

**IPEC-25**  
**REGIONAL ECONOMIC DIALOGUE (RED-AMS)**  
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**ITU-D Study Group 1**  
**Question 4/1 on Economic aspects of**  
**national telecommunications/ICTs - Output**  
**Report for the study period 2022-25**

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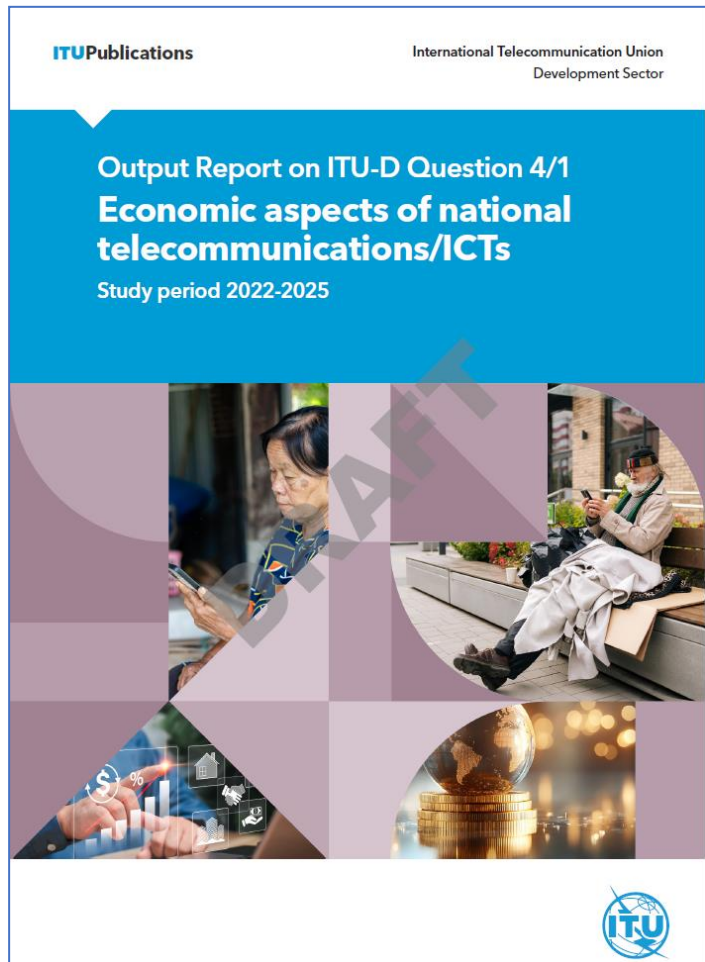
# Topics under study for Question 4/1 in 2022-2025 (1/2)

- Topic 1: **New charging methods (or models, if applicable) for services provided over next-generation networks (NGN)**, including methods for determining the costs of wholesale services.
- Topic 2: **The impact of infrastructure-sharing** (local loop unbundling, tower companies, etc.) on investment costs, provision of telecommunication/ICT services, competition and prices to consumers - case studies with quantitative analysis.
- Topic 3: **Consumer price evolution and impact on ICT service usage, innovation, investment and operator revenues.**
- Topic 4: Trends in the **development of virtual mobile operators** and associated regulatory framework.
- Topic 5: Impact of **new converging ICTs on cost-modelling strategies** traditionally carried out by stakeholders constituting the ICT networked value chain
- Topic 6: The role and impact on achieving the SDGs, of **new types and modes of investment in telecommunications/ICTs, such as blended investments, and crowdfunding.**
- Topic 7: Analysis of **case studies on the economic contribution** of digital telecommunication/ICT technologies and services to the national economy. •

# Topics under study for Question 4/1 in 2022-2025 (2/2)

- Topic 8: Framework for establishing the **contribution of telecommunications/ICTs to a country's gross domestic product (GDP)**.
- Topic 9: **Economic incentives and mechanisms for bridging the digital divide**.
- Topic 10: Analysis of the **economic impact of the COVID-19 pandemic** on telecommunication/ICT markets.
- Topic 11: Analysis of the contribution of telecommunications/ICTs on the economic recovery from the COVID-19 pandemic.
- Topic 12: **Economic aspects/implications of digital transformation**.
- Topic 13: **Impact on innovation and productivity**, and other national economic aspects of digital financial inclusion.
- Topic 14: **National experiences on the contribution to the national economy** in bridging the digital divide, to provide accessible and affordable connectivity.
- Topic 15: **Different models of infrastructure sharing**, including infrastructure sharing on commercially negotiated terms.
- Topic 16: The economic value of usage of personal data.

# Structure of the content of ITU-D Question 4/1 New Report 2022-2025



- **Emerging investment approaches** in telecommunications/ICTs and their impact on achieving SDGs
- **Case studies on the economic contribution of digital telecommunication/ICT technologies and services** to national economy and GDP
- **The economic value of personal data usage**
- **Other economic aspects/implications of national telecommunication/ICT**
- **Best-practice guidelines**

# Additional deliverables on ITU-D Question 4/1 in 2022-2025



ITU-D Study Group 1

International Telecommunication Union

## Challenges and opportunities for using universal service funds to bridge the digital divide

Study period  
2022-2025

### Executive summary

This document presents the joint interim (annual) deliverable for Question 4/1, "Economic aspects of national telecommunications/ICTs", and Question 5/1, "Telecommunications/ICTs for rural and remote areas". It concerns the challenges and opportunities associated with using universal service funds to bridge the digital divide.

### Question 4/1

Economic aspects  
of national  
telecommunications/ICTs

### Question 5/1

Telecommunications/  
ICTs for rural and remote  
areas

Interim deliverable  
2024



ITU-D Study Group 1

International Telecommunication Union

## Consumer awareness in the digital transformation age

Study period  
2022-2025

### Executive summary

This is the second interim (annual) deliverable for Question 6/1 of ITU-D Study Group 1 for the study period 2022-2025.

### Question 6/1

Consumer information,  
protection and rights

Interim deliverable  
2024

Advanced telecommunication/information and communication technology (ICT) products and services have increasingly permeated all aspects of our lives, including work, entertainment and learning. This has brought untold benefits and significantly improved consumers' lived experiences. In order to facilitate the continuous development of the digital economy and society, there is a need for robust mechanisms that support the development and deployment of underlying technologies. The Global Digital Regulatory Outlook 2023 reiterates the role of digital transformation as a means of facilitating universal access to new economic and social opportunities. As indicated in the ITU Facts and Figures 2023 report, there still exists a significant digital divide, with a third of the global population, or an estimated 2.6 billion people, being offline and, consequently, impeded from accessing these opportunities.

Therefore, it is crucial that consumers of telecommunication/ICT products and services, as one of the key actors in this ecosystem, participate effectively in the digital economy and society. In this regard, it is important that policy-makers develop and deploy appropriate digital transformation policies and strategies that empower and support consumers to exercise their rights and meet their needs. Rapidly evolving technologies are exacerbating existing information asymmetries in our digital worlds; hence, it is even more important to safeguard consumers and develop protection mechanisms that support consumers in making purchase, subscription- and use-related decisions in the market and, in so doing, enable citizens and businesses to participate in, and fully harness the benefits of, the digital economy and society. It is thus inevitable that digital transformation requires a consumer-centric approach that enhances consumer trust and confidence.

As an initial step, it is important to raise awareness among consumers so that they have a better understanding of the terms and conditions that they are agreeing to and that they are well informed of their rights and responsibilities, as well as of their choices in terms of service options, available features and the benefits and opportunities that can be harnessed in the digital era.

The following paragraphs look at key considerations for policy-makers and the means through which consumers' level of awareness can be raised. This is carried out by firstly understanding the process through which consumers make decisions and the mechanisms to inform their decision-making process.

- Joint deliverable and workshop:
- Question 4/1 and Question 5/1 on Challenges and opportunities of the **use of universal service funds for bridging the digital divide**
- Question 4/1 and Question 6/1 on **Personal data usage: regulatory and economic aspects**



# Main Q4/1 Best Practices Guidelines

## New Investment Modes for Telecom/ICT and SDGs

### 1. Blended Investment (SDGs 8, 9, 11, 17)

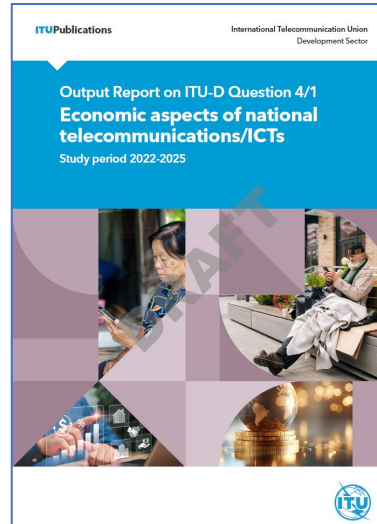
- Combine public/philanthropic funds with private capital to reduce risk and attract investment.

#### Key lessons for policymakers:

- Targeted, clearly defined projects. Pair funding with technical assistance and capacity building.
- Engage local stakeholders (co-creation). Prioritize social impact (inclusion, equity, access).
- Ensure regulatory support and enabling environment.

### 2. Online Crowdfunding

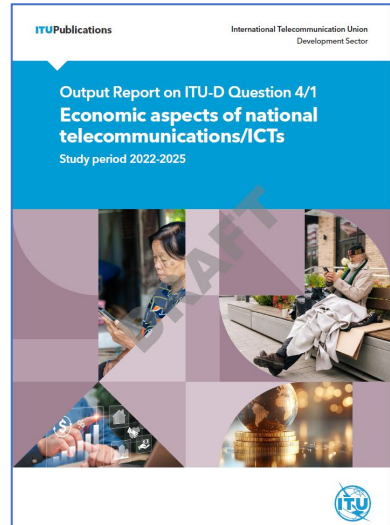
- Alternative financing for microentrepreneurs, especially in emerging economies.
- Helps overcome credit barriers and biases (e.g., gender).
- Promotes digital inclusion, strengthens ICT sector diversity, broader economic growth and societal benefits.



# Main Best Practices Guidelines

## The economic value of personal data usage

- **Recognize personal data as a key economic factor;** ensure transparency in collection, analysis, and valuation.
- **Data sharing benefits:** boosts competitiveness, digital identity, smarter market decisions, and infrastructure planning.
- **Risks:** exploitation, lock-in effects, reduced competition, monopolization by large platforms.
- **Data portability:** Enable seamless transfer of personal data across platforms. Lower switching costs for consumers. Safeguard personalization while preventing anti-competitive practices.
- **Economic valuation:** Diversify methods for valuing personal data. Improve transparency and fairness in data pricing.
- **Data markets and business models:** Promote federated/distributed platforms and niche marketplaces.
- **Support global initiatives for secure, standardized frameworks.**





# Main Best Practices Guidelines

## Economic contribution of digital telecommunication/ICT technologies and services to national economy and GDP

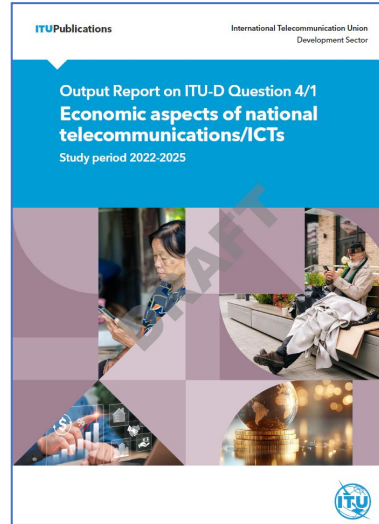
- Higher ICT penetration → positive impact on GDP.
- Strongest effect in low-income countries.
- Recommendation: Developing countries should boost ICT investment as a key growth driver (“spend money to make money”).

## Other economic aspects/implications of national telecommunication/ICT

- Align ICT use with digital transformation goals

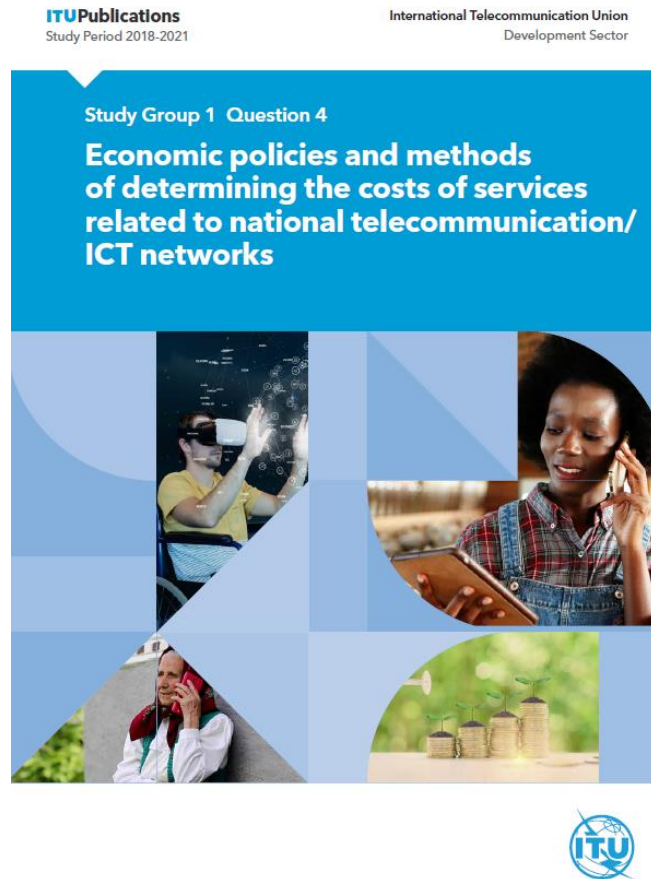
### Key actions for developing countries:

- Target ICT in priority sectors (health, education, agriculture)
- Tackle digital divide & usage barriers
- Assess investment needs vs. benefits
- Build transparent digital strategies with clear targets
- Share & adopt best practices via ITU platforms





# Structure of the content of ITU-D Question 4/1 Revised Report 2018-2022



- **New charging methods (or models, if applicable) for services provided over next-generation networks (NGN)**, including methods for determining the costs of wholesale services.
- **The impact of infrastructure-sharing** (local loop unbundling, tower companies, etc.) on investment costs, provision of telecommunication/ICT services, competition and prices to consumers - case studies with quantitative analysis.
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- Trends in the **development of virtual mobile operators** and associated regulatory framework.
- Best-practice guidelines

# Future topics for next period 2026-2029

Question 4/1 will cover the following main topics from a national perspective in the scope of developing the new Question 4/1 Final Report or other deliverables for the ITU-D study period 2026-2029:

- 1) Digital currencies
- 2) Economic aspects of Ai and Metaverse
- 3) Digital service taxes
- 4) National aspects of spectrum economics
- 5) Social return of investment

# Resources on Economics and Finance

ITU-D Study Group 1 Question 4/1 – reports and guidelines:

ITU Publications  
Study Period 2018-2021

International Telecommunication Union  
Development Sector

Study Group 1 Question 4

**Economic policies and methods of determining the costs of services related to national telecommunication/ICT networks**

ITU Publications  
Study period 2018-2021

International Telecommunication Union  
Development Sector

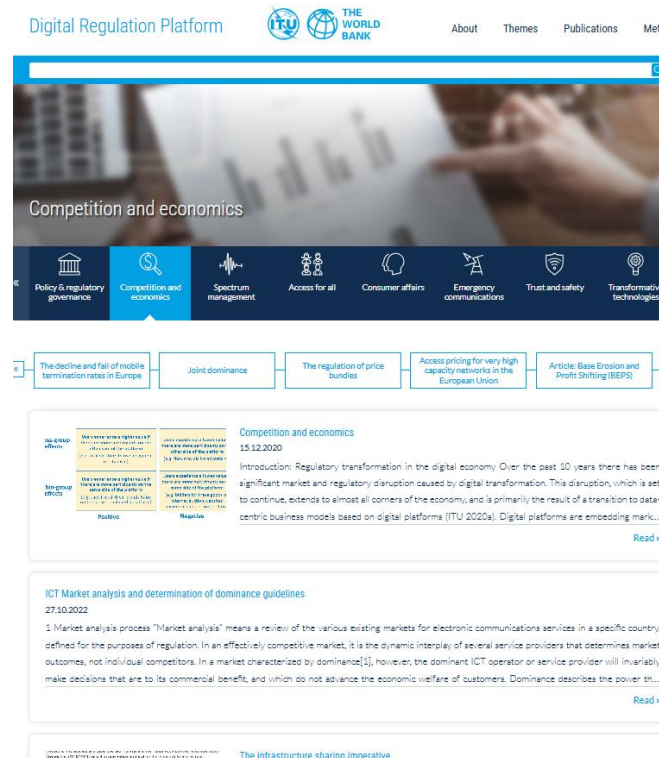
Study Group 1 Question 4

**Guidelines on cost modelling**  
Economic policies and methods of determining the costs of services related to national telecommunication/ICT networks



The new report of the SG1 Q4/1 will be launched very soon.

The Digital Regulation Platform – module on Competition and Economics



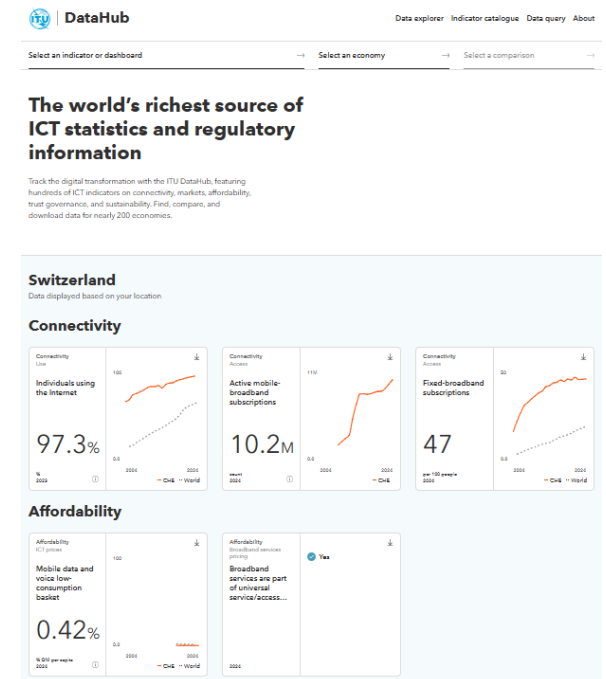
<https://digitalregulation.org/category/competition-and-economics/>

ITU-D Study Groups interim deliverables  
**Questions 4/1 & 5/1:  
Challenges and Opportunities of the Use of USF for Bridging the Digital Divide**



Interim deliverable newly launched: [Q4/1 & Q5/1]  
**Challenges and Opportunities of the Use of USF for Bridging the Digital Divide**

ITU DataHub:



<https://datahub.itu.int/>



**Thank you**