a city receives a 1 if the feature is present on its website or a 0 if the feature is absent or not found. Cities can also earn a point for local access by providing a direct link to the relevant national portal. The final LOSI value is calculated by dividing the city's total score to new maximum of 95, yielding a value ranging from 0 to 1.

Although the number of indicators has increased, the LOSI value ranges remain consistent with previous editions. Based on their respective values, cities are categorized into four levels or groups – very high (0.7500 to 1.0000), high (0.5000 to 0.7499), middle (0.2500 to 0.4999), or low (0.0000 to 0.2499). These ranges facilitate the comparison of e-government development levels across different cities and provide a clear benchmark for progress. Cities within the same LOSI group are considered to have comparable levels of local e-government development. This classification provides valuable insights for policymakers, helping them gauge what constitutes good performance and set realistic targets for short-, medium-, and long-term improvement.

For a comprehensive list of the features assessed for the 2024 LOSI, see Table 13 in Section 11 of this Appendix.

8.3 LOSI Network

To further extend the reach and impact of LOSI, UN DESA and UNU-EGOV have established partnerships with various institutions and local governments. These collaborations, formalized through Memoranda of Understanding (MOUs), enable the application of the LOSI methodology to multiple cities within individual countries. This approach has significantly expanded the LOSI network, fostering knowledge sharing and best practices among participating cities. As a result, an increasing number of urban centers are benefiting from the LOSI methodology, using the insights gained to enhance their online services and address common challenges in digital governance.

For information on ongoing and completed projects visit the application of LOSI methodology webpage on UN E-Government Knowledgebase https://publicadministration.un.org/egovkb/en-us/About/E-Government-at-Local-Level/Application-of-LOSI-methodology-in-countries.

9. Local Government Questionnaire

For the 2024 E-Government Survey, the Local Government Questionnaire (LGQ) was utilized alongside the LOSI survey to gather supplementary information. Of the 193 most populous cities assessed for the 2024 LOSI, 51 cities completed the LGQ – a response rate of 26.42 per cent. The LGQ used for the present Survey can be accessed at https://publicadministration.un.org/egovkb.

The list of responding cities to LGQ is available in Table 21 in section 16 of this appendix.

10. E-Government Survey process workflow

The OSI values for 2024 were calculated based on evaluations performed by 261 online researchers comprising of 215 new volunteers from the United Nations Volunteers programme, 46 returning volunteers from past Surveys, and others recruited through Department of Public Institutions and Digital Government (DPIDG) outreach. These evaluators hailed from 127 different nations and collectively possessed proficiency in 67 languages. They assessed each country's national website using the Survey's Online Services Questionnaire, conducting evaluations in the respective native languages to ensure accuracy. For the full list of online researchers, see table 19 in this appendix.

10.1 Volunteer training and data collection phase

For the 2024 E-Government Survey, volunteers attended introductory sessions before being assigned two pilot tasks simulating the data collection phase. These tasks included one mock OSI assessment and one mock LOSI assessment of e-government portals. Each volunteer researcher received the same set of pilot assignments to facilitate quality control and ensure consistent training across the cohort. To qualify for the data collection phase, participants had to complete and submit the two mock assessments for review.

During the data collection phase, each qualified participant received personalized research assignments tailored to their specific capabilities. These assignments involved conducting OSI and LOSI assessments for one of the 193 United Nations Member States and its most populous city. For each assigned Member State and city, participants conducted independent research into the provision of e-government services. The online presence of each Member State was assessed independently by two researchers proficient in one or more of the official languages of the assessed country.

Researchers relied exclusively on government-affiliated sources and were instructed not to share their findings or research with third parties, including government affiliates of the assessed Member States. The aim was to assess and verify the existence of an extensive set of features and online services relevant to e-government development. Researchers assumed the role of targeted users and based their responses on whether the assessed features were readily accessible to the average user.

10.2 Discrepancy review phase

Following the data collection phase, all submitted assignments underwent a rigorous review process to ensure accuracy and consistency. Initially, the assessment platform conducted an automatic check for discrepancies between the submissions of two volunteers assigned to each country or city. If the discrepancies were below a defined threshold of 20%, the system allowed the two volunteers to dispute and negotiate their findings, working together to reach an agreement. If they could not resolve the differences, the case was escalated to a UN DESA-appointed reviewer for further evaluation. For discrepancies between 20% and 50%, the system automatically flagged the assessment, returning it to both volunteers for reassessment. The volunteers were required to conduct a new evaluation to address and correct the inconsistencies.

Discrepancies exceeding 50% resulted in the automatic disqualification of the assessment. These cases were immediately escalated to the assigned UN DESA reviewer, who conducted further research and decided whether to reassign the assessment to a new pair of volunteers or to a different set of assessors.

Following the initial review by the UN DESA reviewer, assignments were forwarded to a senior UN DESA reviewer for cross-checking, ensuring a thorough final data quality assurance review before approval. This established approach guaranteed that each assignment was conducted by independent, trained researchers equipped with the necessary language skills and an understanding of the social and political context of the assessed Member State. Internal UN DESA experts in e-government

development and online services provision then meticulously reviewed the assignments to prevent any disparities in the assessment process, the introduction of intentional biases, the submission of inaccurate information to improve scores, or even potential fraud.

Throughout this process, UN DESA reviewers played a pivotal role by conducting independent research to verify responses and commissioning additional research from volunteer researchers as necessary to resolve complex issues and discrepancies. This multi-tiered review system was designed to ensure the integrity and reliability of the data used in the E-Government Survey.

10.3 Data quality assurance

The quality assurance process (see Box 3) began with checking the consistency of the data against established historical patterns and group rankings based on the OSI and LOSI values, which measured the scope and quality of online services. The survey questions were then fine-tuned to stabilize the data set and ensure alignment with the EGDI data model.

Following the initial calculation of the OSI and LOSI, outliers were subjected to two or more levels of assessment and supervision. MSQ and LGQ data were utilized for compensation where feasible. The indices were then recalculated, with detailed analysis conducted on target countries and cities showing significant changes or improvements.

Box 3   List of the criteria adopted for data QA

- Three levels of assessments/review (volunteers, UN DESA reviewer, UN DESA senior reviewer)

- First check of consistency of data with data patterns (when doable) by group ranking (OSI/LOSI – VH, H, M, L)

- Fine-tuning of OSI/LOSI questions to stabilize data set and ensure consistency with EGDI/LOSI data model

- Second check of consistency of data with data patterns by group ranking (OSI/LOSI – VH, H, M, L)

- First calculation of OSI/LOSI

- Three levels of assessment/review of the outliers – compensation using MSQ/LGQ (if doable)

- Second calculation of OSI/LOSI

- Investigation and data analysis of target countries/cities (outliers and specific cases with significant drop/improvement)

- Random check of OSI/LOSI subset of questions/URLs – compensation using MSQ/LGQ (if doable)

- Third calculation of OSI/LOSI

- Third check of consistency of data with data patterns by group ranking (OSI/LOSI – VH, H, M, L)

- Check of consistency with other international benchmark reports and third-party sources (MSQ/LGQ)

- Validation of the Dataset for OSI/LOSI

- Recalculation of OSI (final)

- Calculation of EGDI/EPI/LOSI

- Data analysis of target countries (those moving from one group to another)

- Final calculation of EGDI/EPI/LOSI

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To further ensure accuracy, a random subset of index questions and URLs were checked, with MSQ and LGQ data used for compensation if needed. A third calculation of the OSI and LOSI followed, along with another consistency check against established data patterns and group rankings.

The process also included cross-referencing with international benchmark reports and third-party sources, with MSQ and LGQ data used to ensure consistency and validate discrepancies. Finally, the OSI and LOSI were recalculated one last time, incorporating all quality assurance measures and adjustments.

This comprehensive approach, featuring multiple review levels, external source cross-referencing, and the strategic use of MSQ and LGQ data, enhanced the overall robustness and reliability of the E-Government survey findings.

10.4 Data analysis

Following the rigorous quality assurance process, E-Government Survey data were subjected to in-depth analysis to extract meaningful insights and pinpoint key trends. This comprehensive analysis involved comparative evaluations across countries, cities, regions, and income groups, facilitating the identification of strengths and areas requiring improvement. The analysis also included comparisons with similar digital government indexes such as the Organization for Economic Co-operation and Development Digital Government Index.

The analysis extended beyond EGDI and other index-related data. Researchers explored correlations with the SDGs to assess the alignment of e-government initiatives with the broader 2030 Agenda framework, recognizing that digital governance is a critical enabler for achieving those global objectives.

This comprehensive approach was crucial as it helped identify potential factors influencing e-government progress in the countries and cities assessed, provided a more holistic view of national and local development, and highlighted areas that might benefit from targeted interventions or policy initiatives.

Trend analysis was also a crucial aspect of the data examination, enabling the identification of cities, countries or regions that had made significant progress or experienced setbacks in their e-government development over time. This longitudinal perspective allowed researchers to evaluate the effectiveness of e-government strategies and policies and to assess the impact of global events or technological advancements on e-government adoption and implementation.

The analysis encompassed both quantitative and qualitative approaches, combining statistical methods with case studies and expert opinions to provide a well-rounded and nuanced understanding of the e-government landscape. The findings from this analysis are presented in the 2024 E-Government Survey and constitute a valuable resource for policymakers, researchers and stakeholders involved in the advancement of e-government initiatives worldwide.

11. Challenges in reviewing the online presence of national and local governments

11.1 Methodology limitations

The EGDI is a powerful tool for assessing and comparing digital government development across the 193 Member States, providing a valuable snapshot of digital government capabilities at the national level. However, because levels of development, geographical characteristics, population dynamics, geopolitical situations, and other relevant factors vary widely from one country to another, the EGDI methodology has some limitations in terms of capturing certain aspects of e-government development.

For example, while the EGDI serves as a valuable proxy for assessing digital government development, it may not fully capture the diverse digital advancements occurring at the State level in large countries with federal systems. In those countries, State governments play a significant role in digital development and the provision of services, and levels of digital maturity may differ across the States. When digital governance is decentralized, the federal-level EGDI assessment may not fully reflect the digital landscape of the entire country.

In some countries, a considerable portion of digital services are set up and provided by the private sector rather than government agencies. The involvement of private entities in establishing and delivering services can skew perceptions of digital government development as a process that primarily falls within the purview of the public sector.

To address these challenges and ensure a comprehensive evaluation, additional resources such as MSQs and recent articles and publications are increasingly being used to check and confirm the quality of the results. This multifaceted approach helps provide a more accurate and nuanced understanding of digital government development worldwide.

Periodically, updates to the methodology introduce changes that could affect the direct comparability of current assessments with previous assessments. This is important not only because it affects the measurement of progress, but also because a decline in value or ranking does not necessarily indicate a decline in performance.

11.2 Multiple channels for public services delivery and the rapid evolution of digital technologies

In today's digital landscape, Governments utilize a wide range of channels to connect with citizens and provide public services, including websites, mobile applications, social media platforms, messaging apps, digital identification systems, and emerging technologies such as AI chatbots and IoT devices. This diversity, while beneficial for engagement, presents significant challenges for the comprehensive assessment of e-government. Each channel comes with unique features and capabilities, necessitating tailored evaluation criteria and ad hoc approaches for the researchers.

The EGDI methodology has been updated in every edition to better address emerging challenges and priorities. However, the evolution of digital technologies and the integration of new platforms and services are occurring so rapidly that the assessment framework may not be able to keep pace with these developments and accurately measure the most advanced features of digital government. Consequently, the EGDI may not fully reflect the progress made, especially by countries implementing initiatives that integrate the newest technologies or approaches to public services delivery. To mitigate these limitations, indirect assessment methods are also employed. These include analysing (when available) MSQ-related data and documentation, service usage statistics, and third-party evaluations, which can provide additional insights into the effectiveness and reach of digital government services. These methods can offer valuable supplementary policy information and implementation details, though they may not fully capture the nuanced capabilities and innovative features of the most cutting-edge digital government platforms.

The EGDI remains a crucial tool for assessing e-government development, but it must continue to evolve and incorporate new evaluation strategies so that it accurately reflects the dynamic digital landscape. Ongoing refinement is essential to ensure that the Index provides a holistic and accurate measure of e-government progress, capturing both established and emerging technologies in its scope.

11.3 Measuring e-participation

Assessing engagement on national portals presents unique challenges in e-government evaluation, particularly when web analytics are not part of the assessment methodology. Without access to traditional metrics such as page views or user session data, evaluators must rely on alternative methods to gauge citizen engagement and portal effectiveness.

The main challenge lies in accurately determining how well the portal meets people's needs, facilitates services delivery, and promotes interaction with government entities. Evaluators must focus on observable features, content quality, and the availability of services rather than direct user interaction data. Additionally, with the diverse range of services offered through these portals – from information provision to complex application processes – engagement potential can vary significantly across different sections of the site.

12. EGDI 2024 Datasets

Table 2   Regional groupings for E-Government Development Index (EGDI) and E-Participation

Regional/Grouping	EGDI Group	EGDI	Online Service Index	Telecommunications Infrastructure Index	Human Capital Index	E-Partcipation Index
Africa	Middle EGDI	0.4247	0.3861	0.4534	0.4345	0.2973
Americas	High EGDI	0.6701	0.5797	0.7344	0.6961	0.4735
Asia	High EGDI	0.6989	0.6400	0.7739	0.6828	0.5403
Europe	Very High EGDI	0.8493	0.7835	0.9226	0.8417	0.7247
Oceania	High EGDI	0.5288	0.4377	0.4885	0.6603	0.3747
World	**High EGDI**	**0.6382**	**0.5754**	**0.6896**	**0.6496**	**0.4893**

Small Island Developing States	High EGDI	0.5412	0.4075	0.5931	0.6229	0.3080
Land Locked Developing Countries	High EGDI	0.5159	0.4910	0.5377	0.5190	0.3999
Least Developed Countries	Middle EGDI	0.3547	0.3321	0.3539	0.3781	0.2620

Table 2.1   E-Government Development Index (EGDI) and E-Participation for Africa region

Country	Sub-Region	EDGI Group	Rating Class	Rank	EGDI 2024	OSI	TII	HCI	EPI	"Level of Income"
Algeria	Northern Africa	High EGDI	H2	116	0.5956	0.3320	0.8129	0.6418	0.0548	LMC
Angola	Middle Africa	Middle EGDI	M3	156	0.4149	0.3962	0.3724	0.4760	0.2192	LMC
Benin	Western Africa	Middle EGDI	MH	146	0.4578	0.5202	0.4817	0.3715	0.3699	LMC
Botswana	Southern Africa	High EGDI	H2	112	0.6118	0.3985	0.8649	0.5719	0.274	UMC
Burkina Faso	Western Africa	Middle EGDI	M1	175	0.2895	0.3376	0.3640	0.1668	0.2192	LIC
Burundi	Eastern Africa	Low EGDI	LM	183	0.2480	0.3146	0.0330	0.3965	0.2192	LIC
Cabo Verde	Western Africa	High EGDI	H2	111	0.6238	0.6892	0.6128	0.5694	0.5479	LMC
Cameroon	Middle Africa	Middle EGDI	M3	155	0.4294	0.3988	0.3700	0.5193	0.4247	LMC
Central African Republic	Middle Africa	Low EGDI	L1	193	0.0947	0.1128	0.0000	0.1713	0.0822	LIC
Chad	Middle Africa	Low EGDI	L2	189	0.1785	0.2674	0.1194	0.1488	0.3151	LIC
Comoros	Eastern Africa	Middle EGDI	M1	180	0.2586	0.0230	0.3537	0.3992	0	LMC
Congo	Middle Africa	Middle EGDI	M2	166	0.3391	0.2760	0.2776	0.4637	0.0822	LMC
Côte d'Ivoire	Western Africa	High EGDI	H1	124	0.5587	0.5219	0.6693	0.4848	0.589	LMC
Democratic Republic of the Congo	Middle Africa	Middle EGDI	M1	179	0.2715	0.2067	0.1591	0.4487	0.2466	LIC
Djibouti	Eastern Africa	Middle EGDI	M1	174	0.2911	0.2092	0.3840	0.2800	0.0959	LMC
Egypt	Northern Africa	High EGDI	H3	95	0.6699	0.7002	0.6946	0.6150	0.589	LMC
Equatorial Guinea	Middle Africa	Middle EGDI	M1	176	0.2855	0.1932	0.2532	0.4102	0.2329	UMC
Eritrea	Eastern Africa	Low EGDI	L2	190	0.1576	0.0000	0.1405	0.3324	0.0137	LIC
Eswatini	Southern Africa	High EGDI	H2	113	0.6081	0.4557	0.7851	0.5836	0.3836	LMC
Ethiopia	Eastern Africa	Middle EGDI	M2	169	0.3111	0.3420	0.2659	0.3254	0.1644	LIC
Gabon	Middle Africa	High EGDI	H2	121	0.5741	0.3187	0.8263	0.5772	0.1233	UMC
Gambia	Western Africa	Middle EGDI	M1	181	0.2552	0.0955	0.3877	0.2823	0.1781	LIC
Ghana	Western Africa	High EGDI	H2	108	0.6317	0.6084	0.7281	0.5586	0.5342	LMC
Guinea	Western Africa	Middle EGDI	M2	160	0.4006	0.4808	0.4323	0.2887	0.5068	LMC
Guinea-Bissau	Western Africa	Middle EGDI	M2	170	0.3083	0.1270	0.4902	0.3077	0.2192	LIC
Kenya	Eastern Africa	High EGDI	H2	109	0.6314	0.7770	0.5901	0.5271	0.5205	LMC
Lesotho	Southern Africa	Middle EGDI	M3	157	0.4123	0.2864	0.4643	0.4862	0.2055	LMC

Table 2.1 *(continued)*

Country	Sub-Region	EDGI Group	Rating Class	Rank	EGDI 2024	OSI	TII	HCI	EPI	"Level of Income"
Liberia	Western Africa	Middle EGDI	M1	182	0.2513	0.2633	0.1238	0.3669	0.1644	LIC
Libya	Northern Africa	High EGDI	H1	125	0.5466	0.0808	0.9639	0.5951	0.0137	UMC
Madagascar	Eastern Africa	Middle EGDI	M2	168	0.3235	0.4045	0.1518	0.4141	0.3014	LIC
Malawi	Eastern Africa	Middle EGDI	M2	163	0.3753	0.4625	0.1886	0.4749	0.4521	LIC
Mali	Western Africa	Middle EGDI	M1	173	0.3005	0.3334	0.4432	0.1250	0.274	LIC
Mauritania	Western Africa	Middle EGDI	M2	165	0.3491	0.1688	0.5824	0.2961	0.1233	LMC
Mauritius	Eastern Africa	Very High EGDI	V1	76	0.7506	0.5903	0.9159	0.7456	0.411	UMC
Morocco	Northern Africa	High EGDI	HV	90	0.6841	0.5618	0.8827	0.6078	0.4384	LMC
Mozambique	Eastern Africa	Middle EGDI	M1	177	0.2848	0.3959	0.0632	0.3952	0.2055	LIC
Namibia	Southern Africa	High EGDI	H2	114	0.6007	0.4996	0.7288	0.5738	0.274	UMC
Niger	Western Africa	Low EGDI	L3	187	0.2116	0.3084	0.1578	0.1685	0.2055	LIC
Nigeria	Western Africa	Middle EGDI	MH	144	0.4815	0.5372	0.4836	0.4236	0.3699	LMC
Rwanda	Eastern Africa	High EGDI	H2	118	0.5799	0.8207	0.3724	0.5467	0.7534	LIC
Sao Tome and Principe	Middle Africa	Middle EGDI	M3	154	0.4308	0.2156	0.4839	0.5928	0.1644	LMC
Senegal	Western Africa	High EGDI	H1	135	0.5162	0.4779	0.7328	0.3380	0.4247	LMC
Seychelles	Eastern Africa	High EGDI	H3	92	0.6773	0.4638	0.8913	0.6769	0.3014	HIC
Sierra Leone	Western Africa	Middle EGDI	M1	172	0.3042	0.3823	0.2585	0.2718	0.3288	LIC
Somalia	Eastern Africa	Low EGDI	L1	191	0.1468	0.2971	0.1432	0.0000	0.2877	LIC
South Africa	Southern Africa	Very High EGDI	V2	40	0.8616	0.8872	0.8951	0.8026	0.8356	UMC
South Sudan	Eastern Africa	Low EGDI	L1	192	0.1191	0.1504	0.0547	0.1521	0.1096	LIC
Sudan	Northern Africa	Middle EGDI	M1	178	0.2759	0.1293	0.4392	0.2593	0.0685	LIC
Togo	Western Africa	Middle EGDI	M2	161	0.3920	0.4472	0.2474	0.4813	0.4521	LIC
Tunisia	Northern Africa	High EGDI	HV	87	0.6935	0.5951	0.8357	0.6497	0.4521	LMC
Uganda	Eastern Africa	Middle EGDI	M3	150	0.4464	0.6069	0.2299	0.5023	0.4384	LIC
United Republic of Tanzania	Eastern Africa	Middle EGDI	M3	153	0.4327	0.4791	0.3792	0.4399	0.2877	LMC
Zambia	Eastern Africa	High EGDI	H1	130	0.5424	0.4958	0.5088	0.6225	0.411	LMC
Zimbabwe	Eastern Africa	Middle EGDI	M3	149	0.4481	0.4100	0.3947	0.5395	0.274	LMC

Table 2.2   E-Government Development Index (EGDI) and E-Participation for Americas region

Country	Sub-Region	EDGI Group	Rating Class	Rank	EGDI 2024	OSI	TII	HCI	EPI	"Level of Income"
Antigua and Barbuda	Caribbean	High EGDI	H3	105	0.6428	0.4166	0.7943	0.7176	0.3425	HIC
Argentina	South America	Very High EGDI	V2	42	0.8573	0.7965	0.8425	0.9330	0.6301	UMC
Bahamas	Caribbean	High EGDI	HV	83	0.7143	0.5402	0.8652	0.7376	0.3151	HIC
Barbados	Caribbean	High EGDI	H3	91	0.6815	0.4976	0.7624	0.7845	0.3288	HIC
Belize	Central America	Middle EGDI	MH	141	0.4872	0.4054	0.5292	0.5270	0.2329	UMC
Bolivia	South America	High EGDI	H3	99	0.6651	0.5987	0.7089	0.6876	0.4247	LMC
Brazil	South America	Very High EGDI	V2	50	0.8403	0.9063	0.8068	0.8077	0.863	UMC
Canada	Northern America	Very High EGDI	V2	47	0.8452	0.8552	0.8078	0.8725	0.9178	HIC
Chile	South America	Very High EGDI	V3	31	0.8827	0.8612	0.9455	0.8413	0.8356	HIC
Colombia	South America	Very High EGDI	V1	68	0.7793	0.7521	0.8065	0.7793	0.7397	UMC
Costa Rica	Central America	Very High EGDI	V1	61	0.8009	0.7217	0.8933	0.7877	0.726	UMC
Cuba	Caribbean	Middle EGDI	MH	139	0.4921	0.2298	0.5318	0.7148	0.9178	UMC
Dominica	Caribbean	High EGDI	H1	127	0.5445	0.3798	0.6757	0.5781	0.3014	UMC
Dominican Republic	Caribbean	High EGDI	HV	85	0.7013	0.6405	0.7444	0.7189	0.6575	UMC
Ecuador	South America	Very High EGDI	V1	67	0.7800	0.8851	0.6833	0.7715	0.8767	UMC
El Salvador	Central America	High EGDI	H2	115	0.5988	0.509	0.7526	0.5348	0.3836	UMC
Grenada	Caribbean	High EGDI	H3	104	0.6458	0.5056	0.6767	0.7550	0.2466	UMC
Guatemala	Central America	High EGDI	H2	122	0.5738	0.6538	0.5843	0.4834	0.4658	UMC
Guyana	South America	High EGDI	H1	128	0.5443	0.3455	0.6942	0.5933	0.2192	HIC
Haiti	Caribbean	Low EGDI	L3	186	0.2116	0.1379	0.2087	0.2883	0.0959	LMC
Honduras	Central America	Middle EGDI	MH	142	0.4856	0.4587	0.4799	0.5182	0.3014	LMC
Jamaica	Caribbean	High EGDI	H3	96	0.6678	0.5677	0.7296	0.7060	0.4384	UMC
Mexico	Central America	Very High EGDI	V1	65	0.7850	0.7637	0.831	0.7603	0.7397	UMC
Nicaragua	Central America	High EGDI	H1	132	0.5318	0.4493	0.5851	0.5610	0.2329	LMC
Panama	Central America	High EGDI	HV	79	0.7298	0.6505	0.8523	0.6866	0.5205	HIC
Paraguay	South America	High EGDI	HV	80	0.7251	0.6712	0.7947	0.7093	0.6027	UMC

Table 2.2 *(continued)*

Country	Sub-Region	EDGI Group	Rating Class	Rank	EGDI 2024	OSI	TII	HCI	EPI	"Level of Income"
Peru	South America	Very High EGDI	V1	58	0.8070	0.8377	0.8364	0.7469	0.7534	UMC
Saint Kitts and Nevis	Caribbean	High EGDI	H2	110	0.6305	0.3039	0.8675	0.7202	0.2055	HIC
Saint Lucia	Caribbean	High EGDI	H1	133	0.5255	0.3229	0.6498	0.6037	0.137	UMC
Saint Vincent and the Grenadines	Caribbean	High EGDI	H2	117	0.5876	0.3906	0.6767	0.6956	0.3425	UMC
Suriname	South America	High EGDI	H3	106	0.6365	0.4814	0.8714	0.5568	0.2877	UMC
Trinidad and Tobago	Caribbean	High EGDI	HV	86	0.6973	0.5999	0.7745	0.7174	0.3288	HIC
United States of America	Northern America	Very High EGDI	V3	19	0.9194	0.9136	0.9605	0.8842	0.9452	HIC
Uruguay	South America	Very High EGDI	V3	25	0.9006	0.8832	0.9437	0.8749	0.863	HIC
Venezuela, Bolivarian Republic of	South America	High EGDI	H1	131	0.5360	0.3576	0.539	0.7115	0.2192	LMC

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Table 2.3   E-Government Development Index (EGDI) and E-Participation for Asia region

Country	Sub-Region	EDGI Group	Rating Class	Rank	EGDI 2024	OSI	TII	HCI	EPI	"Level of Income"
Afghanistan	Southern Asia	Low EGDI	L2	188	0.2083	0.1438	0.2167	0.2643	0.1096	LIC
Armenia	Western Asia	Very High EGDI	V2	48	0.8422	0.7922	0.8782	0.8561	0.8493	UMC
Azerbaijan	Western Asia	Very High EGDI	V1	74	0.7607	0.7386	0.8203	0.7233	0.4932	UMC
Bahrain	Western Asia	Very High EGDI	VH	18	0.9196	0.903	0.9877	0.8680	0.9041	HIC
Bangladesh	Southern Asia	High EGDI	H3	100	0.6570	0.7374	0.6501	0.5834	0.6164	LMC
Bhutan	Southern Asia	High EGDI	H3	103	0.6511	0.5886	0.8169	0.5478	0.4932	LMC
Brunei Darussalam	South-Eastern Asia	Very High EGDI	V1	75	0.7554	0.5802	0.9868	0.6991	0.4658	HIC
Cambodia	South-Eastern Asia	High EGDI	H2	120	0.5754	0.4503	0.7609	0.5149	0.3151	LMC
China	Eastern Asia	Very High EGDI	V3	35	0.8718	0.9258	0.8995	0.7902	0.9315	UMC
Cyprus	Western Asia	Very High EGDI	V2	38	0.8619	0.8217	0.8941	0.8698	0.0548	HIC
Democratic People's Republic of Korea	Eastern Asia	Low EGDI	L3	184	0.2320	0.0291	0.1745	0.4924	0	LIC
Georgia	Western Asia	Very High EGDI	V1	69	0.7792	0.5652	0.9071	0.8654	0.5616	UMC
India	Southern Asia	High EGDI	H3	97	0.6678	0.8184	0.57	0.6149	0.6575	LMC
Indonesia	South-Eastern Asia	Very High EGDI	V1	64	0.7991	0.8035	0.8645	0.7293	0.7945	UMC
Iran (Islamic Republic of)	Southern Asia	High EGDI	H3	101	0.6564	0.3773	0.8987	0.6932	0.1781	LMC
Iraq	Western Asia	Middle EGDI	MH	148	0.4572	0.1875	0.6874	0.4967	0.0959	UMC
Israel	Western Asia	Very High EGDI	V3	23	0.9014	0.8541	0.9763	0.8739	0.6986	HIC
Japan	Eastern Asia	Very High EGDI	VH	13	0.9351	0.9427	0.9509	0.9117	0.9863	HIC
Jordan	Western Asia	High EGDI	HV	89	0.6849	0.7591	0.6499	0.6458	0.6164	LMC
Kazakhstan	Central Asia	Very High EGDI	V3	24	0.9009	0.939	0.9235	0.8403	0.8493	UMC
Kuwait	Western Asia	Very High EGDI	V1	66	0.7812	0.6365	0.9988	0.7083	0.3014	HIC
Kyrgyzstan	Central Asia	High EGDI	HV	78	0.7316	0.6072	0.8815	0.7061	0.4658	LMC
Lao People's Democratic Republic	South-Eastern Asia	Middle EGDI	M3	152	0.4404	0.3265	0.5338	0.4608	0.2877	LMC
Lebanon	Western Asia	High EGDI	H1	126	0.5449	0.4489	0.6425	0.5433	0.4658	LMC
Malaysia	South-Eastern Asia	Very High EGDI	V1	57	0.8111	0.728	0.9862	0.7192	0.6986	UMC

Table 2.3 *(continued)*

Country	Sub-Region	EDGI Group	Rating Class	Rank	EGDI 2024	OSI	TII	HCI	EPI	"Level of Income"
Maldives	Southern Asia	High EGDI	H3	94	0.6745	0.622	0.7886	0.6130	0.4795	UMC
Mongolia	Eastern Asia	Very High EGDI	V2	46	0.8457	0.8222	0.9374	0.7775	0.7808	LMC
Myanmar	South-Eastern Asia	High EGDI	H1	138	0.5001	0.3259	0.6662	0.5081	0.1644	LMC
Nepal	Southern Asia	High EGDI	H2	119	0.5781	0.4481	0.7653	0.5210	0.2192	LMC
Oman	Western Asia	Very High EGDI	V2	41	0.8576	0.8077	0.9674	0.7977	0.6575	HIC
Pakistan	Southern Asia	High EGDI	H1	136	0.5096	0.7042	0.4745	0.3500	0.4932	LMC
Philippines	South-Eastern Asia	Very High EGDI	V1	73	0.7621	0.8054	0.7554	0.7256	0.726	LMC
Qatar	Western Asia	Very High EGDI	V2	53	0.8244	0.7655	0.9963	0.7114	0.4795	HIC
Republic of Korea	Eastern Asia	Very High EGDI	VH	4	0.9679	1	0.9917	0.9120	0.9726	HIC
Saudi Arabia	Western Asia	Very High EGDI	VH	6	0.9602	0.9899	0.9841	0.9067	0.9589	HIC
Singapore	South-Eastern Asia	Very High EGDI	VH	3	0.9691	0.9831	0.9881	0.9362	0.9589	HIC
Sri Lanka	Southern Asia	High EGDI	H3	98	0.6667	0.5494	0.7936	0.6570	0.411	LMC
Syrian Arab Republic	Western Asia	Middle EGDI	M2	162	0.3888	0.3068	0.4426	0.4169	0.0685	LIC
Tajikistan	Central Asia	High EGDI	H1	123	0.5606	0.4476	0.581	0.6531	0.274	LMC
Thailand	South-Eastern Asia	Very High EGDI	V2	52	0.8351	0.7611	0.941	0.8032	0.7534	UMC
Timor-Leste	South-Eastern Asia	Middle EGDI	M3	159	0.4020	0.3406	0.3551	0.5104	0.3288	LMC
Türkiye	Western Asia	Very High EGDI	V3	27	0.8913	0.9225	0.8322	0.9192	0.863	UMC
Turkmenistan	Central Asia	Middle EGDI	MH	145	0.4757	0.2506	0.5151	0.6614	0.0411	UMC
United Arab Emirates	Western Asia	Very High EGDI	VH	11	0.9533	0.9163	1	0.9436	0.7808	HIC
Uzbekistan	Central Asia	Very High EGDI	V1	63	0.7999	0.7648	0.8769	0.7580	0.6986	LMC
Viet Nam	South-Eastern Asia	Very High EGDI	V1	71	0.7709	0.7081	0.878	0.7267	0.6027	LMC
Yemen	Western Asia	Low EGDI	L3	185	0.2317	0.1377	0.2905	0.2670	0.1507	LIC

Table 2.4   E-Government Development Index (EGDI) and E-Participation for Europe region

Country	Sub-Region	EDGI Group	Rating Class	Rank	EGDI 2024	OSI	TII	HCI	EPI	"Level of Income"
Albania	Southern Europe	Very High EGDI	V1	62	0.8000	0.8144	0.7750	0.8106	0.7260	UMC
Andorra	Southern Europe	High EGDI	HV	88	0.6893	0.4780	0.9231	0.6668	0.5479	HIC
Austria	Western Europe	Very High EGDI	V3	22	0.9065	0.8383	0.9810	0.9003	0.7808	HIC
Belarus	Eastern Europe	High EGDI	HV	77	0.7445	0.5760	0.9156	0.7419	0.4932	UMC
Belgium	Western Europe	Very High EGDI	V2	56	0.8121	0.7224	0.8698	0.8442	0.5068	HIC
Bosnia and Herzegovina	Southern Europe	High EGDI	H2	107	0.6329	0.5003	0.7763	0.6222	0.5479	UMC
Bulgaria	Eastern Europe	Very High EGDI	V2	55	0.8145	0.7727	0.9171	0.7538	0.6712	UMC
Croatia	Southern Europe	Very High EGDI	V3	32	0.8818	0.8735	0.9180	0.8538	0.4110	HIC
Czechia	Eastern Europe	Very High EGDI	V2	54	0.8239	0.7006	0.9204	0.8508	0.6986	HIC
Denmark	Northern Europe	Very High EGDI	VH	1	0.9847	0.9992	0.9966	0.9584	0.9863	HIC
Estonia	Northern Europe	Very High EGDI	VH	2	0.9727	0.9954	0.9731	0.9497	0.9589	HIC
Finland	Northern Europe	Very High EGDI	VH	9	0.9575	0.9097	0.9791	0.9836	0.8904	HIC
France	Western Europe	Very High EGDI	V3	34	0.8744	0.8440	0.9228	0.8565	0.8082	HIC
Germany	Western Europe	Very High EGDI	VH	12	0.9382	0.9238	0.9236	0.9672	0.9726	HIC
Greece	Southern Europe	Very High EGDI	V3	36	0.8674	0.8145	0.8657	0.9219	0.6712	HIC
Hungary	Eastern Europe	Very High EGDI	V1	59	0.8043	0.7144	0.8282	0.8703	0.5479	HIC
Iceland	Northern Europe	Very High EGDI	VH	5	0.9671	0.9076	0.9983	0.9953	0.9589	HIC
Ireland	Northern Europe	Very High EGDI	V3	20	0.9138	0.8768	0.9599	0.9046	0.9178	HIC
Italy	Southern Europe	Very High EGDI	V2	51	0.8356	0.7624	0.9017	0.8426	0.6575	HIC
Latvia	Northern Europe	Very High EGDI	V3	29	0.8852	0.8092	0.9660	0.8805	0.7808	HIC
Liechtenstein	Western Europe	Very High EGDI	V2	44	0.8528	0.7416	0.9906	0.8263	0.6575	HIC
Lithuania	Northern Europe	Very High EGDI	V3	21	0.9110	0.8839	0.9631	0.8861	0.8356	HIC
Luxembourg	Western Europe	Very High EGDI	V2	45	0.8466	0.7555	0.9888	0.7955	0.6301	HIC
Malta	Southern Europe	Very High EGDI	V3	28	0.8886	0.8749	0.9747	0.8162	0.7397	HIC
Monaco	Western Europe	High EGDI	HV	82	0.7175	0.4838	0.9171	0.7515	0.1507	HIC

Table **2.4** *(continued)*

Country	Sub-Region	EDGI Group	Rating Class	Rank	EGDI 2024	OSI	TII	HCI	EPI	"Level of Income"
Montenegro	Southern Europe	High EGDI	HV	81	0.7211	0.5214	0.9229	0.7190	0.5068	UMC
Netherlands	Western Europe	Very High EGDI	VH	10	0.9538	0.9212	0.9715	0.9688	0.9315	HIC
North Macedonia	Southern Europe	High EGDI	HV	84	0.7070	0.6642	0.7546	0.7023	0.5753	UMC
Norway	Northern Europe	Very High EGDI	VH	15	0.9315	0.9117	0.9654	0.9175	0.8630	HIC
Poland	Eastern Europe	Very High EGDI	V3	37	0.8648	0.8037	0.9603	0.8304	0.7534	HIC
Portugal	Southern Europe	Very High EGDI	V2	49	0.8415	0.7878	0.8979	0.8389	0.6438	HIC
Republic of Moldova	Eastern Europe	Very High EGDI	V1	70	0.7719	0.7264	0.8118	0.7776	0.7260	UMC
Romania	Eastern Europe	Very High EGDI	V1	72	0.7636	0.6548	0.8922	0.7439	0.6849	HIC
Russian Federation	Eastern Europe	Very High EGDI	V2	43	0.8532	0.7766	0.9512	0.8319	0.6438	UMC
San Marino	Southern Europe	High EGDI	H3	102	0.6551	0.3575	0.9491	0.6587	0.1233	HIC
Serbia	Southern Europe	Very High EGDI	V2	39	0.8618	0.8540	0.9221	0.8094	0.8904	UMC
Slovakia	Eastern Europe	Very High EGDI	V1	60	0.8021	0.7097	0.8985	0.7982	0.6986	HIC
Slovenia	Southern Europe	Very High EGDI	V3	33	0.8759	0.8640	0.9107	0.8530	0.7808	HIC
Spain	Southern Europe	Very High EGDI	VH	17	0.9206	0.9054	0.9603	0.8961	0.8082	HIC
Sweden	Northern Europe	Very High EGDI	VH	14	0.9326	0.8836	0.9868	0.9275	0.7945	HIC
Switzerland	Western Europe	Very High EGDI	V3	26	0.9003	0.8408	0.9576	0.9026	0.8219	HIC
Ukraine	Eastern Europe	Very High EGDI	V3	30	0.8841	0.9854	0.8428	0.8240	1.0000	LMC
United Kingdom of Great Britain and Northern Ireland	Northern Europe	Very High EGDI	VH	7	0.9577	0.9535	0.9747	0.9450	0.9726	HIC

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Table 2.5   E-Government Development Index (EGDI) and E-Participation for Oceania region

Country	Sub-Region	EDGI Group	Rating Class	Rank	EGDI 2024	OSI	TII	HCI	EPI	"Level of Income"
Australia	Australia and New Zealand	Very High EGDI	VH	8	0.9577	0.9222	0.9509	1.0000	0.8630	HIC
Fiji	Melanesia	High EGDI	H3	93	0.6754	0.5343	0.7507	0.7413	0.3973	UMC
Kiribati	Micronesia	Middle EGDI	MH	147	0.4572	0.3904	0.3544	0.6269	0.3288	LMC
Marshall Islands	Micronesia	Middle EGDI	MH	143	0.4823	0.3586	0.3047	0.7836	0.3288	UMC
Micronesia (Federated States of)	Micronesia	Middle EGDI	M2	167	0.3235	0.2621	0.1350	0.5735	0.1370	LMC
Nauru	Micronesia	Middle EGDI	M3	151	0.4454	0.2439	0.5863	0.5061	0.2329	HIC
New Zealand	Australia and New Zealand	Very High EGDI	VH	16	0.9265	0.9453	0.8728	0.9615	0.9315	HIC
Palau	Micronesia	High EGDI	H1	137	0.5072	0.2787	0.4910	0.7520	0.3014	UMC
Papua New Guinea	Melanesia	Middle EGDI	M1	171	0.3076	0.3392	0.1851	0.3984	0.1918	LMC
Samoa	Polynesia	Middle EGDI	MH	140	0.4899	0.3638	0.4606	0.6453	0.3014	LMC
Solomon Islands	Melanesia	Middle EGDI	M2	164	0.3681	0.4970	0.1811	0.4262	0.3699	LMC
Tonga	Polynesia	High EGDI	H1	134	0.5164	0.3220	0.4784	0.7488	0.3288	UMC
Tuvalu	Polynesia	Middle EGDI	M3	158	0.4042	0.1944	0.4720	0.5463	0.0685	UMC
Vanuatu	Melanesia	High EGDI	H1	129	0.5427	0.4769	0.6165	0.5347	0.4658	LMC

Table 3   Economic groupings for E-Government Development Index (EGDI) and E-Participation

Levels of Income	EGDI Group	EGDI	Online Service Index	Telecommunications Infrastructure Index	Human Capital Index	E-Partcipation Index
High income	Very High EGDI	0.8326	0.7553	0.9123	0.8301	0.6725
Upper middle income	High EGDI	0.6932	0.5992	0.7699	0.7104	0.5216
Lower middle income	High EGDI	0.5449	0.4934	0.5881	0.5533	0.3805
Low income	Middle EGDI	0.2764	0.2854	0.2291	0.3145	0.2318

Table 4   E-Government Development Index (EGDI) of Least Developed Countries (LDCs)

Country	Region	Sub-Region	EGDI Group	Rating Class	Rank	EGDI	Online Service Index	Telecommunications Infrastructure Index	Human Capital Index	EPI
Afghanistan	Asia	Southern Asia	Low EGDI	L2	188	0.2083	0.1438	0.2167	0.2643	0.1096
Angola	Africa	Middle Africa	Middle EGDI	M3	156	0.4149	0.3962	0.3724	0.4760	0.2192
Bangladesh	Asia	Southern Asia	High EGDI	H3	100	0.657	0.7374	0.6501	0.5834	0.6164
Benin	Africa	Western Africa	Middle EGDI	MH	146	0.4578	0.5202	0.4817	0.3715	0.3699
Bhutan	Asia	Southern Asia	High EGDI	H3	103	0.6511	0.5886	0.8169	0.5478	0.4932
Burkina Faso	Africa	Western Africa	Middle EGDI	M1	175	0.2895	0.3376	0.3640	0.1668	0.2192
Burundi	Africa	Eastern Africa	Low EGDI	LM	183	0.248	0.3146	0.0330	0.3965	0.2192
Cambodia	Asia	South-Eastern Asia	High EGDI	H2	120	0.5754	0.4503	0.7609	0.5149	0.3151
Central African Republic	Africa	Middle Africa	Low EGDI	L1	193	0.0947	0.1128	0.0000	0.1713	0.0822
Chad	Africa	Middle Africa	Low EGDI	L2	189	0.1785	0.2674	0.1194	0.1488	0.3151
Comoros	Africa	Eastern Africa	Middle EGDI	M1	180	0.2586	0.0230	0.3537	0.3992	0
Democratic Republic of the Congo	Africa	Middle Africa	Middle EGDI	M1	179	0.2715	0.2067	0.1591	0.4487	0.2466
Djibouti	Africa	Eastern Africa	Middle EGDI	M1	174	0.2911	0.2092	0.3840	0.2800	0.0959
Eritrea	Africa	Eastern Africa	Low EGDI	L2	190	0.1576	0.0000	0.1405	0.3324	0.0137
Ethiopia	Africa	Eastern Africa	Middle EGDI	M2	169	0.3111	0.3420	0.2659	0.3254	0.1644
Gambia	Africa	Western Africa	Middle EGDI	M1	181	0.2552	0.0955	0.3877	0.2823	0.1781
Guinea	Africa	Western Africa	Middle EGDI	M2	160	0.4006	0.4808	0.4323	0.2887	0.5068
Guinea-Bissau	Africa	Western Africa	Middle EGDI	M2	170	0.3083	0.1270	0.4902	0.3077	0.2192
Haiti	Americas	Caribbean	Low EGDI	L3	186	0.2116	0.1379	0.2087	0.2883	0.0959
Kiribati	Oceania	Micronesia	Middle EGDI	MH	147	0.4572	0.3904	0.3544	0.6269	0.3288
Lao People's Democratic Republic	Asia	South-Eastern Asia	Middle EGDI	M3	152	0.4404	0.3265	0.5338	0.4608	0.2877
Lesotho	Africa	Southern Africa	Middle EGDI	M3	157	0.4123	0.2864	0.4643	0.4862	0.2055
Liberia	Africa	Western Africa	Middle EGDI	M1	182	0.2513	0.2633	0.1238	0.3669	0.1644
Madagascar	Africa	Eastern Africa	Middle EGDI	M2	168	0.3235	0.4045	0.1518	0.4141	0.3014

Table 4 *(continued)*

Country	Region	Sub-Region	EGDI Group	Rating Class	Rank	EGDI	Online Service Index	Telecommunications Infrastructure Index	Human Capital Index	EPI
Malawi	Africa	Eastern Africa	Middle EGDI	M2	163	0.3753	0.4625	0.1886	0.4749	0.4521
Mali	Africa	Western Africa	Middle EGDI	M1	173	0.3005	0.3334	0.4432	0.1250	0.274
Mauritania	Africa	Western Africa	Middle EGDI	M2	165	0.3491	0.1688	0.5824	0.2961	0.1233
Mozambique	Africa	Eastern Africa	Middle EGDI	M1	177	0.2848	0.3959	0.0632	0.3952	0.2055
Myanmar	Asia	South-Eastern Asia	High EGDI	H1	138	0.5001	0.3259	0.6662	0.5081	0.1644
Nepal	Asia	Southern Asia	High EGDI	H2	119	0.5781	0.4481	0.7653	0.5210	0.2192
Niger	Africa	Western Africa	Low EGDI	L3	187	0.2116	0.3084	0.1578	0.1685	0.2055
Rwanda	Africa	Eastern Africa	High EGDI	H2	118	0.5799	0.8207	0.3724	0.5467	0.7534
Sao Tome and Principe	Africa	Middle Africa	Middle EGDI	M3	154	0.4308	0.2156	0.4839	0.5928	0.1644
Senegal	Africa	Western Africa	High EGDI	H1	135	0.5162	0.4779	0.7328	0.3380	0.4247
Sierra Leone	Africa	Western Africa	Middle EGDI	M1	172	0.3042	0.3823	0.2585	0.2718	0.3288
Solomon Islands	Oceania	Melanesia	Middle EGDI	M2	164	0.3681	0.4970	0.1811	0.4262	0.3699
Somalia	Africa	Eastern Africa	Low EGDI	L1	191	0.1468	0.2971	0.1432	0.0000	0.2877
South Sudan	Africa	Eastern Africa	Low EGDI	L1	192	0.1191	0.1504	0.0547	0.1521	0.1096
Sudan	Africa	Northern Africa	Middle EGDI	M1	178	0.2759	0.1293	0.4392	0.2593	0.0685
Timor-Leste	Asia	South-Eastern Asia	Middle EGDI	M3	159	0.402	0.3406	0.3551	0.5104	0.3288
Togo	Africa	Western Africa	Middle EGDI	M2	161	0.392	0.4472	0.2474	0.4813	0.4521
Tuvalu	Oceania	Polynesia	Middle EGDI	M3	158	0.4042	0.1944	0.4720	0.5463	0.0685
Uganda	Africa	Eastern Africa	Middle EGDI	M3	150	0.4464	0.6069	0.2299	0.5023	0.4384
United Republic of Tanzania	Africa	Eastern Africa	Middle EGDI	M3	153	0.4327	0.4791	0.3792	0.4399	0.2877
Yemen	Asia	Western Asia	Low EGDI	L3	185	0.2317	0.1377	0.2905	0.2670	0.1507
Zambia	Africa	Eastern Africa	High EGDI	H1	130	0.5424	0.4958	0.5088	0.6225	0.411

Table 5   E-Government Development Index (EGDI) of Landlocked Developing Countries (LLDCs)

Country	Region	Sub-Region	EGDI Group	Rating Class	Rank	EGDI	Online Service Index	Telecommunications Infrastructure Index	Human Capital Index	EPI
Afghanistan	Asia	Southern Asia	Low EGDI	L2	188	0.2083	0.1438	0.2167	0.2643	0.1096
Armenia	Asia	Western Asia	Very High EGDI	V2	48	0.8422	0.7922	0.8782	0.8561	0.8493
Azerbaijan	Asia	Western Asia	Very High EGDI	V1	74	0.7607	0.7386	0.8203	0.7233	0.4932
Bhutan	Asia	Southern Asia	High EGDI	H3	103	0.6511	0.5886	0.8169	0.5478	0.4932
Bolivia	Americas	South America	High EGDI	H3	99	0.6651	0.5987	0.7089	0.6876	0.4247
Botswana	Africa	Southern Africa	High EGDI	H2	112	0.6118	0.3985	0.8649	0.5719	0.274
Burkina Faso	Africa	Western Africa	Middle EGDI	M1	175	0.2895	0.3376	0.364	0.1668	0.2192
Burundi	Africa	Eastern Africa	Low EGDI	LM	183	0.248	0.3146	0.033	0.3965	0.2192
Central African Republic	Africa	Middle Africa	Low EGDI	L1	193	0.0947	0.1128	0	0.1713	0.0822
Chad	Africa	Middle Africa	Low EGDI	L2	189	0.1785	0.2674	0.1194	0.1488	0.3151
Eswatini	Africa	Southern Africa	High EGDI	H2	113	0.6081	0.4557	0.7851	0.5836	0.3836
Ethiopia	Africa	Eastern Africa	Middle EGDI	M2	169	0.3111	0.342	0.2659	0.3254	0.1644
Kazakhstan	Asia	Central Asia	Very High EGDI	V3	24	0.9009	0.939	0.9235	0.8403	0.8493
Kyrgyzstan	Asia	Central Asia	High EGDI	HV	78	0.7316	0.6072	0.8815	0.7061	0.4658
Lao People's Democratic Republic	Asia	South-Eastern Asia	Middle EGDI	M3	152	0.4404	0.3265	0.5338	0.4608	0.2877
Lesotho	Africa	Southern Africa	Middle EGDI	M3	157	0.4123	0.2864	0.4643	0.4862	0.2055
Malawi	Africa	Eastern Africa	Middle EGDI	M2	163	0.3753	0.4625	0.1886	0.4749	0.4521
Mali	Africa	Western Africa	Middle EGDI	M1	173	0.3005	0.3334	0.4432	0.125	0.274
Mongolia	Asia	Eastern Asia	Very High EGDI	V2	46	0.8457	0.8222	0.9374	0.7775	0.7808
Nepal	Asia	Southern Asia	High EGDI	H2	119	0.5781	0.4481	0.7653	0.521	0.2192
Niger	Africa	Western Africa	Low EGDI	L3	187	0.2116	0.3084	0.1578	0.1685	0.2055
North Macedonia	Europe	Southern Europe	High EGDI	HV	84	0.707	0.6642	0.7546	0.7023	0.5753
Paraguay	Americas	South America	High EGDI	HV	80	0.7251	0.6712	0.7947	0.7093	0.6027

Table 5   *(continued)*

Country	Region	Sub-Region	EGDI Group	Rating Class	Rank	EGDI	Online Service Index	Telecommunications Infrastructure Index	Human Capital Index	EPI
Republic of Moldova	Europe	Eastern Europe	Very High EGDI	V1	70	0.7719	0.7264	0.8118	0.7776	0.726
Rwanda	Africa	Eastern Africa	High EGDI	H2	118	0.5799	0.8207	0.3724	0.5467	0.7534
South Sudan	Africa	Eastern Africa	Low EGDI	L1	192	0.1191	0.1504	0.0547	0.1521	0.1096
Tajikistan	Asia	Central Asia	High EGDI	H1	123	0.5606	0.4476	0.581	0.6531	0.274
Turkmenistan	Asia	Central Asia	Middle EGDI	MH	145	0.4757	0.2506	0.5151	0.6614	0.0411
Uganda	Africa	Eastern Africa	Middle EGDI	M3	150	0.4464	0.6069	0.2299	0.5023	0.4384
Uzbekistan	Asia	Central Asia	Very High EGDI	V1	63	0.7999	0.7648	0.8769	0.758	0.6986
Zambia	Africa	Eastern Africa	High EGDI	H1	130	0.5424	0.4958	0.5088	0.6225	0.411

Table 6   E-Government Development Index (EGDI) of Small Island Developing States (SIDS)

Country	Region	Sub-Region	EGDI Group	Rating Class	Rank	EGDI	Online Service Index	Telecommunications Infrastructure Index	Human Capital Index	EPI
Antigua and Barbuda	Americas	Caribbean	High EGDI	H3	105	0.6428	0.4166	0.7943	0.7176	0.3425
Bahamas	Americas	Caribbean	High EGDI	HV	83	0.7143	0.5402	0.8652	0.7376	0.3151
Barbados	Americas	Caribbean	High EGDI	H3	91	0.6815	0.4976	0.7624	0.7845	0.3288
Belize	Americas	Central America	Middle EGDI	MH	141	0.4872	0.4054	0.5292	0.527	0.2329
Cabo Verde	Africa	Western Africa	High EGDI	H2	111	0.6238	0.6892	0.6128	0.5694	0.5479
Comoros	Africa	Eastern Africa	Middle EGDI	M1	180	0.2586	0.023	0.3537	0.3992	0
Cuba	Americas	Caribbean	Middle EGDI	MH	139	0.4921	0.2298	0.5318	0.7148	0.0548
Dominica	Americas	Caribbean	High EGDI	H1	127	0.5445	0.3798	0.6757	0.5781	0.3014
Dominican Republic	Americas	Caribbean	High EGDI	HV	85	0.7013	0.6405	0.7444	0.7189	0.6575
Fiji	Oceania	Melanesia	High EGDI	H3	93	0.6754	0.5343	0.7507	0.7413	0.3973
Grenada	Americas	Caribbean	High EGDI	H3	104	0.6458	0.5056	0.6767	0.755	0.2466
Guinea-Bissau	Africa	Western Africa	Middle EGDI	M2	170	0.3083	0.127	0.4902	0.3077	0.2192
Guyana	Americas	South America	High EGDI	H1	128	0.5443	0.3455	0.6942	0.5933	0.2192
Haiti	Americas	Caribbean	Low EGDI	L3	186	0.2116	0.1379	0.2087	0.2883	0.0959
Jamaica	Americas	Caribbean	High EGDI	H3	96	0.6678	0.5677	0.7296	0.706	0.4384
Kiribati	Oceania	Micronesia	Middle EGDI	MH	147	0.4572	0.3904	0.3544	0.6269	0.3288
Maldives	Asia	Southern Asia	High EGDI	H3	94	0.6745	0.622	0.7886	0.613	0.4795
Marshall Islands	Oceania	Micronesia	Middle EGDI	MH	143	0.4823	0.3586	0.3047	0.7836	0.3288
Mauritius	Africa	Eastern Africa	Very High EGDI	V1	76	0.7506	0.5903	0.9159	0.7456	0.411
Micronesia (Federated States of)	Oceania	Micronesia	Middle EGDI	M2	167	0.3235	0.2621	0.135	0.5735	0.137
Nauru	Oceania	Micronesia	Middle EGDI	M3	151	0.4454	0.2439	0.5863	0.5061	0.2329
Palau	Oceania	Micronesia	High EGDI	H1	137	0.5072	0.2787	0.491	0.752	0.3014
Papua New Guinea	Oceania	Melanesia	Middle EGDI	M1	171	0.3076	0.3392	0.1851	0.3984	0.1918

Technical Appendix

Table 6 *(continued)*

Country	Region	Sub-Region	EGDI Group	Rating Class	Rank	EGDI	Online Service Index	Telecommunications Infrastructure Index	Human Capital Index	EPI
Saint Kitts and Nevis	Americas	Caribbean	High EGDI	H2	110	0.6305	0.3039	0.8675	0.7202	0.2055
Saint Lucia	Americas	Caribbean	High EGDI	H1	133	0.5255	0.3229	0.6498	0.6037	0.137
Saint Vincent and the Grenadines	Americas	Caribbean	High EGDI	H2	117	0.5876	0.3906	0.6767	0.6956	0.3425
Samoa	Oceania	Polynesia	Middle EGDI	MH	140	0.4899	0.3638	0.4606	0.6453	0.3014
Sao Tome and Principe	Africa	Middle Africa	Middle EGDI	M3	154	0.4308	0.2156	0.4839	0.5928	0.1644
Seychelles	Africa	Eastern Africa	High EGDI	H3	92	0.6773	0.4638	0.8913	0.6769	0.3014
Singapore	Asia	South-Eastern Asia	Very High EGDI	VH	3	0.9691	0.9831	0.9881	0.9362	0.9589
Solomon Islands	Oceania	Melanesia	Middle EGDI	M2	164	0.3681	0.497	0.1811	0.4262	0.3699
Suriname	Americas	South America	High EGDI	H3	106	0.6365	0.4814	0.8714	0.5568	0.2877
Timor-Leste	Asia	South-Eastern Asia	Middle EGDI	M3	159	0.402	0.3406	0.3551	0.5104	0.3288
Tonga	Oceania	Polynesia	High EGDI	H1	134	0.5164	0.322	0.4784	0.7488	0.3288
Trinidad and Tobago	Americas	Caribbean	High EGDI	HV	86	0.6973	0.5999	0.7745	0.7174	0.3288
Tuvalu	Oceania	Polynesia	Middle EGDI	M3	158	0.4042	0.1944	0.472	0.5463	0.0685
Vanuatu	Oceania	Melanesia	High EGDI	H1	129	0.5427	0.4769	0.6165	0.5347	0.4658

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Table 7   Online Service Index (OSI) and its components

Country	OSI Group	OSI 2024	IF	CP	SP	EPI	TEC	EDGI Group	EGDI 2024
Afghanistan	Low OSI	0.1438	0.6800	0.1111	0.0482	0.1096	0.1250	Low EGDI	0.2083
Albania	Very High OSI	0.8144	0.9200	1.0000	0.8313	0.7260	0.6250	Very High EGDI	0.8000
Algeria	Middle OSI	0.3320	0.6800	0.5556	0.4217	0.0548	0.3750	High EGDI	0.5956
Andorra	Middle OSI	0.4780	0.7200	0.6667	0.3494	0.5479	0.3750	High EGDI	0.6893
Angola	Middle OSI	0.3962	0.6400	0.6667	0.4217	0.2192	0.5000	Middle EGDI	0.4149
Antigua and Barbuda	Middle OSI	0.4166	0.6000	0.6667	0.3855	0.3425	0.5000	High EGDI	0.6428
Argentina	Very High OSI	0.7965	0.9600	0.7778	0.8434	0.6301	0.8750	Very High EGDI	0.8573
Armenia	Very High OSI	0.7922	0.9600	1.0000	0.6506	0.8493	0.8125	Very High EGDI	0.8422
Australia	Very High OSI	0.9222	0.9600	0.8889	0.9518	0.8630	0.7500	Very High EGDI	0.9577
Austria	Very High OSI	0.8383	0.9600	0.7778	0.8313	0.7808	0.8125	Very High EGDI	0.9065
Azerbaijan	High OSI	0.7386	0.8400	1.0000	0.8795	0.4932	0.5000	Very High EGDI	0.7607
Bahamas	High OSI	0.5402	0.6800	0.5556	0.6627	0.3151	0.5625	High EGDI	0.7143
Bahrain	Very High OSI	0.9030	1.0000	0.8889	0.8313	0.9041	1.0000	Very High EGDI	0.9196
Bangladesh	High OSI	0.7374	0.9200	0.6667	0.7470	0.6164	0.8750	High EGDI	0.6570
Barbados	Middle OSI	0.4976	0.7200	0.5556	0.5542	0.3288	0.5000	High EGDI	0.6815
Belarus	High OSI	0.5760	0.8400	0.6667	0.5301	0.4932	0.6875	High EGDI	0.7445
Belgium	High OSI	0.7224	0.9600	0.6667	0.7711	0.5479	0.7500	Very High EGDI	0.8121
Belize	Middle OSI	0.4054	0.9200	0.4444	0.4458	0.2329	0.0000	Middle EGDI	0.4872
Benin	High OSI	0.5202	0.9200	0.5556	0.5060	0.3699	0.5625	Middle EGDI	0.4578
Bhutan	High OSI	0.5886	0.8800	0.7778	0.5422	0.4932	0.6250	High EGDI	0.6511
Bolivia	High OSI	0.5987	0.9200	0.6667	0.6265	0.4247	0.5625	High EGDI	0.6651
Bosnia and Herzegovina	High OSI	0.5003	0.8400	0.5556	0.3855	0.5479	0.3125	High EGDI	0.6329
Botswana	Middle OSI	0.3985	0.6800	0.5556	0.4217	0.2740	0.2500	High EGDI	0.6118
Brazil	Very High OSI	0.9063	1.0000	1.0000	0.8916	0.8630	0.7500	Very High EGDI	0.8403

Table 7 *(continued)*

Country	OSI Group	OSI 2024	IF	CP	SP	EPI	TEC	EDGI Group	EGDI 2024
Brunei Darussalam	High OSI	0.5802	0.9200	0.6667	0.5542	0.4658	0.5625	Very High EGDI	0.7554
Bulgaria	Very High OSI	0.7727	0.9200	1.0000	0.7711	0.6712	0.6875	Very High EGDI	0.8145
Burkina Faso	Middle OSI	0.3376	0.8400	0.3333	0.2892	0.2192	0.3750	Middle EGDI	0.2895
Burundi	Middle OSI	0.3146	0.6800	0.2222	0.2892	0.2192	0.4375	Low EGDI	0.2480
Cabo Verde	High OSI	0.6892	0.9200	0.6667	0.7349	0.5479	0.5625	High EGDI	0.6238
Cambodia	Middle OSI	0.4503	0.8000	0.7778	0.4096	0.3151	0.5000	High EGDI	0.5754
Cameroon	Middle OSI	0.3988	0.7200	0.7778	0.2530	0.4247	0.3750	Middle EGDI	0.4294
Canada	Very High OSI	0.8552	1.0000	0.7778	0.7711	0.9178	0.6875	Very High EGDI	0.8452
Central African Republic	Low OSI	0.1128	0.4000	0.2222	0.0602	0.0822	0.1875	Low EGDI	0.0947
Chad	Middle OSI	0.2674	0.7200	0.4444	0.1084	0.3151	0.1875	Low EGDI	0.1785
Chile	Very High OSI	0.8612	1.0000	0.7778	0.8554	0.8356	0.6250	Very High EGDI	0.8827
China	Very High OSI	0.9258	0.9600	1.0000	0.9036	0.9315	0.6875	Very High EGDI	0.8718
Colombia	Very High OSI	0.7521	0.9600	0.8889	0.6747	0.7397	0.6875	Very High EGDI	0.7793
Comoros	Low OSI	0.0230	0.1200	0.0000	0.0482	0.0000	0.0625	Middle EGDI	0.2586
Congo	Middle OSI	0.2760	0.8000	0.3333	0.2410	0.0822	0.5625	Middle EGDI	0.3391
Costa Rica	High OSI	0.7217	0.8800	0.7778	0.6627	0.7260	0.6250	Very High EGDI	0.8009
Croatia	High OSI	0.5219	0.8800	0.5556	0.4819	0.4110	0.6250	Very High EGDI	0.8818
Cuba	Very High OSI	0.8735	0.9600	0.8889	0.8193	0.9178	0.6250	Middle EGDI	0.4921
Cyprus	Low OSI	0.2298	0.8400	0.1111	0.2169	0.0548	0.2500	Very High EGDI	0.8619
Czechia	Very High OSI	0.8217	0.9600	0.8889	0.8313	0.7260	0.7500	Very High EGDI	0.8239
Côte d'Ivoire	High OSI	0.7006	0.9200	0.7778	0.6988	0.5890	0.6875	High EGDI	0.5587
Democratic People's Republic of Korea	Low OSI	0.0291	0.2000	0.2222	0.0120	0.0000	0.0625	Low EGDI	0.2320
Democratic Republic of the Congo	Low OSI	0.2067	0.4400	0.4444	0.0723	0.2466	0.4375	Middle EGDI	0.2715
Denmark	Very High OSI	0.9992	1.0000	1.0000	0.9880	0.9863	0.8750	Very High EGDI	0.9847
Djibouti	Low OSI	0.2092	0.6000	0.3333	0.1928	0.0959	0.1875	Middle EGDI	0.2911

Table 7 *(continued)*

Country	OSI Group	OSI 2024	IF	CP	SP	EPI	TEC	EDGI Group	EGDI 2024
Dominica	Middle OSI	0.3798	0.5200	0.7778	0.3976	0.3014	0.1250	High EGDI	0.5445
Dominican Republic	High OSI	0.6405	0.8800	0.7778	0.5422	0.6575	0.5625	High EGDI	0.7013
Ecuador	Very High OSI	0.8851	0.9600	0.8889	0.8675	0.8767	0.6875	Very High EGDI	0.7800
Egypt	High OSI	0.7002	0.9200	0.6667	0.7108	0.5890	0.6875	High EGDI	0.6699
El Salvador	High OSI	0.5090	0.8000	0.7778	0.5060	0.3836	0.3750	High EGDI	0.5988
Equatorial Guinea	Low OSI	0.1932	0.3200	0.1111	0.1446	0.2329	0.3125	Middle EGDI	0.2855
Eritrea	Low OSI	0.0000	0.0000	0.1111	0.0000	0.0137	0.1250	Low EGDI	0.1576
Estonia	Very High OSI	0.9954	1.0000	1.0000	1.0000	0.9589	0.8750	Very High EGDI	0.9727
Eswatini	Middle OSI	0.4557	0.8400	0.7778	0.3494	0.3836	0.5625	High EGDI	0.6081
Ethiopia	Middle OSI	0.3420	0.6000	0.4444	0.3976	0.1644	0.3750	Middle EGDI	0.3111
Fiji	High OSI	0.5343	0.8000	0.3333	0.5783	0.3973	0.5625	High EGDI	0.6754
Finland	Very High OSI	0.9097	1.0000	0.8889	0.8916	0.8904	0.7500	Very High EGDI	0.9575
France	Very High OSI	0.8440	1.0000	0.8889	0.8072	0.8082	0.7500	Very High EGDI	0.8744
Gabon	Middle OSI	0.3187	0.7200	0.5556	0.3373	0.1233	0.3125	High EGDI	0.5741
Gambia	Low OSI	0.0955	0.3200	0.1111	0.0120	0.1781	0.0000	Middle EGDI	0.2552
Georgia	High OSI	0.5652	0.8800	0.5556	0.4819	0.5616	0.5000	Very High EGDI	0.7792
Germany	Very High OSI	0.9238	1.0000	0.8889	0.8434	0.9726	0.8750	Very High EGDI	0.9382
Ghana	High OSI	0.6084	0.9200	0.5556	0.5783	0.5342	0.5625	High EGDI	0.6317
Greece	Very High OSI	0.8145	0.9200	0.8889	0.9036	0.6712	0.5000	Very High EGDI	0.8674
Grenada	High OSI	0.5056	0.5600	0.6667	0.6506	0.2466	0.6250	High EGDI	0.6458
Guatemala	High OSI	0.6538	0.8000	0.7778	0.7229	0.4658	0.6875	High EGDI	0.5738
Guinea	Middle OSI	0.4808	0.8800	0.3333	0.3614	0.5068	0.5000	Middle EGDI	0.4006
Guinea-Bissau	Low OSI	0.1270	0.2000	0.1111	0.0602	0.2192	0.1875	Middle EGDI	0.3083
Guyana	Middle OSI	0.3455	0.6800	0.5556	0.3012	0.2192	0.5625	High EGDI	0.5443
Haiti	Low OSI	0.1379	0.4800	0.0000	0.1084	0.0959	0.1875	Low EGDI	0.2116

Table.7 *(continued)*

Country	OSI Group	OSI 2024	IF	CP	SP	EPI	TEC	EDGI Group	EGDI 2024
Honduras	Middle OSI	0.4587	0.7200	0.6667	0.4578	0.3014	0.6250	Middle EGDI	0.4856
Hungary	High OSI	0.7144	0.8800	0.7778	0.8072	0.5479	0.4375	Very High EGDI	0.8043
Iceland	Very High OSI	0.9076	0.9600	0.8889	0.8554	0.9589	0.6875	Very High EGDI	0.9671
India	Very High OSI	0.8184	1.0000	0.8889	0.8554	0.6575	0.8125	High EGDI	0.6678
Indonesia	Very High OSI	0.8035	1.0000	1.0000	0.7229	0.7945	0.6875	Very High EGDI	0.7991
Iran (Islamic Republic of)	Middle OSI	0.3773	0.6800	0.4444	0.4337	0.1781	0.4375	High EGDI	0.6564
Iraq	Low OSI	0.1875	0.4400	0.3333	0.1566	0.0959	0.4375	Middle EGDI	0.4572
Ireland	Very High OSI	0.8768	1.0000	0.7778	0.8193	0.9178	0.6875	Very High EGDI	0.9138
Israel	Very High OSI	0.8541	0.9600	0.8889	0.9157	0.6986	0.8125	Very High EGDI	0.9014
Italy	Very High OSI	0.7624	1.0000	1.0000	0.7349	0.6575	0.6875	Very High EGDI	0.8356
Jamaica	High OSI	0.5677	0.8400	0.7778	0.5663	0.4384	0.5000	High EGDI	0.6678
Japan	Very High OSI	0.9427	1.0000	1.0000	0.8795	0.9863	0.7500	Very High EGDI	0.9351
Jordan	Very High OSI	0.7591	0.9200	0.8889	0.7952	0.6164	0.6875	High EGDI	0.6849
Kazakhstan	Very High OSI	0.9390	1.0000	0.8889	0.9880	0.8493	0.7500	Very High EGDI	0.9009
Kenya	Very High OSI	0.7770	0.9600	0.7778	0.7952	0.6712	0.6875	High EGDI	0.6314
Kiribati	Middle OSI	0.3904	0.6000	0.5556	0.3855	0.3288	0.2500	Middle EGDI	0.4572
Kuwait	High OSI	0.6365	0.8800	0.7778	0.6506	0.4795	0.6875	Very High EGDI	0.7812
Kyrgyzstan	High OSI	0.6072	0.9200	0.6667	0.6145	0.4658	0.5625	High EGDI	0.7316
Lao People's Democratic Republic	Middle OSI	0.3265	0.6800	0.6667	0.2289	0.2877	0.3125	Middle EGDI	0.4404
Latvia	Very High OSI	0.8092	1.0000	0.8889	0.7590	0.7808	0.6875	Very High EGDI	0.8852
Lebanon	Middle OSI	0.4489	0.8000	0.4444	0.3494	0.4658	0.3750	High EGDI	0.5449
Lesotho	Middle OSI	0.2864	0.5200	0.3333	0.2530	0.2055	0.5625	Middle EGDI	0.4123
Liberia	Middle OSI	0.2633	0.6000	0.3333	0.2530	0.1644	0.2500	Middle EGDI	0.2513
Libya	Low OSI	0.0808	0.4000	0.0000	0.0843	0.0137	0.0625	High EGDI	0.5466
Liechtenstein	High OSI	0.7416	0.9200	0.7778	0.7470	0.6575	0.6250	Very High EGDI	0.8528

Table 7 *(continued)*

Country	OSI Group	OSI 2024	IF	CP	SP	EPI	TEC	EDGI Group	EGDI 2024
Lithuania	Very High OSI	0.8839	0.9600	1.0000	0.8916	0.8356	0.6250	Very High EGDI	0.9110
Luxembourg	Very High OSI	0.7555	1.0000	1.0000	0.7229	0.6301	0.8125	Very High EGDI	0.8466
Madagascar	Middle OSI	0.4045	0.6400	0.5556	0.3735	0.3014	0.6250	Middle EGDI	0.3235
Malawi	Middle OSI	0.4625	0.8000	0.5556	0.3855	0.4521	0.3125	Middle EGDI	0.3753
Malaysia	High OSI	0.7280	0.9200	0.7778	0.6506	0.6986	0.8750	Very High EGDI	0.8111
Maldives	High OSI	0.6220	0.6800	0.6667	0.6988	0.4795	0.6250	High EGDI	0.6745
Mali	Middle OSI	0.3334	0.6000	0.5556	0.2651	0.2740	0.5000	Middle EGDI	0.3005
Malta	Very High OSI	0.8749	0.9600	0.8889	0.9277	0.7671	0.6875	Very High EGDI	0.8886
Marshall Islands	Middle OSI	0.3586	0.5600	0.3333	0.3614	0.3288	0.1875	Middle EGDI	0.4823
Mauritania	Low OSI	0.1688	0.7600	0.2222	0.0482	0.1233	0.1875	Middle EGDI	0.3491
Mauritius	High OSI	0.5903	1.0000	0.7778	0.5904	0.4110	0.5000	Very High EGDI	0.7506
Mexico	Very High OSI	0.7637	0.8800	0.7778	0.7108	0.7397	0.8750	Very High EGDI	0.7850
Micronesia (Federated States of)	Middle OSI	0.2621	0.6800	0.4444	0.2169	0.1370	0.3750	Middle EGDI	0.3235
Monaco	Middle OSI	0.4838	0.8800	0.5556	0.6024	0.1507	0.5625	High EGDI	0.7175
Mongolia	Very High OSI	0.8222	0.9200	1.0000	0.8072	0.7808	0.6250	Very High EGDI	0.8457
Montenegro	High OSI	0.5214	0.9200	0.6667	0.4096	0.5068	0.4375	High EGDI	0.7211
Morocco	High OSI	0.5618	0.8400	0.6667	0.5663	0.4384	0.5000	High EGDI	0.6841
Mozambique	Middle OSI	0.3959	0.6800	0.4444	0.4458	0.2055	0.5000	Middle EGDI	0.2848
Myanmar	Middle OSI	0.3259	0.6800	0.5556	0.3253	0.1644	0.3750	High EGDI	0.5001
Namibia	Middle OSI	0.4996	0.7200	0.6667	0.5783	0.2740	0.5625	High EGDI	0.6007
Nauru	Low OSI	0.2439	0.4400	0.3333	0.2048	0.2329	0.2500	Middle EGDI	0.4454
Nepal	Middle OSI	0.4481	0.8800	0.5556	0.5060	0.2192	0.3125	High EGDI	0.5781
Netherlands	Very High OSI	0.9212	1.0000	1.0000	0.8554	0.9315	0.8750	Very High EGDI	0.9538
New Zealand	Very High OSI	0.9453	1.0000	0.8889	0.9398	0.9315	0.7500	Very High EGDI	0.9265
Nicaragua	Middle OSI	0.4493	0.7200	0.6667	0.5060	0.2329	0.5000	High EGDI	0.5318

Table 7 *(continued)*

Country	OSI Group	OSI 2024	IF	CP	SP	EPI	TEC	EDGI Group	EGDI 2024
Niger	Middle OSI	0.3084	0.8400	0.5556	0.2169	0.2055	0.3125	Low EGDI	0.2116
Nigeria	High OSI	0.5372	0.9600	0.7778	0.5060	0.3699	0.5625	Middle EGDI	0.4815
North Macedonia	High OSI	0.6642	0.8800	0.8889	0.6265	0.5753	0.6875	High EGDI	0.7070
Norway	Very High OSI	0.9117	1.0000	1.0000	0.9036	0.8630	0.7500	Very High EGDI	0.9315
Oman	Very High OSI	0.8077	1.0000	0.8889	0.7711	0.7260	0.8750	Very High EGDI	0.8576
Pakistan	High OSI	0.7042	1.0000	1.0000	0.7470	0.4932	0.5625	High EGDI	0.5096
Palau	Middle OSI	0.2787	0.5200	0.2222	0.2289	0.3014	0.1875	High EGDI	0.5072
Panama	High OSI	0.6505	0.8800	0.7778	0.6506	0.5205	0.6875	High EGDI	0.7298
Papua New Guinea	Middle OSI	0.3392	0.8400	0.2222	0.3614	0.1918	0.1250	Middle EGDI	0.3076
Paraguay	High OSI	0.6712	0.8400	0.6667	0.6506	0.6027	0.7500	High EGDI	0.7251
Peru	Very High OSI	0.8377	1.0000	0.8889	0.8434	0.7534	0.6875	Very High EGDI	0.8070
Philippines	Very High OSI	0.8054	0.9600	0.8889	0.7952	0.7260	0.7500	Very High EGDI	0.7621
Poland	Very High OSI	0.8037	0.8800	0.7778	0.8072	0.7534	0.7500	Very High EGDI	0.8648
Portugal	Very High OSI	0.7878	1.0000	0.7778	0.8193	0.6438	0.7500	Very High EGDI	0.8415
Qatar	Very High OSI	0.7655	0.9600	1.0000	0.8795	0.4795	0.7500	Very High EGDI	0.8244
Republic of Korea	Very High OSI	1.0000	1.0000	1.0000	1.0000	0.9726	0.8750	Very High EGDI	0.9679
Republic of Moldova	High OSI	0.7264	0.9600	0.6667	0.6627	0.7260	0.6250	Very High EGDI	0.7719
Romania	High OSI	0.6548	1.0000	0.7778	0.5181	0.6849	0.5625	Very High EGDI	0.7636
Russian Federation	Very High OSI	0.7766	0.9600	0.6667	0.8193	0.6438	0.7500	Very High EGDI	0.8532
Rwanda	Very High OSI	0.8207	0.9600	0.8889	0.8434	0.7534	0.5000	High EGDI	0.5799
Saint Kitts and Nevis	Middle OSI	0.3039	0.4400	0.4444	0.3373	0.2055	0.3125	High EGDI	0.6305
Saint Lucia	Middle OSI	0.3229	0.7200	0.4444	0.3494	0.1370	0.3125	High EGDI	0.5255
Saint Vincent and the Grenadines	Middle OSI	0.3906	0.8800	0.4444	0.2892	0.3425	0.3750	High EGDI	0.5876
Samoa	Middle OSI	0.3638	0.7600	0.5556	0.2651	0.3014	0.5000	Middle EGDI	0.4899
San Marino	Middle OSI	0.3575	0.7200	0.7778	0.3976	0.1233	0.3125	High EGDI	0.6551

Table 7   (continued)

Country	OSI Group	OSI 2024	IF	CP	SP	EPI	TEC	EDGI Group	EGDI 2024
Sao Tome and Principe	Low OSI	0.2156	0.4800	0.4444	0.1687	0.1644	0.2500	Middle EGDI	0.4308
Saudi Arabia	Very High OSI	0.9899	1.0000	1.0000	0.9880	0.9589	0.8750	Very High EGDI	0.9602
Senegal	Middle OSI	0.4779	0.7600	0.5556	0.4699	0.4247	0.1875	High EGDI	0.5162
Serbia	Very High OSI	0.8540	0.9200	1.0000	0.7952	0.8904	0.6250	Very High EGDI	0.8618
Seychelles	Middle OSI	0.4638	0.6800	0.5556	0.4940	0.3014	0.6250	High EGDI	0.6773
Sierra Leone	Middle OSI	0.3823	0.8000	0.5556	0.2651	0.3288	0.5625	Middle EGDI	0.3042
Singapore	Very High OSI	0.9831	1.0000	1.0000	0.9639	0.9589	0.9375	Very High EGDI	0.9691
Slovakia	High OSI	0.7097	0.9600	0.7778	0.6506	0.6986	0.5000	Very High EGDI	0.8021
Slovenia	Very High OSI	0.8640	0.9200	1.0000	0.8916	0.7808	0.6875	Very High EGDI	0.8759
Solomon Islands	Middle OSI	0.4970	0.8000	0.6667	0.4940	0.3699	0.4375	Middle EGDI	0.3681
Somalia	Middle OSI	0.2971	0.8000	0.3333	0.1325	0.2877	0.5625	Low EGDI	0.1468
South Africa	Very High OSI	0.8872	1.0000	0.8889	0.8916	0.8356	0.6875	Very High EGDI	0.8616
South Sudan	Low OSI	0.1504	0.1600	0.1111	0.1807	0.1096	0.3750	Low EGDI	0.1191
Spain	Very High OSI	0.9054	1.0000	1.0000	0.9398	0.8082	0.6875	Very High EGDI	0.9206
Sri Lanka	High OSI	0.5494	0.9200	0.3333	0.5663	0.4110	0.5625	High EGDI	0.6667
Sudan	Low OSI	0.1293	0.2400	0.3333	0.1325	0.0685	0.2500	Middle EGDI	0.2759
Suriname	Middle OSI	0.4814	0.8000	0.6667	0.5301	0.2877	0.3750	High EGDI	0.6365
Sweden	Very High OSI	0.8836	0.8400	1.0000	0.9398	0.7945	0.7500	Very High EGDI	0.9326
Switzerland	Very High OSI	0.8408	1.0000	0.8889	0.8072	0.8219	0.6250	Very High EGDI	0.9003
Syrian Arab Republic	Middle OSI	0.3068	0.8000	0.5556	0.3373	0.0685	0.2500	Middle EGDI	0.3888
Tajikistan	Middle OSI	0.4476	0.8400	0.5556	0.4578	0.2740	0.4375	High EGDI	0.5606
Thailand	Very High OSI	0.7611	1.0000	0.8889	0.6988	0.7534	0.5000	Very High EGDI	0.8351
Timor-Leste	Middle OSI	0.3406	0.6400	0.6667	0.2410	0.3288	0.3125	Middle EGDI	0.4020
Togo	Middle OSI	0.4472	0.8000	0.5556	0.3253	0.4521	0.5000	Middle EGDI	0.3920
Tonga	Middle OSI	0.3220	0.4400	0.6667	0.2410	0.3288	0.4375	High EGDI	0.5164

Table 7 *(continued)*

Country	OSI Group	OSI 2024	IF	CP	SP	EPI	TEC	EDGI Group	EGDI 2024
Trinidad and Tobago	High OSI	0.5999	0.9600	0.7778	0.6506	0.3288	0.7500	High EGDI	0.6973
Tunisia	High OSI	0.5951	0.9600	0.7778	0.5904	0.4521	0.4375	High EGDI	0.6935
Türkiye	Very High OSI	0.9225	1.0000	1.0000	0.9277	0.8630	0.7500	Very High EGDI	0.8913
Turkmenistan	Middle OSI	0.2506	0.5600	0.4444	0.3253	0.0411	0.1875	Middle EGDI	0.4757
Tuvalu	Low OSI	0.1944	0.4800	0.2222	0.2289	0.0685	0.1875	Middle EGDI	0.4042
Uganda	High OSI	0.6069	0.8800	0.7778	0.6506	0.4384	0.4375	Middle EGDI	0.4464
Ukraine	Very High OSI	0.9854	0.9600	1.0000	0.9759	1.0000	0.7500	Very High EGDI	0.8841
United Arab Emirates	Very High OSI	0.9163	1.0000	1.0000	0.9759	0.7808	0.7500	Very High EGDI	0.9533
United Kingdom of Great Britain and Northern Ireland	Very High OSI	0.9535	0.9600	0.7778	0.9518	0.9726	0.7500	Very High EGDI	0.9577
United Republic of Tanzania	Middle OSI	0.4791	0.8800	0.6667	0.4578	0.2877	0.6875	Middle EGDI	0.4327
United States of America	Very High OSI	0.9136	1.0000	0.8889	0.8675	0.9452	0.6875	Very High EGDI	0.9194
Uruguay	Very High OSI	0.8832	1.0000	1.0000	0.8313	0.8630	0.8125	Very High EGDI	0.9006
Uzbekistan	Very High OSI	0.7648	0.9200	0.7778	0.7590	0.6986	0.6875	Very High EGDI	0.7999
Vanuatu	Middle OSI	0.4769	0.8000	0.6667	0.3855	0.4658	0.3750	High EGDI	0.5427
Venezuela, Bolivarian Republic of	Middle OSI	0.3576	0.7600	0.4444	0.3614	0.2192	0.2500	High EGDI	0.5360
Viet Nam	High OSI	0.7081	0.9600	0.7778	0.7108	0.6027	0.5625	Very High EGDI	0.7709
Yemen	Low OSI	0.1377	0.3200	0.3333	0.0482	0.1507	0.3750	Low EGDI	0.2317
Zambia	Middle OSI	0.4958	0.7600	0.3333	0.4940	0.4110	0.5625	High EGDI	0.5424
Zimbabwe	Middle OSI	0.4100	0.7600	0.5556	0.3976	0.2740	0.4375	Middle EGDI	0.4481

Table 8   Online Service Index (OSI) features accessed

Components	Feature
Technology	Government portal(s) ease of finding |Advanced Search features |Sitemap/Index |Help feature/FAQs section |Contact us feature	National portal(s)utilize HTTPS |Responsive web design |Evidence of being updated in the past month| Advanced search options	Mark favorite/most used online services |Access to list of previous interactions/transactions |Availability of Tutorials or guidance to understand and use online services/Help link	Accessibility by citizens to own data |Possibility for citizens to modify own data	Accessibility by businesses to own data
Institutional Framework	Existence of national government portal (s) |Information available on the organizational structure and/or chart of the government I Names/titles of heads of government agencies/departments/ministries available on the national portal(s)	Links to any sub-national/local government institutions/agencies	Privacy statement(s) available |Digital ID to access online services |National e-Government/Digital Government strategy or equivalent available |Information on citizens' rights to access government information| Legislation/law/policy/regulation on personal data protection |Legislation/law/policy/regulation on cybersecurity |Information/contact about a national CIO or equivalent	Legislation/law/policy/regulation on e-participation |Legislation/law/policy/regulation on Open Government Data |Link to the sectoral or ministerial website on HEALTH /EDUCATION/ EMPLOYMENT AND-OR LABOR/ SOCIAL PROTECTION/ENVIROMENT/ JUSTICE| Information on policies related to HEALTH /EDUCATION/ EMPLOYMENT AND-OR LABOR/ SOCIAL PROTECTION/ ENVIROMENT/ JUSTICE |Availability of National Data strategy or Policy.
Content Provision	National portal(s) available in more than ONE official language |Information available about payments for government services through channels other than online |Announcements of forthcoming procurement/ bidding processes |Information about results of procurement/bidding processes online |Information about service provision in partnership with the private sector| Evidence of free access to services through kiosks, community centers, post offices, libraries, public spaces, or free Wi-Fi |Web statistics on usage of the online features/services |Information on available scholarships or other forms of government funding for EDUCATION |Links and references for EMPLOYMENT for youth	Information on how older persons can apply for long term care.

Table 8   *(continued)*

Components	Feature
E-Participation	E-participation portal(s)	Availability of social networking feature(s)	Live chat support functionality	leave feedback option to improve useability and/or accessibility of e-services	Report corruption by public servants or institutions	Calendar or announcements about any upcoming public engagement or e-participation activities	Online tools to obtain raw (non-deliberative) inputs for policy deliberation	Evidence of any outcome of e-consultations resulted in new policy decisions/regulations/services	Open government data portal	In Open Data Portal availability of data dictionary or metadata repository	Guidance or toolkit on using Open Government datasets	Possibility to propose/request new open datasets be made available online	Information about the organization of competitions/ hackathons/ events around the use of open government data	Open Government dataset(s) on national government expenditures (budget)	Availability of GIS or other geospatial data	Evidence of user satisfaction of online or mobile services	Information on government expenditures (budget) on HEALTH/ EDUCATION/ EMPLOYMENT/ SOCIAL PROTECTION/ENVIRONMENT/ JUSTICE	Information about upcoming consultations intended to involve people in the past 12 months (HEALTH/ EDUCATION/ EMPLOYMENT/ SOCIAL PROTECTION/ ENVIRONMENT/ JUSTICE)	Information about having held online consultations via forums, polls, questionnaires etc. intended to involve people in the past 12 months (HEALTH/ EDUCATION/ EMPLOYMENT/ SOCIAL PROTECTION/ ENVIRONMENT/ JUSTICE)	Evidence that people's voices were included in the actual decision-making in the past 12 months (HEALTH/ EDUCATION/ EMPLOYMENT/ SOCIAL PROTECTION/ ENVIRONMENT/JUSTICE) Open Government dataset(s) on HEALTH/ EDUCATION/ EMPLOYMENT/ SOCIAL PROTECTION/ENVIRONMENT/ JUSTICE	Report online a violation of labor laws	Availability of feature for participatory budgeting or similar mechanism I Evidence of open data license for open government datasets	Open Government dataset(s) on budget/expenditure in EDUCATION/ EMPLOYMENT/ ENVIRONMENT/ HEALTH/JUSTICE /SOCIAL PROTECTION?	Evidence of real time open government dataset(s)	Evidence of any cocreation and/or co-production of e-service (HEALTH/ EDUCATION/ EMPLOYMENT/ SOCIAL PROTECTION/ENVIRONMENT/ JUSTICE)	Evidence of e-petition or similar mechanism	Evidence that people's voices were included in the policy decision-making on issues related to vulnerable group in the past 12 months (for immigrants, older people, persons living below poverty line, persons with disabilities, women, youth).
Services Provision	Evidence of One-Stop-Shop portal(s)	E-procurement platform for bidding processes/submission of tenders	Service provision on Income taxes |Online provision for: Value Added Tax (VAT), Goods & Services Tax (GST) or equivalent	Apply online for: Visa to enter or transit	Registration or renewal for a: Vehicle (car, truck, motorcycle, and others) |Online declaration to the police	Notify of moving/changing an address online	Registration for a new company or business entity |Apply/request Birth certificates |Death certificates |Marriage certificates |Personal Identity Cards	Driver's license |Land title registration |Environment-related permits |Building permits| Business licenses| Apply for Government vacancy positions	Pay online for government fees or fines	Water utility |Energy(electricity/gas) utility |Digital invoices	provision of GIS or other geospatial related online services	Business tax filing	Mobile service provision available through i) smartphone apps; ii) SMS services; or iii) mobile browser (for HEALTH, EDUCATION, EMPLOYMENT, SOCIAL PROTECTION, ENVIROMENT. JUSTICE)	Students can apply for government scholarships and fellowships programme	Users can apply for: Social protection programs |Services available to the following vulnerable groups: poor (below poverty line) /persons with disabilities. /older persons / immigrants, migrant workers, refugees, and internally displaced persons / women /youth| Eligibility and/or procedure on applying for citizenship or residency |Apply for: Receiving an affidavit of criminal record/background clearance	Access to justice: retrieve information / file (open) online; / manage of court cases |Services provided to people retiring from job	Apply for benefits due to illness and injury	Apply for child benefits	Apply for disability compensation benefits |Apply online for maternal or newborn benefits |Apply or file for unemployment benefits.

Table 9   E-participation Index and its components

Country	EPI Group	EPI 2024	Rank	E-information	E-consultation	E-decisionmaking	EDGI Group	EGDI 2024
Afghanistan	Low EPI	0.1096	177	0	0	0.16	Low EGDI	0.2083
Albania	High EPI	0.726	49	0.7778	0.5	0.78	Very High EGDI	0.8000
Algeria	Low EPI	0.0548	187	0.1111	0	0.06	High EGDI	0.5956
Andorra	High EPI	0.5479	78	0.3333	0.0714	0.72	High EGDI	0.6893
Angola	Low EPI	0.2192	152	0.2222	0.0714	0.26	Middle EGDI	0.4149
Antigua and Barbuda	Middle EPI	0.3425	118	0	0	0.5	High EGDI	0.6428
Argentina	High EPI	0.6301	68	0.6667	0.1429	0.76	Very High EGDI	0.8573
Armenia	Very High EPI	0.8493	27	0.6667	0.9286	0.86	Very High EGDI	0.8422
Australia	Very High EPI	0.863	22	1	0.7857	0.86	Very High EGDI	0.9577
Austria	Very High EPI	0.7808	37	0.6667	0.4286	0.9	Very High EGDI	0.9065
Azerbaijan	Middle EPI	0.4932	88	0.4444	0	0.64	Very High EGDI	0.7607
Bahamas	Middle EPI	0.3151	127	0	0.1429	0.42	High EGDI	0.7143
Bahrain	Very High EPI	0.9041	18	1	0.9286	0.88	Very High EGDI	0.9196
Bangladesh	High EPI	0.6164	70	0.8889	0.0714	0.72	High EGDI	0.6570
Barbados	Middle EPI	0.3288	120	0.1111	0	0.46	High EGDI	0.6815
Belarus	Middle EPI	0.4932	88	0.2222	0.2857	0.6	High EGDI	0.7445
Belgium	High EPI	0.5068	85	0.1111	0.1429	0.68	Very High EGDI	0.8121
Belize	Low EPI	0.2329	148	0	0	0.34	Middle EGDI	0.4872
Benin	Middle EPI	0.3699	115	0.2222	0.2857	0.42	Middle EGDI	0.4578
Bhutan	Middle EPI	0.4932	88	0.3333	0.2857	0.58	High EGDI	0.6511
Bolivia	Middle EPI	0.4247	105	0.1111	0.0714	0.58	High EGDI	0.6651
Bosnia and Herzegovina	High EPI	0.5479	78	0.4444	0	0.72	High EGDI	0.6329
Botswana	Middle EPI	0.274	141	0	0	0.4	High EGDI	0.6118
Brazil	Very High EPI	0.863	22	1	0.4286	0.96	Very High EGDI	0.8403
Brunei Darussalam	Middle EPI	0.4658	94	0.3333	0.0714	0.6	Very High EGDI	0.7554
Bulgaria	High EPI	0.6712	59	0.8889	0.1429	0.78	Very High EGDI	0.8145

Table 9 *(continued)*

Country	EPI Group	EPI 2024	Rank	E-information	E-consultation	E-decisionmaking	EDGI Group	EGDI 2024
Burkina Faso	Low EPI	0.2192	152	0.1111	0	0.3	Middle EGDI	0.2895
Burundi	Low EPI	0.2192	152	0	0.3571	0.22	Low EGDI	0.2480
Cabo Verde	High EPI	0.5479	78	0.1111	0	0.78	High EGDI	0.6238
Cambodia	Middle EPI	0.3151	127	0	0	0.46	High EGDI	0.5754
Cameroon	Middle EPI	0.4247	105	0.1111	0.0714	0.58	Middle EGDI	0.4294
Canada	Very High EPI	0.9178	15	0.7778	0.7143	1	Very High EGDI	0.8452
Central African Republic	Low EPI	0.0822	182	0	0	0.12	Low EGDI	0.0947
Chad	Middle EPI	0.3151	127	0	0.0714	0.44	Low EGDI	0.1785
Chile	Very High EPI	0.8356	29	0.4444	0.7143	0.94	Very High EGDI	0.8827
China	Very High EPI	0.9315	12	1	0.8571	0.94	Very High EGDI	0.8718
Colombia	High EPI	0.7397	46	0.3333	0.4286	0.9	Very High EGDI	0.7793
Comoros	Low EPI	0	192	0	0	0	Middle EGDI	0.2586
Congo	Low EPI	0.0822	182	0	0	0.12	Middle EGDI	0.3391
Costa Rica	High EPI	0.726	49	0.7778	0.4286	0.8	Very High EGDI	0.8009
Côte d'Ivoire	Middle EPI	0.411	108	0.2222	0.1429	0.52	Very High EGDI	0.8818
Croatia	Very High EPI	0.9178	15	0.8889	0.8571	0.94	Middle EGDI	0.4921
Cuba	Low EPI	0.0548	187	0	0	0.08	Very High EGDI	0.8619
Cyprus	High EPI	0.6986	53	0.3333	0.1429	0.92	Very High EGDI	0.8239
Czech Republic	High EPI	0.589	74	0.2222	0.2143	0.76	High EGDI	0.5587
Democratic People's Republic of Korea	Low EPI	0	192	0	0	0	Low EGDI	0.2320
Democratic Republic of the Congo	Low EPI	0.2466	146	0	0	0.36	Middle EGDI	0.2715
Denmark	Very High EPI	0.9863	2	1	1	0.98	Very High EGDI	0.9847
Djibouti	Low EPI	0.0959	179	0	0	0.14	Middle EGDI	0.2911
Dominica	Middle EPI	0.3014	130	0	0	0.44	High EGDI	0.5445
Dominican Republic	High EPI	0.6575	61	0.2222	0.4286	0.8	High EGDI	0.7013
Ecuador	Very High EPI	0.8767	21	0.7778	0.9286	0.88	Very High EGDI	0.7800

Table 9 *(continued)*

Country	EPI Group	EPI 2024	Rank	E-information	E-consultation	E-decisionmaking	EDGI Group	EGDI 2024
Egypt	High EPI	0.589	74	0.8889	0.1429	0.66	High EGDI	0.6699
El Salvador	Middle EPI	0.3836	113	0.3333	0	0.5	High EGDI	0.5988
Equatorial Guinea	Low EPI	0.2329	148	0.1111	0	0.32	Middle EGDI	0.2855
Eritrea	Low EPI	0.0137	190	0	0	0.02	Low EGDI	0.1576
Estonia	Very High EPI	0.9589	7	0.8889	0.8571	1	Very High EGDI	0.9727
Eswatini	Middle EPI	0.3836	113	0.2222	0	0.52	High EGDI	0.6081
Ethiopia	Low EPI	0.1644	166	0.1111	0.0714	0.2	Middle EGDI	0.3111
Fiji	Middle EPI	0.3973	112	0.2222	0.0714	0.52	High EGDI	0.6754
Finland	Very High EPI	0.8904	19	0.7778	0.7143	0.96	Very High EGDI	0.9575
France	Very High EPI	0.8082	33	0.5556	0.5714	0.92	Very High EGDI	0.8744
Gabon	Low EPI	0.1233	174	0.1111	0	0.16	High EGDI	0.5741
Gambia	Low EPI	0.1781	164	0	0	0.26	Middle EGDI	0.2552
Georgia	High EPI	0.5616	77	0.4444	0.2143	0.68	Very High EGDI	0.7792
Germany	Very High EPI	0.9726	4	1	0.8571	1	Very High EGDI	0.9382
Ghana	High EPI	0.5342	82	0.4444	0	0.7	High EGDI	0.6317
Greece	High EPI	0.6712	59	0.6667	0.7143	0.66	Very High EGDI	0.8674
Grenada	Low EPI	0.2466	146	0.1111	0	0.34	High EGDI	0.6458
Guatemala	Middle EPI	0.4658	94	0.1111	0.0714	0.64	High EGDI	0.5738
Guinea	High EPI	0.5068	85	0	0.0714	0.72	Middle EGDI	0.4006
Guinea-Bissau	Low EPI	0.2192	152	0	0	0.32	Middle EGDI	0.3083
Guyana	Low EPI	0.2192	152	0	0	0.28	High EGDI	0.5443
Haiti	Low EPI	0.0959	179	0	0	0.14	Low EGDI	0.2116
Honduras	Middle EPI	0.3014	130	0.3333	0.2857	0.3	Middle EGDI	0.4856
Hungary	High EPI	0.5479	78	0.1111	0.1429	0.74	Very High EGDI	0.8043
Iceland	Very High EPI	0.9589	7	0.8889	1	0.96	Very High EGDI	0.9671
India	High EPI	0.6575	61	0.3333	0.0714	0.88	High EGDI	0.6678

Table 9 *(continued)*

Country	EPI Group	EPI 2024	Rank	E-information	E-consultation	E-decisionmaking	EDGI Group	EGDI 2024
Indonesia	Very High EPI	0.7945	35	0.5556	0.7143	0.86	Very High EGDI	0.7991
Iran (Islamic Republic of)	Low EPI	0.1781	164	0.3333	0	0.2	High EGDI	0.6564
Iraq	Low EPI	0.0959	179	0.2222	0	0.1	Middle EGDI	0.4572
Ireland	Very High EPI	0.9178	15	0.7778	0.9286	0.94	Very High EGDI	0.9138
Israel	High EPI	0.6986	53	0.6667	0.5714	0.74	Very High EGDI	0.9014
Italy	High EPI	0.6575	61	0.6667	0.1429	0.8	Very High EGDI	0.8356
Jamaica	Middle EPI	0.4384	102	0.2222	0.2143	0.54	High EGDI	0.6678
Japan	Very High EPI	0.9863	2	1	0.9286	1	Very High EGDI	0.9351
Jordan	High EPI	0.6164	70	0.5556	0	0.8	High EGDI	0.6849
Kazakhstan	Very High EPI	0.8493	27	1	0.4286	0.94	Very High EGDI	0.9009
Kenya	High EPI	0.5205	83	0.2222	0.4286	0.6	High EGDI	0.6314
Kiribati	Middle EPI	0.3288	120	0.2222	0	0.44	Middle EGDI	0.4572
Kuwait	Middle EPI	0.3014	130	0.2222	0	0.4	Very High EGDI	0.7812
Kyrgyzstan	Middle EPI	0.4658	94	0.4444	0.0714	0.58	High EGDI	0.7316
Lao People's Democratic Republic	Middle EPI	0.2877	137	0	0.0714	0.4	Middle EGDI	0.4404
Latvia	Very High EPI	0.7808	37	0.5556	0.4286	0.92	Very High EGDI	0.8852
Lebanon	Middle EPI	0.4658	94	0.2222	0	0.64	High EGDI	0.5449
Lesotho	Low EPI	0.2055	159	0.1111	0	0.28	Middle EGDI	0.4123
Liberia	Low EPI	0.1644	166	0	0	0.24	Middle EGDI	0.2513
Libya	Low EPI	0.0137	190	0	0	0.02	High EGDI	0.5466
Liechtenstein	High EPI	0.6575	61	0.4444	0.2143	0.82	Very High EGDI	0.8528
Lithuania	Very High EPI	0.8356	29	0.5556	0.6429	0.94	Very High EGDI	0.9110
Luxembourg	High EPI	0.6301	68	0.3333	0.5	0.72	Very High EGDI	0.8466
Madagascar	Middle EPI	0.3014	130	0.3333	0	0.38	Middle EGDI	0.3235
Malawi	Middle EPI	0.4521	99	0.1111	0.0714	0.62	Middle EGDI	0.3753
Malaysia	High EPI	0.6986	53	0.3333	0.5	0.82	Very High EGDI	0.8111

Table 9 *(continued)*

Country	EPI Group	EPI 2024	Rank	E-information	E-consultation	E-decisionmaking	EDGI Group	EGDI 2024
Maldives	Middle EPI	0.4795	92	0.2222	0	0.66	High EGDI	0.6745
Mali	Middle EPI	0.274	141	0.1111	0	0.38	Middle EGDI	0.3005
Malta	High EPI	0.7397	46	0.5556	0.5	0.84	Very High EGDI	0.8886
Marshall Islands	Middle EPI	0.3288	120	0.1111	0.4286	0.34	Middle EGDI	0.4823
Mauritania	Low EPI	0.1233	174	0	0	0.18	Middle EGDI	0.3491
Mauritius	Middle EPI	0.411	108	0.2222	0.0714	0.54	Very High EGDI	0.7506
Mexico	High EPI	0.7397	46	0.3333	0.6429	0.84	Very High EGDI	0.7850
Micronesia (Federated States of)	Low EPI	0.137	172	0	0	0.2	Middle EGDI	0.3235
Monaco	Low EPI	0.1507	170	0.2222	0	0.18	High EGDI	0.7175
Mongolia	Very High EPI	0.7808	37	0.3333	0.5	0.94	Very High EGDI	0.8457
Montenegro	High EPI	0.5068	85	0.4444	0.0714	0.64	High EGDI	0.7211
Morocco	Middle EPI	0.4384	102	0.3333	0.1429	0.54	High EGDI	0.6841
Mozambique	Low EPI	0.2055	159	0.1111	0	0.28	Middle EGDI	0.2848
Myanmar	Low EPI	0.1644	166	0.3333	0	0.18	High EGDI	0.5001
Namibia	Middle EPI	0.274	141	0.2222	0	0.36	High EGDI	0.6007
Nauru	Low EPI	0.2329	148	0	0	0.34	Middle EGDI	0.4454
Nepal	Low EPI	0.2192	152	0.1111	0	0.3	High EGDI	0.5781
Netherlands	Very High EPI	0.9315	12	0.4444	0.5	0.96	Very High EGDI	0.9538
New Zealand	Very High EPI	0.9315	12	1	0.9286	0.92	Very High EGDI	0.9265
Nicaragua	Low EPI	0.2329	148	0	0	0.34	High EGDI	0.5318
Niger	Low EPI	0.2055	159	0.1111	0	0.28	Low EGDI	0.2116
Nigeria	Middle EPI	0.3699	115	0.2222	0.0714	0.48	Middle EGDI	0.4815
North Macedonia	High EPI	0.5753	76	0.3333	0	0.78	High EGDI	0.7070
Norway	Very High EPI	0.863	22	1	0.7857	0.86	Very High EGDI	0.9315
Oman	High EPI	0.6575	61	0.4444	0.4286	0.76	Very High EGDI	0.8576
Pakistan	Middle EPI	0.4932	88	0.3333	0.1429	0.62	High EGDI	0.5096

Table 9 *(continued)*

Country	EPI Group	EPI 2024	Rank	E-information	E-consultation	E-decisionmaking	EDGI Group	EGDI 2024
Palau	Middle EPI	0.3014	130	0.2222	0	0.4	High EGDI	0.5072
Panama	High EPI	0.5205	83	0.3333	0.0714	0.68	High EGDI	0.7298
Papua New Guinea	Low EPI	0.1918	163	0	0	0.28	Middle EGDI	0.3076
Paraguay	High EPI	0.6027	72	0.4444	0.1429	0.76	High EGDI	0.7251
Peru	Very High EPI	0.7534	42	0.3333	0.2857	0.96	Very High EGDI	0.8070
Philippines	High EPI	0.726	49	0.3333	0.6429	0.82	Very High EGDI	0.7621
Poland	Very High EPI	0.7534	42	0.3333	0.5714	0.88	Very High EGDI	0.8648
Portugal	High EPI	0.6438	66	0.4444	0.2857	0.78	Very High EGDI	0.8415
Qatar	Middle EPI	0.4795	92	0.3333	0.0714	0.62	Very High EGDI	0.8244
Republic of Korea	Very High EPI	0.9726	4	1	1	0.96	Very High EGDI	0.9679
Republic of Moldova	High EPI	0.726	49	0.6667	0.3571	0.84	Very High EGDI	0.7719
Romania	High EPI	0.6849	58	0.8889	0.0714	0.82	Very High EGDI	0.7636
Russian Federation	High EPI	0.6438	66	0.8889	0.1429	0.74	Very High EGDI	0.8532
Rwanda	Very High EPI	0.7534	42	0.5556	0.7143	0.8	High EGDI	0.5799
Saint Kitts and Nevis	Low EPI	0.2055	159	0	0	0.3	High EGDI	0.6305
Saint Lucia	Low EPI	0.137	172	0.1111	0.1429	0.14	High EGDI	0.5255
Saint Vincent and the Grenadines	Middle EPI	0.3425	118	0	0	0.5	High EGDI	0.5876
Samoa	Middle EPI	0.3014	130	0.1111	0	0.42	Middle EGDI	0.4899
San Marino	Low EPI	0.1233	174	0.2222	0	0.14	High EGDI	0.6551
Sao Tome and Principe	Low EPI	0.1644	166	0.2222	0	0.2	Middle EGDI	0.4308
Saudi Arabia	Very High EPI	0.9589	7	1	0.7857	1	Very High EGDI	0.9602
Senegal	Middle EPI	0.4247	105	0	0.0714	0.6	High EGDI	0.5162
Serbia	Very High EPI	0.8904	19	0.8889	0.7857	0.92	Very High EGDI	0.8618
Seychelles	Middle EPI	0.3014	130	0.2222	0.2143	0.34	High EGDI	0.6773
Sierra Leone	Middle EPI	0.3288	120	0.1111	0	0.46	Middle EGDI	0.3042
Singapore	Very High EPI	0.9589	7	0.8889	1	0.96	Very High EGDI	0.9691

Table 9 *(continued)*

Country	EPI Group	EPI 2024	Rank	E-information	E-consultation	E-decisionmaking	EDGI Group	EGDI 2024
Slovakia	High EPI	0.6986	53	0.3333	0.5714	0.8	Very High EGDI	0.8021
Slovenia	Very High EPI	0.7808	37	1	0.1429	0.92	Very High EGDI	0.8759
Solomon Islands	Middle EPI	0.3699	115	0	0	0.54	Middle EGDI	0.3681
Somalia	Middle EPI	0.2877	137	0.1111	0.2143	0.34	Low EGDI	0.1468
South Africa	Very High EPI	0.8356	29	0.7778	0.8571	0.84	Very High EGDI	0.8616
South Sudan	Low EPI	0.1096	177	0	0	0.16	Low EGDI	0.1191
Spain	Very High EPI	0.8082	33	0.5556	0.3571	0.98	Very High EGDI	0.9206
Sri Lanka	Middle EPI	0.411	108	0.2222	0.0714	0.54	High EGDI	0.6667
Sudan	Low EPI	0.0685	184	0.1111	0.0714	0.06	Middle EGDI	0.2759
Suriname	Middle EPI	0.2877	137	0	0	0.42	High EGDI	0.6365
Sweden	Very High EPI	0.7945	35	0.7778	0.2143	0.96	Very High EGDI	0.9326
Switzerland	Very High EPI	0.8219	32	0.2222	0.6429	0.98	Very High EGDI	0.9003
Syrian Arab Republic	Low EPI	0.0685	184	0.3333	0	0.04	Middle EGDI	0.3888
Tajikistan	Middle EPI	0.274	141	0.1111	0	0.38	High EGDI	0.5606
Thailand	Very High EPI	0.7534	42	0.7778	0.4286	0.84	Very High EGDI	0.8351
Timor-Leste	Middle EPI	0.3288	120	0.1111	0	0.46	Middle EGDI	0.4020
Togo	Middle EPI	0.4521	99	0.2222	0.3571	0.52	Middle EGDI	0.3920
Tonga	Middle EPI	0.3288	120	0.1111	0	0.46	High EGDI	0.5164
Trinidad and Tobago	Middle EPI	0.3288	120	0.1111	0.1429	0.42	High EGDI	0.6973
Tunisia	Middle EPI	0.4521	99	0	0.0714	0.64	High EGDI	0.6935
Türkiye	Very High EPI	0.863	22	0.8889	0.7143	0.9	Very High EGDI	0.8913
Turkmenistan	Low EPI	0.0411	189	0	0	0.06	Middle EGDI	0.4757
Tuvalu	Low EPI	0.0685	184	0	0	0.1	Middle EGDI	0.4042
Uganda	Middle EPI	0.4384	102	0.1111	0	0.62	Middle EGDI	0.4464
Ukraine	Very High EPI	1	1	1	1	1	Very High EGDI	0.8841
United Arab Emirates	Very High EPI	0.7808	37	0.5556	0.3571	0.94	Very High EGDI	0.9533

Table 9 *(continued)*

Country	EPI Group	EPI 2024	Rank	E-information	E-consultation	E-decisionmaking	EDGI Group	EGDI 2024
United Kingdom of Great Britain and Northern Ireland	Very High EPI	0.9726	4	1	1	0.96	Very High EGDI	0.9577
United Republic of Tanzania	Middle EPI	0.2877	137	0.2222	0	0.38	Middle EGDI	0.4327
United States of America	Very High EPI	0.9452	11	1	1	0.92	Very High EGDI	0.9194
Uruguay	Very High EPI	0.863	22	1	0.5714	0.92	Very High EGDI	0.9006
Uzbekistan	High EPI	0.6986	53	0.3333	0.1429	0.92	Very High EGDI	0.7999
Vanuatu	Middle EPI	0.4658	94	0.3333	0.2143	0.56	High EGDI	0.5427
Venezuela	Low EPI	0.2192	152	0.1111	0	0.3	High EGDI	0.5360
Viet Nam	High EPI	0.6027	72	0.5556	0.1429	0.74	Very High EGDI	0.7709
Yemen	Low EPI	0.1507	170	0	0	0.22	Low EGDI	0.2317
Zambia	Middle EPI	0.411	108	0	0.0714	0.58	High EGDI	0.5424
Zimbabwe	Middle EPI	0.274	141	0	0.1429	0.36	Middle EGDI	0.4481

2024 UN E-GOVERNMENT SURVEY

Table 10   Human Capital Index (HCI) and its components

Country	HCI Group	HCI 2024	Adult Literacy (%)			Gross Enrollment Ratio			Expected Year of Schooling			Mean Year of Schooling			E-government literacy			EDGI Group	EGDI 2024
			Index Value	Year	Source	Index Value	Year	Source	Index Value	Year	Source	Index Value	Year	Source	Index Value	Year	Source		
Afghanistan	Middle HCI	0.2643	37.27	2021	UNESCO	64.43	2018	UNESCO	10.54	2018	UNESCO	3	2021	UNDP	0.0556	2024	UN-DESA	Low EGDI	0.2083
Albania	Very High HCI	0.8106	98.5	2022	UNESCO	84.76	2022	UNESCO	14.49	2022	UNESCO	11.3	2021	UNDP	0.7778	2024	UN-DESA	Very High EGDI	0.8000
Algeria	High HCI	0.6418	81.41	2018	UNESCO	94.94	2022	UNESCO	15.49	2022	UNESCO	8.1	2021	UNDP	0.1111	2024	UN-DESA	High EGDI	0.5956
Andorra	High HCI	0.6668	100	2016	UNESCO	76.71	2022	UNESCO	12.78	2022	UNESCO	10.6	2021	UNDP	0.2778	2024	UN-DESA	High EGDI	0.6893
Angola	Middle HCI	0.476	72.4	2022	UNESCO	61.3	2011	UNESCO	12.2	2021	UNDP	5.4	2021	UNDP	0.3889	2024	UN-DESA	Middle EGDI	0.4149
Antigua and Barbuda	High HCI	0.7176	98.95	2015	UNESCO	87.76	2012	UNESCO	14.2	2021	UNDP	9.3	2021	UNDP	0.3889	2024	UN-DESA	High EGDI	0.6428
Argentina	Very High HCI	0.933	99	2018	UNESCO	100	2021	UNESCO	18.98	2021	UNESCO	11.1	2021	UNESCO	0.8333	2024	UN-DESA	Very High EGDI	0.8573
Armenia	Very High HCI	0.8561	99.79	2020	UNESCO	86.24	2022	UNESCO	14.41	2022	UNESCO	11.3	2021	UNESCO	1	2024	UN-DESA	Very High EGDI	0.8422
Australia	Very High HCI	1	99	2014	UNESCO	121.45	2021	UNESCO	21.08	2021	UNESCO	12.7	2021	UNESCO	0.8889	2024	UN-DESA	Very High EGDI	0.9577
Austria	Very High HCI	0.9003	99	2014	UNESCO	100.36	2021	UNESCO	16.37	2021	UNESCO	12.3	2021	UNESCO	0.7778	2024	UN-DESA	Very High EGDI	0.9065
Azerbaijan	High HCI	0.7233	99.8	2019	UNESCO	77.17	2022	UNESCO	12.71	2022	UNESCO	10.5	2021	UNESCO	0.6111	2024	UN-DESA	Very High EGDI	0.7607
Bahamas	High HCI	0.7376	95.8	2014	UNESCO	74	2014	UNESCO	12.9	2014	UNESCO	12.6	2021	UNDP	0.6111	2024	UN-DESA	High EGDI	0.7143
Bahrain	Very High HCI	0.868	90.98	2010	UNESCO	97.16	2022	UNESCO	16.3	2022	UNESCO	11	2021	UNESCO	0.8889	2024	UN-DESA	Very High EGDI	0.9196
Bangladesh	High HCI	0.5834	74.91	2020	UNESCO	70.16	2022	UNESCO	11.95	2020	UNESCO	7.4	2021	UNESCO	0.6667	2024	UN-DESA	High EGDI	0.6570
Barbados	Very High HCI	0.7845	99.6	2014	UNESCO	95.69	2011	UNESCO	15.7	2021	UNDP	9.9	2021	UNESCO	0.4444	2024	UN-DESA	High EGDI	0.6815
Belarus	High HCI	0.7419	99.87	2019	UNESCO	88.55	2022	UNESCO	13.98	2022	UNESCO	12.1	2021	UNESCO	0.2778	2024	UN-DESA	High EGDI	0.7445
Belgium	Very High HCI	0.8442	99	2014	UNESCO	113.18	2021	UNESCO	18.95	2021	UNESCO	10.4	2021	UNESCO	0.3889	2024	UN-DESA	Very High EGDI	0.8121
Belize	High HCI	0.527	76.9	2000	UNESCO	72.41	2022	UNESCO	12.43	2022	UNESCO	8.8	2021	UNESCO	0.1111	2024	UN-DESA	Middle EGDI	0.4872
Benin	Middle HCI	0.3715	47.1	2022	UNESCO	62.78	2020	UNESCO	10.37	2021	UNESCO	4.3	2021	UNESCO	0.4444	2024	UN-DESA	Middle EGDI	0.4578
Bhutan	High HCI	0.5478	72.1	2022	UNESCO	70.37	2018	UNESCO	12.89	2019	UNESCO	5.2	2021	UNESCO	0.6111	2024	UN-DESA	High EGDI	0.6511
Bolivia (Plurinational State of)	High HCI	0.6876	93.85	2020	UNESCO	79.25	2007	UNESCO	14.9	2021	UNDP	9.8	2021	UNDP	0.3333	2024	UN-DESA	High EGDI	0.6651
Bosnia and Herzegovina	High HCI	0.6222	98.3	2022	UNESCO	74.15	2022	UNESCO	13.28	2022	UNESCO	10.5	2021	UNESCO	0.0556	2024	UN-DESA	High EGDI	0.6329
Botswana	High HCI	0.5719	86.82	2013	UNESCO	69.04	2021	UNESCO	11.43	2021	UNESCO	10.3	2021	UNESCO	0.2222	2024	UN-DESA	High EGDI	0.6118
Brazil	Very High HCI	0.8077	94.69	2022	UNESCO	91.66	2020	UNESCO	15.58	2021	UNESCO	8.1	2021	UNESCO	0.8889	2024	UN-DESA	Very High EGDI	0.8403
Brunei Darussalam	High HCI	0.6991	97.59	2021	UNESCO	75.72	2020	UNESCO	13.7	2020	UNESCO	9.2	2021	UNESCO	0.5556	2024	UN-DESA	Very High EGDI	0.7554
Bulgaria	Very High HCI	0.7538	98.42	2021	UNESCO	84.86	2021	UNESCO	13.87	2020	UNESCO	11.4	2021	UNDP	0.5	2024	UN-DESA	Very High EGDI	0.8145
Burkina Faso	Low HCI	0.1668	34.49	2022	UNESCO	47.93	2022	UNESCO	8.09	2022	UNESCO	2.1	2021	UNESCO	0.1111	2024	UN-DESA	Middle EGDI	0.2895

Table 10 *(continued)*

Country	HCI Group	HCI 2024	Adult Literacy (%)			Gross Enrollment Ratio			Expected Year of Schooling			Mean Year of Schooling			E-government literacy			EDGI Group	EGDI 2024
			Index Value	Year	Source	Index Value	Year	Source	Index Value	Year	Source	Index Value	Year	Source	Index Value	Year	Source		
Burundi	Middle HCI	0.3965	75.54	2022	UNESCO	66.9	2018	UNESCO	10.25	2018	UNESCO	3.1	2021	UNDP	0.1667	2024	UN-DESA	Low EGDI	0.2480
Cabo Verde	High HCI	0.5694	91	2022	UNESCO	69.17	2018	UNESCO	11.86	2018	UNESCO	6.3	2021	UNDP	0.4444	2024	UN-DESA	High EGDI	0.6238
Cambodia	High HCI	0.5149	83.78	2022	UNESCO	65.72	2021	UNESCO	12.1	2021	UNDP	5.1	2021	UNDP	0.3889	2024	UN-DESA	High EGDI	0.5754
Cameroon	High HCI	0.5193	78.23	2020	UNESCO	71.64	2016	UNESCO	13.1	2021	UNDP	6.2	2021	UNDP	0.2222	2024	UN-DESA	Middle EGDI	0.4294
Canada	Very High HCI	0.8725	99	2014	UNESCO	94.8	2021	UNESCO	15.96	2021	UNESCO	13.8	2021	UNDP	0.6111	2024	UN-DESA	Very High EGDI	0.8452
Central African Republic	Low HCI	0.1713	37.49	2020	UNESCO	42.18	2012	UNESCO	8	2021	UNDP	4.3	2021	UNDP	0	2024	UN-DESA	Low EGDI	0.0947
Chad	Low HCI	0.1488	27.28	2022	UNESCO	46.66	2015	UNESCO	8	2021	UNDP	2.6	2021	UNDP	0.1111	2024	UN-DESA	Low EGDI	0.1785
Chile	Very High HCI	0.8413	97.16	2022	UNESCO	100.9	2021	UNESCO	16.91	2022	UNESCO	10.9	2021	UNDP	0.5556	2024	UN-DESA	Very High EGDI	0.8827
China	Very High HCI	0.7902	97.15	2020	UNESCO	89.96	2022	UNESCO	14.2	2021	UNDP	7.6	2021	UNDP	0.9444	2024	UN-DESA	Very High EGDI	0.8718
Colombia	Very High HCI	0.7793	95.64	2020	UNESCO	89.64	2021	UNESCO	14.44	2021	UNESCO	8.9	2021	UNDP	0.7778	2024	UN-DESA	Very High EGDI	0.7793
Comoros	Middle HCI	0.3992	61.71	2022	UNESCO	65.29	2014	UNESCO	11.9	2021	UNDP	5.1	2021	UNDP	0.1111	2024	UN-DESA	Middle EGDI	0.2586
Congo	Middle HCI	0.4637	80.61	2021	UNESCO	64.46	2012	UNESCO	12.3	2021	UNDP	6.2	2021	UNDP	0.0556	2024	UN-DESA	Middle EGDI	0.3391
Costa Rica	Very High HCI	0.7877	98.04	2021	UNESCO	100.12	2019	UNESCO	15.84	2019	UNESCO	8.8	2021	UNDP	0.5	2024	UN-DESA	Very High EGDI	0.8009
Côte d'Ivoire	Middle HCI	0.4848	89.89	2019	UNESCO	59.62	2020	UNESCO	10.1	2020	UNESCO	5.2	2021	UNDP	0.3889	2024	UN-DESA	Very High EGDI	0.8818
Croatia	Very High HCI	0.8538	99.45	2021	UNESCO	91.61	2021	UNESCO	15.57	2021	UNESCO	12.2	2021	UNDP	0.7222	2024	UN-DESA	Middle EGDI	0.4921
Cuba	High HCI	0.7148	99.67	2021	UNESCO	84.66	2021	UNESCO	14.47	2021	UNESCO	12.5	2021	UNDP	0.1111	2024	UN-DESA	Very High EGDI	0.8619
Cyprus	Very High HCI	0.8698	99.36	2021	UNESCO	99.37	2021	UNESCO	16.24	2021	UNESCO	12.4	2021	UNDP	0.5556	2024	UN-DESA	Very High EGDI	0.8239
Czechia	Very High HCI	0.8508	99	2014	UNESCO	93.23	2021	UNESCO	16.35	2021	UNESCO	12.9	2021	UNDP	0.5556	2024	UN-DESA	High EGDI	0.5587
Democratic People's Republic of Korea	Middle HCI	0.4924	100	2008	UNESCO	70.75	2015	UNESCO	10.8	2021	UNDP	5.47	2017	UNDP	0	2024	UN-DESA	Low EGDI	0.2320
Democratic Republic of the Congo	Middle HCI	0.4487	80.54	2022	UNESCO	61.9	2013	UNESCO	9.8	2021	UNDP	7.02	2021	UNDP	0.1667	2024	UN-DESA	Middle EGDI	0.2715
Denmark	Very High HCI	0.9584	99	2014	UNESCO	105.94	2021	UNESCO	18.77	2021	UNESCO	13	2021	UNDP	0.8333	2024	UN-DESA	Very High EGDI	0.9847
Djibouti	Middle HCI	0.28	70.3	2014	UNESCO	38.32	2011	UNESCO	7.4	2021	UNDP	4.1	2021	UNDP	0.2222	2024	UN-DESA	Middle EGDI	0.2911
Dominica	High HCI	0.5781	88	2014	UNESCO	73	2014	UNESCO	13	2021	UNDP	8.1	2021	UNDP	0.2222	2024	UN-DESA	High EGDI	0.5445
Dominican Republic	High HCI	0.7189	95.5	2022	UNESCO	78.17	2021	UNESCO	13.57	2021	UNESCO	9.3	2021	UNDP	0.6667	2024	UN-DESA	High EGDI	0.7013
Ecuador	Very High HCI	0.7715	93.95	2022	UNESCO	86.8	2020	UNESCO	14.86	2020	UNESCO	8.8	2021	UNDP	0.7778	2024	UN-DESA	Very High EGDI	0.7800
Egypt	High HCI	0.615	74.5	2022	UNESCO	78.32	2020	UNESCO	12.91	2020	UNESCO	9.6	2021	UNDP	0.4444	2024	UN-DESA	High EGDI	0.6699

2024 UN E-GOVERNMENT SURVEY

Table 10 *(continued)*

Country	HCI Group	HCI 2024	Adult Literacy (%)			Gross Enrollment Ratio			Expected Year of Schooling			Mean Year of Schooling			E-government literacy			EDGI Group	EGDI 2024
			Index Value	Year	Source	Index Value	Year	Source	Index Value	Year	Source	Index Value	Year	Source	Index Value	Year	Source		
El Salvador	High HCI	0.5348	89.98	2020	UNESCO	66.25	2018	UNESCO	12.6	2021	UNDP	7.2	2021	UNDP	0.1667	2024	UN-DESA	High EGDI	0.5988
Equatorial Guinea	Middle HCI	0.4102	94.37	2010	UNESCO	44.55	2000	UNESCO	9.7	2021	UNDP	5.9	2021	UNDP	0.1111	2024	UN-DESA	Middle EGDI	0.2855
Eritrea	Middle HCI	0.3324	76.57	2018	UNESCO	49.14	2015	UNESCO	8.1	2021	UNDP	4.9	2021	UNDP	0.1111	2024	UN-DESA	Low EGDI	0.1576
Estonia	Very High HCI	0.9497	99.87	2021	UNESCO	98.85	2021	UNESCO	15.94	2021	UNESCO	13.5	2021	UNDP	1	2024	UN-DESA	Very High EGDI	0.9727
Eswatini	High HCI	0.5836	89.28	2020	UNESCO	76.22	2013	UNESCO	13.7	2021	UNDP	5.6	2021	UNDP	0.3333	2024	UN-DESA	High EGDI	0.6081
Ethiopia	Middle HCI	0.3254	51.77	2017	UNESCO	54.53	2012	UNESCO	9.7	2021	UNDP	3.2	2021	UNDP	0.3889	2024	UN-DESA	Middle EGDI	0.3111
Fiji	High HCI	0.7413	99.08	2017	UNESCO	77.9	2004	UNESCO	14.7	2021	UNDP	10.9	2021	UNDP	0.5	2024	UN-DESA	High EGDI	0.6754
Finland	Very High HCI	0.9836	99	2014	UNESCO	117.54	2021	UNESCO	19.23	2021	UNESCO	12.9	2021	UNDP	0.9444	2024	UN-DESA	Very High EGDI	0.9575
France	Very High HCI	0.8565	99	2014	UNESCO	93.86	2021	UNESCO	15.99	2021	UNESCO	11.6	2021	UNDP	0.7222	2024	UN-DESA	Very High EGDI	0.8744
Gabon	High HCI	0.5772	85.69	2022	UNESCO	74.93	2001	UNESCO	13	2021	UNDP	9.4	2021	UNDP	0.1111	2024	UN-DESA	High EGDI	0.5741
Gambia	Middle HCI	0.2823	58.67	2022	UNESCO	50.65	2010	UNESCO	9.4	2021	UNDP	4.6	2021	UNDP	0	2024	UN-DESA	Middle EGDI	0.2552
Georgia	Very High HCI	0.8654	99.57	2022	UNESCO	99.6	2022	UNESCO	16.73	2022	UNESCO	12.8	2021	UNESCO	0.5	2024	UN-DESA	Very High EGDI	0.7792
Germany	Very High HCI	0.9672	99	2014	UNESCO	98.35	2021	UNESCO	17.34	2021	UNESCO	14.1	2021	UNESCO	0.9444	2024	UN-DESA	Very High EGDI	0.9382
Ghana	High HCI	0.5586	80.38	2020	UNESCO	70.27	2021	UNESCO	11.59	2021	UNESCO	8.3	2021	UNESCO	0.3889	2024	UN-DESA	High EGDI	0.6317
Greece	Very High HCI	0.9219	97.94	2018	UNESCO	120.52	2021	UNESCO	20.03	2021	UNESCO	11.4	2021	UNESCO	0.6667	2024	UN-DESA	Very High EGDI	0.8674
Grenada	Very High HCI	0.755	98.6	2014	UNESCO	99.83	2018	UNESCO	16.59	2018	UNDP	9	2021	UNDP	0.2222	2024	UN-DESA	High EGDI	0.6458
Guatemala	Middle HCI	0.4834	84.27	2022	UNESCO	61.66	2020	UNESCO	10.79	2019	UNESCO	5.7	2021	UNESCO	0.3333	2024	UN-DESA	High EGDI	0.5738
Guinea	Middle HCI	0.2887	45.33	2021	UNESCO	52.84	2021	UNESCO	9.8	2021	UNDP	2.2	2021	UNDP	0.3889	2024	UN-DESA	Middle EGDI	0.4006
Guinea-Bissau	Middle HCI	0.3077	53.9	2022	UNESCO	62.98	2006	UNESCO	10.6	2021	UNDP	3.6	2021	UNDP	0	2024	UN-DESA	Middle EGDI	0.3083
Guyana	High HCI	0.5933	90.03	2022	UNESCO	73.01	2012	UNESCO	12.5	2021	UNDP	8.6	2021	UNDP	0.2778	2024	UN-DESA	High EGDI	0.5443
Haiti	Middle HCI	0.2883	61.69	2016	UNESCO	39.4	2014	UNESCO	9.7	2021	UNDP	5.6	2021	UNDP	0.0556	2024	UN-DESA	Low EGDI	0.2116
Honduras	High HCI	0.5182	88.51	2019	UNESCO	62.61	2019	UNESCO	10.1	2021	UNDP	7.1	2021	UNDP	0.3889	2024	UN-DESA	Middle EGDI	0.4856
Hungary	Very High HCI	0.8703	99.1	2021	UNESCO	90.3	2021	UNESCO	15.07	2021	UNESCO	12.2	2021	UNESCO	0.8889	2024	UN-DESA	Very High EGDI	0.8043
Iceland	Very High HCI	0.9953	99	2014	UNESCO	102.62	2021	UNESCO	19.11	2021	UNESCO	13.8	2021	UNESCO	0.9444	2024	UN-DESA	Very High EGDI	0.9671
India	High HCI	0.6149	76.33	2022	UNESCO	73.2	2022	UNESCO	12.96	2022	UNESCO	6.7	2021	UNESCO	0.7778	2024	UN-DESA	High EGDI	0.6678
Indonesia	High HCI	0.7293	96	2020	UNESCO	83.77	2022	UNESCO	13.79	2018	UNESCO	8.6	2021	UNESCO	0.6667	2024	UN-DESA	Very High EGDI	0.7991
Iran (Islamic Republic of)	High HCI	0.6932	88.99	2022	UNESCO	86.09	2020	UNESCO	14.12	2020	UNESCO	10.6	2021	UNESCO	0.3333	2024	UN-DESA	High EGDI	0.6564
Iraq	Middle HCI	0.4967	85.6	2017	UNESCO	63.14	2004	UNESCO	12.1	2021	UNESCO	7.9	2021	UNESCO	0.0556	2024	UN-DESA	Middle EGDI	0.4572
Ireland	Very High HCI	0.9046	99.2	2015	UNESCO	107.32	2021	UNESCO	19.13	2021	UNESCO	11.6	2021	UNESCO	0.6111	2024	UN-DESA	Very High EGDI	0.9138
Israel	Very High HCI	0.8739	97.76	2011	UNESCO	87.29	2021	UNESCO	15.03	2021	UNESCO	13.3	2021	UNESCO	0.8889	2024	UN-DESA	Very High EGDI	0.9014
Italy	Very High HCI	0.8426	99.35	2019	UNESCO	93.14	2021	UNESCO	16.66	2021	UNESCO	10.7	2021	UNESCO	0.6667	2024	UN-DESA	Very High EGDI	0.8356

Table 10   *(continued)*

Country	HCI Group	HCI 2024	Adult Literacy (%)			Gross Enrollment Ratio			Expected Year of Schooling			Mean Year of Schooling			E-government literacy			EDGI Group	EGDI 2024
			Index Value	Year	Source	Index Value	Year	Source	Index Value	Year	Source	Index Value	Year	Source	Index Value	Year	Source		
Jamaica	High HCI	0.706	88.1	2014	UNESCO	79.03	2005	UNESCO	13.4	2021	UNDP	9.2	2021	UNDP	0.7222	2024	UN-DESA	High EGDI	0.6678
Japan	Very High HCI	0.9117	99	2014	UNESCO	89.58	2020	UNESCO	15.46	2020	UNESCO	13.4	2021	UNDP	1	2024	UN-DESA	Very High EGDI	0.9351
Jordan	High HCI	0.6458	98.41	2021	UNESCO	63.59	2020	UNESCO	10.6	2021	UNDP	10.4	2021	UNDP	0.6111	2024	UN-DESA	High EGDI	0.6849
Kazakhstan	Very High HCI	0.8403	99.78	2018	UNESCO	93.58	2020	UNESCO	14.82	2020	UNESCO	12.3	2021	UNDP	0.6667	2024	UN-DESA	Very High EGDI	0.9009
Kenya	High HCI	0.5271	82.88	2022	UNESCO	63.34	2009	UNESCO	10.7	2021	UNDP	6.7	2021	UNDP	0.5	2024	UN-DESA	High EGDI	0.6314
Kiribati	High HCI	0.6269	93	2014	UNESCO	71.85	2008	UNESCO	11.8	2021	UNDP	8	2021	UNDP	0.5556	2024	UN-DESA	Middle EGDI	0.4572
Kuwait	High HCI	0.7083	96.46	2020	UNESCO	88.11	2015	UNESCO	15.3	2021	UNDP	7.3	2021	UNDP	0.3333	2024	UN-DESA	Very High EGDI	0.7812
Kyrgyzstan	High HCI	0.7061	99.59	2018	UNESCO	85.47	2020	UNESCO	12.99	2021	UNESCO	11.4	2021	UNDP	0.2778	2024	UN-DESA	High EGDI	0.7316
Lao People's Democratic Republic	Middle HCI	0.4608	87.52	2022	UNESCO	58.83	2021	UNESCO	10.19	2020	UNESCO	5.4	2021	UNDP	0.2778	2024	UN-DESA	Middle EGDI	0.4404
Latvia	Very High HCI	0.8805	99.89	2021	UNESCO	101.36	2021	UNESCO	16.48	2022	UNESCO	13.3	2021	UNDP	0.5556	2024	UN-DESA	Very High EGDI	0.8852
Lebanon	High HCI	0.5433	95.03	2019	UNESCO	63.43	2015	UNESCO	11.3	2021	UNDP	8.7	2021	UNDP	0.1667	2024	UN-DESA	High EGDI	0.5449
Lesotho	Middle HCI	0.4862	82.01	2022	UNESCO	67.12	2017	UNESCO	11.33	2017	UNESCO	6	2021	UNDP	0.2222	2024	UN-DESA	Middle EGDI	0.4123
Liberia	Middle HCI	0.3669	48.3	2017	UNESCO	65.41	2000	UNESCO	10.4	2021	UNDP	5.1	2021	UNDP	0.2778	2024	UN-DESA	Middle EGDI	0.2513
Libya	High HCI	0.5951	86.1	2004	UNESCO	90.88	2003	UNESCO	12.9	2021	UNDP	7.6	2021	UNDP	0.1111	2024	UN-DESA	High EGDI	0.5466
Liechtenstein	Very High HCI	0.8263	99	2014	UNESCO	91.62	2021	UNESCO	15.41	2021	UNESCO	12.5	2021	UNDP	0.5556	2024	UN-DESA	Very High EGDI	0.8528
Lithuania	Very High HCI	0.8861	99.83	2021	UNESCO	97.91	2021	UNESCO	16.4	2021	UNESCO	13.5	2021	UNDP	0.6111	2024	UN-DESA	Very High EGDI	0.9110
Luxembourg	Very High HCI	0.7955	99	2014	UNESCO	78.38	2021	UNESCO	14.2	2021	UNESCO	13	2021	UNDP	0.6667	2024	UN-DESA	Very High EGDI	0.8466
Madagascar	Middle HCI	0.4141	77.48	2022	UNESCO	58.57	2019	UNESCO	9.37	2019	UNESCO	5.1	2021	UNDP	0.2778	2024	UN-DESA	Middle EGDI	0.3235
Malawi	Middle HCI	0.4749	68.08	2022	UNESCO	70.63	2011	UNESCO	12.7	2021	UNDP	4.5	2021	UNDP	0.3333	2024	UN-DESA	Middle EGDI	0.3753
Malaysia	High HCI	0.7192	94.97	2019	UNESCO	75.4	2022	UNESCO	12.93	2021	UNESCO	10.6	2021	UNDP	0.6667	2024	UN-DESA	Very High EGDI	0.8111
Maldives	High HCI	0.613	97.86	2021	UNESCO	70.61	2019	UNESCO	12.17	2019	UNESCO	7.3	2021	UNDP	0.4444	2024	UN-DESA	High EGDI	0.6745
Mali	Low HCI	0.125	30.76	2020	UNESCO	48.11	2017	UNESCO	7.12	2017	UNESCO	2.3	2021	UNDP	0	2024	UN-DESA	Middle EGDI	0.3005
Malta	Very High HCI	0.8162	94.94	2021	UNESCO	91.56	2021	UNESCO	15.86	2021	UNESCO	12.2	2021	UNDP	0.5556	2024	UN-DESA	Very High EGDI	0.8886
Marshall Islands	Very High HCI	0.7836	98.27	2011	UNESCO	97.79	2022	UNESCO	16.39	2022	UNESCO	10.9	2021	UNDP	0.2778	2024	UN-DESA	Middle EGDI	0.4823
Mauritania	Middle HCI	0.2961	66.96	2021	UNESCO	49.7	2020	UNESCO	8.05	2020	UNESCO	4.9	2021	UNDP	0.0556	2024	UN-DESA	Middle EGDI	0.3491
Mauritius	High HCI	0.7456	92.15	2021	UNESCO	79.25	2020	UNESCO	14.61	2020	UNESCO	10.4	2021	UNDP	0.6667	2024	UN-DESA	Very High EGDI	0.7506
Mexico	Very High HCI	0.7603	95.25	2020	UNESCO	84.79	2021	UNESCO	14.51	2021	UNESCO	9.2	2021	UNDP	0.7222	2024	UN-DESA	Very High EGDI	0.7850
Micronesia (Federated States of)	High HCI	0.5735	94	2014	UNESCO	75.28	2004	UNESCO	11.5	2021	UNDP	7.8	2021	UNDP	0.2222	2024	UN-DESA	Middle EGDI	0.3235
Monaco	Very High HCI	0.7515	99	2014	UNESCO	99	2014	UNESCO	11.8	2015	UNDP	11.27	2017	UNDP	0.4444	2024	UN-DESA	High EGDI	0.7175

Table 10   *(continued)*

Country	HCI Group	HCI 2024	Adult Literacy (%)			Gross Enrollment Ratio			Expected Year of Schooling			Mean Year of Schooling			E-government literacy			EDGI Group	EGDI 2024
			Index Value	Year	Source	Index Value	Year	Source	Index Value	Year	Source	Index Value	Year	Source	Index Value	Year	Source		
Mongolia	Very High HCI	0.7775	99.18	2020	UNESCO	89.95	2022	UNESCO	15	2021	UNDP	9.4	2021	UNDP	0.6111	2024	UN-DESA	Very High EGDI	0.8457
Montenegro	High HCI	0.719	98.98	2021	UNESCO	83.76	2022	UNESCO	14.08	2022	UNDP	12.2	2021	UNDP	0.2222	2024	UN-DESA	High EGDI	0.7211
Morocco	High HCI	0.6078	77.35	2022	UNESCO	86.69	2022	UNESCO	14.59	2022	UNESCO	5.9	2021	UNDP	0.3889	2024	UN-DESA	High EGDI	0.6841
Mozambique	Middle HCI	0.3952	59.78	2020	UNESCO	67.2	2019	UNESCO	10.36	2017	UNDP	3.2	2021	UNDP	0.3889	2024	UN-DESA	Middle EGDI	0.2848
Myanmar	High HCI	0.5081	89.07	2019	UNESCO	71.53	2019	UNESCO	11.5	2018	UNESCO	6.4	2021	UNDP	0.1111	2024	UN-DESA	High EGDI	0.5001
Namibia	High HCI	0.5738	92.25	2021	UNESCO	71.31	2006	UNESCO	11.9	2021	UNDP	7.2	2021	UNDP	0.3333	2024	UN-DESA	High EGDI	0.6007
Nauru	High HCI	0.5061	92	2014	UNESCO	59.59	2008	UNESCO	11.7	2021	UNDP	7.12	2017	UNDP	0.1667	2024	UN-DESA	Middle EGDI	0.4454
Nepal	High HCI	0.521	71.15	2021	UNESCO	71.64	2022	UNESCO	12.64	2020	UNESCO	5.1	2021	UNDP	0.5	2024	UN-DESA	High EGDI	0.5781
Netherlands	Very High HCI	0.9688	99	2014	UNESCO	103.75	2021	UNESCO	18.58	2021	UNESCO	12.6	2021	UNDP	0.9444	2024	UN-DESA	Very High EGDI	0.9538
New Zealand	Very High HCI	0.9615	99	2014	UNESCO	112.05	2021	UNESCO	19.68	2021	UNESCO	12.9	2021	UNDP	0.7778	2024	UN-DESA	Very High EGDI	0.9265
Nicaragua	High HCI	0.561	82.61	2015	UNESCO	69.69	2002	UNESCO	12.6	2021	UNDP	7.1	2021	UNDP	0.3889	2024	UN-DESA	High EGDI	0.5318
Niger	Low HCI	0.1685	38.1	2022	UNESCO	41.04	2017	UNESCO	6.33	2017	UNDP	2.1	2021	UNDP	0.3333	2024	UN-DESA	Low EGDI	0.2116
Nigeria	Middle HCI	0.4236	62.02	2018	UNESCO	56.06	2011	UNESCO	11.2	2021	UNDP	7.2	2021	UNDP	0.2778	2024	UN-DESA	Middle EGDI	0.4815
North Macedonia	High HCI	0.7023	98.36	2020	UNESCO	71.25	2021	UNESCO	13	2021	UNESCO	10.2	2021	UNESCO	0.6111	2024	UN-DESA	High EGDI	0.7070
Norway	Very High HCI	0.9175	99	2014	UNESCO	105.35	2021	UNESCO	18.64	2021	UNESCO	13	2021	UNESCO	0.6111	2024	UN-DESA	Very High EGDI	0.9315
Oman	Very High HCI	0.7977	97.34	2022	UNESCO	80.91	2021	UNESCO	12.96	2021	UNESCO	11.7	2021	UNESCO	0.6667	2024	UN-DESA	Very High EGDI	0.8576
Pakistan	Middle HCI	0.35	58	2019	UNESCO	47.81	2021	UNESCO	7.64	2019	UNESCO	4.5	2021	UNESCO	0.6111	2024	UN-DESA	High EGDI	0.5096
Palau	Very High HCI	0.752	96.59	2015	UNESCO	93.42	2013	UNESCO	15.8	2021	UNDP	12.5	2021	UNDP	0.1111	2024	UN-DESA	High EGDI	0.5072
Panama	High HCI	0.6866	95.74	2019	UNESCO	76.43	2016	UNESCO	13.1	2021	UNDP	10.5	2021	UNDP	0.4444	2024	UN-DESA	High EGDI	0.7298
Papua New Guinea	Middle HCI	0.3984	61.6	2010	UNESCO	78.93	2012	UNESCO	10.4	2021	UNDP	4.7	2021	UNDP	0.0556	2024	UN-DESA	Middle EGDI	0.3076
Paraguay	High HCI	0.7093	94.54	2020	UNESCO	70.77	2010	UNESCO	13	2021	UNDP	8.9	2021	UNDP	0.8333	2024	UN-DESA	High EGDI	0.7251
Peru	High HCI	0.7469	94.5	2020	UNESCO	90.82	2017	UNESCO	14.5	2017	UNESCO	9.9	2021	UNDP	0.5	2024	UN-DESA	Very High EGDI	0.8070
Philippines	High HCI	0.7256	96.28	2019	UNESCO	75.41	2021	UNESCO	12.78	2020	UNESCO	9	2021	UNESCO	0.8333	2024	UN-DESA	Very High EGDI	0.7621
Poland	Very High HCI	0.8304	99.8	2021	UNESCO	96.22	2021	UNESCO	15.93	2021	UNESCO	13.2	2021	UNESCO	0.3889	2024	UN-DESA	Very High EGDI	0.8648
Portugal	Very High HCI	0.8389	96.78	2021	UNESCO	99.33	2021	UNESCO	16.82	2021	UNESCO	9.6	2021	UNESCO	0.6667	2024	UN-DESA	Very High EGDI	0.8415
Qatar	High HCI	0.7114	93.46	2017	UNESCO	75.51	2020	UNESCO	13.26	2020	UNESCO	10	2021	UNESCO	0.6667	2024	UN-DESA	Very High EGDI	0.8244
Republic of Korea	Very High HCI	0.912	98.8	2018	UNESCO	99.06	2021	UNESCO	16.51	2021	UNESCO	12.5	2021	UNESCO	0.8333	2024	UN-DESA	Very High EGDI	0.9679
Republic of Moldova	Very High HCI	0.7776	99.6	2021	UNESCO	90.99	2022	UNESCO	14.91	2022	UNESCO	11.8	2021	UNDP	0.3889	2024	UN-DESA	Very High EGDI	0.7719
Romania	High HCI	0.7439	98.9	2021	UNESCO	81.33	2021	UNESCO	14.51	2021	UNESCO	11.3	2021	UNESCO	0.4444	2024	UN-DESA	Very High EGDI	0.7636
Russian Federation	Very High HCI	0.8319	99.93	2021	UNESCO	97.61	2019	UNESCO	15.52	2019	UNESCO	12.8	2021	UNDP	0.4444	2024	UN-DESA	Very High EGDI	0.8532

Table 10 *(continued)*

Country	HCI Group	HCI 2024	Adult Literacy (%)			Gross Enrollment Ratio			Expected Year of Schooling			Mean Year of Schooling			E-government literacy			EDGI Group	EGDI 2024
			Index Value	Year	Source	Index Value	Year	Source	Index Value	Year	Source	Index Value	Year	Source	Index Value	Year	Source		
Rwanda	High HCI	0.5467	75.9	2021	UNESCO	68.55	2022	UNESCO	11.38	2022	UNESCO	4.4	2021	UNDP	0.7778	2024	UN-DESA	High EGDI	0.5799
Saint Kitts and Nevis	High HCI	0.7202	97.8	2014	UNESCO	100	2015	UNESCO	15.4	2021	UNDP	8.7	2021	UNDP	0.1667	2024	UN-DESA	High EGDI	0.6305
Saint Lucia	High HCI	0.6037	94.8	2014	UNESCO	71.29	2022	UNESCO	12.73	2022	UNESCO	8.5	2021	UNDP	0.2778	2024	UN-DESA	High EGDI	0.5255
Saint Vincent and the Grenadines	High HCI	0.6956	88.1	2014	UNESCO	83.56	2015	UNESCO	14.7	2021	UNDP	10.8	2021	UNDP	0.3333	2024	UN-DESA	High EGDI	0.5876
Samoa	High HCI	0.6453	99.1	2021	UNESCO	71.33	2000	UNESCO	12.4	2021	UNDP	11.4	2021	UNDP	0.2222	2024	UN-DESA	Middle EGDI	0.4899
San Marino	High HCI	0.6587	99.92	2018	UNESCO	68.16	2022	UNESCO	12.4	2022	UNESCO	10.8	2021	UNDP	0.3889	2024	UN-DESA	High EGDI	0.6551
Sao Tome and Principe	High HCI	0.5928	93.75	2022	UNESCO	76.9	2015	UNESCO	13.4	2021	UNDP	6.2	2021	UNDP	0.2778	2024	UN-DESA	Middle EGDI	0.4308
Saudi Arabia	Very High HCI	0.9067	97.59	2020	UNESCO	96.81	2020	UNESCO	16.1	2021	UNDP	11.3	2021	UNDP	1	2024	UN-DESA	Very High EGDI	0.9602
Senegal	Middle HCI	0.338	57.67	2022	UNESCO	54.37	2022	UNESCO	9.14	2022	UNESCO	2.9	2021	UNDP	0.4444	2024	UN-DESA	High EGDI	0.5162
Serbia	Very High HCI	0.8094	99.48	2019	UNESCO	86.19	2022	UNESCO	14.5	2022	UNDP	11.4	2021	UNDP	0.7222	2024	UN-DESA	Very High EGDI	0.8618
Seychelles	High HCI	0.6769	96.2	2020	UNESCO	79.47	2022	UNESCO	13.89	2022	UNESCO	10.3	2021	UNDP	0.2778	2024	UN-DESA	High EGDI	0.6773
Sierra Leone	Middle HCI	0.2718	48.64	2022	UNESCO	41.15	2001	UNESCO	9.8	2021	UNDP	4.6	2021	UNDP	0.2222	2024	UN-DESA	Middle EGDI	0.3042
Singapore	Very High HCI	0.9362	97.13	2020	UNESCO	118.1	2021	UNESCO	16.9	2021	UNESCO	11.9	2021	UNDP	1	2024	UN-DESA	Very High EGDI	0.9691
Slovakia	Very High HCI	0.7982	99.6	2015	UNESCO	83.21	2021	UNESCO	14.72	2021	UNESCO	12.9	2021	UNDP	0.5556	2024	UN-DESA	Very High EGDI	0.8021
Slovenia	Very High HCI	0.853	99.7	2014	UNESCO	98.18	2021	UNESCO	17.41	2021	UNESCO	12.8	2021	UNDP	0.3333	2024	UN-DESA	Very High EGDI	0.8759
Solomon Islands	Middle HCI	0.4262	76.6	2009	UNESCO	55.39	2007	UNESCO	10.3	2021	UNDP	5.7	2021	UNDP	0.2778	2024	UN-DESA	Middle EGDI	0.3681
Somalia	Low HCI	0	41.03	2022	UNESCO	17	2014	UNESCO	2.4	2013	UNDP	0.97	---	UNDP	0.1667	2024	UN-DESA	Low EGDI	0.1468
South Africa	Very High HCI	0.8026	90	2021	UNESCO	84.35	2021	UNESCO	14.26	2021	UNDP	11.4	2021	UNDP	0.8889	2024	UN-DESA	Very High EGDI	0.8616
South Sudan	Low HCI	0.1521	34.52	2018	UNESCO	38	2014	UNESCO	5.5	2021	UNDP	5.7	2021	UNDP	0.1111	2024	UN-DESA	Low EGDI	0.1191
Spain	Very High HCI	0.8961	98.59	2020	UNESCO	106.95	2021	UNESCO	17.81	2021	UNESCO	10.6	2021	UNDP	0.7778	2024	UN-DESA	Very High EGDI	0.9206
Sri Lanka	High HCI	0.657	92.43	2021	UNESCO	75.34	2021	UNESCO	13.58	2018	UNESCO	10.8	2021	UNDP	0.2778	2024	UN-DESA	High EGDI	0.6667
Sudan	Middle HCI	0.2593	60.7	2018	UNESCO	49.69	2015	UNESCO	7.9	2021	UNDP	3.8	2021	UNDP	0.0556	2024	UN-DESA	Middle EGDI	0.2759
Suriname	High HCI	0.5568	95	2021	UNESCO	60.85	2021	UNESCO	10.96	2021	UNDP	9.8	2021	UNDP	0.2222	2024	UN-DESA	High EGDI	0.6365
Sweden	Very High HCI	0.9275	99	2014	UNESCO	117.47	2021	UNESCO	19.04	2021	UNESCO	12.6	2021	UNDP	0.6667	2024	UN-DESA	Very High EGDI	0.9326
Switzerland	Very High HCI	0.9026	99	2014	UNESCO	94.6	2021	UNESCO	16.58	2021	UNESCO	13.9	2021	UNDP	0.7222	2024	UN-DESA	Very High EGDI	0.9003
Syrian Arab Republic	Middle HCI	0.4169	86.3	2014	UNESCO	55.11	2013	UNESCO	9.2	2021	UNDP	5.1	2021	UNDP	0.2222	2024	UN-DESA	Middle EGDI	0.3888
Tajikistan	High HCI	0.6531	99.8	2014	UNESCO	70.93	2013	UNESCO	11.7	2021	UNDP	11.3	2021	UNDP	0.3333	2024	UN-DESA	High EGDI	0.5606

Table 10 *(continued)*

Country	HCI Group	HCI 2024	Adult Literacy (%)			Gross Enrollment Ratio			Expected Year of Schooling			Mean Year of Schooling			E-government literacy			EDGI Group	EGDI 2024
			Index Value	Year	Source	Index Value	Year	Source	Index Value	Year	Source	Index Value	Year	Source	Index Value	Year	Source		
Thailand	Very High HCI	0.8032	94.1	2021	UNESCO	87.5	2023	UNESCO	15.58	2020	UNDP	8.7	2021	UNDP	0.8889	2024	UN-DESA	Very High EGDI	0.8351
Timor-Leste	High HCI	0.5104	69.9	2020	UNESCO	77.01	2010	UNESCO	12.6	2021	UNDP	5.4	2021	UNDP	0.3333	2024	UN-DESA	Middle EGDI	0.4020
Togo	Middle HCI	0.4813	66.54	2019	UNESCO	75.88	2017	UNESCO	12.57	2017	UNESCO	5	2021	UNDP	0.2778	2024	UN-DESA	Middle EGDI	0.3920
Tonga	High HCI	0.7488	99.4	2021	UNESCO	92.6	2020	UNESCO	16.29	2020	UNESCO	11.4	2021	UNESCO	0.1111	2024	UN-DESA	High EGDI	0.5164
Trinidad and Tobago	High HCI	0.7174	98.7	2010	UNESCO	67.3	2004	UNESCO	14.5	2021	UNDP	11.6	2021	UNDP	0.5	2024	UN-DESA	High EGDI	0.6973
Tunisia	High HCI	0.6497	83.56	2022	UNESCO	82.74	2016	UNESCO	15.4	2021	UNDP	7.4	2021	UNDP	0.3889	2024	UN-DESA	High EGDI	0.6935
Türkiye	Very High HCI	0.9192	96.74	2019	UNESCO	114.9	2021	UNESCO	19.68	2021	UNESCO	8.6	2021	UNESCO	0.9444	2024	UN-DESA	Very High EGDI	0.8913
Turkmenistan	High HCI	0.6614	99.7	2014	UNESCO	82.46	2022	UNESCO	13.24	2022	UNESCO	11.3	2021	UNESCO	0.0556	2024	UN-DESA	Middle EGDI	0.4757
Tuvalu	High HCI	0.5463	98	2014	UNESCO	65.37	2001	UNESCO	9.4	2021	UNDP	10.6	2021	UNDP	0.1111	2024	UN-DESA	Middle EGDI	0.4042
Uganda	High HCI	0.5023	80.59	2022	UNESCO	68.94	2004	UNESCO	10.1	2021	UNDP	5.7	2021	UNDP	0.4444	2024	UN-DESA	Middle EGDI	0.4464
Ukraine	Very High HCI	0.824	100	2021	UNESCO	85.22	2021	UNESCO	13.33	2021	UNESCO	11.1	2021	UNESCO	0.9444	2024	UN-DESA	Very High EGDI	0.8841
United Arab Emirates	Very High HCI	0.9436	98.29	2022	UNESCO	95.49	2020	UNESCO	17.21	2020	UNESCO	12.7	2021	UNESCO	1	2024	UN-DESA	Very High EGDI	0.9533
United Kingdom of Great Britain and Northern Ireland	Very High HCI	0.945	99	2014	UNESCO	99.47	2021	UNESCO	17.63	2021	UNESCO	13.4	2021	UNDP	0.8333	2024	UN-DESA	Very High EGDI	0.9577
United Republic of Tanzania	Middle HCI	0.4399	82.02	2022	UNESCO	53.69	2021	UNESCO	8.59	2021	UNESCO	6.4	2021	UNESCO	0.3889	2024	UN-DESA	Middle EGDI	0.4327
United States of America	Very High HCI	0.8842	99	2014	UNESCO	96.96	2021	UNESCO	16.41	2021	UNESCO	13.7	2021	UNESCO	0.6111	2024	UN-DESA	Very High EGDI	0.9194
Uruguay	Very High HCI	0.8749	98.77	2019	UNESCO	101.98	2021	UNESCO	17.35	2021	UNESCO	9	2021	UNESCO	0.8333	2024	UN-DESA	Very High EGDI	0.9006
Uzbekistan	Very High HCI	0.758	100	2022	UNESCO	78.88	2023	UNESCO	11.99	2021	UNESCO	11.9	2021	UNESCO	0.7222	2024	UN-DESA	Very High EGDI	0.7999
Vanuatu	High HCI	0.5347	89.1	2021	UNESCO	63.5	2004	UNESCO	11.5	2021	UNDP	7.1	2021	UNDP	0.3333	2024	UN-DESA	High EGDI	0.5427
Venezuela (Bolivarian Republic of)	High HCI	0.7115	96.6	2022	UNESCO	89.57	2009	UNESCO	12.8	2021	UNDP	11.1	2021	UNDP	0.3333	2024	UN-DESA	High EGDI	0.5360
Viet Nam	High HCI	0.7267	95.75	2019	UNESCO	91.9	2022	UNESCO	13	2021	UNDP	8.4	2021	UNDP	0.6111	2024	UN-DESA	Very High EGDI	0.7709
Yemen	Middle HCI	0.267	54.1	2004	UNESCO	55.52	2011	UNESCO	9.1	2021	UNDP	3.2	2021	UNDP	0.0556	2024	UN-DESA	Low EGDI	0.2317
Zambia	High HCI	0.6225	87.5	2020	UNESCO	85	---	UNESCO	10.9	2021	UNDP	7.2	2021	UNDP	0.5556	2024	UN-DESA	High EGDI	0.5424
Zimbabwe	High HCI	0.5395	89.85	2022	UNESCO	66.25	2013	UNESCO	12.1	2021	UNDP	8.7	2021	UNDP	0.1111	2024	UN-DESA	Middle EGDI	0.4481

Table 11   Telecommunications Infrastructure Index (TII) and its components

Country	TII Group	TII 2024	Percentage of Mobile cellular telephone subscriptions	Percentage of Individuals using the Internet	Percentage of Mobile data and voice high-consumption basket price	Percentage of Fixed-broadband Internet basket price	Percentage of Active mobile-broadband subscriptions	EGDI Group	EGDI 2024
Afghanistan	Low TII	0.2167	55.51	17.60	20.39	14.96	55.51	Low EGDI	0.2083
Albania	Very High TII	0.7750	97.89	82.61	1.45	1.27	75.30	Very High EGDI	0.8000
Algeria	Very High TII	0.8129	109.17	71.24	2.42	3.87	99.68	High EGDI	0.5956
Andorra	Very High TII	0.9231	120.00	94.49	1.10	2.30	95.21	High EGDI	0.6893
Angola	Middle TII	0.3724	66.69	39.29	4.49	12.18	26.27	Middle EGDI	0.4149
Antigua and Barbuda	Very High TII	0.7943	120.00	91.41	3.02	4.83	51.50	High EGDI	0.6428
Argentina	Very High TII	0.8425	120.00	88.38	1.00	5.66	72.90	Very High EGDI	0.8573
Armenia	Very High TII	0.8782	120.00	77.03	1.00	4.20	102.05	Very High EGDI	0.8422
Australia	Very High TII	0.9509	109.56	94.88	1.00	1.21	120.00	Very High EGDI	0.9577
Austria	Very High TII	0.9810	120.00	93.61	1.00	1.00	120.00	Very High EGDI	0.9065
Azerbaijan	Very High TII	0.8203	107.00	88.20	1.81	1.75	77.11	Very High EGDI	0.7607
Bahamas	Very High TII	0.8652	98.54	94.41	1.09	1.58	98.54	High EGDI	0.7143
Bahrain	Very High TII	0.9877	120.00	100.00	1.70	2.96	120.00	Very High EGDI	0.9196
Bangladesh	High TII	0.6501	108.71	44.50	1.40	1.54	55.92	High EGDI	0.6570
Barbados	Very High TII	0.7624	114.86	76.21	3.59	3.56	64.81	High EGDI	0.6815
Belarus	Very High TII	0.9156	120.00	89.51	1.57	1.00	97.76	High EGDI	0.7445
Belgium	Very High TII	0.8698	102.00	94.01	1.00	1.00	94.89	Very High EGDI	0.8121
Belize	High TII	0.5292	66.00	70.35	3.85	6.98	44.20	Middle EGDI	0.4872
Benin	Middle TII	0.4817	108.97	33.76	12.55	22.96	67.22	Middle EGDI	0.4578
Bhutan	Very High TII	0.8169	94.89	86.84	2.19	2.87	98.01	High EGDI	0.6511
Bolivia	High TII	0.7089	99.60	73.28	7.36	8.30	86.70	High EGDI	0.6651

Table 11 *(continued)*

Country	TII Group	TII 2024	Percentage of Mobile cellular telephone subscriptions	Percentage of Individuals using the Internet	Percentage of Mobile data and voice high-consumption basket price	Percentage of Fixed-broadband Internet basket price	Percentage of Active mobile-broadband subscriptions	EDGI Group	EGDI 2024
Bosnia and Herzegovina	Very High TII	0.7763	117.89	83.38	2.33	10.09	64.89	High EGDI	0.6329
Botswana	Very High TII	0.8649	120.00	77.33	3.19	7.39	108.16	High EGDI	0.6118
Brazil	Very High TII	0.8069	98.89	80.53	1.00	3.05	93.06	Very High EGDI	0.8403
Brunei Darussalam	Very High TII	0.9868	117.76	99.00	1.00	1.20	118.82	Very High EGDI	0.7554
Bulgaria	Very High TII	0.9171	117.44	79.13	1.00	1.52	115.59	Very High EGDI	0.8145
Burkina Faso	Middle TII	0.3640	112.00	19.92	18.29	31.07	60.90	Middle EGDI	0.2895
Burundi	Low TII	0.0330	58.14	11.28	20.39	32.12	8.33	Low EGDI	0.2480
Cabo Verde	High TII	0.6128	99.23	72.10	20.12	2.85	74.59	High EGDI	0.6238
Cambodia	Very High TII	0.7609	116.33	56.73	3.10	11.61	101.97	High EGDI	0.5754
Cameroon	Middle TII	0.3700	88.92	43.86	15.93	19.78	36.04	Middle EGDI	0.4294
Canada	Very High TII	0.8078	92.11	94.00	1.00	1.05	81.04	Very High EGDI	0.8452
Central African Republic	Low TII	0.0000	33.60	7.51	20.39	16.43	5.22	Low EGDI	0.0947
Chad	Low TII	0.1194	68.14	12.18	20.39	16.43	3.40	Low EGDI	0.1785
Chile	Very High TII	0.9455	120.00	90.68	1.00	1.83	109.48	Very High EGDI	0.8827
China	Very High TII	0.8995	120.00	75.61	1.00	1.00	107.84	Very High EGDI	0.8718
Colombia	Very High TII	0.8065	120.00	72.80	1.50	3.80	76.17	Very High EGDI	0.7793
Comoros	Middle TII	0.3537	100.24	16.40	14.09	29.15	61.53	Middle EGDI	0.2586
Congo	Middle TII	0.2776	94.64	36.25	15.64	30.96	15.80	Middle EGDI	0.3391
Costa Rica	Very High TII	0.8933	120.00	82.60	1.00	1.64	96.55	Very High EGDI	0.8009
Croatia	High TII	0.6693	120.00	38.41	5.88	12.98	91.38	Very High EGDI	0.8818
Cuba	Very High TII	0.9180	111.17	82.07	1.00	1.00	120.00	Middle EGDI	0.4921
Cyprus	High TII	0.5318	67.78	73.22	5.03	6.79	42.20	Very High EGDI	0.8619
Czechia	Very High TII	0.8941	120.00	89.60	1.00	1.00	86.10	Very High EGDI	0.8239

Table 11   *(continued)*

Country	TII Group	TII 2024	Percentage of Mobile cellular telephone subscriptions	Percentage of Individuals using the Internet	Percentage of Mobile data and voice high-consumption basket price	Percentage of Fixed-broadband Internet basket price	Percentage of Active mobile-broadband subscriptions	EDGI Group	EGDI 2024
Côte d'Ivoire	Very High TII	0.9204	120.00	84.54	1.00	1.00	105.03	High EGDI	0.5587
Democratic People's Republic of Korea	Low TII	0.1745	23.10	0.00	1.29	1.07	23.10	Low EGDI	0.2320
Democratic Republic of the Congo	Low TII	0.1591	50.34	27.24	20.39	16.43	26.19	Middle EGDI	0.2715
Denmark	Very High TII	0.9966	120.00	98.78	1.00	1.00	120.00	Very High EGDI	0.9847
Djibouti	Middle TII	0.3840	47.46	65.03	10.36	8.77	35.61	Middle EGDI	0.2911
Dominica	High TII	0.6757	85.90	83.38	5.86	5.57	67.80	High EGDI	0.5445
Dominican Republic	High TII	0.7444	90.39	89.03	3.32	2.66	71.64	High EGDI	0.7013
Ecuador	High TII	0.6833	97.17	72.69	2.97	4.74	59.43	Very High EGDI	0.7800
Egypt	High TII	0.6946	92.01	72.20	1.60	2.79	64.83	High EGDI	0.6699
El Salvador	Very High TII	0.7526	120.00	62.89	2.90	6.67	74.85	High EGDI	0.5988
Equatorial Guinea	Middle TII	0.2532	53.34	66.82	19.50	12.86	0.89	Middle EGDI	0.2855
Eritrea	Low TII	0.1405	49.70	26.59	12.87	32.12	25.00	Low EGDI	0.1576
Estonia	Very High TII	0.9731	120.00	91.02	1.00	1.00	120.00	Very High EGDI	0.9727
Eswatini	Very High TII	0.7851	120.00	58.25	4.65	13.37	113.53	High EGDI	0.6081
Ethiopia	Middle TII	0.2659	57.89	19.38	4.92	16.34	26.91	Middle EGDI	0.3111
Fiji	Very High TII	0.7507	107.00	85.22	10.39	1.80	76.10	High EGDI	0.6754
Finland	Very High TII	0.9791	120.00	93.00	1.00	1.00	120.00	Very High EGDI	0.9575
France	Very High TII	0.9228	118.85	85.33	1.00	1.18	107.00	Very High EGDI	0.8744
Gabon	Very High TII	0.8263	120.00	73.70	2.89	7.23	94.40	High EGDI	0.5741
Gambia	Middle TII	0.3877	101.00	54.19	20.39	33.04	50.30	Middle EGDI	0.2552
Georgia	Very High TII	0.9071	120.00	78.71	1.17	2.35	110.00	Very High EGDI	0.7792

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Table 11   *(continued)*

Country	TII Group	TII 2024	Percentage of Mobile cellular telephone subscriptions	Percentage of Individuals using the Internet	Percentage of Mobile data and voice high-consumption basket price	Percentage of Fixed-broadband Internet basket price	Percentage of Active mobile-broadband subscriptions	EDGI Group	EGDI 2024
Germany	Very High TII	0.9236	120.00	92.48	1.00	1.00	95.54	Very High EGDI	0.9382
Ghana	High TII	0.7281	119.62	69.84	3.74	12.76	68.38	High EGDI	0.6317
Greece	Very High TII	0.8657	109.32	83.17	1.35	1.88	100.10	Very High EGDI	0.8674
Grenada	High TII	0.6767	81.10	79.90	5.17	4.89	76.60	High EGDI	0.6458
Guatemala	High TII	0.5843	115.18	54.40	3.12	6.26	17.00	High EGDI	0.5738
Guinea	Middle TII	0.4323	102.00	33.92	9.32	11.29	23.40	Middle EGDI	0.4006
Guinea-Bissau	Middle TII	0.4902	120.00	31.57	7.97	33.04	62.50	Middle EGDI	0.3083
Guyana	High TII	0.6942	106.00	85.32	3.46	3.65	33.80	High EGDI	0.5443
Haiti	Low TII	0.2087	63.90	39.30	15.62	33.04	28.20	Low EGDI	0.2116
Honduras	Middle TII	0.4799	76.08	59.71	9.45	12.76	49.78	Middle EGDI	0.4856
Hungary	Very High TII	0.8282	103.00	89.14	1.11	1.00	81.59	Very High EGDI	0.8043
Iceland	Very High TII	0.9983	120.00	99.86	1.00	1.40	120.00	Very High EGDI	0.9671
India	High TII	0.5700	80.65	48.08	1.11	2.80	56.36	High EGDI	0.6678
Indonesia	Very High TII	0.8645	120.00	66.48	1.71	6.13	116.00	Very High EGDI	0.7991
Iran (Islamic Republic of)	Very High TII	0.8987	120.00	81.72	4.20	4.91	116.00	High EGDI	0.6564
Iraq	High TII	0.6874	98.18	78.72	2.55	2.54	46.18	Middle EGDI	0.4572
Ireland	Very High TII	0.9599	113.00	95.59	1.00	1.46	118.60	Very High EGDI	0.9138
Israel	Very High TII	0.9763	120.00	92.09	1.00	1.00	120.00	Very High EGDI	0.9014
Italy	Very High TII	0.9017	120.00	85.06	1.00	1.06	95.91	Very High EGDI	0.8356
Jamaica	High TII	0.7296	106.20	85.12	5.81	8.91	66.67	High EGDI	0.6678
Japan	Very High TII	0.9509	120.00	84.92	1.49	1.09	120.00	Very High EGDI	0.9351
Jordan	High TII	0.6499	67.57	90.50	3.54	6.71	67.57	High EGDI	0.6849
Kazakhstan	Very High TII	0.9235	120.00	92.30	1.14	1.00	96.18	Very High EGDI	0.9009

Table 11 *(continued)*

Country	TII Group	TII 2024	Percentage of Mobile cellular telephone subscriptions	Percentage of Individuals using the Internet	Percentage of Mobile data and voice high-consumption basket price	Percentage of Fixed-broadband Internet basket price	Percentage of Active mobile-broadband subscriptions	EDGI Group	EGDI 2024
Kenya	High TII	0.5901	120.00	40.81	5.96	16.61	59.02	High EGDI	0.6314
Kiribati	Middle TII	0.3544	48.83	54.42	15.05	8.34	48.42	Middle EGDI	0.4572
Kuwait	Very High TII	0.9988	120.00	99.75	1.00	1.18	120.00	Very High EGDI	0.7812
Kyrgyzstan	Very High TII	0.8815	112.17	79.77	2.73	6.22	120.00	High EGDI	0.7316
Lao People's Democratic Republic	High TII	0.5338	65.00	66.15	8.21	1.18	56.40	Middle EGDI	0.4404
Latvia	Very High TII	0.9660	117.10	92.19	1.00	1.37	120.00	Very High EGDI	0.8852
Lebanon	High TII	0.6425	76.70	90.05	15.38	1.03	77.80	High EGDI	0.5449
Lesotho	Middle TII	0.4643	67.52	47.04	11.66	6.10	67.12	Middle EGDI	0.4123
Liberia	Low TII	0.1238	31.80	30.13	20.39	28.61	54.99	Middle EGDI	0.2513
Libya	Very High TII	0.9639	120.00	88.43	1.20	1.00	120.00	High EGDI	0.5466
Liechtenstein	Very High TII	0.9906	120.00	96.80	1.00	1.00	120.00	Very High EGDI	0.8528
Lithuania	Very High TII	0.9631	120.00	87.72	1.00	1.00	120.00	Very High EGDI	0.9110
Luxembourg	Very High TII	0.9888	120.00	99.35	1.00	1.00	115.65	Very High EGDI	0.8466
Madagascar	Low TII	0.1518	66.55	20.58	15.54	33.04	24.08	Middle EGDI	0.3235
Malawi	Low TII	0.1886	60.13	27.66	14.91	33.04	38.34	Middle EGDI	0.3753
Malaysia	Very High TII	0.9862	120.00	97.40	1.05	2.48	120.00	Very High EGDI	0.8111
Maldives	Very High TII	0.7886	120.00	83.91	2.54	2.54	53.61	High EGDI	0.6745
Mali	Middle TII	0.4432	114.50	33.05	17.01	24.05	58.48	Middle EGDI	0.3005
Malta	Very High TII	0.9747	120.00	91.54	1.00	1.00	120.00	Very High EGDI	0.8886
Marshall Islands	Middle TII	0.3047	38.00	73.22	7.90	11.87	0.00	Middle EGDI	0.4823
Mauritania	High TII	0.5824	113.12	44.36	8.64	19.19	73.42	Middle EGDI	0.3491
Mauritius	Very High TII	0.9159	120.00	75.50	1.38	1.42	117.33	Very High EGDI	0.7506

Table 11 *(continued)*

Country	TII Group	TII 2024	Percentage of Mobile cellular telephone subscriptions	Percentage of Individuals using the Internet	Percentage of Mobile data and voice high-consumption basket price	Percentage of Fixed-broadband Internet basket price	Percentage of Active mobile-broadband subscriptions	EDGI Group	EGDI 2024
Mexico	Very High TII	0.8310	107.00	78.63	1.22	2.13	94.01	Very High EGDI	0.7850
Micronesia (Federated States of)	Low TII	0.1350	19.40	40.54	12.99	6.19	0.00	Middle EGDI	0.3235
Monaco	Very High TII	0.9171	106.82	98.38	1.00	1.00	103.40	High EGDI	0.7175
Mongolia	Very High TII	0.9374	120.00	83.91	1.88	1.71	117.61	Very High EGDI	0.8457
Montenegro	Very High TII	0.9229	120.00	88.22	1.04	1.73	102.53	High EGDI	0.7211
Morocco	Very High TII	0.8827	120.00	90.65	2.29	3.84	88.64	High EGDI	0.6841
Mozambique	Low TII	0.0632	45.38	21.21	18.70	33.04	23.16	Middle EGDI	0.2848
Myanmar	High TII	0.6662	106.70	48.10	4.93	15.33	97.09	High EGDI	0.5001
Namibia	High TII	0.7288	113.20	62.22	2.57	8.70	77.41	High EGDI	0.6007
Nauru	High TII	0.5863	79.90	82.67	1.49	10.29	32.00	Middle EGDI	0.4454
Nepal	Very High TII	0.7653	120.00	49.56	3.00	1.06	89.05	High EGDI	0.5781
Netherlands	Very High TII	0.9715	118.07	92.52	1.00	1.00	120.00	Very High EGDI	0.9538
New Zealand	Very High TII	0.8728	115.00	95.73	1.00	12.53	96.18	Very High EGDI	0.9265
Nicaragua	High TII	0.5851	101.01	61.05	6.06	20.75	64.00	High EGDI	0.5318
Niger	Low TII	0.1578	56.40	16.94	12.17	28.61	28.00	Low EGDI	0.2116
Nigeria	Middle TII	0.4836	102.00	35.46	3.54	19.33	41.36	Middle EGDI	0.4815
North Macedonia	Very High TII	0.7546	97.83	84.23	2.16	3.23	69.66	High EGDI	0.7070
Norway	Very High TII	0.9654	112.12	99.00	1.00	1.12	117.06	Very High EGDI	0.9315
Oman	Very High TII	0.9674	120.00	97.85	1.99	3.66	115.91	Very High EGDI	0.8576
Pakistan	Middle TII	0.4745	81.75	32.95	1.51	12.72	51.54	High EGDI	0.5096
Palau	Middle TII	0.4910	120.00	27.00	2.08	5.00	0.00	High EGDI	0.5072
Panama	Very High TII	0.8523	120.00	73.61	1.87	3.75	96.85	High EGDI	0.7298

Table 11   *(continued)*

Country	TII Group	TII 2024	Percentage of Mobile cellular telephone subscriptions	Percentage of Individuals using the Internet	Percentage of Mobile data and voice high-consumption basket price	Percentage of Fixed-broadband Internet basket price	Percentage of Active mobile-broadband subscriptions	EDGI Group	EGDI 2024
Papua New Guinea	Low TII	0.1851	48.40	26.99	13.23	12.02	11.10	Middle EGDI	0.3076
Paraguay	Very High TII	0.7947	120.00	76.35	3.03	4.00	70.95	High EGDI	0.7251
Peru	Very High TII	0.8364	120.00	74.68	1.39	2.99	85.30	Very High EGDI	0.8070
Philippines	Very High TII	0.7554	120.00	72.26	2.32	11.26	69.81	Very High EGDI	0.7621
Poland	Very High TII	0.9603	120.00	86.94	1.00	1.09	120.00	Very High EGDI	0.8648
Portugal	Very High TII	0.8979	120.00	84.50	1.00	1.48	95.74	Very High EGDI	0.8415
Qatar	Very High TII	0.9963	120.00	100.00	1.00	1.99	120.00	Very High EGDI	0.8244
Republic of Korea	Very High TII	0.9917	120.00	97.20	1.00	1.03	120.00	Very High EGDI	0.9679
Republic of Moldova	Very High TII	0.8118	120.00	63.53	1.00	1.99	86.45	Very High EGDI	0.7719
Romania	Very High TII	0.8922	118.11	85.50	1.00	1.00	93.63	Very High EGDI	0.7636
Russian Federation	Very High TII	0.9512	120.00	90.42	1.00	1.00	110.89	Very High EGDI	0.8532
Rwanda	Middle TII	0.3724	79.86	34.44	7.13	33.04	60.10	High EGDI	0.5799
Saint Kitts and Nevis	Very High TII	0.8675	119.00	76.46	2.47	3.15	102.00	High EGDI	0.6305
Saint Lucia	High TII	0.6498	95.60	74.19	5.39	4.73	51.80	High EGDI	0.5255
Saint Vincent and the Grenadines	High TII	0.6767	100.46	77.74	6.29	6.71	58.54	High EGDI	0.5876
Samoa	Middle TII	0.4606	60.40	75.29	5.31	15.10	33.65	Middle EGDI	0.4899
San Marino	Very High TII	0.9491	120.00	85.06	1.10	2.30	120.00	High EGDI	0.6551
Sao Tome and Principe	Middle TII	0.4839	86.37	56.99	7.78	15.57	40.58	Middle EGDI	0.4308
Saudi Arabia	Very High TII	0.9841	120.00	100.00	1.34	4.47	120.00	Very High EGDI	0.9602
Senegal	High TII	0.7328	120.00	59.98	5.50	17.75	98.05	High EGDI	0.5162
Serbia	Very High TII	0.9221	120.00	83.54	1.00	2.31	109.54	Very High EGDI	0.8618
Seychelles	Very High TII	0.8913	120.00	86.67	4.28	1.14	99.22	High EGDI	0.6773

Table 11 *(continued)*

Country	TII Group	TII 2024	Percentage of Mobile cellular telephone subscriptions	Percentage of Individuals using the Internet	Percentage of Mobile data and voice high-consumption basket price	Percentage of Fixed-broadband Internet basket price	Percentage of Active mobile-broadband subscriptions	EDGI Group	EGDI 2024
Sierra Leone	Middle TII	0.2585	97.70	30.35	20.39	28.61	21.20	Middle EGDI	0.3042
Singapore	Very High TII	0.9881	120.00	95.95	1.00	1.00	120.00	Very High EGDI	0.9691
Slovakia	Very High TII	0.8985	120.00	91.40	1.36	1.00	86.74	Very High EGDI	0.8021
Slovenia	Very High TII	0.9107	120.00	88.91	1.00	1.77	96.01	Very High EGDI	0.8759
Solomon Islands	Low TII	0.1811	67.00	44.96	20.39	33.04	18.10	Middle EGDI	0.3681
Somalia	Low TII	0.1432	50.26	27.60	5.33	33.04	2.53	Low EGDI	0.1468
South Africa	Very High TII	0.8951	120.00	74.70	3.49	3.89	120.00	Very High EGDI	0.8616
South Sudan	Low TII	0.0547	49.00	12.14	12.87	32.12	6.97	Low EGDI	0.1191
Spain	Very High TII	0.9603	120.00	94.49	1.29	1.27	110.81	Very High EGDI	0.9206
Sri Lanka	Very High TII	0.7936	120.00	50.11	1.00	1.00	94.88	High EGDI	0.6667
Sudan	Middle TII	0.4392	73.97	28.70	5.78	2.79	47.60	Middle EGDI	0.2759
Suriname	Very High TII	0.8714	120.00	75.76	7.62	3.61	120.00	High EGDI	0.6365
Sweden	Very High TII	0.9868	120.00	95.70	1.00	1.13	120.00	Very High EGDI	0.9326
Switzerland	Very High TII	0.9576	120.00	96.80	1.00	1.00	105.00	Very High EGDI	0.9003
Syrian Arab Republic	Middle TII	0.4426	79.85	34.70	2.51	2.54	21.90	Middle EGDI	0.3888
Tajikistan	High TII	0.5810	119.00	36.09	4.89	5.87	40.00	High EGDI	0.5606
Thailand	Very High TII	0.9410	120.00	87.98	2.92	3.45	120.00	Very High EGDI	0.8351
Timor-Leste	Middle TII	0.3551	110.42	40.75	18.56	30.31	29.89	Middle EGDI	0.4020
Togo	Low TII	0.2474	74.18	37.62	17.40	32.62	38.00	Middle EGDI	0.3920
Tonga	Middle TII	0.4784	60.70	57.50	3.11	3.57	38.00	High EGDI	0.5164
Trinidad and Tobago	Very High TII	0.7745	120.00	79.98	2.73	3.35	54.71	High EGDI	0.6973
Tunisia	Very High TII	0.8357	120.00	73.84	1.52	2.61	85.83	High EGDI	0.6935

Table 11   *(continued)*

Country	TII Group	TII 2024	Percentage of Mobile cellular telephone subscriptions	Percentage of Individuals using the Internet	Percentage of Mobile data and voice high-consumption basket price	Percentage of Fixed-broadband Internet basket price	Percentage of Active mobile-broadband subscriptions	EDGI Group	EGDI 2024
Türkiye	Very High TII	0.8322	105.81	85.96	1.00	1.29	83.96	Very High EGDI	0.8913
Turkmenistan	High TII	0.5151	98.60	21.30	2.43	4.68	49.99	Middle EGDI	0.4757
Tuvalu	Middle TII	0.4720	80.30	81.19	5.47	13.68	0.00	Middle EGDI	0.4042
Uganda	Low TII	0.2299	69.99	10.34	10.88	33.04	54.35	Middle EGDI	0.4464
Ukraine	Very High TII	0.8428	120.00	79.22	1.46	1.87	80.10	Very High EGDI	0.8841
United Arab Emirates	Very High TII	1.0000	120.00	100.00	1.05	1.00	120.00	Very High EGDI	0.9533
United Kingdom of Great Britain and Northern Ireland	Very High TII	0.9747	120.00	95.34	1.00	1.16	115.06	Very High EGDI	0.9577
United Republic of Tanzania	Middle TII	0.3792	91.90	31.90	6.87	22.04	28.60	Middle EGDI	0.4327
United States of America	Very High TII	0.9605	110.17	97.13	1.00	1.00	120.00	Very High EGDI	0.9194
Uruguay	Very High TII	0.9437	120.00	89.87	2.69	2.30	115.82	Very High EGDI	0.9006
Uzbekistan	Very High TII	0.8769	106.42	83.90	1.02	1.71	107.00	Very High EGDI	0.7999
Vanuatu	High TII	0.6165	78.20	69.89	7.47	30.02	120.00	High EGDI	0.5427
Venezuela, Bolivarian Republic of	High TII	0.5390	66.26	61.60	2.94	3.99	52.14	High EGDI	0.5360
Viet Nam	Very High TII	0.8780	120.00	78.59	1.00	2.64	96.94	Very High EGDI	0.7709
Yemen	Middle TII	0.2905	52.69	17.69	6.14	4.03	29.18	Low EGDI	0.2317
Zambia	High TII	0.5088	99.10	31.23	3.82	14.71	55.26	High EGDI	0.5424
Zimbabwe	Middle TII	0.3947	87.62	32.56	20.39	9.45	59.56	Middle EGDI	0.4481

Table 12   Local Online Service Index and its components

City	Country	Region	LOSI Group	Rank	LOSI 2024	IF	CP	SP	EPI	TEC	OSI Group	OSI 2024
Tallinn	Estonia	Europe	Very High LOSI	1	0.9271	1.0000	1.0000	0.9333	0.9091	0.6000	Very High OSI	0.9954
Madrid	Spain	Europe	Very High LOSI	1	0.9271	1.0000	0.9333	1.0000	0.6364	0.8000	Very High OSI	0.9054
Riyadh	Saudi Arabia	Asia	Very High LOSI	3	0.9167	1.0000	1.0000	0.8667	0.8182	0.7000	Very High OSI	0.9899
Copenhagen	Denmark	Europe	Very High LOSI	4	0.9063	1.0000	0.9667	0.9333	0.7273	0.6000	Very High OSI	0.9992
Dubai	United Arab Emirates	Asia	Very High LOSI	4	0.9063	0.8000	0.9333	0.9000	0.8182	0.6000	Very High OSI	0.9163
New York	United States of America	Americas	Very High LOSI	4	0.9063	0.8000	1.0000	0.7333	0.8182	0.7000	Very High OSI	0.9136
Istanbul	Türkiye	Asia	Very High LOSI	7	0.8958	1.0000	0.8667	0.8333	0.7273	0.7000	Very High OSI	0.9225
Berlin	Germany	Europe	Very High LOSI	8	0.8854	1.0000	0.9333	0.7000	0.9091	0.7000	Very High OSI	0.9238
Seoul	Republic of Korea	Asia	Very High LOSI	9	0.875	1.0000	0.9000	0.6333	0.9091	0.7000	Very High OSI	1.0000
Singapore	Singapore	Asia	Very High LOSI	9	0.875	1.0000	0.9333	0.6333	0.8182	0.7000	Very High OSI	0.9831
London	United Kingdom of Great Britain and Northern Ireland	Europe	Very High LOSI	9	0.875	1.0000	0.9000	0.7000	0.7273	0.6000	Very High OSI	0.9535
Shanghai	China	Asia	Very High LOSI	12	0.8646	1.0000	0.9000	0.6667	0.7273	0.7000	Very High OSI	0.9258
Manama	Bahrain	Asia	Very High LOSI	13	0.8542	1.0000	0.7000	0.6000	0.9091	0.4000	Very High OSI	0.9030
Tokyo	Japan	Asia	Very High LOSI	13	0.8542	1.0000	0.7667	0.3000	0.7273	0.5000	Very High OSI	0.9427
Kyiv	Ukraine	Europe	Very High LOSI	13	0.8542	1.0000	0.9667	0.9667	0.9091	0.7000	Very High OSI	0.9854
Vienna	Austria	Europe	Very High LOSI	16	0.8438	1.0000	0.9667	0.9667	0.6364	0.8000	Very High OSI	0.8383
Bogota	Colombia	Americas	Very High LOSI	16	0.8438	1.0000	0.9333	0.9333	0.6364	1.0000	Very High OSI	0.7521
Moscow	Russian Federation	Europe	Very High LOSI	16	0.8438	1.0000	0.9333	0.8667	0.9091	0.7000	Very High OSI	0.7766
Sao Paulo	Brazil	Americas	Very High LOSI	19	0.8333	1.0000	1.0000	0.8333	0.7273	0.7000	Very High OSI	0.9063
Montevideo	Uruguay	Americas	Very High LOSI	19	0.8333	1.0000	0.9333	0.7667	1.0000	0.8000	Very High OSI	0.8832
Helsinki	Finland	Europe	Very High LOSI	21	0.8125	1.0000	0.9000	0.9000	0.7273	0.7000	Very High OSI	0.9097
Paris	France	Europe	Very High LOSI	21	0.8125	1.0000	0.9667	0.9667	0.4545	0.5000	Very High OSI	0.8440
Reykjavik	Iceland	Europe	Very High LOSI	21	0.8125	1.0000	0.8667	0.8667	0.8182	0.6000	Very High OSI	0.9076
Rome	Italy	Europe	Very High LOSI	21	0.8125	1.0000	0.9000	0.8000	0.8182	0.6000	Very High OSI	0.7624

Table 12 *(continued)*

City	Country	Region	LOSI Group	Rank	LOSI 2024	IF	CP	SP	EPI	TEC	OSI Group	OSI 2024
Riga	Latvia	Europe	Very High LOSI	21	0.8125	1.0000	0.8667	0.7667	0.9091	0.7000	Very High OSI	0.8092
Zurich	Switzerland	Europe	Very High LOSI	21	0.8125	1.0000	0.9000	0.7667	0.7273	0.6000	Very High OSI	0.8408
Buenos Aires	Argentina	Americas	Very High LOSI	27	0.8021	1.0000	0.9000	0.7333	0.8182	0.6000	Very High OSI	0.7965
Zagreb	Croatia	Europe	Very High LOSI	27	0.8021	1.0000	0.9667	0.7000	0.7273	0.6000	Very High OSI	0.8735
Almaty	Kazakhstan	Asia	Very High LOSI	27	0.8021	1.0000	0.9000	0.7333	0.7273	0.6000	Very High OSI	0.9390
Auckland	New Zealand	Oceania	Very High LOSI	27	0.8021	1.0000	0.9333	0.7000	0.7273	0.6000	Very High OSI	0.9453
Stockholm	Sweden	Europe	Very High LOSI	27	0.8021	1.0000	0.9333	0.6333	0.7273	0.7000	Very High OSI	0.8836
Sofia	Bulgaria	Europe	Very High LOSI	32	0.7917	0.8000	0.8667	0.6667	0.7273	0.7000	Very High OSI	0.7727
Toronto	Canada	Americas	Very High LOSI	32	0.7917	0.8000	0.8667	0.7000	0.5455	0.7000	Very High OSI	0.8552
Doha	Qatar	Asia	Very High LOSI	32	0.7917	1.0000	0.8333	0.7000	0.6364	0.5000	Very High OSI	0.7655
Amsterdam	Netherlands	Europe	Very High LOSI	35	0.7813	1.0000	0.9333	0.5667	0.7273	0.5000	Very High OSI	0.9212
Oslo	Norway	Europe	Very High LOSI	35	0.7813	1.0000	0.9000	0.5333	0.6364	0.4000	Very High OSI	0.9117
Sydney	Australia	Oceania	Very High LOSI	37	0.7708	0.8000	0.8000	0.4667	0.2727	0.4000	Very High OSI	0.9222
Warsaw	Poland	Europe	Very High LOSI	37	0.7708	0.8000	0.7000	0.4333	0.3636	0.6000	Very High OSI	0.8037
Vilnius	Lithuania	Europe	Very High LOSI	39	0.7604	1.0000	0.9000	0.8667	0.8182	0.7000	Very High OSI	0.8839
Guayaquil	Ecuador	Americas	Very High LOSI	40	0.75	0.8000	0.9000	0.7333	0.9091	0.7000	Very High OSI	0.8851
Tel Aviv	Israel	Asia	Very High LOSI	40	0.75	0.8000	0.8000	0.8333	0.8182	0.7000	Very High OSI	0.8541
Luxembourg-Ville	Luxembourg	Europe	Very High LOSI	40	0.75	1.0000	0.8333	0.7667	0.7273	0.6000	Very High OSI	0.7555
Brussels	Belgium	Europe	High LOSI	43	0.7396	0.8000	0.8667	0.6667	0.6364	0.7000	High OSI	0.7224
Bratislava	Slovakia	Europe	High LOSI	44	0.7188	0.8000	0.9000	0.5667	0.7273	0.7000	High OSI	0.7097
Mexico City	Mexico	Americas	High LOSI	45	0.7083	1.0000	0.8667	0.6667	0.3636	0.6000	Very High OSI	0.7637
Lisbon	Portugal	Europe	High LOSI	45	0.7083	1.0000	0.8667	0.4000	0.7273	0.7000	Very High OSI	0.7878
Jakarta	Indonesia	Asia	High LOSI	47	0.6875	1.0000	0.8333	0.5667	0.5455	0.4000	Very High OSI	0.8035
Dublin	Ireland	Europe	High LOSI	47	0.6875	1.0000	0.9000	0.5000	0.3636	0.6000	Very High OSI	0.8768
Prague	Czechia	Europe	High LOSI	49	0.6771	0.8000	0.6667	0.5667	0.6364	0.7000	High OSI	0.7006

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Table 12 *(continued)*

City	Country	Region	LOSI Group	Rank	LOSI 2024	IF	CP	SP	EPI	TEC	OSI Group	OSI 2024
Bucharest	Romania	Europe	High LOSI	49	0.6771	0.8000	0.8667	0.4000	0.4545	0.6000	High OSI	0.6548
Bangkok	Thailand	Asia	High LOSI	51	0.6667	0.8000	0.7000	0.6000	0.2727	0.6000	Very High OSI	0.7611
Yerevan	Armenia	Asia	High LOSI	52	0.6563	0.8000	0.7000	0.4333	0.5455	0.6000	Very High OSI	0.7922
Ulaanbaatar	Mongolia	Asia	High LOSI	53	0.6354	0.4000	0.7000	0.4667	0.5455	0.5000	Very High OSI	0.8222
Ho Chi Minh City	Viet Nam	Asia	High LOSI	53	0.6354	0.8000	0.6333	0.4333	0.5455	0.5000	High OSI	0.7081
Tirana	Albania	Europe	High LOSI	55	0.625	0.8000	0.6000	0.4667	0.2727	0.7000	Very High OSI	0.8144
Monaco	Monaco	Europe	High LOSI	55	0.625	0.8000	0.6000	0.4333	0.3636	0.5000	Middle OSI	0.4838
Kigali	Rwanda	Africa	High LOSI	55	0.625	0.4000	0.6000	0.3333	0.2727	0.4000	Very High OSI	0.8207
Nairobi	Kenya	Africa	High LOSI	58	0.6146	1.0000	0.9000	0.9000	0.2727	0.7000	Very High OSI	0.7770
Budapest	Hungary	Europe	High LOSI	59	0.6042	1.0000	0.9333	0.6667	0.8182	0.7000	High OSI	0.7144
Quezon	Philippines	Asia	High LOSI	59	0.6042	1.0000	0.9000	0.7667	0.5455	0.7000	Very High OSI	0.8054
Johannesburg	South Africa	Africa	High LOSI	59	0.6042	1.0000	0.4667	0.5667	0.8182	0.6000	Very High OSI	0.8872
Santo Domingo	Dominican Republic	Americas	High LOSI	62	0.5938	1.0000	0.7000	0.4333	0.2727	0.7000	High OSI	0.6405
Tbilisi	Georgia	Asia	High LOSI	62	0.5938	0.6000	0.6667	0.3667	0.3636	0.6000	High OSI	0.5652
Kuala Lumpur	Malaysia	Asia	High LOSI	62	0.5938	0.8000	0.6333	0.3333	0.4545	0.5000	High OSI	0.7280
Athens	Greece	Europe	High LOSI	65	0.5833	1.0000	0.6667	0.3333	0.2727	0.4000	Very High OSI	0.8145
Muscat	Oman	Asia	High LOSI	65	0.5833	0.6000	0.5333	0.2333	0.1818	0.6000	Very High OSI	0.8077
Ljubljana	Slovenia	Europe	High LOSI	65	0.5833	0.8000	0.2667	0.1667	0.1818	0.6000	Very High OSI	0.8640
Panama City	Panama	Americas	High LOSI	68	0.5729	0.8000	0.8333	0.6333	0.5455	0.6000	High OSI	0.6505
Belgrade	Serbia	Europe	High LOSI	68	0.5729	1.0000	0.9333	0.4333	0.3636	0.8000	Very High OSI	0.8540
Mumbai	India	Asia	High LOSI	70	0.5625	1.0000	0.6333	0.5333	0.5455	0.5000	Very High OSI	0.8184
Chisinau (Kishinev)	Republic of Moldova	Europe	High LOSI	70	0.5625	0.8000	0.6667	0.3333	0.7273	0.6000	High OSI	0.7264
Amman	Jordan	Asia	High LOSI	72	0.5417	0.8000	0.7000	0.4000	0.3636	0.5000	Very High OSI	0.7591
Bishkek	Kyrgyzstan	Asia	High LOSI	72	0.5417	0.8000	0.6667	0.3333	0.6364	0.4000	High OSI	0.6072
Santiago	Chile	Americas	High LOSI	74	0.5313	0.6000	0.6333	0.4667	0.3636	0.4000	Very High OSI	0.8612

Table 12 *(continued)*

City	Country	Region	LOSI Group	Rank	LOSI 2024	IF	CP	SP	EPI	TEC	OSI Group	OSI 2024
Nicosia	Cyprus	Asia	High LOSI	74	0.5313	0.6000	0.6333	0.2333	0.7273	0.7000	Very High OSI	0.8217
Andorra La Vella	Andorra	Europe	High LOSI	76	0.5208	0.8000	0.6333	0.3000	0.3636	0.6000	Middle OSI	0.4780
Minsk	Belarus	Europe	High LOSI	76	0.5208	0.8000	0.6000	0.2667	0.1818	0.6000	High OSI	0.5760
San Jose	Costa Rica	Americas	High LOSI	76	0.5208	0.6000	0.6333	0.3000	0.0000	0.4000	High OSI	0.7217
Vaduz	Liechtenstein	Europe	High LOSI	76	0.5208	0.8000	0.5333	0.1333	0.3636	0.5000	High OSI	0.7416
Lima	Peru	Americas	High LOSI	80	0.5104	0.8000	0.3333	0.2333	0.3636	0.5000	Very High OSI	0.8377
Thimphu Thromde	Bhutan	Asia	High LOSI	81	0.5	0.4000	0.4000	0.2333	0.2727	0.6000	High OSI	0.5886
Skopje	North Macedonia	Europe	Middle LOSI	82	0.4896	0.6000	0.4333	0.1667	0.1818	0.5000	High OSI	0.6642
Asuncion	Paraguay	Americas	Middle LOSI	83	0.4688	0.2000	0.2333	0.1667	0.2727	0.5000	High OSI	0.6712
Kathmandu	Nepal	Asia	Middle LOSI	84	0.4583	1.0000	0.8333	0.7667	0.8182	0.7000	Middle OSI	0.4481
Podgorica	Montenegro	Europe	Middle LOSI	85	0.4479	0.8000	0.7333	0.7000	0.2727	0.5000	High OSI	0.5214
Cairo	Egypt	Africa	Middle LOSI	86	0.4271	0.8000	0.5333	0.8333	0.3636	0.5000	High OSI	0.7002
Ciudad De Guatemala	Guatemala	Americas	Middle LOSI	86	0.4271	0.8000	0.7333	0.5667	0.3636	0.5000	High OSI	0.6538
Casablanca	Morocco	Africa	Middle LOSI	86	0.4271	1.0000	0.7667	0.2667	0.7273	0.7000	High OSI	0.5618
Tunis	Tunisia	Africa	Middle LOSI	89	0.4167	0.6000	0.7000	0.3000	0.5455	0.6000	High OSI	0.5951
Santa Cruz (de la Sierra)	Bolivia	Americas	Middle LOSI	90	0.4063	0.6000	0.5000	0.3000	0.2727	0.6000	High OSI	0.5987
Dhaka	Bangladesh	Asia	Middle LOSI	91	0.3854	0.6000	0.3333	0.3333	0.1818	0.5000	High OSI	0.7374
Baku	Azerbaijan	Asia	Middle LOSI	92	0.375	0.8000	0.4000	0.1667	0.2727	0.6000	High OSI	0.7386
Havana	Cuba	Americas	Middle LOSI	92	0.375	0.4000	0.4667	0.2667	0.0909	0.4000	Low OSI	0.2298
Male	Maldives	Asia	Middle LOSI	92	0.375	0.0000	0.0667	0.2667	0.0000	0.4000	High OSI	0.6220
Belize City	Belize	Americas	Middle LOSI	95	0.3646	0.4000	0.8667	0.5667	0.5455	0.6000	Middle OSI	0.4054
Tashkent	Uzbekistan	Asia	Middle LOSI	95	0.3646	0.6000	0.6333	0.4667	0.1818	0.5000	Very High OSI	0.7648
Port Louis	Mauritius	Africa	Middle LOSI	97	0.3542	0.8000	0.4000	0.2667	0.2727	0.6000	High OSI	0.5903
Kampala	Uganda	Africa	Middle LOSI	97	0.3542	0.6000	0.5000	0.2667	0.0909	0.5000	High OSI	0.6069

Table 12 *(continued)*

City	Country	Region	LOSI Group	Rank	LOSI 2024	IF	CP	SP	EPI	TEC	OSI Group	OSI 2024
Kabul	Afghanistan	Asia	Middle LOSI	99	0.3438	0.6000	0.4000	0.2000	0.1818	0.6000	Low OSI	0.1438
Tehran	Iran (Islamic Republic of)	Asia	Middle LOSI	99	0.3438	0.0000	0.3667	0.2000	0.0909	0.5000	Middle OSI	0.3773
Dar Es Salaam	United Republic of Tanzania	Africa	Middle LOSI	99	0.3438	0.4000	0.3000	0.1333	0.0909	0.6000	Middle OSI	0.4791
Caracas	Venezuela, Bolivarian Republic of	Americas	Middle LOSI	99	0.3438	0.4000	0.3667	0.0667	0.1818	0.5000	Middle OSI	0.3576
Addis Ababa	Ethiopia	Africa	Middle LOSI	103	0.3333	0.4000	0.2000	0.0333	0.1818	0.4000	Middle OSI	0.3420
Abidjan	Côte d'Ivoire	Africa	Middle LOSI	104	0.3229	0.6000	0.7000	0.5667	0.4545	0.6000	High OSI	0.5219
Damascus	Syrian Arab Republic	Asia	Middle LOSI	104	0.3229	0.8000	0.6667	0.2333	0.3636	0.5000	Middle OSI	0.3068
Colombo	Sri Lanka	Asia	Middle LOSI	106	0.3021	0.6000	0.5667	0.2667	0.2727	0.6000	High OSI	0.5494
Suva	Fiji	Oceania	Middle LOSI	107	0.2813	0.6000	0.3667	0.3667	0.0909	0.4000	High OSI	0.5343
Yangon	Myanmar	Asia	Middle LOSI	107	0.2813	0.6000	0.3333	0.2333	0.4545	0.5000	Middle OSI	0.3259
Managua	Nicaragua	Americas	Middle LOSI	107	0.2813	0.6000	0.4667	0.2333	0.0909	0.5000	Middle OSI	0.4493
Honiara	Solomon Islands	Oceania	Middle LOSI	107	0.2813	0.6000	0.3000	0.2667	0.1818	0.6000	Middle OSI	0.4970
Georgetown	Guyana	Americas	Middle LOSI	111	0.2708	0.8000	0.5667	0.0000	0.1818	0.5000	Middle OSI	0.3455
Tegucigalpa	Honduras	Americas	Middle LOSI	111	0.2708	0.4000	0.5000	0.1000	0.0000	0.6000	Middle OSI	0.4587
Kuwait City	Kuwait	Asia	Middle LOSI	111	0.2708	0.4000	0.3667	0.1333	0.1818	0.5000	High OSI	0.6365
Kingston	Jamaica	Americas	Middle LOSI	114	0.2604	0.6000	0.2667	0.1667	0.2727	0.4000	High OSI	0.5677
Monrovia	Liberia	Africa	Middle LOSI	114	0.2604	0.8000	0.3333	0.1000	0.0909	0.4000	Middle OSI	0.2633
Sarajevo	Bosnia and Herzegovina	Europe	Middle LOSI	116	0.25	0.6000	0.2667	0.1000	0.1818	0.5000	High OSI	0.5003
Vientiane	Lao People's Democratic Republic	Asia	Middle LOSI	116	0.25	0.8000	0.4000	0.0333	0.0000	0.4000	Middle OSI	0.3265
Windhoek	Namibia	Africa	Middle LOSI	116	0.25	0.6000	0.2333	0.0667	0.0909	0.7000	Middle OSI	0.4996
Karachi	Pakistan	Asia	Middle LOSI	116	0.25	0.0000	0.4000	0.0667	0.0909	0.4000	High OSI	0.7042
Freetown	Sierra Leone	Africa	Middle LOSI	116	0.25	0.6000	0.1667	0.1333	0.0909	0.4000	Middle OSI	0.3823
Dushanbe	Tajikistan	Asia	Middle LOSI	116	0.25	0.4000	0.2000	0.0667	0.1818	0.5000	Middle OSI	0.4476
Yaounde	Cameroon	Africa	Low LOSI	122	0.2396	0.4000	0.2000	0.0000	0.0909	0.8000	Middle OSI	0.3988

Table 12 *(continued)*

City	Country	Region	LOSI Group	Rank	LOSI 2024	IF	CP	SP	EPI	TEC	OSI Group	OSI 2024
Brazzaville	Congo	Africa	Low LOSI	122	0.2396	0.8000	0.1000	0.1667	0.0909	0.3000	Middle OSI	0.2760
San Salvador	El Salvador	Americas	Low LOSI	122	0.2396	0.6000	0.2333	0.1667	0.2727	0.4000	High OSI	0.5090
Ashkhabad	Turkmenistan	Asia	Low LOSI	122	0.2396	0.4000	0.3333	0.0667	0.2727	0.5000	Middle OSI	0.2506
Mogadishu	Somalia	Africa	Low LOSI	126	0.2292	0.8000	0.3667	0.0000	0.1818	0.5000	Middle OSI	0.2971
Harare	Zimbabwe	Africa	Low LOSI	126	0.2292	0.8000	0.3667	0.0000	0.0909	0.6000	Middle OSI	0.4100
Kumasi	Ghana	Africa	Low LOSI	128	0.2188	0.4000	0.3000	0.1333	0.1818	0.4000	High OSI	0.6084
Luanda	Angola	Africa	Low LOSI	129	0.2083	0.0000	0.3333	0.1000	0.0909	0.7000	Middle OSI	0.3962
Bamako	Mali	Africa	Low LOSI	129	0.2083	0.8000	0.3000	0.0333	0.1818	0.5000	Middle OSI	0.3334
Maputo	Mozambique	Africa	Low LOSI	129	0.2083	0.2000	0.3333	0.0667	0.1818	0.5000	Middle OSI	0.3959
Lusaka	Zambia	Africa	Low LOSI	129	0.2083	0.0000	0.4000	0.0333	0.0909	0.4000	Middle OSI	0.4958
Cotonou	Benin	Africa	Low LOSI	133	0.1979	0.2000	0.2000	0.0333	0.0909	0.7000	High OSI	0.5202
Bandar Seri Begawan	Brunei Darussalam	Asia	Low LOSI	133	0.1979	0.2000	0.2333	0.0333	0.0000	0.4000	High OSI	0.5802
Praia	Cabo Verde	Africa	Low LOSI	133	0.1979	0.2000	0.2333	0.0000	0.0909	0.4000	High OSI	0.6892
Phnom Penh	Cambodia	Asia	Low LOSI	136	0.1875	0.2000	0.1333	0.0333	0.0000	0.5000	Middle OSI	0.4503
Mbabane	Eswatini	Africa	Low LOSI	136	0.1875	0.0000	0.1000	0.0333	0.0909	0.5000	Middle OSI	0.4557
Lilongwe	Malawi	Africa	Low LOSI	138	0.1771	0.6000	0.4333	0.0667	0.2727	0.5000	Middle OSI	0.4625
Port Moresby	Papua New Guinea	Oceania	Low LOSI	138	0.1771	0.6000	0.3333	0.1667	0.0909	0.5000	Middle OSI	0.3392
Antananarivo	Madagascar	Africa	Low LOSI	140	0.1667	0.2000	0.4333	0.0333	0.0909	0.4000	Middle OSI	0.4045
Ouagadougou	Burkina Faso	Africa	Low LOSI	141	0.1563	0.2000	0.3333	0.0000	0.1818	0.4000	Middle OSI	0.3376
Libreville	Gabon	Africa	Low LOSI	141	0.1563	0.0000	0.2667	0.1000	0.0909	0.4000	Middle OSI	0.3187
Baghdad	Iraq	Asia	Low LOSI	141	0.1563	0.2000	0.3333	0.0000	0.0909	0.4000	Low OSI	0.1875
Algiers	Algeria	Africa	Low LOSI	144	0.1354	0.2000	0.2000	0.1333	0.0000	0.4000	Middle OSI	0.3320
Bujumbura	Burundi	Africa	Low LOSI	144	0.1354	0.6000	0.2667	0.0000	0.0000	0.3000	Middle OSI	0.3146
Conakry	Guinea	Africa	Low LOSI	144	0.1354	0.2000	0.2333	0.0333	0.0000	0.3000	Middle OSI	0.4808
Dakar	Senegal	Africa	Low LOSI	144	0.1354	0.2000	0.2000	0.0000	0.0000	0.5000	Middle OSI	0.4779

Table 12 *(continued)*

City	Country	Region	LOSI Group	Rank	LOSI 2024	IF	CP	SP	EPI	TEC	OSI Group	OSI 2024
Banjul	Gambia	Africa	Low LOSI	148	0.125	0.0000	0.1333	0.0000	0.0000	0.4000	Low OSI	0.0955
Victoria	Seychelles	Africa	Low LOSI	149	0.0938	0.0000	0.1333	0.0000	0.0000	0.4000	Middle OSI	0.4638
Port Vila	Vanuatu	Oceania	Low LOSI	149	0.0938	0.0000	0.0333	0.0000	0.0000	0.2000	Middle OSI	0.4769
Port-Of-Spain	Trinidad and Tobago	Americas	Low LOSI	151	0.0417	0.2000	0.2667	0.0333	0.0000	0.3000	High OSI	0.5999
St. John	Antigua and Barbuda	Americas	Not Assessed	152	0	0.0000	0.0000	0.0000	0.0000	0.0000	Low OSI	0.2067
Nassau	Bahamas	Americas	Not Assessed	152	0	0.0000	0.0000	0.0000	0.0000	0.0000	Middle OSI	0.4166
Bridgetown	Barbados	Americas	Not Assessed	152	0	0.0000	0.0000	0.0000	0.0000	0.0000	High OSI	0.5402
Gaborone	Botswana	Africa	Not Assessed	152	0	0.0000	0.0000	0.0000	0.0000	0.0000	Middle OSI	0.4976
Bangui	Central African Republic	Africa	Not Assessed	152	0	0.0000	0.0000	0.0000	0.0000	0.0000	Middle OSI	0.3985
N'Djamena	Chad	Africa	Not Assessed	152	0	0.0000	0.0000	0.0000	0.0000	0.0000	Low OSI	0.1128
Moroni	Comoros	Africa	Not Assessed	152	0	0.0000	0.0000	0.0000	0.0000	0.0000	Middle OSI	0.2674
Pyongyang	Democratic People's Republic of Korea	Asia	Not Assessed	152	0	0.0000	0.0000	0.0000	0.0000	0.0000	Low OSI	0.0230
Kinshasa	Democratic Republic of the Congo	Africa	Not Assessed	152	0	0.0000	0.0000	0.0000	0.0000	0.0000	Low OSI	0.0291
Djibouti	Djibouti	Africa	Not Assessed	152	0	0.0000	0.0000	0.0000	0.0000	0.0000	Low OSI	0.2092
Roseau	Dominica	Americas	Not Assessed	152	0	0.0000	0.0000	0.0000	0.0000	0.0000	Middle OSI	0.3798
Bata	Equatorial Guinea	Africa	Not Assessed	152	0	0.0000	0.0000	0.0000	0.0000	0.0000	Low OSI	0.1932
Asmara	Eritrea	Africa	Not Assessed	152	0	0.0000	0.0000	0.0000	0.0000	0.0000	Low OSI	0.0000
St. George's	Grenada	Americas	Not Assessed	152	0	0.0000	0.0000	0.0000	0.0000	0.0000	High OSI	0.5056
Bissau	Guinea-Bissau	Africa	Not Assessed	152	0	0.0000	0.0000	0.0000	0.0000	0.0000	Low OSI	0.1270
Port-Au-Prince	Haiti	Americas	Not Assessed	152	0	0.0000	0.0000	0.0000	0.0000	0.0000	Low OSI	0.1379
South Tarawa	Kiribati	Oceania	Not Assessed	152	0	0.0000	0.0000	0.0000	0.0000	0.0000	Middle OSI	0.3904
Beirut	Lebanon	Asia	Not Assessed	152	0	0.0000	0.0000	0.0000	0.0000	0.0000	Middle OSI	0.4489
Maseru	Lesotho	Africa	Not Assessed	152	0	0.0000	0.0000	0.0000	0.0000	0.0000	Middle OSI	0.2864

Table 12   *(continued)*

City	Country	Region	LOSI Group	Rank	LOSI 2024	IF	CP	SP	EPI	TEC	OSI Group	OSI 2024
Tripoli	Libya	Africa	Not Assessed	152	0	0.0000	0.0000	0.0000	0.0000	0.0000	Low OSI	0.0808
St. Paul's Bay/San Pawl il-Banar	Malta	Europe	Not Assessed	152	0	0.0000	0.0000	0.0000	0.0000	0.0000	Very High OSI	0.8749
Majuro	Marshall Islands	Oceania	Not Assessed	152	0	0.0000	0.0000	0.0000	0.0000	0.0000	Middle OSI	0.3586
Nouakchott	Mauritania	Africa	Not Assessed	152	0	0.0000	0.0000	0.0000	0.0000	0.0000	Low OSI	0.1688
Palikir	Micronesia (Federated States of)	Oceania	Not Assessed	152	0	0.0000	0.0000	0.0000	0.0000	0.0000	Middle OSI	0.2621
Yaren	Nauru	Oceania	Not Assessed	152	0	0.0000	0.0000	0.0000	0.0000	0.0000	Low OSI	0.2439
Niamey	Niger	Africa	Not Assessed	152	0	0.0000	0.0000	0.0000	0.0000	0.0000	Middle OSI	0.3084
Lagos	Nigeria	Africa	Not Assessed	152	0	0.0000	0.0000	0.0000	0.0000	0.0000	High OSI	0.5372
Koror	Palau	Oceania	Not Assessed	152	0	0.0000	0.0000	0.0000	0.0000	0.0000	Middle OSI	0.2787
Basseterre	Saint Kitts and Nevis	Americas	Not Assessed	152	0	0.0000	0.0000	0.0000	0.0000	0.0000	Middle OSI	0.3039
Castries	Saint Lucia	Americas	Not Assessed	152	0	0.0000	0.0000	0.0000	0.0000	0.0000	Middle OSI	0.3229
Kingstown	Saint Vincent and the Grenadines	Americas	Not Assessed	152	0	0.0000	0.0000	0.0000	0.0000	0.0000	Middle OSI	0.3906
Apia	Samoa	Oceania	Not Assessed	152	0	0.0000	0.0000	0.0000	0.0000	0.0000	Middle OSI	0.3638
San Marino	San Marino	Europe	Not Assessed	152	0	0.0000	0.0000	0.0000	0.0000	0.0000	Middle OSI	0.3575
Sao Tome	Sao Tome and Principe	Africa	Not Assessed	152	0	0.0000	0.0000	0.0000	0.0000	0.0000	Low OSI	0.2156
Juba	South Sudan	Africa	Not Assessed	152	0	0.0000	0.0000	0.0000	0.0000	0.0000	Low OSI	0.1504
Khartoum	Sudan	Africa	Not Assessed	152	0	0.0000	0.0000	0.0000	0.0000	0.0000	Low OSI	0.1293
Paramaribo	Suriname	Americas	Not Assessed	152	0	0.0000	0.0000	0.0000	0.0000	0.0000	Middle OSI	0.4814
Dili	Timor-Leste	Asia	Not Assessed	152	0	0.0000	0.0000	0.0000	0.0000	0.0000	Middle OSI	0.3406
Lome	Togo	Africa	Not Assessed	152	0	0.0000	0.0000	0.0000	0.0000	0.0000	Middle OSI	0.4472
Nuku'Alofa	Tonga	Oceania	Not Assessed	152	0	0.0000	0.0000	0.0000	0.0000	0.0000	Middle OSI	0.3220
Funafuti	Tuvalu	Oceania	Not Assessed	152	0	0.0000	0.0000	0.0000	0.0000	0.0000	Low OSI	0.1944
Sana'a	Yemen	Asia	Not Assessed	152	0	0.0000	0.0000	0.0000	0.0000	0.0000	Low OSI	0.1377

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Table 13   Local Online Service Index (OSI) Features accessed in E-government Survey 2024

Subindex	Features
Institutional Framework	Municipal portal	Municipal e-government strategy	Organization structure	Names and contacts of heads of department	Rights to access government information	Privacy policy	Open data policy	Links for government agencies	Portal authentication.
Content Provision	Foreign language support	Municipality information	Alerts for weather and natural disasters	Procurement announcements	Procurement results |Information about provided services	Services in partnership with civil society	Facilitation of free internet access	Health information |Environmental information	Education information	Social welfare information	Sports and culture information |Information for vulnerable groups	Justice information	Labor information	Evidence of smart cities initiatives	Evidence of emerging technologies use	Statistical data and studies	Public transportation information	Evidence of mobile phone apps	Waste and recycling information	Road safety information	MGP usage statistics	COVID-19 information.
Services Provision	Police online declaration	Online driver's license	Online building permit	Online environment related permit	Online business license	Online residentship	Online birth certificate	Online death certificate	Online marriage certificate	Address change notification	Online land title registration	Online vehicle registration	e-Procurement service	Online vacancies	Business tax payment	Online fees payment	Water payment	Electricity/gas payment.
Participation and Engagement	Municipality responsiveness emails	Quality of email response	Budget-related information	Open data provision	Open data metadata	Report of any form of discrimination	Real time communication	Feedback/complaint submission	Online deliberation processes	Social networking features	Reporting of incidents in public spaces	Participatory budgeting	Participatory land use plan	Announcement of upcoming e-participation activities	Feedback about consultation processes	e-Voting	Information on the public meetings of the municipal council.
Technology	Contact details	Browser compatibility	Ease of portal finding	Mobile device accessibility	Navigability	Internal search mechanism	Internal advanced search mechanism	Alignment with markup validation standards	Alignment with display standards	Alignment with accessibility standards	Online user support	Information on online services use	Evidence of portal content update	Personal data accessibility	Personal data updating	Business data accessibility	Business data updating	Helpdesk call number.
E-Government Literacy	Internal search mechanism	Facilitation of free Internet access	Access to physical spaces	Privacy policy	Open data metadata	Online user support	Information on online services use	Portal authentication	Live chat support with a person	Social networking features

13. Past editions of the United Nations E-Government Survey

Table 14   Past editions of the United Nations E-Government Survey

Survey editon	Survey theme and thematic areas	Trends and developments
	2001 **Benchmarking E-Government: A Global Perspective – Assessing the Progress of the UN Member States** Thematic areas: • Assessing the global e-government landscape • Benchmarking e-government • Public administration and e-government	The approach of benchmarking e-government using the theoretical framework of activity theory as a unified model was first discussed. The publication addressed the need to establish e-government benchmarks and introduced a survey methodology based on the assessment of online government portals. The first composite benchmarking tool was referred to as the e-Government Index.[a]
	2003 **UN Global E-Government Survey 2003: E-Government at the Crossroads** Thematic areas: • The e-government imperative • Benchmarking e-government • The extent of e-participation • The promise of the (digital) future	The Survey methodology used for the 2001 edition was substantively and quantitatively strengthened to produce the e-Government Readiness Index (eGRI). The publication also introduced and elaborated on the concept of e-participation, with a comparative assessment of the ability and willingness of Governments to engage the public online. The methodology for benchmarking and assessing relative e-government readiness was updated to include an appraisal of how Governments delivered online services relating to specific sectors (labour, social welfare, finance, health and education).[b]
	2004 **United Nations Global E-Government Readiness Report 2004: Towards Access for Opportunity** Thematic areas: • The emerging access-for-opportunity framework • Access for acceleration model • Taxonomy of countries according to the access-acceleration model • Worldwide disparities in achieving access	The report delved into the "access-opportunity divide", examining the wide disparities in e-government readiness between developed and developing countries. It was argued that a realistic approach to "access for opportunity" required more than just technology; countries needed to meet thresholds across multiple dimensions, including government leadership, digital literacy, and providing an enabling environment conducive to development. It was observed that the digital government leaders (as reflected in the E-Government Readiness Index) were countries that had developed integrated portals providing one-stop access to information and services.[c]

Table 14 *(continued)*
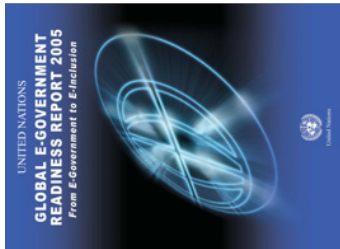
Survey edition	Survey theme and thematic areas	Trends and developments
	2005 **United Nations Global E-Government Readiness Report 2005: From E-Government to E-Inclusion** Thematic areas: • The emerging socially inclusive government paradigm: from e-government to e-inclusion • Socially inclusive governance for the Information Society • The socially inclusive governance model • Worldwide disparities and inclusion	The report identified access and inclusion as priorities. Many developing countries were focusing primarily on connectivity, but there was an identified need to broaden their approach to ensure that e-services were reaching all segments of the population. The report emphasized that a strong political commitment, a clear vision, and realistic objectives were critical success factors for e-government advancement. It was acknowledged that e-participation features were expanding but were largely limited to developed and high-income countries. Limited infrastructure, a lack of skilled personnel, and competing development priorities – all deriving from serious resource constraints – remained a major barrier to e-government development for developing countries.[d]
	2008 **United Nations E-Government Survey 2008: From E-Government to Connected Governance** Thematic areas: • Origins and emergence of e-government • Back-office issues in e-government operations	It was determined that the emphasis on capturing countries' "readiness" for e-government did not adequately reflect the need for concrete action, so the focus of the Survey shifted to assessing actual development. The report examined how e-government had evolved beyond the general aims of efficacy and cost reduction to focus on people-centric outcomes and impacts and on institutional transformation through digitization and digitalization. It was emphasized that successful e-government required integrating back-end systems and processes across agencies rather than simply putting services online using siloed applications. Connected governance would offer seamless, people-centred services delivery but would require adequate infrastructure investment to ensure comprehensive integration. E-participation tools, including online consultation and feedback mechanisms, were recognized as important for increasing public engagement. Mobile and Web 2.0 technologies offered new opportunities for Governments to interact with and provide services to the public. While these options held promise for increased engagement, most countries had not yet created an appropriate ecosystem for robust e-participation.[e]

Table 14 *(continued)*

Survey editon	Survey theme and thematic *areas*	Trends and developments
	2010 **United Nations E-Government Survey 2010: Leveraging E-Government at a Time of Financial and Economic Crisis** Thematic areas: • The role of e-government in financial regulation and monitoring • E-services delivery and the Millennium Development Goals • Citizen empowerment and inclusion	The report was published during the financial and economic crisis, and the focus was on how e-government could help countries respond effectively to emerging challenges during that period. Suggested strategies included improving government transparency, enhancing public sector efficiency, strengthening services provision, and expanding e-participation and engagement. Even with limited resources and facing various constraints, Governments could achieve significant transparency and accountability gains through low-cost e-government solutions such as crisis response websites and open data initiatives. Expanding online access to critical public services in areas such as education, health care and employment during times of economic strain or uncertainty could help countries stay on track in pursuing their development goals. A section on participatory e-government tools demonstrated how citizens could provide input on policies and priorities, increasing public buy-in and improving outcomes at little cost.[f]
	2012 **United Nations E-Government Survey 2012: E-Government for the People** Thematic areas: • Taking a whole-of-government approach • Supporting multichannel service delivery • Reaching vulnerable populations • Expanding e-government usage	The report explored how the world was moving away from isolated silos towards more integrated, collaborative approaches to government administration and public services delivery. The "whole-of-government" approach would make public services more personalized and accessible and easier to navigate. Coherent policy approaches and cohesive institutional mechanisms – enabled by technology – could contribute to the achievement of long-term development goals and strengthen government legitimacy. It was emphasized that the whole-of-government approach was essential for inclusive, people-centred sustainable development, as agencies could work together more effectively to serve all segments of the population and promote dialogue and engagement. Conversely, the absence of coordination across government could undermine progress – especially in low-income countries, where it could negatively affect the delivery of social services, security, economic management, and political processes.[g]

Table 14 *(continued)*

Survey editon	Survey theme and thematic *areas*	Trends and developments
UNITED NATIONS E-GOVERNMENT SURVEY 2014	2014 United Nations E-Government Survey 2014: E-Government for the Future We Want Thematic areas: • E-participation • Whole-of-government and collaborative governance • Mobile and other channels for inclusive multichannel services delivery • Bridging the digital divide	The report was published when the United Nations was discussing the development agenda that would succeed the Millennium Development Goals once the latter concluded in 2015. While e-government was continuing to advance globally, there were still wide disparities between countries and regions. All 193 Member States were operating national portals, but for the majority, e-government was still at a low or intermediate level of development. The focus in digital government was moving away from mere services delivery towards adding public value through inclusive, participatory governance. Increased attention was being given to e-participation, open government data (OGD), multichannel services delivery, and whole-of-government approaches to create more people-centred, transparent and accountable governance. Mobile technology and social media were emerging as important new channels for e-government, especially in developing countries, though Internet access and broadband connectivity remained limited in many of those countries. Addressing infrastructure gaps and developing human capacity were crucial for leveraging e-government to realize development goals. [h]
UNITED NATIONS E-GOVERNMENT SURVEY 2016	2016 E-Government for Sustainable Development Thematic areas: • Policy integration • Enhancing transparency through Open Government Data • Enhancing engagement through e-participation	For the 2016 edition of the Survey, a theme was chosen that aligned with the 2030 Agenda for Sustainable Development adopted by world leaders the previous year. The report focused on the role of e-government in achieving the SDGs and how e-government could enhance the efficiency, transparency and accountability of public institutions. The report explored how Governments could leverage technology to improve services delivery, engage people in decision-making processes, and ensure that no one was left behind. There was further elaboration of whole-of-government approaches, with emphasis on the integration of e-services across different agencies to provide users with a seamless and holistic e-government experience. OGD was identified as key to government transparency, accountability and innovation. OGD initiatives could drive progress towards the SDGs by making data available for public scrutiny, fostering innovation, and facilitating evidence-based policymaking. The Survey indicated that many countries, including those in the lower-middle-income group, were making significant strides in e-participation. Globally, countries were continuing to make progress in e-government development, but with the persistent digital divide, many were still unable to access and benefit from information and communications technology (ICT). The report called for greater efforts to increase access to high-speed broadband, enhance digital literacy, and pursue inclusive policies. [i]

Table 14 *(continued)*

Survey editon	Survey theme and thematic *areas*	Trends and developments
	2018 **United Nations E-Government Survey 2018: Gearing E-Government to Support Transformation towards Sustainable and Resilient Societies** Thematic areas: • Building resilient, sustainable societies • Leaving no one behind • E-resilience (disaster risk management) • Cybersecurity • Emerging technologies in e-government	The report identified e-government as a transformative catalyst in achieving the SDGs. It provided evidence of a global trend towards higher levels of e-government development, highlighting significant improvements in online services delivery and OGD. However, it also noted the persistence of e-government and broader digital divides, particularly in low-income countries, and called for continued investment in human capital and infrastructure development to accelerate progress. An important focal point of the report was addressing digital divides to ensure that no one was left behind, especially in Africa, least developed countries, and small island developing States. The report highlighted the need for tailored capacity-building programmes and policies to bridge these gaps and promote digital inclusion. Another focal point of the report was e-resilience, with particular attention given to disaster risk management and how digital technologies were increasingly being used to organize and manage emergency responses and recovery from crises. It was noted that resilience in e-government systems required public trust, robust cybersecurity measures (including the integration of security mechanisms from the design phase), the adoption of harmonized laws governing cybercrime, and assurances that data and privacy would be protected. For the first time, the Survey assessed 40 municipalities, introducing the Local Online Services Index (LOSI), and the Open Government Data Index (OGDI) was piloted as well.[j]
	2020 **United Nations E-Government Survey 2020: Digital Government in the Decade of Action for Sustainable Development** Thematic areas: • E-participation • Data-centric and digital data governance • Capacities for digital government transformation • The role of e-government during the COVID-19 pandemic (addendum)	The theme "Digital Government in the Decade of Action for Sustainable Development" was selected for the 2020 Survey to acknowledge the time remaining for the implementation of the 2030 Agenda. The report noted that there had been a significant global increase in e-government development, even among some countries with limited resources, such as least developed countries, landlocked developing countries and small island developing States. The report emphasized the growing importance of e-participation and acknowledged that many Governments were offering a range of opportunities for public engagement beyond the provision of information. The report also mentioned that there had been a paradigm shift towards data-centric policymaking and stressed the need for effective national data governance frameworks. The Survey included an addendum highlighting how the handling of the COVID-19 pandemic had underscored the critical role of e-government in crisis management. During the pandemic, Governments with robust digital infrastructures were able to provide timely information, manage misinformation, and offer essential services online. The fact that many vulnerable populations lacked access to digital services during the health crisis underscored the need for inclusive digital strategies. In this edition of the Survey, rating classes (quartile subgroups) were introduced for each EGDI level, and the LOSI assessment was expanded to include 100 municipalities.[k]

Table 14 *(continued)*

Survey editon	Survey theme and thematic areas	Trends and developments
 E-Government Survey 2022 The Future of Digital Government	**2022** **United Nations E-Government Survey 2022: The Future of Digital Government** Thematic areas: • Leaving no one behind in the hybrid digital society • The future of digital government: trends, insights and conclusion	The report focused on the future of digital government, calling for e-government leaders to increase investment in national digital transformation and adopt innovative e-government frameworks to support sustainable development and prepare for future global crises. As evident both during and after the COVID-19 pandemic, digital government tools were key to effective emergency response and recovery. Global EGDI values showed improvement, but there remained persistent digital divides within and between countries and regions. Special emphasis was given to leaving no one behind in the hybrid digital world, and Governments were called upon to ensure inclusion by design and accessibility for all, especially vulnerable groups, through targeted policies and the effective leveraging of data, design and delivery to address gaps in access, affordability and digital skills. For the first time, the Survey conducted LOSI assessments for the most populous city in each of the 193 Member States.[l]

a   Ibid.

b   UN DESA and Civic Resource Group, *UN Global E-Government Survey 2003* (New York, 2004), available at https://publicadministration.un.org/egovkb/en-us/Reports/UN-E-Government-Survey-2003.

c   UN DESA, *UN Global E-Government Readiness Report 2004: Towards Access for Opportunity* (New York, 2004), available at https://desapublications.un.org/publications/un-global-e-government-readiness-report-2004.

d   UN DESA, *United Nations Global E-Government Readiness Report 2005: From E-Government to E-Inclusion* (New York, 2006), available at https://publicadministration.un.org/egovkb/en-us/Reports/UN-E-Government-Survey-2008.

e   UN DESA, *United Nations e-Government Survey 2008: From e-Government to Connected Governance* (New York, 2008), available at https://publicadministration.un.org/egovkb/en-us/Reports/UN-E-Government-Survey-2008.

f   UN DESA, *United Nations E-Government Survey 2010: Leveraging E-Government at a Time of Financial and Economic Crisis* (New York, 2010), available at https://publicadministration.un.org/egovkb/portals/egovkb/documents/un/2010-survey/complete-survey.pdf.

g   UN DESA, *United Nations E-Government Survey 2012: E-Government for the People* (New York, 2012), available at https://publicadministration.un.org/egovkb/en-us/Reports/UN-E-Government-Survey-2012.

h   UN DESA, *United Nations E-Government Survey 2014: E-Government for the Future We Want* (New York, 2014), available at https://publicadministration.un.org/egovkb/en-us/Reports/UN-E-Government-Survey-2014.

i   UN DESA, *United Nations E-Government Survey 2016: E-Government in Support of Sustainable Development* (New York, 2016), available at https://publicadministration.un.org/egovkb/en-us/Reports/UN-E-Government-Survey-2016.

j   UN DESA, *United Nations E-Government Survey 2018: Gearing E-Government to Support Transformation towards Sustainable and Resilient Societies* (New York, 2018), available at https://publicadministration.un.org/egovkb/en-us/Reports/UN-E-Government-Survey-2018.

k   UN DESA, *United Nations E-Government Survey 2020: Digital Government in the Decade of Action for Sustainable Development, with Addendum on COVID-19 Response* (New York, 2020), available at https://publicadministration.un.org/egovkb/en-us/Reports/UN-E-Government-Survey-2020.

l   UN DESA, *United Nations E-Government Survey 2022: The Future of Digital Government* (New York 2022), available at https://desapublications.un.org/sites/default/files/publications/2022-09/Web%20version%20E-Government%202022.pdf.

14. Pilot research projects

14.1 Open Government Data Index

The Open Government Data Index (OGDI) has become an increasingly important assessment tool in recent years. A growing number of countries are taking a transformative approach to governance, enhancing transparency, accountability, and value creation by making government data accessible to all. By opening their data sets, public institutions can strengthen trust in government while simultaneously fostering innovation and economic growth. This paradigm shift encourages the use, reuse, and free distribution of government data, facilitating the development of citizen-centric services and creating opportunities for business and entrepreneurship. Such openness fundamentally changes how Governments interact with their constituents, with the power of data harnessed to drive positive change and create a more open, collaborative, and responsive public sector.

In acknowledgement of the critical role of open government data and the importance of measuring progress in this area, the E-Government Survey continues to include the OGDI as a supplementary indicator within the OSI. First introduced in the 2020 Survey, the OGDI is based on an assessment of the national portals of Member States. The computation methodology employed for the last two Surveys has been used for the 2024 edition, ensuring consistency in evaluation. The number of questions used to calculate the OGDI remains at 26 (unchanged from the 2022 survey), preserving the integrity and comparability of data across Survey periods. This detailed assessment underscores the ongoing commitment of the United Nations to monitoring, evaluating and promoting open data practices in e-government development.

While a binary system is used for the responses to most of the 26 questions included in the OGDI assessment, some responses, particularly those related to the availability of specific types of open data, are assessed using a more detailed scoring system. For the latter, a score of 0 indicates the absence of a feature, while scores of 1 and 2 represent different levels of feature implementation. For instance, a score of 1 might denote data availability in any format, whereas a score of 2 would indicate availability in an open standard format such as eXtensible Markup Language (XML). Following the computation method used for the OSI, the composite OGDI score for each Member State is normalized to a range of 0 to 1 using a standardized formula. This methodology ensures the accurate tracking and comprehensive evaluation of open data practices across Member States.

The OGDI remains structured around three key pillars: policy, platform, and impact. The Index continues to use the weighted sum method for aggregating the assessed areas across these pillars. The 2024 Survey has applied the weighting criteria established for the 2020 pilot study, including (a) the relative weight for each pillar and (b) the relative number of assessed areas and questions for each pillar, including those introduced in recent surveys.

The 2024 OGDI retains the 2022 OGDI (adjusted) weight for each pillar: 30 per cent for policy, 50 per cent for platform/use, and 20 per cent for impact. The calculation method remains unchanged, with the OGDI computed as the weighted average of the normalized scores for each Member State. The OGDI level grouping system introduced in 2022, which aligns with EGDI levelling, has also been used for the 2024 Survey. The division of groups into four equal quarters (0 – 0.25 – 0.50 – 0.75 – 1.00) represents a refinement from the 2020 pilot study's 0 – 0.4 – 0.8 – 1.0 demarcations. By preserving these methodological elements, the 2024 Survey ensures OGDI continuity and comparability with previous assessments while also maintaining alignment with the broader EGDI framework.

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Appendix

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Table 15   Open Government Data Index (OGDI)

Country	OGDI Group	OGDI 2024
Afghanistan	Low OGDI	0.1282
Albania	High OGDI	0.7436
Algeria	Low OGDI	0.1026
Andorra	High OGDI	0.7436
Angola	Low OGDI	0.1795
Antigua and Barbuda	High OGDI	0.5641
Argentina	Very High OGDI	0.7692
Armenia	Very High OGDI	0.8462
Australia	Very High OGDI	0.8462
Austria	Very High OGDI	0.8974
Azerbaijan	High OGDI	0.7179
Bahamas	Middle OGDI	0.4103
Bahrain	Very High OGDI	0.9231
Bangladesh	High OGDI	0.7179
Barbados	Middle OGDI	0.359
Belarus	High OGDI	0.5385
Belgium	Very High OGDI	0.8462
Belize	Middle OGDI	0.2821
Benin	Middle OGDI	0.4872
Bhutan	High OGDI	0.5385
Bolivia	High OGDI	0.641
Bosnia and Herzegovina	High OGDI	0.641
Botswana	Middle OGDI	0.4615
Brazil	Very High OGDI	0.9744
Brunei Darussalam	High OGDI	0.6154
Bulgaria	High OGDI	0.7436
Burkina Faso	Middle OGDI	0.3333
Burundi	Low OGDI	0.2308
Cabo Verde	Very High OGDI	0.8462
Cambodia	Middle OGDI	0.4615
Cameroon	High OGDI	0.6667
Canada	Very High OGDI	1
Central African Republic	Low OGDI	0.0256
Chad	Middle OGDI	0.4615
Chile	Very High OGDI	0.9487
China	Very High OGDI	0.9231
Colombia	Very High OGDI	0.9487
Comoros	Low OGDI	0
Congo	Low OGDI	0.0769
Costa Rica	Very High OGDI	0.7949
Côte d'Ivoire	High OGDI	0.5641
Croatia	Very High OGDI	0.9231
Cuba	Low OGDI	0.1026
Cyprus	Very High OGDI	0.9487

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Table 15   *(continued)*

Country	OGDI Group	OGDI 2024
Czech Republic	Very High OGDI	0.8205
Democratic People's Republic of Korea	Low OGDI	0
Democratic Republic of the Congo	Middle OGDI	0.3077
Denmark	Very High OGDI	0.9744
Djibouti	Low OGDI	0.1026
Dominica	Middle OGDI	0.3846
Dominican Republic	Very High OGDI	0.8718
Ecuador	Very High OGDI	0.8462
Egypt	High OGDI	0.6154
El Salvador	Middle OGDI	0.4872
Equatorial Guinea	Middle OGDI	0.3077
Eritrea	Low OGDI	0
Estonia	Very High OGDI	1
Eswatini	High OGDI	0.5641
Ethiopia	Middle OGDI	0.359
Fiji	High OGDI	0.5128
Finland	Very High OGDI	0.9231
France	Very High OGDI	0.9744
Gabon	Low OGDI	0.1282
Gambia	Middle OGDI	0.3077
Georgia	Very High OGDI	0.8205
Germany	Very High OGDI	1
Ghana	Very High OGDI	0.8205
Greece	High OGDI	0.5897
Grenada	Low OGDI	0.2051
Guatemala	Very High OGDI	0.8205
Guinea	Very High OGDI	0.8205
Guinea-Bissau	Middle OGDI	0.2821
Guyana	Low OGDI	0.2308
Haiti	Low OGDI	0.0513
Honduras	Middle OGDI	0.3333
Hungary	Very High OGDI	0.8974
Iceland	Very High OGDI	0.9487
India	Very High OGDI	1
Indonesia	Very High OGDI	0.8718
Iran (Islamic Republic of)	Middle OGDI	0.3333
Iraq	Low OGDI	0
Ireland	Very High OGDI	0.9487
Israel	Very High OGDI	0.8462
Italy	Very High OGDI	0.8205
Jamaica	High OGDI	0.5641
Japan	Very High OGDI	1
Jordan	Very High OGDI	0.8205
Kazakhstan	Very High OGDI	0.9231

Technical Appendix

Table 15 *(continued)*

Country	OGDI Group	OGDI 2024
Kenya	High OGDI	0.5897
Kiribati	Middle OGDI	0.4103
Kuwait	Middle OGDI	0.3846
Kyrgyzstan	High OGDI	0.5385
Lao People's Democratic Republic	Middle OGDI	0.3333
Latvia	Very High OGDI	0.9744
Lebanon	High OGDI	0.6923
Lesotho	Middle OGDI	0.3333
Liberia	Low OGDI	0.1795
Libya	Low OGDI	0.0769
Liechtenstein	Very High OGDI	0.8718
Lithuania	Very High OGDI	0.9487
Luxembourg	Very High OGDI	0.7949
Madagascar	Middle OGDI	0.359
Malawi	High OGDI	0.6667
Malaysia	Very High OGDI	0.8205
Maldives	High OGDI	0.5641
Mali	Middle OGDI	0.3333
Malta	Very High OGDI	0.8205
Marshall Islands	Middle OGDI	0.3077
Mauritania	Middle OGDI	0.2821
Mauritius	High OGDI	0.6923
Mexico	Very High OGDI	0.9231
Micronesia (Federated States of)	Low OGDI	0.2051
Monaco	Low OGDI	0.2051
Mongolia	Very High OGDI	0.9231
Montenegro	High OGDI	0.5385
Morocco	High OGDI	0.5128
Mozambique	Middle OGDI	0.3077
Myanmar	Low OGDI	0.2308
Namibia	Middle OGDI	0.3077
Nauru	Middle OGDI	0.3333
Nepal	Middle OGDI	0.2821
Netherlands	Very High OGDI	0.9744
New Zealand	Very High OGDI	0.9231
Nicaragua	Middle OGDI	0.2821
Niger	Middle OGDI	0.2821
Nigeria	High OGDI	0.5128
North Macedonia	High OGDI	0.7179
Norway	Very High OGDI	0.8205
Oman	Very High OGDI	0.7692
Pakistan	High OGDI	0.641
Palau	Middle OGDI	0.359
Panama	High OGDI	0.7436

Table 15   *(continued)*

Country	OGDI Group	OGDI 2024
Papua New Guinea	Middle OGDI	0.3077
Paraguay	Very High OGDI	0.8462
Peru	Very High OGDI	1
Philippines	Very High OGDI	0.8205
Poland	Very High OGDI	0.8718
Portugal	Very High OGDI	0.8205
Qatar	High OGDI	0.7436
Republic of Korea	Very High OGDI	0.9487
Republic of Moldova	Very High OGDI	0.8205
Romania	Very High OGDI	0.8205
Russian Federation	Very High OGDI	0.7949
Rwanda	Very High OGDI	0.7949
Saint Kitts and Nevis	Low OGDI	0.2308
Saint Lucia	Low OGDI	0.1026
Saint Vincent and the Grenadines	High OGDI	0.5641
Samoa	Middle OGDI	0.4359
San Marino	Low OGDI	0.1026
Sao Tome and Principe	Low OGDI	0.1795
Saudi Arabia	Very High OGDI	1
Senegal	High OGDI	0.641
Serbia	Very High OGDI	0.9231
Seychelles	Low OGDI	0.2308
Sierra Leone	Middle OGDI	0.4872
Singapore	Very High OGDI	1
Slovakia	Very High OGDI	0.8718
Slovenia	Very High OGDI	0.8718
Solomon Islands	High OGDI	0.5897
Somalia	Middle OGDI	0.359
South Africa	Very High OGDI	0.8205
South Sudan	Low OGDI	0.1026
Spain	Very High OGDI	1
Sri Lanka	High OGDI	0.6154
Sudan	Low OGDI	0.0513
Suriname	Middle OGDI	0.3333
Sweden	Very High OGDI	1
Switzerland	Very High OGDI	1
Syrian Arab Republic	Low OGDI	0.1026
Tajikistan	Middle OGDI	0.4359
Thailand	Very High OGDI	0.8974
Timor-Leste	Middle OGDI	0.4872
Togo	Middle OGDI	0.4359
Tonga	Middle OGDI	0.4359
Trinidad and Tobago	Middle OGDI	0.3846
Tunisia	High OGDI	0.7179

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Table 15 *(continued)*

Country	OGDI Group	OGDI 2024
Türkiye	Very High OGDI	1
Turkmenistan	Low OGDI	0.0769
Tuvalu	Low OGDI	0.1538
Uganda	High OGDI	0.7436
Ukraine	Very High OGDI	1
United Arab Emirates	Very High OGDI	0.9744
United Kingdom of Great Britain and Northern Ireland	Very High OGDI	0.9231
United Republic of Tanzania	Middle OGDI	0.3846
United States of America	Very High OGDI	0.8974
Uruguay	Very High OGDI	0.9744
Uzbekistan	Very High OGDI	0.9744
Vanuatu	High OGDI	0.5385
Venezuela	Middle OGDI	0.4359
Viet Nam	High OGDI	0.7436
Yemen	Middle OGDI	0.3077
Zambia	High OGDI	0.641
Zimbabwe	Middle OGDI	0.3846

14.2 Complex Network Analysis

In 2022, UN DESA, in collaboration with the Department of physics of the university of Bari (IT)[1] conducted a first pilot study using the science of complex systems to expand the analysis of factors affecting countries' e-government development beyond income level and test a complex network analysis model to address possible inequalities and biases adherent to rankings and find as yet unidentified similarities and differences between the Member States. More detailed information on the study and its findings is available on https://publicadministration.un.org/egovkb.

Identifying external biases that affect assessment of the digital development performance of countries is a complicated task, since classifications based on proxy parameters are subject to discretion and are not always able to capture the interrelationships between different countries. With due consideration given to the complexity of these connections, a model of a digital government ecosystem was created as a network in which countries represent nodes, with similarities in their development indicators determining the strength of the links between the nodes.

The data set used for the 2022 analysis, intended to help identify hidden similarities and differences between the countries, consisted of 305 World Development Indicators (WDIs) relating to health, economy, society and environment and 214 SDG indicators characterizing the general development level of each Member State. The results of 2022 analysis was presented in the 2022 edition of the E-Government Survey.[2] Base of the positive feedback and recommendations provided by experts and member states the study was repeated in 2024 redesigning the clusters using only data from the Sustainable Development Goals (SDGs) dataset, updated to 2022.

The original datasets included 3542 indicators from the SDGs.[3] However, some of them were not available for all member states. When the value of a given indicator was not available for a given country for the year 2022, it was decided to fill in this value with the corresponding one from 2021; if this value was also empty, the corresponding value from 2020 was considered. If the fill-in still failed also in this case, it was decided to avoid using data from years prior to 2020 to ensure that

the data remains as up-to-date as possible. The number of missing entries is subjected not only to variability in time, but also to large fluctuations among countries, since the indicator measurement process is not equally viable throughout the world. The diversified availability of SDGs should not be considered as a limitation to this study, but it should be seen as a guideline for the choice of the indicators, with the aim of combining the needs for data recentness and availability.

A three-step indicator selection process was implemented, following the criteria of data availability, consistency, and non-redundant information.

A subset of indicators was extracted from 2021 and 2022 datasets by considering only those that had non-null values in at least 70% of the 193 MS.

indicators expressed in Local Currency Units were excluded since they could not be compared directly for different states.

Pearson correlations were computed between the available values for each pair of residual indicators. If the correlation value was greater than 0.98, and if it was statistically significant, the indicator with more available values in the pair was retained.

These three steps reduced the total number of SDGs indicators from 3542 to 278. These indicators are listed respectively in Table 16. At the end of this procedure, each of the 193 MS was characterized by 278 values, corresponding to the values of selected indicators for that country. It is worth specifying that some of the indicators included in the model could be interpreted as disaggregated sub-indexes referred to a single main index. In this selection procedure, sub-indicators referred to the same context should not be considered as redundant, since their mutual Pearson correlation was lower than the threshold value of 0.98, as they were available for different sets of countries.

After the data cleaning and indicator selection processes, the complex network building process was implemented as presented in the methodological workflow (figure 7).

Firstly, 278 selected indicators were re-scaled between 0 and 1. This is a standard procedure that allows for the unification of different indicator scales and eliminates potential distortions in the data.

Pearson correlations were computed between each pair of countries. These correlations provided the basis from which the complex network was built. The complex network has 193 nodes, representing MS. The nodes are linked by edges, weighted by the pairwise correlations. Thus, weight values, ranging between -1 and 1, quantify the similarity between connected countries. Two examples of weight values are the following. Italy has a strong correlation with Spain (0.88). The cell corresponding to the Portugal row and the Italy column is therefore colored red; China has a negative correlation with the Central African Republic (-0.20). The cell corresponding to the China row and the Central African Republic column is colored violet. In this way, the complete network was built it has (193*192)/2 = 18528 links.

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Figure 7   Scheme representing the workflow of the complex network analysis, and map representing grouping of countries into four development clusters
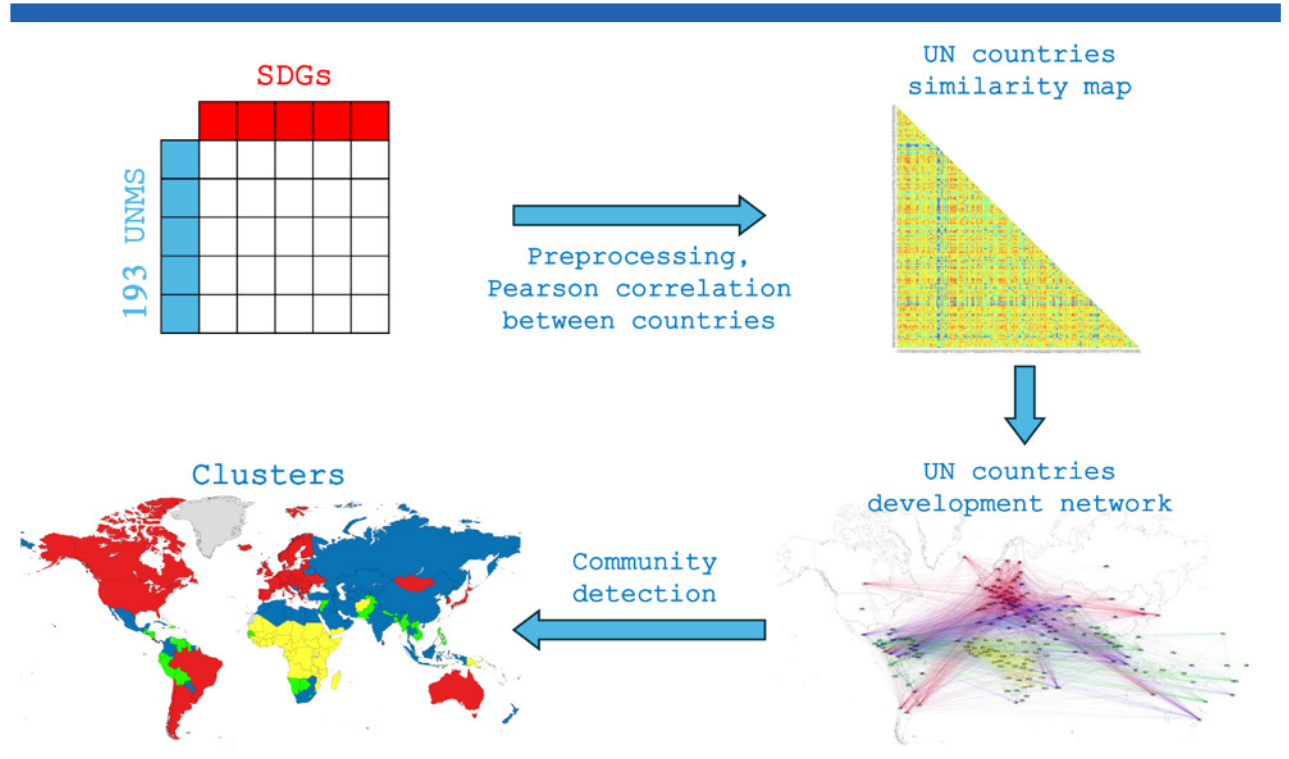
Source: Complex Network Analysis Pilot Study for the 2024 United Nations E-Government Survey.

The identification of clusters has been carried out by means of an algorithm based on the so-called spin glasses[4,5,6]. The same methodologies developed in 2022[7] were implemented also for this work. The Spin Glass algorithm performed a hierarchical cluster detection by recursive partitioning.[8,9]

The algorithm has been implemented using a Python library called igraph[10]. With the objective of obtaining stable and reliable clusters, the following criterion was adopted: the complex network was partitioned in 100 different runs by the chosen algorithm, each time with a different random seed.

In this way, the algorithm produced 100 outcomes. Each outcome corresponded to a given partition: if an outcome was obtained in more than 90 runs, it was accepted and the procedure moved on to the next step; otherwise, the iteration stopped, and the partition found at the previous level was returned as the result.

This method was implemented to partition opportunely the MS, on the basis of the complex network built from the dataset consisting of the 278 selected indicators.

The method returned 4 non-overlapping clusters with a strong characterization in terms of development status. The overall stability of cluster detection procedure used in the UN DESA pilot study corroborates the reliability and consistency of the findings on countries' development levels.

Box 4   Distribution of 2024 E-government Development Index (EGDI) in 2022 clusters

The clusters are composed as follows:

Cluster I: Albania, Argentina, Australia, Austria, Belgium, Brazil, Bulgaria, Canada, Chile, Costa Rica, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Republic of Korea, Latvia, Lithuania, Luxembourg, Malta, Moldova, Mongolia, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Ukraine, United Kingdom, United States, Uruguay.

Cluster II: Algeria, Andorra, Armenia, Azerbaijan, Bahrain, Barbados, Belarus, Bosnia and Herzegovina, Brunei Darussalam, Cabo Verde, China, Colombia, Cuba, Egypt, El Salvador, Georgia, India, Indonesia, Iran, Iraq, Israel, Jamaica, Kazakhstan, Democratic People's Republic of Korea, Kuwait, Kyrgyz Republic, Libya, Liechtenstein, Malaysia, Maldives, Mauritius, Mexico, Monaco, Montenegro, Morocco, Nauru, New Zealand, North Macedonia, Oman, Palau, Panama, Paraguay, Qatar, Russian Federation, San Marino, Saudi Arabia, Seychelles, Singapore, South Africa, Sri Lanka, St. Kitts and Nevis, Suriname, Thailand, Tonga, Trinidad and Tobago, Tunisia, Türkiye, Turkmenistan, United Arab Emirates, Uzbekistan, Zimbabwe.

Cluster III: Antigua and Barbuda, Bahamas, Bangladesh, Belize, Bhutan, Bolivia, Botswana, Cambodia, Djibouti, Dominica, Dominican Republic, Ecuador, Eswatini, Fiji, Grenada, Guatemala, Guyana, Honduras, Jordan, Kiribati, Laos, Lebanon, Lesotho, Marshall Islands, Federated States of Micronesia, Myanmar, Namibia, Nepal, Nicaragua, Pakistan, Peru, Philippines, Samoa, Senegal, Solomon Islands, St. Lucia, St. Vincent and the Grenadines, Syrian Arab Republic, Tajikistan, Timor-Leste, Tuvalu, Vanuatu, Venezuela, Vietnam.

Cluster IV: Afghanistan, Angola, Benin, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Comoros, Congo, Democratic Republic of Congo, Republic of Congo, Cote d'Ivoire, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Haiti, Kenya, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Niger, Nigeria, Papua New Guinea, Rwanda, Sao Tome and Principe, Sierra Leone, Somalia, South Sudan, Sudan, Tanzania, Togo, Uganda, Yemen, Zambia.

Grouping the countries into four development clusters using complex network analysis enables a reinterpretation of the levels of e-government development of the UN Member States and their EGDI ranking considering their starting conditions, as well as their mutual similarities and differences.

By comparing the 2024 EGDI values both within the same cluster, and between different clusters it is possible to identify top-of the-class countries, whose performance goes beyond the expectations based on their development status, and room-for-improvement countries, that have the potential to reach their cluster peers in the EGDI ranking by increasing their efforts. For top-of-the-class countries their EGDI values are above the 75th percentile of the cluster they belong to, and, at the same time, they are above the 25th percentile of at least one development cluster above. By the same token, for room-for-improvement countries the EGDI values are below the 25th percentile of the cluster they belong to and, at the same time, are below the 75th percentile of at least one developed cluster below.

The study also identified the benchmark countries, regarded as the best cases compared to the rest of the world, and trailing countries, which would need specific support to improve their condition in areas relevant for EDGI ranking. Benchmark countries are characterized by EGDI values above the 75th percentile of the distribution within cluster I, while trailing countries have EGDI values falling below the 25th percentile of the distribution within cluster IV.

This advanced approach has a dual advantage over traditional statistical methods: first, the similarities between countries are determined by more than 270 SDGs indicators, providing a multifaceted representation of sustainable development in the clusters to which these countries are referred; second, the tool of network cluster detection offers a data-driven way to categorize different development ecosystems in which e-government development (expressed in EGDI values) can be interpreted and assessed.

Considering the case of clusters obtained from 2022 SDGs updated data and EGDI from 2024, the performances of MS are summarized:

- **Cluster I (median: 0.882).**

  – **Benchmark**: Denmark, Estonia, Republic of Korea, Iceland, United Kingdom of Great Britain and Northern Ireland, Australia, Finland, Netherlands, Germany, Japan, Sweden, Norway, Spain.

  – **Room-for-improvement**: Brazil (∗), Italy (∗), Czech Republic (∗), Bulgaria (∗), Belgium (∗), Hungary (∗), Slovak Republic (∗), Costa Rica (∗), Albania (∗), Moldova (∗), Romania (∗).

- **Cluster II (median: 0.721).**

  – **Top-of-the-class**: Singapore (↑), Saudi Arabia (↑), United Arab Emirates (↑), New Zealand (↑), Bahrain (↑), Israel (↑), Kazakhstan (↑), Türkiye (↑), China (↑), South Africa (↑), Oman (↑), Russian Federation (↑), Liechtenstein (↑), Armenia (↑), Thailand (↑).

  – **Room-for-improvement**: Suriname (∗), Bosnia and Herzegovina (∗), St. Kitts and Nevis (∗), Cabo Verde (∗), El Salvador (∗), Algeria (∗), Libya (∗), Tonga (∗), Palau (∗), Cuba (∗), Turkmenistan (∗), Iraq (∗), Zimbabwe (∗), Nauru (∗), Democratic People's Republic of Korea (∗∗).

- **Cluster III (median: 0.545).**

  – **Top-of-the-class**: Peru (↑), Ecuador (↑), Vietnam (↑), Philippines (↑), Bahamas (↑), Dominican Republic (↑), Jordan (↑), Fiji (↑), Bolivia (↑), Bangladesh (↑), Bhutan (↑).

  – **Room-for-improvement**: Marshall Islands (∗), Kiribati (∗), Laos (∗), Lesotho (∗), Tuvalu (∗), Timor-Leste (∗), Syrian Arab Republic (∗), Solomon Islands (∗), Federated States of Micronesia (∗), Djibouti (∗).

- **Cluster IV (median: 0.310).**

  – **Top-of-the-class**: Ghana (↑), Kenya (↑), Rwanda (↑), Gabon (↑), Cote d'Ivoire (↑), Zambia (↑), Nigeria (↑), Benin (↑), Uganda (↑), Tanzania (↑), Sao Tome and Principe (↑).

  – **Trailing**: Burundi, Yemen, Haiti, Niger, Afghanistan, Chad, Eritrea, Somalia, South Sudan, Central African Republic.

Figure 8   The list of countries grouped by development clusters according to the 2024 EGDI study

Distribution of 2024 EGDI in 2022 clusters
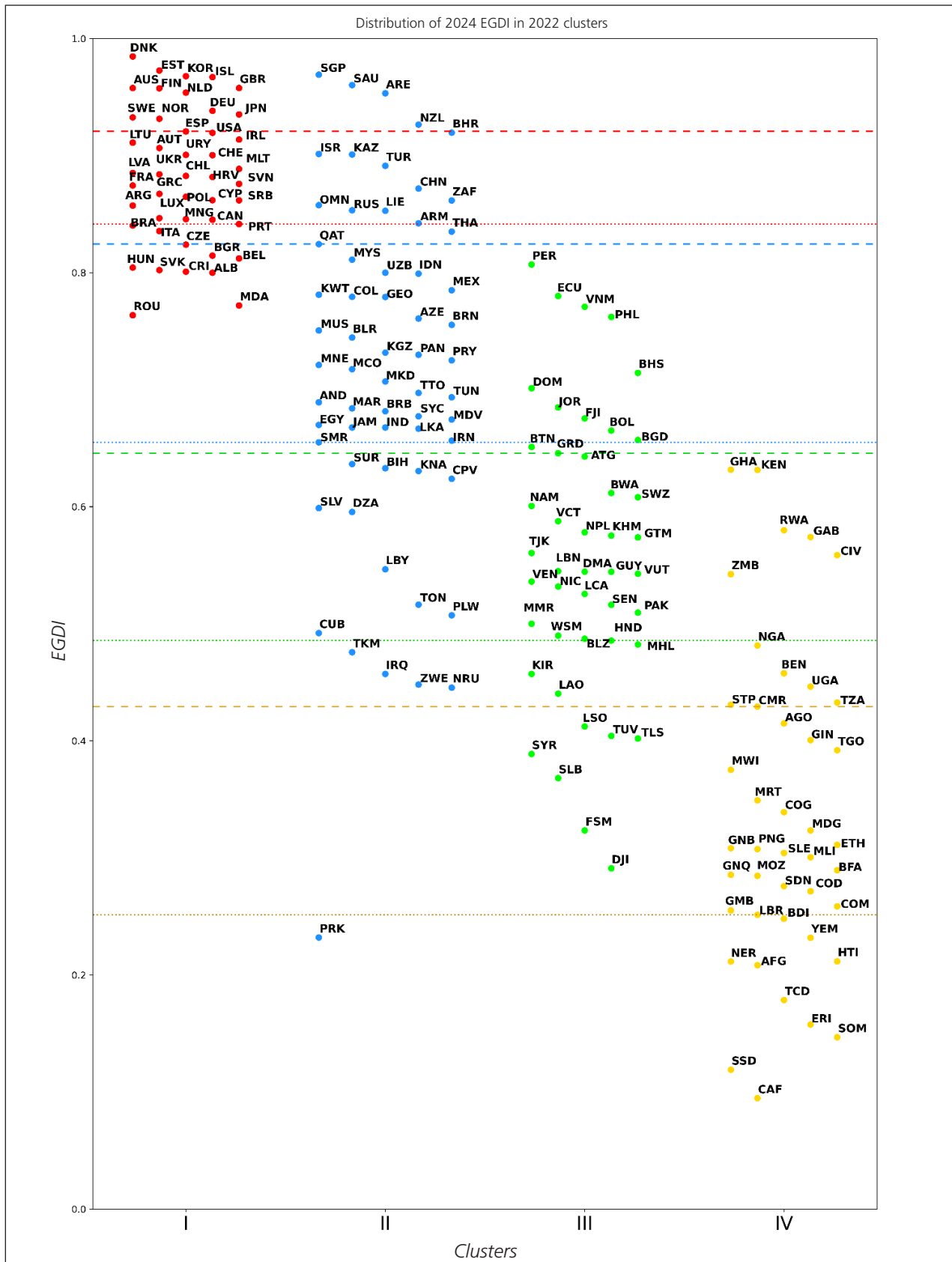
Note: The internationally recognized three-letter country codes.

Endnotes

1   https://www.uniba.it/it/ricerca/dipartimenti/fisica

2   UN E-Government Survey 2022, 12th edition. (2022)

3   Sustainable Development Goals – UNSTATS. https://unstats.un.org/sdgs/dataportal/database (2024). Accessed: 2024-24-05.

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14.3 Complex network analysis: additional information

The tables below report the list of the 278 Sustainable Development Goals used to build the UNMS similarity network (Table 16), and, for each UN country, the most and least similar country in terms of Pearson correlation in the complex network, along with the average correlation with other countries (Table 17).

Table 16   List of the 278 selected Sustainable Development Goals used to build the Member States similarity network

Sustainable Development Goals indicators.
Above-ground biomass in forest (tonnes per hectare) G A T_PER_HA C
Age-standardized prevalence of current tobacco use among persons aged 15 years and older, by sex (%) BOTHSEX G PERCENT 15+ E
Age-standardized prevalence of current tobacco use among persons aged 15 years and older, by sex (%) FEMALE G PERCENT 15+ E
Age-standardized prevalence of current tobacco use among persons aged 15 years and older, by sex (%) MALE G PERCENT 15+ E
Agriculture orientation index for government expenditures G A INDEX C
Agriculture share of Government Expenditure (%) G A PERCENT C
Agriculture value added share of GDP (%) G A PERCENT C
Annual GDP growth (%) G PERCENT G
Annual broad money growth (%) G PERCENT G
Annual forest area change rate (%) G A PERCENT C
Annual growth of exports of goods and services (%) G PERCENT G
Annual growth of households and NPISHs final consumption expenditure (%) G PERCENT G
Annual growth of imports of goods and services (%) G PERCENT G
Annual growth of the general government final consumption expenditure (%) G PERCENT G
Annual growth of the gross capital formation (%) G PERCENT G
Annual growth rate of real GDP per capita (%) G A PERCENT CA
Annual growth rate of real GDP per employed person (%) G A PERCENT 15+ M

Table 16 *(continued)*

Sustainable Development Goals indicators.
Annual inflation, consumer prices (%) G PERCENT G
Average proportion of Freshwater Key Biodiversity Areas (KBAs) covered by protected areas (%) G A PERCENT C
Average proportion of Marine Key Biodiversity Areas (KBAs) covered by protected areas (%) G A PERCENT C
Average proportion of Mountain Key Biodiversity Areas (KBAs) covered by protected areas (%) G A PERCENT C
Average proportion of Terrestrial Key Biodiversity Areas (KBAs) covered by protected areas (%) G A PERCENT C
Average tariff applied by developed countries, most-favored nation status, by type of product (%) G AGR PERCENT C
Average tariff applied by developed countries, most-favored nation status, by type of product (%) G ALP PERCENT C
Average tariff applied by developed countries, most-favored nation status, by type of product (%) G CLO PERCENT C
Average tariff applied by developed countries, most-favored nation status, by type of product (%) G IND PERCENT C
Average tariff applied by developed countries, most-favored nation status, by type of product (%) G TEX PERCENT C
Average tariff applied by developed countries, preferential status, by type of product (%) G AGR PERCENT C
Average tariff applied by developed countries, preferential status, by type of product (%) G ALP PERCENT C
Average tariff applied by developed countries, preferential status, by type of product (%) G CLO PERCENT C
Average tariff applied by developed countries, preferential status, by type of product (%) G IND PERCENT C
Average tariff applied by developed countries, preferential status, by type of product (%) G TEX PERCENT C
Beach litter originating from national land-based sources that ends in the beach (%) G A PERCENT M
Beach litter originating from national land-based sources that ends in the ocean (%) G A PERCENT M
Beach litter originating from national land-based sources that ends in the ocean (Tonnes) G A TONNES M
Carbon dioxide emissions from fuel combustion (millions of tonnes) G TONNES_M TOTAL E
Carbon dioxide emissions per unit of GDP PPP (kilogrammes of CO2 per constant 2017 United States dollars) G KG_PER_CON_USD E
Carbon dioxide emissions per unit of manufacturing value added (kilogrammes of CO2 per constant 2015 United States dollars) G A KG_PER_CON_USD ISIC4_C E
Children moderately or severely overweight (thousands) G A NUM_TH <5Y M
Children moderately or severely stunted (thousands) G A NUM_TH <5Y M
Chlorophyll-a anomaly, remote sensing (%) G D PERCENT Extreme E
Chlorophyll-a anomaly, remote sensing (%) G D PERCENT High E
Chlorophyll-a anomaly, remote sensing (%) G D PERCENT Moderate E
Chlorophyll-a deviations, remote sensing (%) G A PERCENT E
Countries that are contracting Parties to the International Treaty on Plant Genetic Resources for Food and Agriculture (PGRFA) (1 = YES; 0 = NO) G NUMBER C
Countries that are parties to the Nagoya Protocol (1 = YES; 0 = NO) G NUMBER C
Countries that established national targets in accordance with Aichi Biodiversity Target 2 of the Strategic Plan for Biodiversity 2011-2020 in their National Biodiversity Strategy and Action Plans (1 = YES; 0 = NO) G A NUMBER _T C
Countries that have legislative, administrative and policy framework or measures reported through the Online Reporting System on Compliance of the International Treaty on Plant Genetic Resources for Food and Agriculture (PGRFA) (1 = YES; 0 = NO) G NUMBER C
Countries that have legislative, administrative and policy framework or measures reported to the Access and Benefit-Sharing Clearing-House (1 = YES; 0 = NO) G NUMBER C
Countries that have national urban policies or regional development plans that respond to population dynamics; ensure balanced territorial development; and increase local fiscal space (1 = YES; 0 = NO) G NUMBER C
Countries with an allocation from the national budget to manage the threat of invasive alien species (1 = YES, 0 = NO) G BOOL N
Countries with birth registration data that are at least 90 percent complete (1 = YES; 0 = NO) G NUMBER C
Countries with death registration data that are at least 75 percent complete (1 = YES; 0 = NO) G NUMBER C

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Table 16   *(continued)*

Sustainable Development Goals indicators.
Countries with national statistical legislation exists that complies with the Fundamental Principles of Official Statistics (1 = YES; 0 = NO) G NUMBER G
Countries with national statistical plans that are fully funded (1 = YES; 0 = NO) G NUMBER G
Countries with national statistical plans that are under implementation (1 = YES; 0 = NO) G NUMBER G
Current account balance as a proportion of GDP (%) G PERCENT G
Current number of seats in national parliaments (number) BOTHSEX G NUMBER C
DEC alternative conversion factor (in local currency unit per United States dollar) G Ratio G
Data Infrastructure performance index (Statistical Performance Indicators Pillar 5) (Index) G INDEX G
Data Sources performance index (Statistical Performance Indicators Pillar 4) (Index) G INDEX G
Degree of integrated water resources management implementation (%) G A PERCENT _T C
Degree of integrated water resources management implementation, enabling environment (%) G A PERCENT _T C
Degree of integrated water resources management implementation, financing (%) G A PERCENT _T C
Degree of integrated water resources management implementation, institutions and participation (%) G A PERCENT _T C
Degree of integrated water resources management implementation, management instruments (%) G A PERCENT _T C
Developing countries' and least developed countries' share of global merchandise exports (%) G A PERCENT CA
Developing countries' and least developed countries' share of global merchandise imports (%) G A PERCENT CA
Developing countries' and least developed countries' share of global services exports (%) G A PERCENT CA
Developing countries' and least developed countries' share of global services imports (%) G A PERCENT CA
Dollar value of all resources made available to strengthen statistical capacity in developing countries (current United States dollars) G CU_USD G
Domestic material consumption per capita, by type of raw material (tonnes) G ALP A TONNES E
Domestic material consumption per capita, by type of raw material (tonnes) G BIM A TONNES E
Domestic material consumption per capita, by type of raw material (tonnes) G CPR A TONNES E
Domestic material consumption per capita, by type of raw material (tonnes) G CRO A TONNES E
Domestic material consumption per capita, by type of raw material (tonnes) G FEO A TONNES E
Domestic material consumption per capita, by type of raw material (tonnes) G GBO A TONNES E
Domestic material consumption per capita, by type of raw material (tonnes) G NFO A TONNES E
Domestic material consumption per capita, by type of raw material (tonnes) G NMA A TONNES E
Domestic material consumption per capita, by type of raw material (tonnes) G NMC A TONNES E
Domestic material consumption per capita, by type of raw material (tonnes) G NMM A TONNES E
Domestic material consumption per capita, by type of raw material (tonnes) G WCH A TONNES E
Domestic material consumption per capita, by type of raw material (tonnes) G WOD A TONNES E
Domestic material consumption per unit of GDP, by type of raw material (kilograms per constant 2015 United States dollars) G ALP A KG_PER_CON_USD E
Domestic material consumption per unit of GDP, by type of raw material (kilograms per constant 2015 United States dollars) G BIM A KG_PER_CON_USD E
Domestic material consumption per unit of GDP, by type of raw material (kilograms per constant 2015 United States dollars) G CPR A KG_PER_CON_USD E
Domestic material consumption per unit of GDP, by type of raw material (kilograms per constant 2015 United States dollars) G CRO A KG_PER_CON_USD E
Domestic material consumption per unit of GDP, by type of raw material (kilograms per constant 2015 United States dollars) G FEO A KG_PER_CON_USD E
Domestic material consumption per unit of GDP, by type of raw material (kilograms per constant 2015 United States dollars) G GBO A KG_PER_CON_USD E
Domestic material consumption per unit of GDP, by type of raw material (kilograms per constant 2015 United States dollars) G NFO A KG_PER_CON_USD C

Table 16   *(continued)*

Sustainable Development Goals indicators.
Domestic material consumption per unit of GDP, by type of raw material (kilograms per constant 2015 United States dollars) G NMA A KG_PER_CON_USD E
Domestic material consumption per unit of GDP, by type of raw material (kilograms per constant 2015 United States dollars) G NMC A KG_PER_CON_USD E
Domestic material consumption per unit of GDP, by type of raw material (kilograms per constant 2015 United States dollars) G NMM A KG_PER_CON_USD E
Domestic material consumption per unit of GDP, by type of raw material (kilograms per constant 2015 United States dollars) G WCH A KG_PER_CON_USD E
Domestic material consumption per unit of GDP, by type of raw material (kilograms per constant 2015 United States dollars) G WOD A KG_PER_CON_USD E
Domestic material consumption, by type of raw material (tonnes) G BIM A TONNES E
Domestic material consumption, by type of raw material (tonnes) G FEO A TONNES E
Domestic material consumption, by type of raw material (tonnes) G GBO A TONNES E
Domestic material consumption, by type of raw material (tonnes) G MEO A TONNES E
Domestic material consumption, by type of raw material (tonnes) G NFO A TONNES C
Domestic material consumption, by type of raw material (tonnes) G NMA A TONNES E
Domestic material consumption, by type of raw material (tonnes) G WCH A TONNES E
Domestic material consumption, by type of raw material (tonnes) G WOD A TONNES E
Energy intensity level of primary energy (megajoules per constant 2017 purchasing power parity GDP) G MJ_PER_GDP_CON_PPP_USD E
Existence of a developed and operationalized national strategy for youth employment, as a distinct strategy or as part of a national employment strategy G A SCORE G
Exported beach litter originating from national land-based sources (Tonnes) G A TONNES M
Fixed broadband subscriptions per 100 inhabitants, by speed (per 100 inhabitants) 256KT2MBPS G PER_100_POP E
Fixed broadband subscriptions per 100 inhabitants, by speed (per 100 inhabitants) 2MT10MBPS G PER_100_POP E
Fixed broadband subscriptions per 100 inhabitants, by speed (per 100 inhabitants) ANYS G PER_100_POP E
Food waste (Tonnes) HHS G A TONNES E
Food waste (Tonnes) OOHC G A TONNES E
Food waste (Tonnes) RTL G A TONNES E
Food waste per capita (KG) ALL G A KG E
Food waste per capita (KG) HHS G A KG E
Food waste per capita (KG) OOHC G A KG E
Food waste per capita (KG) RTL G A KG E
Foreign direct investment (FDI) inflows (millions of United States dollars) G CU_USD_M C
Foreign direct investment, net inflows, as a proportion of GDP (%) G PERCENT G
Forest area (thousands of hectares) G A HA_TH C
Forest area as a proportion of total land area (%) G A PERCENT C
Forest area certified under an independently verified certification scheme (thousands of hectares) G A HA_TH C
Fossil-fuel subsidies (consumption and production) (billions of nominal United States dollars) G A CU_USD_B E
Fossil-fuel subsidies (consumption and production) as a proportion of total GDP (%) G A PERCENT E
Fossil-fuel subsidies (consumption and production) per capita (nominal United States dollars) G A CU_USD E
Freight volume, by mode of transport (tonne kilometres) AIR G T_KM C
Gross receipts by developing countries of official sustainable development grants (millions of United States dollars) G CU_USD_M G
Health worker density, by type of occupation (per 10,000 population) G PHYS PER_10000_POP C

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Table 16   *(continued)*

Sustainable Development Goals indicators.
Implementation of standard accounting tools to monitor the economic and environmental aspects of tourism (SEEA tables) G NUMBER C
Implementation of standard accounting tools to monitor the economic and environmental aspects of tourism (Tourism Satellite Account tables) G NUMBER C
Implementation of standard accounting tools to monitor the economic and environmental aspects of tourism (number of tables) G NUMBER C
Indicator of Food Price Anomalies (IFPA), by Consumer Food Price Index G A INDEX G
Installed renewable electricity-generating capacity (watts per capita) G W_PER_CAPITA E
International Health Regulations (IHR) capacity, by type of IHR capacity (%) G PERCENT C SPAR01
International Health Regulations (IHR) capacity, by type of IHR capacity (%) G PERCENT C SPAR02
International Health Regulations (IHR) capacity, by type of IHR capacity (%) G PERCENT C SPAR03
International Health Regulations (IHR) capacity, by type of IHR capacity (%) G PERCENT C SPAR04
International Health Regulations (IHR) capacity, by type of IHR capacity (%) G PERCENT C SPAR05
International Health Regulations (IHR) capacity, by type of IHR capacity (%) G PERCENT C SPAR06
International Health Regulations (IHR) capacity, by type of IHR capacity (%) G PERCENT C SPAR07
International Health Regulations (IHR) capacity, by type of IHR capacity (%) G PERCENT C SPAR08
International Health Regulations (IHR) capacity, by type of IHR capacity (%) G PERCENT C SPAR09
International Health Regulations (IHR) capacity, by type of IHR capacity (%) G PERCENT C SPAR10
International Health Regulations (IHR) capacity, by type of IHR capacity (%) G PERCENT C SPAR11
International Health Regulations (IHR) capacity, by type of IHR capacity (%) G PERCENT C SPAR12
International Health Regulations (IHR) capacity, by type of IHR capacity (%) G PERCENT C SPAR13
International Health Regulations (IHR) capacity, by type of IHR capacity (%) G PERCENT C SPAR2-C01
International Health Regulations (IHR) capacity, by type of IHR capacity (%) G PERCENT C SPAR2-C02
International Health Regulations (IHR) capacity, by type of IHR capacity (%) G PERCENT C SPAR2-C03
International Health Regulations (IHR) capacity, by type of IHR capacity (%) G PERCENT C SPAR2-C04
International Health Regulations (IHR) capacity, by type of IHR capacity (%) G PERCENT C SPAR2-C05
International Health Regulations (IHR) capacity, by type of IHR capacity (%) G PERCENT C SPAR2-C06
International Health Regulations (IHR) capacity, by type of IHR capacity (%) G PERCENT C SPAR2-C07
International Health Regulations (IHR) capacity, by type of IHR capacity (%) G PERCENT C SPAR2-C08
International Health Regulations (IHR) capacity, by type of IHR capacity (%) G PERCENT C SPAR2-C09
International Health Regulations (IHR) capacity, by type of IHR capacity (%) G PERCENT C SPAR2-C10
International Health Regulations (IHR) capacity, by type of IHR capacity (%) G PERCENT C SPAR2-C11
International Health Regulations (IHR) capacity, by type of IHR capacity (%) G PERCENT C SPAR2-C12
International Health Regulations (IHR) capacity, by type of IHR capacity (%) G PERCENT C SPAR2-C13
International Health Regulations (IHR) capacity, by type of IHR capacity (%) G PERCENT C SPAR2-C14
International Health Regulations (IHR) capacity, by type of IHR capacity (%) G PERCENT C SPAR2-C15
International financial flows to developing countries in support of clean energy research and development and renewable energy production, including in hybrid systems (millions of constant 2021 United States dollars) G CON_USD_M E
Lakes and rivers permanent water area (% of total land area) G A PERCENT E
Lakes and rivers permanent water area (square kilometres) G A KMSQ E
Lakes and rivers permanent water area change (%) G B PERCENT E
Lakes and rivers seasonal water area (% of total land area) G A PERCENT E
Lakes and rivers seasonal water area (square kilometres) G A KMSQ E
Lakes and rivers seasonal water area change (%) G B PERCENT E

Table 16 *(continued)*

Sustainable Development Goals indicators.
Legislation, Regulation, Act related to the prevention of introduction and management of Invasive Alien Species (1 = YES, 0 = NO) G BOOL N
Level of national compliance with labour rights (freedom of association and collective bargaining) based on International Labour Organization (ILO) textual sources and national legislation G E SCORE G
Level of water stress: freshwater withdrawal as a proportion of available freshwater resources (%) G A PERCENT INDUSTRIES G
Level of water stress: freshwater withdrawal as a proportion of available freshwater resources (%) G A PERCENT ISIC4_GTT G
Level of water stress: freshwater withdrawal as a proportion of available freshwater resources (%) G A PERCENT TOTAL G
Manufacturing value added (constant 2015 United States dollars) as a proportion of GDP (%) G A PERCENT ISIC4_C CA
Manufacturing value added (current United States dollars) as a proportion of GDP (%) G A PERCENT ISIC4_C CA
Manufacturing value added per capita (constant 2015 United States dollars) G A CON_USD ISIC4_C CA
Maternal mortality ratio FEMALE G PER_100000_LIVE_BIRTHS E
Merchandise trade as a proportion of GDP (%) G PERCENT G
National Biodiversity Strategy and Action Plan (NBSAP) targets alignment to Aichi Biodiversity target 9 set out in the Strategic Plan for Biodiversity 2011-2020 (1 = YES, 0 = NO) G BOOL N
Neonatal deaths (number) BOTHSEX G NUMBER <1M E
Neonatal mortality rate (deaths per 1,000 live births) BOTHSEX G PER_1000_LIVE_BIRTHS <1M E
Non-performing loans net of provisions to capital (%) G A PERCENT C
Non-performing loans to total gross loans (%) G A PERCENT C
Number of automated teller machines (ATMs) per 100,000 adults G A PER_100000_POP 15+ C
Number of commercial bank branches per 100,000 adults G A PER_100000_POP 15+ C
Number of fixed broadband subscriptions, by speed (number) 256KT2MBPS G NUMBER C
Number of fixed broadband subscriptions, by speed (number) 2MT10MBPS G NUMBER C
Number of fixed broadband subscriptions, by speed (number) ANYS G NUMBER C
Number of local breeds kept in the country G E NUMBER E
Number of local breeds with unknown risk status (number) G E NUMBER E
Number of people requiring interventions against neglected tropical diseases (number) G NUMBER CA
Number of refugees per 100,000 population, by country of origin (per 100,000 population) G PER_100000_POP C
Number of seats held by women in national parliaments (number) FEMALE G NUMBER C
Number of speakers in parliament, by age and sex , Lower Chamber or Unicameral MALE G NUMBER 46+ C
Number of transboundary breeds (including extinct ones) G E NUMBER E
Number of youth in parliament (age 45 or below), Lower Chamber or Unicameral (Number) G NUMBER <=45Y C
Open Data Inventory (ODIN) Coverage Index G INDEX E
Parties meeting their commitments and obligations in transmitting information as required by Basel Convention on hazardous waste, and other chemicals (%) G PERCENT C
Parties meeting their commitments and obligations in transmitting information as required by Rotterdam Convention on hazardous waste, and other chemicals (%) G PERCENT C
Parties meeting their commitments and obligations in transmitting information as required by Stockholm Convention on hazardous waste, and other chemicals (%) G PERCENT C
Passenger volume (passenger kilometres), by mode of transport AIR G P_KM C
Population in moderate or severe food insecurity (thousands of people) MALE G A NUM_TH 15+ G
Population in severe food insecurity (thousands of people) FEMALE G A NUM_TH 15+ G

Table 16 *(continued)*

Sustainable Development Goals indicators.
Population in severe food insecurity (thousands of people) MALE G A NUM_TH 15+ G
Portfolio investment, net (Balance of Payments, current United States dollars) G CU_USD G
Prevalence of moderate or severe food insecurity in the population (%) MALE ALLAREA G A PERCENT 15+ G
Prevalence of severe food insecurity in the population (%) MALE ALLAREA G A PERCENT 15+ G
Prevalence of undernourishment (%) G E PERCENT E
Proportion of children moderately or severely overweight (%) G A PER_POP_U5 <5Y M
Proportion of children moderately or severely stunted (%) G A PER_POP_U5 <5Y M
Proportion of domestic budget funded by domestic taxes (%) G A PERCENT C
Proportion of population covered by at least a 2G mobile network (%) G PERCENT C
Proportion of population covered by at least a 3G mobile network (%) G PERCENT C
Proportion of population covered by at least a 4G mobile network (%) G PERCENT C
Proportion of population practicing open defecation, by urban/rural (%) ALLAREA G PERCENT E
Proportion of population practicing open defecation, by urban/rural (%) RURAL G PERCENT E
Proportion of population practicing open defecation, by urban/rural (%) URBAN G PERCENT E
Proportion of population using basic drinking water services, by location (%) ALLAREA G PERCENT E
Proportion of population using basic drinking water services, by location (%) RURAL G PERCENT E
Proportion of population using basic drinking water services, by location (%) URBAN G PERCENT E
Proportion of population using basic sanitation services, by location (%) ALLAREA G PERCENT E
Proportion of population using basic sanitation services, by location (%) RURAL G PERCENT E
Proportion of population using basic sanitation services, by location (%) URBAN G PERCENT E
Proportion of population with access to electricity, by urban/rural (%) ALLAREA G PERCENT M
Proportion of population with access to electricity, by urban/rural (%) URBAN G PERCENT M
Proportion of seats held by women in national parliaments (% of total number of seats) FEMALE G PERCENT C
Proportion of tariff lines applied to imports with zero-tariff (%) G AGR PERCENT C
Proportion of tariff lines applied to imports with zero-tariff (%) G ALP PERCENT C
Proportion of tariff lines applied to imports with zero-tariff (%) G ARM PERCENT C
Proportion of tariff lines applied to imports with zero-tariff (%) G CLO PERCENT C
Proportion of tariff lines applied to imports with zero-tariff (%) G IND PERCENT C
Proportion of tariff lines applied to imports with zero-tariff (%) G TEX PERCENT C
Proportion of the target population who received 3 doses of diphtheria-tetanus-pertussis (DTP3) vaccine (%) G PERCENT E
Proportion of the target population who received a 3rd dose of pneumococcal conjugate (PCV3) vaccine (%) G PERCENT E
Proportion of the target population who received measles-containing-vaccine second-dose (MCV2) (%) G PERCENT E
Proportion of voting rights of developing countries in international organizations, by organization (%) G PERCENT G IMF
Proportion of youth in parliament (age 45 or below), Lower Chamber or Unicameral (%) G PERCENT <=45Y C
Ratio for female members of parliaments (Ratio of the proportion of women in parliament in the proportion of women in the national population with the age of eligibility as a lower bound boundary), Lower Chamber or Unicameral G Ratio C
Ratio of young members in parliament (Ratio of the proportion of young members in parliament (age 45 or below) in the proportion of the national population (age 45 or below) with the age of eligibility as a lower bound boundary), Lower Chamber or Unicameral G Ratio <=45Y C
Recipient countries of global funding with access to any funding from global financial mechanisms for projects related to invasive alien species management (1 = YES, 0 = NO) G BOOL N
Red List Index G INDEX E

Table 16   *(continued)*

Sustainable Development Goals indicators.
Regulatory Tier 1 capital to risk-weighted assets (%) G A PERCENT C
Regulatory capital to assets (%) G A PERCENT C
Renewable energy share in the total final energy consumption (%) G PERCENT E
Reservoir minimum water area (% of total land area) G A PERCENT E
Reservoir minimum water area (square kilometres) G A KMSQ E
Reservoir minimum water area change (%) G B PERCENT E
Return on assets (%) G A PERCENT C
Total government revenue (budgetary central government) as a proportion of GDP (%) G A PERCENT C
Total government revenue, in local currency G A CUR_LCU_M C
Total reported number of Standard Material Transfer Agreements (SMTAs) transferring plant genetic resources for food and agriculture to the country (number) G NUMBER C
Total reserves in months of imports (ratio) G Ratio G
Tuberculosis incidence (per 100,000 population) G PER_100000_POP G
Under-five deaths (number) MALE G NUMBER <5Y E
Under-five mortality rate, by sex (deaths per 1,000 live births) MALE G PER_1000_LIVE_BIRTHS <5Y E
Universal health coverage (UHC) service coverage index G INDEX E
Volume of remittances (in United States dollars) as a proportion of total GDP (%) G PERCENT G
Water Use Efficiency (United States dollars per cubic meter) G A USD/m3 INDUSTRIES G
Water Use Efficiency (United States dollars per cubic meter) G A USD/m3 ISIC4_A01_A0210_A0322 G
Water Use Efficiency (United States dollars per cubic meter) G A USD/m3 ISIC4_GTT G
Water Use Efficiency (United States dollars per cubic meter) G A USD/m3 TOTAL G
Worldwide weighted tariff-average, most-favoured-nation status, by type of product (%) G AGR PERCENT C
Worldwide weighted tariff-average, most-favoured-nation status, by type of product (%) G ALP PERCENT C
Worldwide weighted tariff-average, most-favoured-nation status, by type of product (%) G CLO PERCENT C
Worldwide weighted tariff-average, most-favoured-nation status, by type of product (%) G IND PERCENT C
Worldwide weighted tariff-average, most-favoured-nation status, by type of product (%) G TEX PERCENT C
Worldwide weighted tariff-average, preferential status, by type of product (%) G AGR PERCENT C
Worldwide weighted tariff-average, preferential status, by type of product (%) G ALP PERCENT C
Worldwide weighted tariff-average, preferential status, by type of product (%) G CLO PERCENT C
Worldwide weighted tariff-average, preferential status, by type of product (%) G IND PERCENT C
Worldwide weighted tariff-average, preferential status, by type of product (%) G TEX PERCENT C
[ILO] Proportion of children/households receiving child/family cash benefit, by sex (%) BOTHSEX G A PERCENT E
[ILO] Proportion of employed population covered in the event of work injury, by sex (%) BOTHSEX G A PERCENT E
[ILO] Proportion of mothers with newborns receiving maternity cash benefit (%) FEMALE G A PERCENT E
[ILO] Proportion of population above statutory pensionable age receiving a pension, by sex (%) BOTHSEX G A PERCENT E
[ILO] Proportion of population covered by at least one social protection benefit, by sex (%) BOTHSEX G A PERCENT E
[ILO] Proportion of population with severe disabilities receiving disability cash benefit, by sex (%) BOTHSEX G A PERCENT E
[ILO] Proportion of unemployed persons receiving unemployment cash benefit, by sex (%) BOTHSEX G A PERCENT E
[ILO] Proportion of vulnerable population receiving social assistance cash benefit, by sex (%) BOTHSEX G A PERCENT E

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Table 17   Most and least similar states in the complex network built from selected indicators, with the related Pearson correlation values

	Most similar State	Less similar State
Afghanistan	Eritrea (0.6525)	Canada (0.2313)
Albania	Moldova (0.8639)	Equatorial Guinea (0.2550)
Algeria	Tunisia (0.8409)	Chad (0.2111)
Andorra	St. Kitts and Nevis (0.8037)	Liberia (0.2166)
Angola	Mozambique (0.7296)	China (0.2218)
Antigua and Barbuda	St. Lucia (0.8669)	Somalia (0.2058)
Argentina	Uruguay (0.7661)	Central African Republic (0.1977)
Armenia	Georgia (0.8799)	South Sudan (0.2412)
Australia	Denmark (0.8531)	Guinea-Bissau (0.1804)
Austria	Greece (0.8763)	Haiti (0.2130)
Azerbaijan	Kazakhstan (0.7980)	South Sudan (0.1963)
Bahamas	Antigua and Barbuda (0.7323)	China (0.1984)
Bahrain	Kuwait (0.7931)	Somalia (0.2358)
Bangladesh	Morocco (0.7554)	Somalia (0.2503)
Barbados	Trinidad and Tobago (0.8486)	Democratic Republic of the Congo (0.2038)
Belarus	Portugal (0.8218)	Democratic Republic of the Congo (0.2248)
Belgium	Portugal (0.8448)	Equatorial Guinea (0.2021)
Belize	St. Vincent and the Grenadines (0.7326)	China (0.1695)
Benin	Togo (0.7919)	Russian Federation (0.1648)
Bhutan	Yemen (0.6873)	Liechtenstein (0.2171)
Bolivia	Tunisia (0.7670)	South Sudan (0.2770)
Bosnia and Herzegovina	North Macedonia (0.8198)	Democratic Republic of the Congo (0.2123)
Botswana	Brunei Darussalam (0.7189)	Democratic People's Republic of Korea (0.2300)
Brazil	Spain (0.6885)	Equatorial Guinea (0.1734)
Brunei Darussalam	Bosnia and Herzegovina (0.7966)	Uganda (0.2052)
Bulgaria	Czech Republic (0.8561)	Democratic Republic of the Congo (0.2214)
Burkina Faso	Togo (0.8122)	Russian Federation (0.2373)
Burundi	Guinea (0.7896)	Australia (0.1928)
Cabo Verde	Trinidad and Tobago (0.7744)	Central African Republic (0.2348)
Cambodia	Laos (0.7904)	United States (0.2000)
Cameroon	Sudan (0.7806)	Australia (0.2032)
Canada	Australia (0.8131)	Madagascar (0.1623)
Central African Republic	Guinea-Bissau (0.7263)	United States (-0.2478)
Chad	Burkina Faso (0.7184)	Ukraine (0.1715)
Chile	Armenia (0.8077)	Democratic Republic of the Congo (0.1801)
China	United States (0.7029)	Central African Republic (-0.2044)
Colombia	Costa Rica (0.8323)	Chad (0.1935)

Table 17 *(continued)*

	Most similar State	Less similar State
Comoros	Cote d'Ivoire (0.7168)	Russian Federation (0.1879)
Costa Rica	Latvia (0.8359)	South Sudan (0.2013)
Cote d'Ivoire	Togo (0.8431)	China (0.1843)
Croatia	Spain (0.8998)	South Sudan (0.2181)
Cuba	Portugal (0.7794)	Democratic Republic of the Congo (0.2198)
Cyprus	Lithuania (0.8158)	Democratic Republic of the Congo (0.1972)
Czech Republic	Austria (0.8745)	Democratic Republic of the Congo (0.2275)
Democratic Republic of the Congo	Nigeria (0.7045)	Kazakhstan (0.1712)
Democratic People's Republic of Korea	Iran, Islamic Rep. (0.5857)	Democratic Republic of the Congo (0.1917)
Denmark	Norway (0.9016)	Equatorial Guinea (0.1901)
Djibouti	Fiji (0.6164)	United Kingdom (0.1891)
Dominica	St. Vincent and the Grenadines (0.8315)	China (0.1906)
Dominican Republic	Honduras (0.8064)	Central African Republic (0.2232)
Ecuador	Morocco (0.7890)	Central African Republic (0.1835)
Egypt	Tunisia (0.8130)	Somalia (0.2004)
El Salvador	Nicaragua (0.8394)	San Marino (0.2219)
Equatorial Guinea	Gabon (0.6910)	Brazil (0.1734)
Eritrea	Togo (0.7348)	San Marino (0.2664)
Estonia	Latvia (0.8996)	Chad (0.2164)
Eswatini	Laos (0.6994)	United States (0.1899)
Ethiopia	Sudan (0.7588)	Brunei Darussalam (0.2349)
Fiji	Maldives (0.7614)	South Sudan (0.2095)
Finland	Sweden (0.9214)	Equatorial Guinea (0.2148)
France	Spain (0.9042)	Liberia (0.1980)
Gabon	Republic of Congo (0.7617)	Russian Federation (0.2143)
Gambia	Guinea (0.7673)	Liechtenstein (0.2364)
Georgia	Armenia (0.8799)	Chad (0.2249)
Germany	France (0.8977)	Madagascar (0.1950)
Ghana	Senegal (0.7473)	China (0.1839)
Greece	Austria (0.8763)	Democratic Republic of the Congo (0.2213)
Grenada	St. Vincent and the Grenadines (0.8195)	Chad (0.2076)
Guatemala	Morocco (0.7444)	Liechtenstein (0.2151)
Guinea	Mali (0.8123)	Japan (0.1777)
Guinea-Bissau	Sierra Leone (0.7702)	Australia (0.1804)
Guyana	St. Lucia (0.7801)	Central African Republic (0.1978)
Haiti	Zambia (0.6177)	India (0.1806)
Honduras	Dominican Republic (0.8064)	San Marino (0.2356)
Hungary	Croatia (0.8880)	Chad (0.2174)

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Table 17 *(continued)*

	Most similar State	Less similar State
Iceland	Norway (0.8257)	Somalia (0.2360)
India	China (0.6792)	Haiti (0.1806)
Indonesia	Philippines (0.7654)	Somalia (0.2110)
Iran	Algeria (0.7494)	Lesotho (0.2013)
Iraq	Syrian Arab Republic (0.7402)	Equatorial Guinea (0.1988)
Ireland	Latvia (0.8212)	Haiti (0.1907)
Israel	Singapore (0.8219)	Guinea (0.2043)
Italy	Spain (0.8797)	Democratic Republic of the Congo (0.1832)
Jamaica	El Salvador (0.8212)	South Sudan (0.2126)
Japan	Republic of Korea (0.8643)	Guinea (0.1777)
Jordan	Laos (0.7426)	South Sudan (0.2026)
Kazakhstan	Belarus (0.8055)	Democratic Republic of the Congo (0.1712)
Kenya	Senegal (0.7642)	China (0.1686)
Kiribati	Federated States of Micronesia (0.7090)	United States (0.1852)
Kuwait	Qatar (0.8578)	Niger (0.2204)
Kyrgyz Republic	Montenegro (0.8207)	Central African Republic (0.2241)
Laos	Cambodia (0.7904)	China (0.2144)
Latvia	Lithuania (0.9042)	Chad (0.1950)
Lebanon	Venezuela (0.7594)	South Sudan (0.1987)
Lesotho	Namibia (0.6462)	Russian Federation (0.1803)
Liberia	Guinea-Bissau (0.7682)	Australia (0.1876)
Libya	Iraq (0.7014)	Somalia (0.1901)
Liechtenstein	Singapore (0.7105)	Guatemala (0.2151)
Lithuania	Latvia (0.9042)	Niger (0.2211)
Luxembourg	Denmark (0.8322)	Madagascar (0.2121)
Madagascar	Togo (0.7685)	Canada (0.1623)
Malawi	Burundi (0.7889)	Australia (0.1857)
Malaysia	Thailand (0.8364)	Somalia (0.1819)
Maldives	Fiji (0.7614)	Democratic Republic of the Congo (0.1718)
Mali	Guinea (0.8123)	Russian Federation (0.2137)
Malta	Croatia (0.8678)	Chad (0.2372)
Marshall Islands	Tuvalu (0.7777)	Canada (0.2222)
Mauritania	Senegal (0.7644)	Russian Federation (0.1859)
Mauritius	Seychelles (0.7570)	Democratic Republic of the Congo (0.2133)
Mexico	Costa Rica (0.7895)	Somalia (0.1890)
Federated States of Micronesia	Marshall Islands (0.7744)	Chad (0.2106)
Moldova	Albania (0.8639)	Central African Republic (0.2039)
Monaco	Andorra (0.7751)	Ethiopia (0.2515)
Mongolia	Portugal (0.7763)	Democratic Republic of the Congo (0.2512)

Table 17 *(continued)*

	Most similar State	Less similar State
Montenegro	Kyrgyz Republic (0.8207)	Chad (0.2049)
Morocco	Tunisia (0.8694)	Central African Republic (0.1948)
Mozambique	Yemen (0.7978)	United States (0.2112)
Myanmar	Laos (0.7676)	United States (0.2815)
Namibia	Yemen(0.7164)	China (0.2233)
Nauru	Bosnia and Herzegovina (0.6476)	Senegal (0.2209)
Nepal	Laos (0.7410)	Russian Federation (0.1982)
Netherlands	Denmark (0.8814)	Madagascar (0.1985)
New Zealand	Portugal (0.8089)	Sierra Leone (0.1880)
Nicaragua	El Salvador (0.8394)	Central African Republic (0.1936)
Niger	Benin (0.7856)	Thailand (0.1703)
Nigeria	Pakistan (0.7167)	China (0.1825)
North Macedonia	Bosnia and Herzegovina (0.8198)	Niger (0.2561)
Norway	Denmark (0.9016)	Chad (0.1836)
Oman	Kuwait (0.8210)	Somalia (0.1903)
Pakistan	Nigeria (0.7167)	United States (0.2103)
Palau	Tonga (0.7356)	Burkina Faso (0.2820)
Panama	Albania (0.7916)	Central African Republic (0.2043)
Papua New Guinea	Yemen (0.7046)	Turkmenistan (0.2014)
Paraguay	Trinidad and Tobago (0.7376)	Central African Republic (0.2085)
Peru	Ecuador (0.7558)	Central African Republic (0.2217)
Philippines	Malaysia (0.7956)	Central African Republic (0.1886)
Poland	Slovenia (0.8394)	Democratic Republic of the Congo (0.1985)
Portugal	Spain (0.8997)	Democratic Republic of the Congo (0.2470)
Qatar	United Arab Emirates (0.8644)	South Sudan (0.2052)
Republic of Congo	Gabon (0.7617)	Nauru (0.2380)
Republic of Korea	Japan (0.8643)	Niger (0.1796)
Romania	Czech Republic (0.8706)	South Sudan (0.2091)
Russian Federation	Canada (0.7528)	Benin (0.1648)
Rwanda	Yemen (0.7822)	China (0.2315)
Samoa	Tuvalu (0.7869)	Central African Republic (0.2004)
San Marino	Monaco (0.6633)	Lesotho (0.2214)
Sao Tome and Principe	Gambia, The (0.7257)	Democratic People's Republic of Korea (0.2054)
Saudi Arabia	Kuwait (0.8394)	Democratic Republic of the Congo (0.2159)
Senegal	Mauritania (0.7644)	United States (0.1969)
Serbia	Bulgaria (0.8083)	Democratic Republic of the Congo (0.2349)
Seychelles	Mauritius (0.7570)	China (0.2058)
Sierra Leone	Guinea-Bissau (0.7702)	India (0.1847)
Singapore	Israel (0.8219)	Liberia (0.1942)

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Table 17   *(continued)*

	Most similar State	Less similar State
Slovak Republic	Hungary (0.8842)	Chad (0.1906)
Slovenia	Lithuania (0.8937)	Guinea-Bissau (0.2516)
Solomon Islands	Samoa (0.6729)	China (0.1904)
Somalia	South Sudan (0.6638)	Malaysia (0.1819)
South Africa	Mexico (0.7696)	South Sudan (0.2125)
South Sudan	Central African Republic (0.6859)	Uzbekistan (0.1927)
Spain	France (0.9042)	Chad (0.1860)
Sri Lanka	El Salvador (0.7402)	South Sudan (0.2019)
St. Kitts and Nevis	St. Vincent and the Grenadines (0.8058)	Chad (0.2297)
St. Lucia	Antigua and Barbuda (0.8669)	Somalia (0.2567)
St. Vincent and the Grenadines	Dominica (0.8315)	China (0.1947)
Sudan	Cameroon (0.7806)	Russian Federation (0.2166)
Suriname	Trinidad and Tobago (0.7443)	Central African Republic (0.2046)
Sweden	Finland (0.9214)	Equatorial Guinea (0.1965)
Switzerland	Sweden (0.8865)	Sierra Leone (0.1992)
Syrian Arab Republic	Iraq (0.7402)	China (0.2177)
Tajikistan	Kyrgyz Republic (0.7569)	United States (0.2792)
Tanzania	Kenya (0.7397)	Russian Federation (0.2188)
Thailand	Malaysia (0.8364)	Niger (0.1703)
Timor-Leste	Tuvalu (0.6724)	Democratic Republic of the Congo (0.2653)
Togo	Cote d'Ivoire (0.8431)	Russian Federation (0.2079)
Tonga	Samoa (0.7798)	Central African Republic (0.1810)
Trinidad and Tobago	Barbados (0.8486)	Chad (0.2398)
Tunisia	Morocco (0.8694)	Central African Republic (0.1943)
Türkiye	Spain (0.7528)	Madagascar (0.2019)
Turkmenistan	Bahrain (0.7553)	Democratic Republic of the Congo (0.1862)
Tuvalu	Samoa (0.7869)	Central African Republic (0.2054)
Uganda	Rwanda (0.7288)	Brunei Darussalam (0.2052)
Ukraine	Greece (0.7377)	Chad (0.1715)
United Arab Emirates	Qatar (0.8644)	Madagascar (0.1988)
United Kingdom	France (0.8938)	Djibouti (0.1891)
United States	Canada (0.7619)	Central African Republic (-0.2478)
Uruguay	Serbia (0.7935)	South Sudan (0.2177)
Uzbekistan	Bahrain (0.7876)	Democratic Republic of the Congo (0.1772)
Vanuatu	Tajikistan (0.7444)	United States (0.2191)
Venezuela	Lebanon (0.7594)	Niger (0.2798)
Vietnam	Cote d'Ivoire (0.7002)	China (0.1904)
Yemen	Mozambique (0.7978)	United States (0.2132)
Zambia	Burkina Faso (0.7924)	China (0.1705)
Zimbabwe	Thailand (0.7099)	Somalia (0.2281)

15. Addendum on Artificial Intelligence

Table 18   Selected list of United Nations Artificial Intelligence initiatives

UN Resolutions

Title	Description	URL
Resolution A/RES/78/311	"Enhancing international cooperation on capacity-building of artificial intelligence: draft resolution" (25 June 2024) This emphasizes the importance of international cooperation in building artificial intelligence (AI) capacity, especially in developing countries. It highlights the need for AI systems to be safe, reliable, trustworthy, and inclusive, with a focus on promoting human rights and adhering to international law. The resolution recognizes the rapid technological changes and the potential of AI to contribute to sustainable development goals, while also acknowledging the risks and challenges associated with its misuse.	https://digitallibrary.un.org/record/4053245?ln=en&v=pdf
Resolution A/RES/78/265	"Seizing the opportunities of safe, secure and trustworthy artificial intelligence systems for sustainable development" (2024)* Adopted on March 21, 2024, this landmark resolution is the first UN resolution focused entirely on AI. It emphasizes the importance of developing AI systems that are safe, secure, and trustworthy while promoting sustainable development. The resolution calls for international cooperation, equitable access to AI technologies, and the protection of human rights. It also highlights the need for regulatory frameworks at both national and international levels to manage AI risks and ensure its benefits are widely shared.	https://digitallibrary.un.org/record/4043244?v=pdf
Resolution A/HRC/53/L.27/Rev.1	"New and emerging digital technologies and human rights" adopted by the Human Rights Council on 14 July 2023 It points out the importance of addressing the human rights implications of new and emerging digital technologies. It highlights the need for international cooperation and a human rights-based approach to regulate and utilize these technologies to ensure they contribute to the promotion and protection of human rights.	https://digitallibrary.un.org/record/4020206?ln=en&v=pdf

Table 18 *(continued)*

UN Secretariat

Secretary General Advisory Body

Title	Description	URL
Governing AI for Humanity - United Nations (2023)	The interim report by the UN High-level Advisory Body on AI outlines principles and functions for global AI governance. It addresses the opportunities, risks, and challenges of AI, proposing a framework for international collaboration to ensure AI benefits all humanity while mitigating risks.	https://www.un.org/en/ai-advisory-body

High level advisory body on Artificial Intelligence

Title	Description	URL
Interim Report: Governing AI for Humanity	The report calls for a closer alignment between international norms and how AI is developed and rolled out.	https://www.un.org/en/ai-advisory-body

UN DESA

Title	Description	URL
With AI, jobs are changing but no mass unemployment expected - UN labour experts	It explores AI's impact on labor markets, emphasizing its replacement of routine tasks and the creation of new roles requiring interpersonal skills and advocates for policies ensuring equitable AI benefits and urges governments to adopt flexible regulations and enhance social protections. ILO stresses the importance of adapting to digital technology.	https://www.un.org/tr/desa/ai-jobs-are-changing-no-mass-unemployment-expected-un-labour-experts
Frontier Issues: The Impact of the Technological Revolution on Labour Markets and Income Distribution (July. 2017)	This is to provide a comprehensive analysis of how technological advancements, particularly those involving artificial intelligence (AI) and automation, are transforming the global economy and labor markets.	https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/publication/2017_Aug_Frontier-Issues-1.pdf

Internet Governance Forum

Title	Description	URL
Policy Network on Artificial Intelligence (PNAI)	It collects Global multistakeholder effort on AI and provides Four new PNAI focus areas for 2024, building on the previous AI discussions.	https://www.intgovforum.org/en/pnai

UNESCO

Title	Description	URL
Recommendation on the Ethics of Artificial Intelligence	UNESCO's first-ever global standard on AI ethics – was adopted by all 193 Member States in November 2021. Adopted by UNESCO member states in November 2021, the recommendation outlines a series of values, principles, and actions to guide states in the formulation of their legislation, policies, and other instruments regarding AI. For instance, the document calls for action to guarantee individuals more privacy and data protection, by ensuring transparency, agency, and control over their personal data. Explicit bans on the use of AI systems for social scoring and mass surveillance are also highlighted, and there are provisions for ensuring that real-world biases are not replicated online.	https://www.unesco.org/en/articles/recommendation-ethics-artificial-intelligence

Table 18   *(continued)*

Title	Description	URL
Report of the High-level Committee on Programmes on its Virtual Consultation on the Ethics of Artificial Intelligence	The report details the virtual meeting held on 29 July 2020 by the High-level Committee on Programmes to discuss the ethics of artificial intelligence (AI). The meeting, led by UNESCO, focused on developing a global standard-setting instrument on AI ethics. It emphasized the importance of addressing ethical concerns such as privacy, data protection, and biases, and highlighted the need for international cooperation and capacity-building. The discussions underscored the critical role of the United Nations in ensuring AI is developed and used ethically and inclusively, benefiting all sectors of society.	https://digitallibrary.un.org/record/3895564?ln=en&v=pdf
ITU		
United Nations Activities on Artificial Intelligence (AI)	This report compiles AI-related activities from 46 UN agencies, focusing on the ethical use of AI and its application across various sectors. It aims to foster collaboration and build a common understanding of AI technologies, supporting the 2030 Agenda for Sustainable Development.	https://www.itu.int/dms_pub/itu-s/opb/gen/S-GEN-UNACT-2022-PDF-E.pdf
UNU		
Towards a UN Role in Governing Foundation Artificial Intelligence Models (2023)	This working paper discusses the governance challenges posed by foundation AI models like GPT-4. It recommends that the UN focus on norm and consensus-building rather than technical regulation, emphasizing equitable benefits distribution and international convergence on best practices.	https://unu.edu/cpr/working-paper/towards-un-role-governing-foundation-artificial-intelligence-models

16. List of UN online research volunteers, responding countries and cities to MSQ and LGQ

Table 19   List of online researchers

Abdulrahman Jean-Samuel Bonsenge-Bokanga	Abraham Selby	Adam Šíma
Adel Alareba	Adrienn Bősz	Aisha Ayyad
Aishath Celestine Donovan-Bradley	Aissata Elisa Maria Campos	Alanood Alwahaibi
Alejandro Clastornik	Alexia de Roode Torres	Amadou OURY Diallo
Amal Salah Janahi	Amanda Zuze	Aminath Nihan
Amirjon Abdukodirov	Anchal Manchanda	Andrea Vinelli
Andrés Villar	Angel Zundel	Anita Adhikari
Anna Sobota	Annette Murigi	Antons Miscenko
Asim Omran	Asmaa Nabil	Assane Igodoe
Audrey Kianjaya	Baigorria Emman Zisko	Barry Hamblin
Basnet Pema	Batzorig Tuvshinjargal	Begench Bayramov
Botagoz Kairatkyzy	Canicave Rim	Caroline Echea
Charmaine Distor	Chuyi Lu	Courage Chakanza
Daniel Mordeki	Dean Ross	Deborah Marconcini Bittar
EL AID BLAILI	Eden Laura	Edith Williams
Eduardo Tejada	Elena Ricci	Elizabeth Chatora
Elizabeth Niland	Emma Hevlund	Emma Le
Emmanuel Merson Dioceli Flores	Essa Dayhan Daguer Barham	Esther-Maria Rohde
Eun Young Jung	Eva Bolza-Schünemann	Faniel Hagos
Fatema Alhamed	Fathia Assakina	Fatima Zahra El Azizi
Feda Muhammad	Fleur BELINGA	Galina Limorenko
Gaurav Madawela	Georgiadis Samuel	Gjokaj Soumaya
Gladys Besona	Hadja Keita	Hadjaratou Hamani
Hansali Dissanayake	Harry Sailale	Hsu Mon Kyaw
ISMAEL SANDA	Ibrahim Atta	Illugi Hjaltalin
Ilyas Ouirdaoui	Ioana Alexandra Trifa	Isaac Aaron
Isaac Henries	Isabel Susino	Ivana Jezkova
Jakhongir Berkinov	Jari Linikko	Jasmina Mulic
Jelissa Rodríguez	Jerome Idinin Adjimoti	Jessica W. L. Ware
Jingyi Jiang	Johanna Michell Chavez	Joseph Hendrikx
Joseph Lwanga	Joyeuse Tuyizere	Juan Wen
Kabanga Deo	Kareem Altakee	Katerina Mansour
Kelvin Luyako	Khadijatou Suso	Khammassi Pau Vidal Gil
Kie Okamoto	Konassandé Jaya	Krishna Pavan Challa
Ksenia Kumanina	Lamija Balta	Laura Hermann
Laura Karmacsi	Liel Gold	Liisa Kohonen
Lina Coronado	Lithakazi Mkombe	Liyana Arlouskaya
Lorena Belenky	Lousine Aroyan	Luis Mena
Magdalena ciesielska	Mahdi Sadeghiha	Maitha Alamimi
Maksim Padbiarozkin	Malika Gozikhonova	Manoek Sam
Margarit Baburyan	Mariami Bitsadze	Mariglent Jazi

Table 19   *(continued)*

Marina Manakhova	Mario Mendoza	Mario von Ahn
Marisa Simbiak	Marsel Nurbolotov	Marta Rocha
Martina Astorga	Maryam Elsherif	Maëlle Délen
Moamal Ghalib	Mohamed Abdullahi	Mohammed Bilal Wali
Mon Kyaw Su Maung	Muhammad Danial Lim Ong	Naci Karkin
Nasser Anda Garba	Natalja Cekalina	Natasha Rumbidzai Rupiya
Nicole Boudassou Baez	Nicole Mkandla	Nikki Camilleri
Nikolaj Storm Petersen	Nneoma Ojike	Nomenatiana Bakoalijaona
Nurmuhammet Annayev	OJEI EMEKE COLLINS	Olena Shkarpitna
Olivia Morra	Oscar Oldbury-Swift	Parviz Melibaev
Patricia Moreno Gaona	Paulina Robles Rubio	Petya Barzilska
Pranjal Gautam	Prof. Karim Hamza	Rachael Purcell
Rafika Arsyad	Riyadh Fadhl	Roberta Spiteri
Rukhsara Babayeva	Rumen Stefanov	Ryan Ang
Sam Verebes	Sandra Kolb	Saumya Mehta
Scotia Haig	Serge Banga	Sharon Zuckerman
Shashveena Shamira Shafa	Sim Ti Richard	Sohaib Hamza Ekshiekh
Sot Liachnis	Soumaya Gjokaj	Sven Simikin
Séckou Amadou Alpha Coly	Tensae Endrias	Thien Tran
Thomas Nordbø Heyeraas	Tiblet Kelemwork	Unurtsetseg Boldbaatar
Uriel Maldonado Zamudio	Vasyl Kunychka	Wantinèki Diane
Won Fy Lee	Xuewei Liao	Yasmine Elsherif
Yasmine Jawad	Yousif El Ashi	Yudit Agni Puspitarini
Zaidullah Zahid	Zala Terlep Rogelj	Zosheen Riaz
labidi aya		

Table 20   Responding countries to Member States Questionnaire (MSQ)

Albania	Greece	Republic of Moldova
Algeria	Germany	Russian Federation
Antigua and Barbuda	Guatemala	Samoa
Argentina	Gambia	Saudi Arabia
Armenia	Hungary	Serbia
Australia	Honduras	Seychelles
Austria	Kiribati	Singapore
Azerbaijan	Italy	Slovenia
Bahamas	Ireland	Somalia
Bahrain	Iraq	Spain
Bangladesh	Iran (Islamic Republic of)	Sri Lanka
Belgium	Indonesia	Sweden
Belize	India	Switzerland
Benin	Jordan	Syrian Arab Republic
Bhutan	Japan	Thailand
Bolivia (Plurinational State of)	Kyrgyzstan	Tonga
Bosnia and Herzegovina	Kuwait	Trinidad and Tobago
Brazil	Kazakhstan	Türkiye
Brunei Darussalam	Luxembourg	Tuvalu
Burkina Faso	Liechtenstein	United Arab Emirates
Cabo Verde	Lebanon	United Kingdom of Great Britain and Northern Ireland
Cambodia	Latvia	United Republic of Tanzania
Canada	Lao People's Democratic Republic	Uruguay
Chile	Myanmar	Uzbekistan
China	Morocco	Viet Nam
Costa Rica	Montenegro	Yemen
Croatia	Mongolia	
Cuba	Monaco	
Cyprus	Mauritius	
Czech Republic	Mauritania	
Denmark	Malta	
Dominican Republic	Malaysia	
Ecuador	Oman	
Egypt	Pakistan	
Estonia	Panama	
Eswatini	Paraguay	
Ethiopia	Peru	
Estonia	Philippines	
Eswatini	Poland	
Ethiopia	Portugal	
Finland	Qatar	
Fiji	Republic of Korea	

Table 21 Responding cities to Local Government Questionnaire (LGQ)

Addis Ababa (Ethiopia)	Algiers (Algeria)	Almaty (Kazakhstan)
Amman (Jordan)	Apia (Samoa)	Baghdad (Iraq)
Baku (Azerbaijan)	Bangkok (Thailand)	Belize City (Belize)
Berlin (Germany)	Bogota (Colombia)	Brussels (Belgium)
Casablanca (Morocco)	City of Tallinn (Estonia)	Colombo (Sri Lanka)
Cotonou (Benin)	Dar Es Salaam (United Republic of Tanzania)	Dhaka (Dhaka North City Corporation) (Bangladesh)
Doha (Qatar)	Dubai (United Arab Emirates)	Dublin (Ireland)
Guatemala (Guatemala)	Havana (Cuba)	Jakarta (Indonesia)
Karachi (Pakistan)	Kuala Lumpur (Malaysia)	London (United Kingdom of Great Britain and Northern Ireland)
Manama (Bahrain)	Mbabane (Eswatini)	Monaco (Monaco)
Montevideo (Uruguay)	Moscow (Russian Federation)	Mumbai (India)
Niamey (Niger)	Nicosia (Cyprus)	Nouakchott (Mauritania)
Ouagadougou (Burkina Faso)	Port Louis (Mauritius)	Riyadh (Saudi Arabia)
Roma (Italy)	Santo Domingo (Dominican Republic)	Singapore (Singapore)
São Paulo (Brazil)	Tashkent (Uzbekistan)	Tel Aviv (Israel)
Thimphu Thromde (Municipality)(Bhutan)	Tirana (Albania)	Tokyo (Japan)
Vienna (Austria)	Yangon (Myanmar)	Yerevan (Armenia)