Economic and fiscal incentives to accelerate digital transformation

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TWO KEY ISSUES ARE THE MOST IMPORTANT IN TERMS OF THE ROLE OF ECONOMIC AND FISCAL INCENTIVES TO ACCELERATE THE DIGITAL TRANSFORMATION OF ECONOMIES AND SOCIETIES

- What could the potential economic and fiscal incentives be to stimulate the deployment of digital infrastructure in rural and isolated areas?
- What kind of economic incentives should be defined to ensure the introduction of advanced technologies such as 5G in support of the needs for digital transformation of the economy?

THE FIRST ISSUE NEEDS TO BE ADDRESSED WITHIN A TREND OF DECLINING INVESTMENT PER CAPITA IN TELECOMMUNICATIONS, PARTICULARLY IN THE DEVELOPING WORLD

Annual investment in Telecommunications infrastructure per capita (in USD)

	2018	2019	2020	2021
World	$ 51.96	$ 51.27	$ 51.72	$ 52.28
Sub-Saharan Africa	$ 9.94	$ 8.53	$ 7.59	$ 7.41
Latin America and the Caribbean	$ 34.03	$ 36.36	$ 33.67	$ 35.20
North America	$ 298.11	$ 345.60	$ 338.12	$ 352.33
Asia Pacific	$ 31.71	$ 26.16	$ 28.00	$ 27.81
Western Europe	$ 121.72	$ 121.58	$ 121.57	$ 121.09
Eastern Europe	$ 37.59	$ 38.79	$ 40.46	$ 40.47
Arab States	$ 38.82	$ 39.69	$ 43.64	$ 42.95

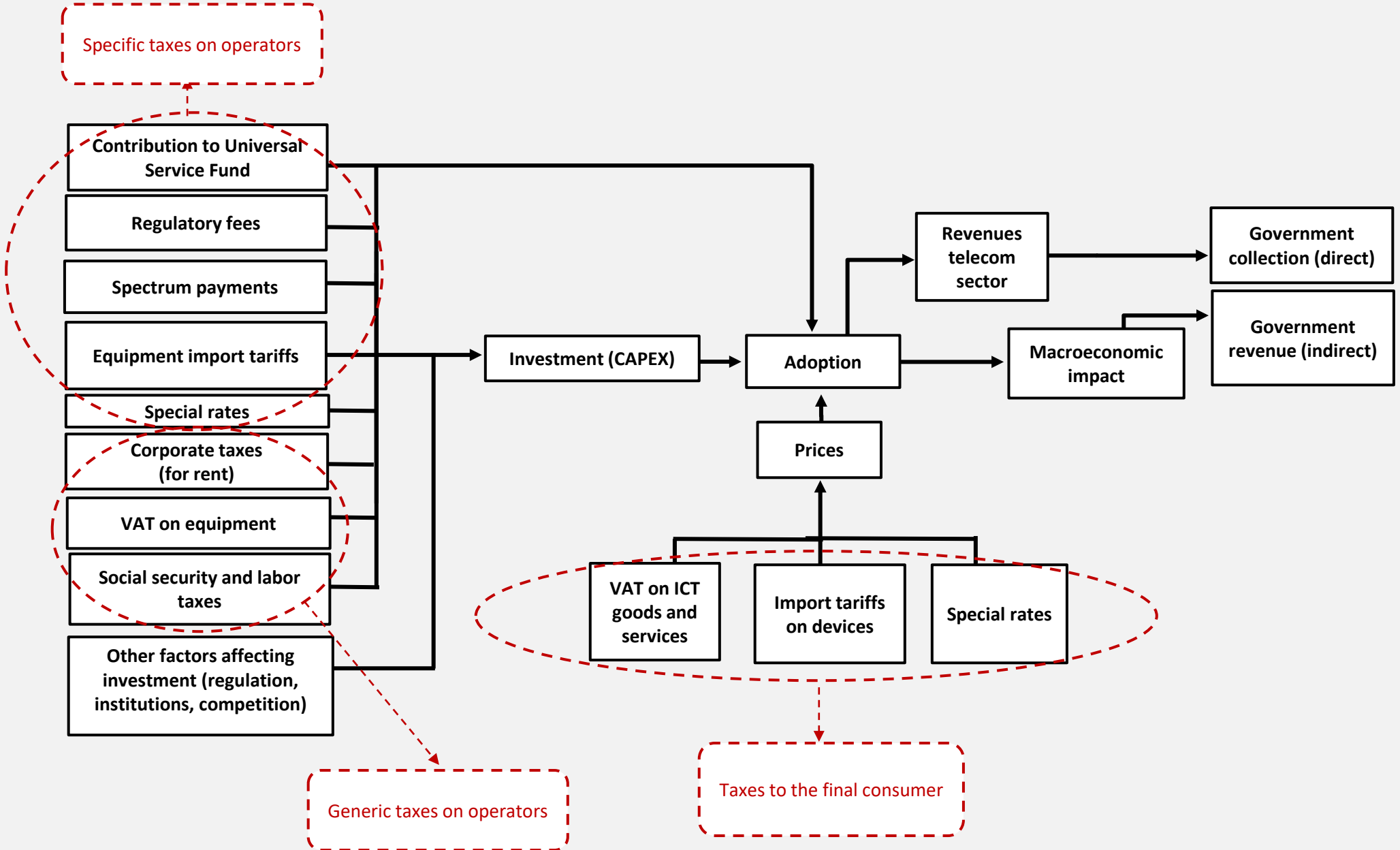
Sources: ITU; GSMA Intelligence; Telecom Advisory Services analysis

- The developing world has been most affected by a negative trend in investment
- Investment in telecommunications infrastructure in Sub-Saharan Africa has consistently declined since 2018, while in Latin America the 2020 decline appears to have been reversed in 2021 and in Asia Pacific, the negative trend has resumed in 2021

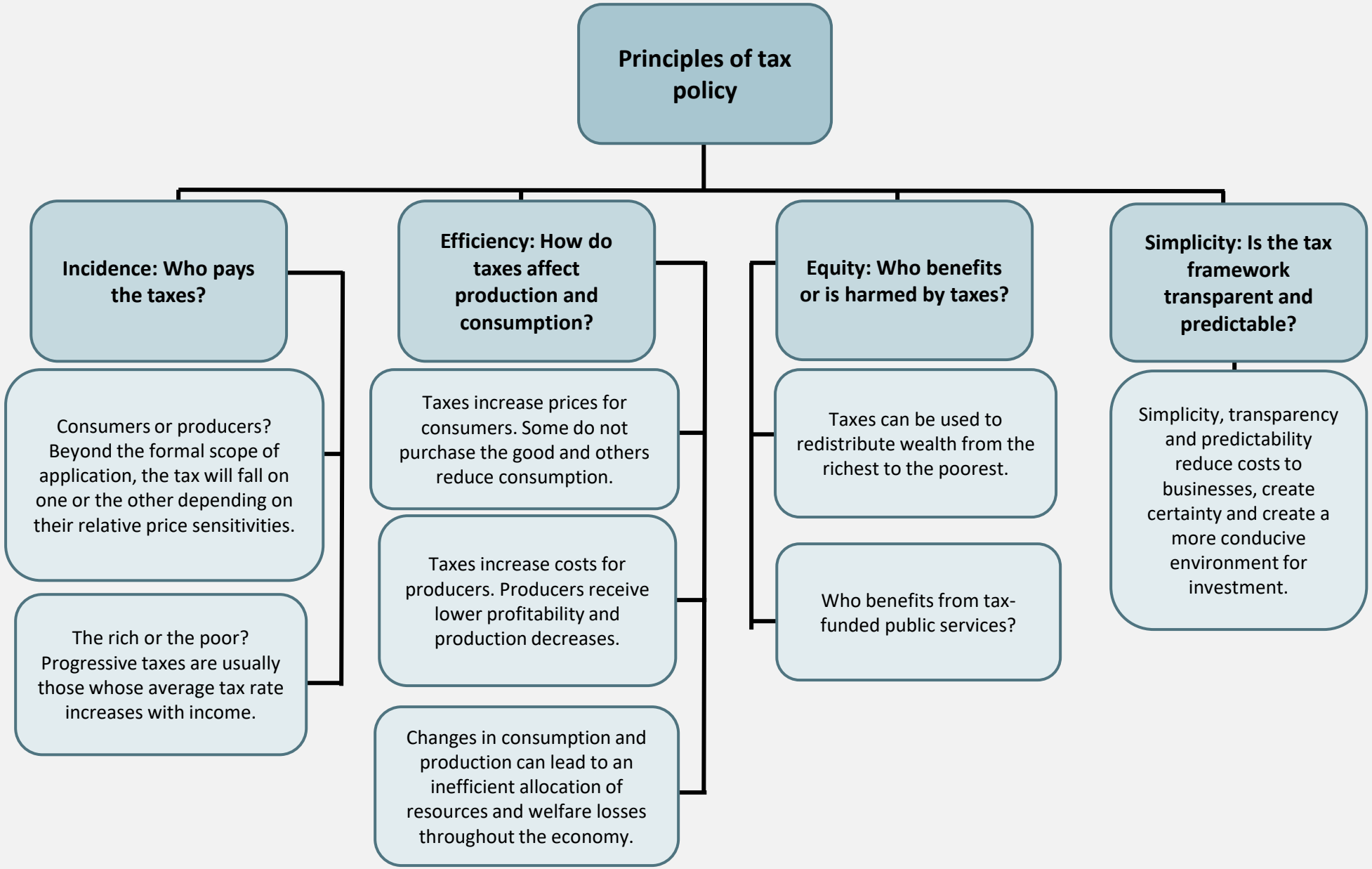
IN THIS CONTEXT, THE KEY PUBLIC POLICY OBJECTIVE IS TO DEFINE AN ENABLING ENVIRONMENT TO ACCELERATE THE DEPLOYMENT OF DIGITAL INFRASTRUCTURE IN RURAL AREAS

- **Infrastructure sharing** as a way of reducing the CAPEX and OPEX burden: Some market structures will be more prone to reaching the coordination entailed by network sharing than others
- **Reducing taxes** as an approach to increasing the available capital to be invested: provide incentives for network deployment in rural areas include reducing telecommunications regulatory fees, designing tax frameworks at the sub-national level to address the specific needs of rural deployment, eliminating equipment and consumer device import duties, and reducing spectrum license payments
- **Exploring new business opportunities** to increase revenues by promoting rural financial services, e-commerce, and media platforms as services that drive demand first, which would then stimulate telecommunications services providers to deploy networks
- Dramatically **change the supply side business model**: an alternative approach could be one that is based on different operating models with lower service economics (for example, community networks, microtelcos, Wi-Fi based wireless internet service providers) that are more suited to addressing the demand of rural areas
- **Rebalance the fiscal framework to address asymmetries** between impositions on infrastructure service providers and Over the Top platforms: in particular, Universal Service Fund contributions could potentially be shifted to demand players that rely on networks to deliver their services (e.g., OTT platforms) to share in the burden of contribution

WHEN TELECOMMUNICATIONS INVESTMENT IS DECLINING, TAXATION BECOMES A CRITICAL FACTOR TO CONSIDER IN DETERMINING INCENTIVES FOR ADDRESSING THE RURAL DIGITAL DIVIDE



AN EFFECTIVE TAX POLICY MUST BE BALANCED, ADDRESSING THE GOVERNMENT'S OWN FISCAL NEEDS, AGAINST INEFFICIENCIES AND DISTORTIONS THAT NEGATIVELY AFFECT MARKET PERFORMANCE



THE INVESTMENT COMPARED WITH THE ANNUAL CAPEX PROJECTION UNDERLINES THE LEVEL OF EFFORT THAT OPERATORS WOULD HAVE TO FACE IF THEY WERE TO DEPLOY 5G NETWORKS ON A NATIONAL SCALE

Investment required for 5G deployment vs. annual mobile CAPEX

Country	Investment Required (USD billion)	Annual CAPEX				
		2021	2022	2023	2024	2025
Argentina	$ 9.09	$ 0.384	$ 0.407	$ 0.505	$ 0.575	$ 0.608
Brazil	$ 48,41	$ 3.588	$ 3.933	$ 4.255	$ 4.348	$ 4.235
Chile	$ 5.18	$ 0.999	$ 1.054	$ 1.115	$ 1.140	$ 1.144
Colombia	$ 12.62	$ 0.893	$ 0.902	$ 0.931	$ 0.907	$ 0.888
Mexico	$ 37.41	$ 1.830	$ 1.951	$ 2.144	$ 2.353	$ 2.329
Peru	$ 7.36	$ 0.845	$ 0.873	$ 0.935	$ 1.029	$ 1.045

Source: GSMA Intelligence; Telecom Advisory Services analysis

POTENTIAL APPROACHES TO FACILITATE 5G DEPLOYMENT

- **Stipulate a low reserve price at auctions in exchange for a higher coverage rate**
- Lower access to and cost of mid-band spectrum. This would allow operators to accelerate 5G deployment by reducing up-front (pre-service) costs and redirect more CAPEX to network roll-out.
- Reduce spectrum license costs by imposing coverage obligations in license awards within a "beauty contest" hybrid auction framework. This allows license applicants to trade license fees for coverage obligations
- Subsidizing the purchasing of 5G devices and connectivity fees
- Set up funds for 5G trial services
- Promote R&D on 5G use cases and innovation
- Reduce deployment barriers of physical infrastructure
- Governments should play the role of orchestrators of incentives to facilitate 5G network deployment,

Governments should play the role of orchestrators of incentives to facilitate 5G network deployment, simultaneously acting upon cost restructuring through sharing, including industry consolidation and promoting network joint ventures, while implementing tax incentives in support of 5G equipment purchasing and applications development

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