



ITU AMERICAS IPEC-2020

ITU Policy and Economics Colloquium
Virtual 5-7 October 2020 – Organized with OSIPTEL, Peru

1. Main outputs

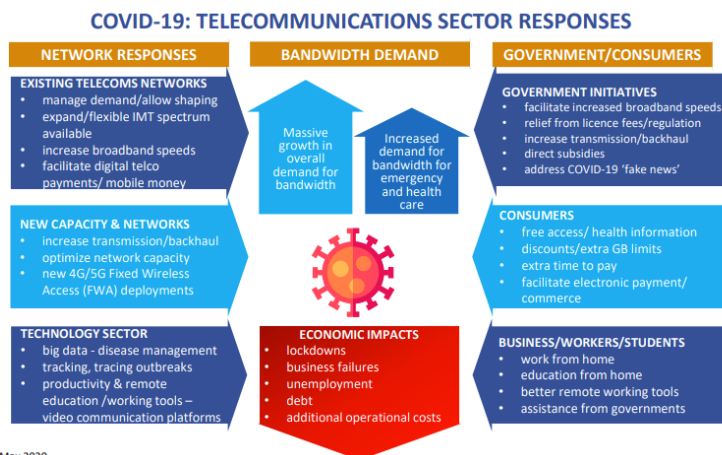
1.1 COVID-19: Challenges and Opportunities for Telecommunications/ICT in the Americas Region (Monday, 5 October 2020)

Over the past months, access to connectivity has become crucial in enabling us to continue working, studying, purchasing, keeping in touch with our families and friends, entertaining ourselves and, evidently, keeping ourselves informed of the health measures that are frequently updated and essential to ensuring that the present crisis is overcome. Digital networks have been vital in allowing us to adapt and survive in the short term. In the medium and long term, however, digital connectivity will also be essential, in terms of how fast and easily we are able to recover both from the health crisis and the economic crisis and remodel our world into some sort of “new normal”. This was the backdrop against which the COVID-19 Webinar focused on the impact of COVID-19 on telecommunication/ICT infrastructure in the Americas region.

ITU expert **Scott Minehane** presented the ITU REG4COVID platform, as well as the publication on the pandemic in the Internet age: communication industry responses – guaranteeing connectivity and business continuity – key lessons learned. The main outputs of the discussions concentrated on the



COVID-19 Emergency Phase (1)



Source: ITU-WPC, May 2020

initiatives and measures implemented by countries during and following the confinement period and the recovery phase. The latter involves various topics including contact-tracing applications, acceleration of available IMT spectrum allocation, 4G and 5G network deployment and transition and the deployment of wireless fibre access as a complementary measure for network substitution if required and

facilitating innovative and future technologies to bridge the digital divide (e.g. responses using Big Data, satellites, etc.). Numerous concerns, however, still have to be tackled, such as disinformation, cybersecurity in teleworking and privacy. In all events, it is clear that the health-related and economic consequences of COVID-19 are unfortunately not a short-term problem, but represent a change to the present system, placing digital connectivity among the top priorities on the agendas of all countries.

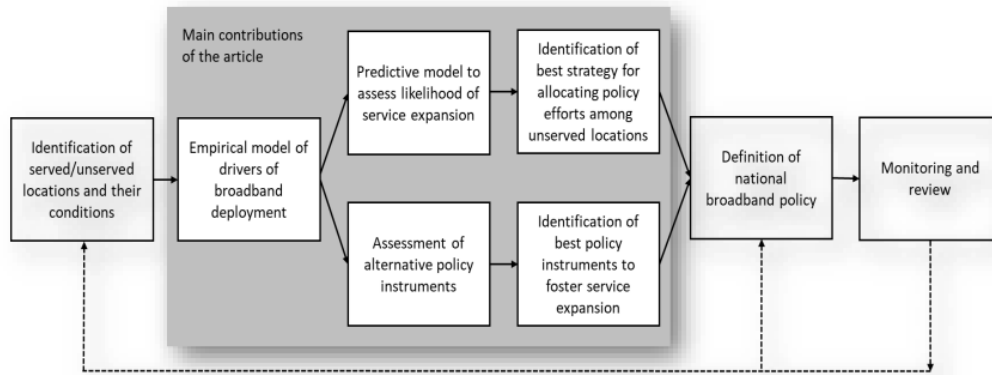
The REG4COVID platform thus hosts the different initiatives implemented by countries across the world. Focusing on actions taken at national level, **Jorge Tafur Panduro (OSIPTEL, Peru)** outlined the impact of COVID-19 on Peru's telecommunication infrastructure. Some of the main measures implemented relate to Internet traffic monitoring and fixed and mobile network traffic management, with the aim of fostering prioritization of the use of e-education, e-health and teleworking applications. From the tariff policy viewpoint, it was made mandatory for mobile operators to enable the "tethering" feature for the user's entire MB or GB contracts. Measures also include prohibition of suspension of service for non-payment up to 15 June 2020, and review of the conditions for telephone service debt repayment in instalments.

At regional level, **Oscar León (CITEL)** presented the five strategic actions implemented in the Americas region:

- 1- Expedite actions to foster Internet coverage expansion and that of other telecommunication services, especially in areas without access;
- 2- Prioritize the connectivity of strategic points in the response to the COVID-19 pandemic;
- 3- Promote actions to encourage positive use of the Internet;
- 4- Give priority to work to support, operate, maintain and deploy additional capacity for telecommunication networks;
- 5- Continue the maintenance and monitoring of both physical and virtual telecommunication infrastructure.

From the viewpoint of the region's network operators, **Maryleana Méndez (ASIET)** explained the challenges of decreased revenues and reduced investment capacity faced by network operators as a consequence of the crisis. To maintain connectivity universalization, priority must be given to universal service, strengthening offer and demand for services through public/private investment projects. In terms of regulatory reforms, it is important to enable the sector's economic growth by providing a flexible regulatory environment. It was stressed that regulation should be applicable only where required and appropriate, and efforts should be made to identify innovative regulatory approaches. Attention was also drawn to the importance of studying draft laws in thorough detail having regard to the regulatory frameworks and fiscal aspects in particular.

In the discussion of digital applications as key elements during COVID-19, **ITU expert Tiago Souza Prado** explained how to design effective digital policies in times of the COVID-19 crisis, proposing a policy design model based on data using the case of Brazil as an example.



The COVID-19 crisis made the world more dependent on connectivity, with the use of digital applications key to combating the spread of the virus. Governments worldwide should strive to achieve more with less resources, largely adopting solutions based on data to make digital policies more effective and efficient.

At the level of the Central America region, **Allan Ruiz (COMTELCA)** presented COMTELCA's input, stressing the importance of public and regulatory policies focused on protecting personal data during COVID-19. In addition, **Rubén Morales (former Minister for the Economy of Guatemala)** explained Guatemala's e-commerce strategies along with several examples of Business to Consumer (B2C) implemented efficiently in Guatemala and as examples for other countries to possibly follow. This type of application is extremely useful during the health crisis. He also underscored the importance of promoting innovation and adaptation as a way for companies to get ahead.

Stress was placed on the importance of investment, collaboration and connectivity in order to resolve the crisis both during and following the pandemic; according to **Lester García (Facebook)**, digital platforms can contribute to promoting strategies to guarantee the connectivity of digital ecosystems during the COVID-19 crisis. In the same vein, **Manuel Haces-Aviña, (Google)** explained how exposure notification applications function as tools to help authorities tackle the pandemic, augmenting traditional outreach and notifying both acquaintances and strangers fast and effectively, thus breaking the chains of infection.

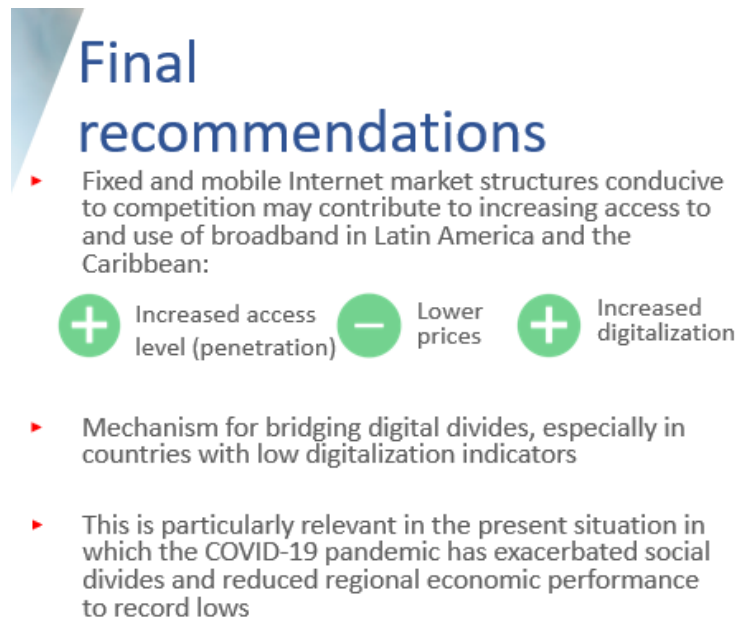
In conclusion, it is important to note that now more than ever before collaboration must be promoted and take place between different sectors at national level, accompanied by investment to promote the deployment of ICT infrastructure in order to expand connectivity, in a bid not only to resolve the crisis caused by the pandemic but also to implement innovative strategies for the "new normal" in regard to interaction between digital ecosystems that should embrace flexibility and adaptation.

1.2 Regional Dialogue on the Telecommunication/ICT Economy for the Americas Region – RED (Tuesday and Wednesday 6-7 October 2020)

Policies, regulations and economic approaches in the ICT sector

ITU's Regional Economic Dialogue (RED) was divided into three main sessions and concluded with discussion of the economic and financial aspects of the digital ecosystem in coordination with the ITU-T study groups, specifically for ITU-D Question 4/1¹.

Discussion of policies, regulations and economic approaches in the ICT sector is a priority for the Americas region. In this context, the strategic analysis of the telecommunication/ICT market structure carried out for the Americas region by ITU experts **Guillermo Cruz** and **Juan Manuel Roldán** is of



Final recommendations

- ▶ Fixed and mobile Internet market structures conducive to competition may contribute to increasing access to and use of broadband in Latin America and the Caribbean:
 - ➕ Increased access level (penetration)
 - ➖ Lower prices
 - ➕ Increased digitalization
- ▶ Mechanism for bridging digital divides, especially in countries with low digitalization indicators
- ▶ This is particularly relevant in the present situation in which the COVID-19 pandemic has exacerbated social divides and reduced regional economic performance to record lows

particular relevance, given the differences between countries regarding correlations between market structure, prices and coverage. The considerable disparities between fixed and mobile broadband service concentration levels for Latin America and the Caribbean were explained, as was the trend towards higher concentration in urban areas. The results of the analysis will be published shortly. It is important to note that the disparities between different countries of the region are closely linked to the concentration and digitalization levels of the fixed and mobile broadband markets. The graphic provided presents the initial recommendations of the study which focuses on the

relationships between market concentration and digitalization using an analytical regression model. References can also include the series of studies carried out by ITU on the economic contribution of broadband, digitalization and regulation².

Also of interest are ITU's policy and regulatory tools for digital transformation. **Sofie Maddens** and **Carmen Prado-Wagner (ITU)** explained how the exchange platforms and training workshops focused on regulatory frameworks and digital policy can help enhance collaboration both at sector and inter-sector level, as well as the regulatory capacity for digital transformation. Among these tools, the pioneering publications and research on regulation and the collection and analysis of data carried out by ITU were particularly recommended, the aim being for regulators to take them into account in the decision-making process – examples being ICTEye³ and the Regulatory Tracker⁴.

Discussion also touched on how regulatory entities are evolving both as part of the digital transformation process and as in the case of the Colombia's Communications Regulatory Commission

¹ ITU-D Question 4/1: Economic policies and ways of determining the costs of services related to national telecommunication/ICT networks

² The Economic Contribution of Broadband, Digitization and ICT Regulation, www.itu.int/en/ITU-D/Regulatory-Market/Pages/Economic-Contribution.aspx

³ ICTEye database: www.itu.int/net4/ITU-D/icteye/#/

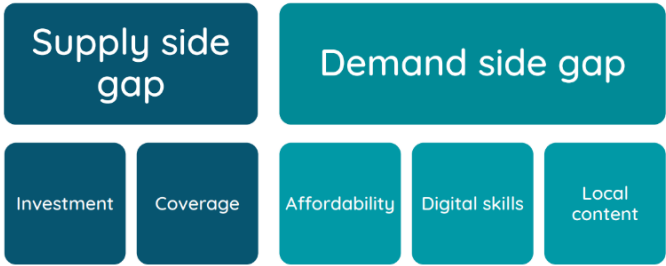
⁴ ICT Regulatory Tracker: <https://www.itu.int/net4/itu-d/irt/#/tracker-by-country/regulatory-tracker/2019>

(CRC), which went from being communications regulator to become sole regulator responsible for ICT and post. **Nicolás Silva (CRC, Colombia)** explained the competition, innovation, development and investment projects under way in 2020 to bring social wellbeing and quality of service to all users and guarantee pluralism of information. Similarly, **Juan Carlos Castro (SIGET, El Salvador)** described the short, medium and long term actions to bolster development of the ICT sector that could be implemented in all countries of the region, as follows:

- Short term: Validity of sector policy goals, consumer protection mechanisms, network and services performance, communication with multiple stakeholders and contribution to achieving the Sustainable Development Goals (SDGs).
- Medium term: Definition of goals and objectives (SMART), updating of indicators, promotion of innovation, consumer protection mechanisms, SDG follow-up and international cooperation.
- Long term: Interaction with multiple stakeholders, ongoing monitoring, user rights and sector development.

Attracting investment in the ICT sector

Moving on to the scheme for attracting investment in the ICT sector, **ITU experts Philippe Defraigne and Carolina Limbatto** presented the analysis of the status of ICT infrastructure and funding mechanisms at global level, before focusing on the Americas and providing examples of infrastructure deployment status in various countries. Several of the approaches to bridging the technological development divide in the region may be summarized as follows:



- Funding model: Public, private, mixed
- Technology: Any type of cutting-edge technology, neutral technology
- Operators: Explore possible partnerships
- Best regulatory model? One that promotes innovation
- Challenges: sustainability and affordability of solutions, efficient use of funds, coordinated effort.

Also: digital skills development and the commitment of local communities, particularly in rural or remote areas. The complete study will be published shortly.

In the same vein, **Julissa Cruz (Indotel, Dominican Republic)** introduced the new regulatory policy approaches for investment in digital transformation in the Dominican Republic, with emphasis on the post-COVID phase. The investments required in the ICT sector are of considerable public and private interest, making it more necessary than before to develop public and private partnership (PPP) approaches and innovative regulatory approaches in the country. The investor requirements defined for the Dominican Republic are described below.

Indotel is continuing to work on spectrum policies up to 2030, creating a masterplan for the next five



INVESTORS' REQUIREMENTS

- **Macroeconomic stability** (inflation, devaluation, unemployment)
- **Infrastructure** and basic services (roads, education, security)
- **Legal security** (property rights, compliance with contracts)
- **Protection** of competition (anti-monopoly laws)
- **Commercial policies** (international treaties, taxes, price-setting)
- **Specific incentives** (partnerships, funding, exemptions)
- **Foreseeability** (continuity of the State, spectrum plan, regulatory agenda)

years, along with review of fiscal policy and negotiation of frequency licensing contracts. Reform of the General Law on

Telecommunications is also being studied, and the largest ICT budget in the history of the Dominican Republic is being implemented – activities in which it has received support from ITU.

A further important aspect of investments comes in the form of the policy and regulatory actions required to catalyze them. **Nathalia Foditsch (Web Foundation)** explained how partnership and collaboration are essential when it comes to implementing investment strategies at national, regional and international level.

Web Foundation recently published a study which found that certain countries in the Americas region apply reasonable prices for Internet access and connectivity. The price should be considered in terms of a reasonable percentage of users' average monthly income. In most countries, however, prices remain very high. The average for the Americas region stands at 11.7 per cent of average monthly income. Unfortunately, the price in many countries still exceeds this percentage.

In addition, many countries of the world have strict local regulations and an unstable political situation that make investment very difficult, with the private sector often opting not to invest in order to avoid risks. To encourage investment in the region it is essential to offer investors suitable incentives, which means removing barriers and obstacles to infrastructure development while at the same time providing a policy and regulatory framework conducive to investment in support of digital transformation.

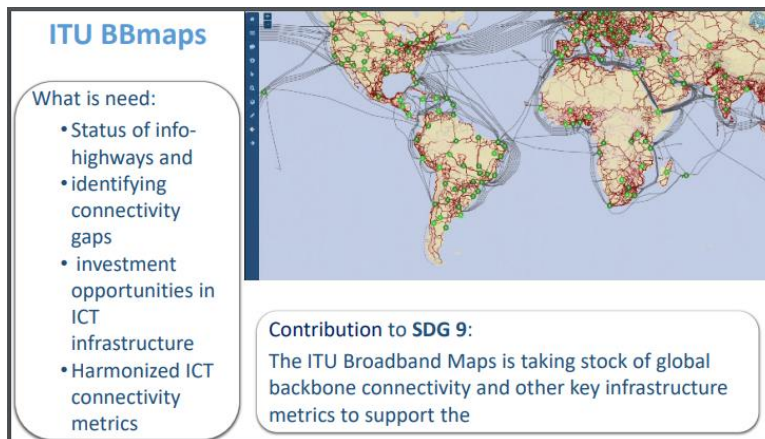
Development of infrastructure and connectivity in the Americas

As part of the process of developing and deploying infrastructure for connectivity in the region, the first point to analyse is the implementation of national broadband plans and digital policies. **ITU expert Judith Mariscal** indicated that the introduction of broadband brought with it enormous advances and opportunities for development, but also aggravated inequality, as the benefits offered were not available to all. The coronavirus pandemic situation has highlighted the importance of broadband connectivity, as it has exposed the costs of the enormous inequality. Today, those who are unconnected cannot participate in tele-education and teleworking, or access health services online. Moreover, and as expected, private sector investment has benefited those urban areas with the highest per capita income, to the disadvantage of companies and inhabitants of rural areas – thereby also increasing the existing divides in access to ICT services. The first step towards changing this situation is to create a digital policy aimed at reducing digital exclusion, strengthening institutional structures and designing a policy with comprehensive social coverage.

Infrastructure development also means deployment in rural and remote areas; however, the key question is how to make investment profitable in these areas where the demand for service is low in relation to the deployment investment. To answer this question, **ITU expert Tiago Prado** presented the

ITU publication on the ICT Infrastructure Business Planning Toolkit for infrastructure development⁵. In economically attractive areas such as major towns and cities, investment in infrastructure takes place almost naturally, as market forces act in response to demand. The situation is often very different, particularly in rural and remote areas, where economic, geographical and/or demographic barriers prevent access to broadband network infrastructure; as a consequence, numerous people remain cut off from the digital world. These guidelines, along with the course that will be given on them, offer regulators and policy-makers a clear and practical methodology for carrying out a thorough economic analysis of proposed plans for the installation and deployment of broadband infrastructure. The training will be designed for the countries of Latin America and the Caribbean, and will take place in November this year.

Although some existing technologies are capable of bringing services to remote and isolated areas, and new technologies are being developed in specific response to these needs, connecting the other half of



the world's population remains a complex problem with various fundamental underlying problems. ITU's 2019 Interactive Transmission Map⁶, presented by **Vladimir Daigele (ITU)**, shows fixed and mobile network coverage worldwide, but also reveals the scarcity of high-speed backbone networks in much of the world, particularly in rural and isolated areas. Lack of reliable ICT infrastructure is one of the reasons why half the world's population is still

not connected. This tool is also being used under the ITU Giga project to connect every school, to map schools and connectivity, and under the Financial Inclusion Global Initiative (FIGI) project in Mexico, to map the different banking institutions and options.

When it comes to connectivity in the Americas, we must not overlook community networks, which play an important role in bringing access to specific communities. **Adriana Labardini Inzunza (Rhizomática)** demonstrated the paradigm of sustainable connectivity models. And when discussing the economy, business models and infrastructure costs, it is important to take a step back and talk about the importance of community networks and small and medium-sized operators in local economies.

In this global world, we are used to talking about global economies and global players, and certainly a great deal has been done in regard to connectivity over the past decade. Innovation is taking place, with large amounts of money invested, but there is quite simply a limit to growth in investment and the possibility of connecting the other 3 billion people worldwide, i.e. those in rural and remote areas, very scattered mountainous areas, forests or on the coast, with very low incomes. The major global economies have considerable demands in terms of investment and profitability, and therefore cannot act like non-profit organizations, small operators and/or cooperatives. There is a need to create public policies and regulations that allow and encourage these three types of player to invest sustainably not only in infrastructure but also in applications and services that are relevant to these populations.

⁵ This publication, produced in the six official languages, is available on the ITU Infrastructure Development and Connectivity Portal: <https://www.itu.int/en/ITU-D/Regulatory-Market/Pages/InfrastructurePortal.aspx>

⁶ <https://www.itu.int/en/ITU-D/Technology/Pages/InteractiveTransmissionMaps.aspx>

Economic and financial aspects of the digital ecosystem in coordination with ITU-D Question 4/1

The ITU-D study groups offer members the opportunity to share experiences, put forward ideas, exchange views and reach consensus on the different strategies for tackling telecommunication/ICT priorities. **Rosheen Awotar-Mauree (ITU-D Study Groups)** explained that the work of the ITU-D study groups is based on contributions from ITU Member States and administrations, Sector Members (industry), observers, other international organizations and academia. Thus the study groups are in constant need of substantive, high quality contributions, case studies and lessons learned.

Within the framework of the study groups and ITU-D Question 4/1 – Economic policies and methods of determining the costs of services related to national telecommunication/information and communication technology networks, including next-generation networks, **Arseny Plossky (Rapporteur for Question 4/1)** explained that this working group deals with all ICT-related economic topics, focusing on four main areas during this study period:

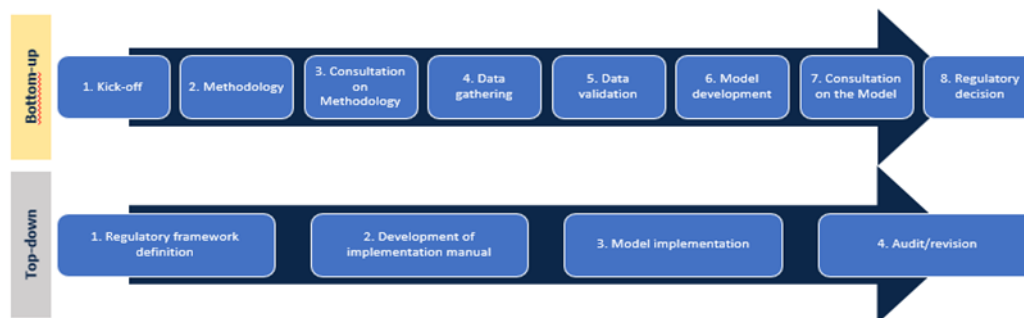
1. New charging methods (or models, if applicable) for services provided over NGN networks;
2. Different models for infrastructure sharing, including through commercially negotiated terms;
3. Consumer price evolution and impact on ICT service usage, innovation, investment and operator revenues;
4. Trends in the development of virtual mobile operators and their regulatory framework.

Coordination with other ITU study groups (standardization and radiocommunication) is very important in order to complete the task under Question 4/1, especially in areas involving infrastructure sharing and spectrum management and topics related to the costing of telecommunication services.

One of the study groups' main outputs is the development of guidelines for use by all countries. During this study period the Guidelines on Cost Modelling were developed under Question 4/1.

Jorge Martínez Morando (Axon, Vice-Rapporteur for Question 4/1) said that the purpose of these new guidelines was to complete the Regulatory Accounting Guide ⁷ published by ITU in 2009, providing more

It is crucial to define properly the process to implement cost models



level of detail that will be useful for implementing these models, especially for national ICT regulatory authorities, as it is important to properly define the cost model implementation process and applicable methodology.

These guidelines will be available shortly and will be translated into ITU's six official languages.

⁷ Available at: https://www.itu.int/dms_pub/itu-d/opb/pref/D-PREF-EF.ACCOUNT-2009-PDF-E.pdf

Against this background, the future of Question 4/1 will be discussed at the world telecommunication development conference (WTDC) to be held next year (2021). With this in mind, the Rapporteur Group (**Arseny Plossky (Rapporteur for Question 4/1)**) prepared a proposal for topics to be dealt with in the next study period, as follows:

- Economic impact of new, converging ICTs on all stakeholders constituting the value chain of ICTs on the network (e.g. telecommunication operators, digital service providers, etc.);
- New types and modes of investment in telecommunications/ICTs (e.g. impact, combined investment, crowdfunding) to help achieve the SDGs;
- Design of new tariffs for converging networks/services (e.g. bundling);
- Economic aspects/implications of digital transformation (IoT, AI, machine learning, 5G, etc.);
- Estimation of value of digital technologies in other sectors of the economy (education, agriculture, health, etc.);
- Fiscal approaches on emerging national telecommunication/ICT markets;
- New commercial models: e.g. real economic value of use of personal data;
- Measurement of economic aspects for bridging the digital divide to guarantee the availability, accessibility and affordability of telecommunication/ICT services for everyone, everywhere;
- Analysis of the economic aspects of closing existing gaps to allow digitalization of all sectors of the economy;
- Economic incentives and mechanisms for bridging the digital divide;
- National economic aspects of digital financial inclusion (to be confirmed);
- Economic impact of the COVID-19 pandemic on telecommunication/ICT markets;
- Economic impact of telecommunication/ICT services on economic recovery following the COVID-19 pandemic;
- New economic aspects affecting the national telecommunication/ICT market environment (to be confirmed).

Discussion is still open on defining the topics to be dealt with under all the ITU-D study group Questions.

2. Main results – wrap-up

We will conclude by recalling some of the areas highlighted during the discussions:

- Regulation should be applied only where necessary and appropriate, and innovative regulatory approaches should be sought.
- Governments in the region should seek to do more with less resources, and to a large extent adopt solutions based on sustainable information in order to make digital policies more effective and efficient.
- Now more than ever, collaboration and investment should be promoted and take place in order to foster the expansion of connectivity, in order not only to resolve the crisis provoked by the pandemic, but also to implement innovative strategies for the “new normal” in regard to the interaction of digital ecosystems that should embrace flexibility and adaptability.
- In order to encourage investment in the region it is essential to offer investors suitable incentives, which means removing barriers and obstacles to infrastructure development while at the same time providing a policy and regulatory framework conducive to investment in support of digital transformation.
- There are lessons to be learned from national cases in which a comprehensive digital policy has been established successfully, as the first step towards a digital policy designed to reduce digital exclusion, strengthening the institutional arrangements and designing a policy with comprehensive social coverage.

- Public policies and regulations should be created that allow and encourage non-profit organizations, small operators and/or cooperatives to invest sustainably not only in infrastructure but also in applications and services of relevance to the inhabitants of rural and remote areas.
 - The Guidelines on Cost Modelling under Question 4/1 are a very important tool for national ICT regulatory authorities, allowing them to define the cost model implementation process and applicable methodology properly in order to allow end users to use digital services and technologies that they can access affordably.
-