



APPLICATIONS FOR UNIVERSAL SERVICE FUND

UTILIZATION OF THE USF

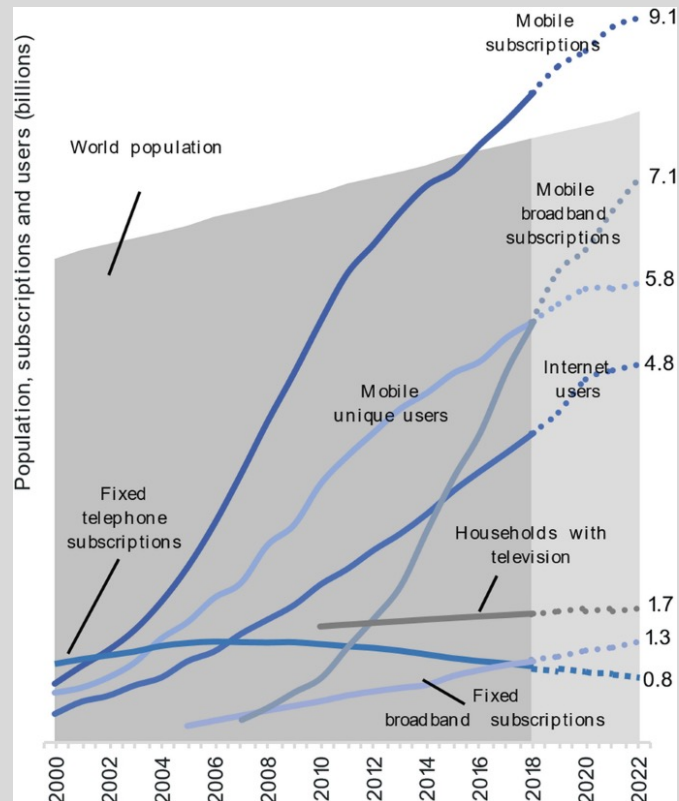
LUCIANO CHARLITA DE FREITAS

Universalization Service Fund

Universal Service Fund principles

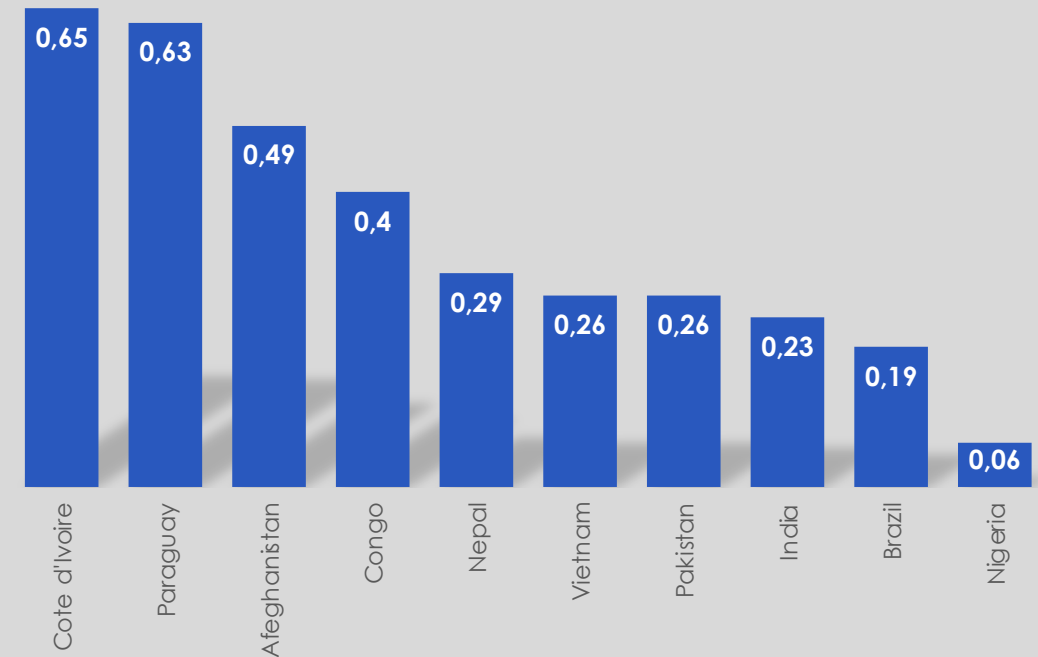
- **Availability:** service must be closer to the consumer.
- **Affordability:** price must not be a factor that limits access.
- **Accessibility:** non-discriminatory.

The Evolution of the Telecom Infrastructure Business



https://link.springer.com/chapter/10.1007/978-3-030-44667-3_4

The money held by USF as a proportion of the host country's GDP (2013)



https://www.gsma.com/publicpolicy/wp-content/uploads/2016/09/GSMA2013_Report_SurveyOfUniversalServiceFunds_KeyFindings.pdf

Reality Check

- 2.9 billion people still offline
- 96% in developing countries
- Urban-rural gap remains a major challenge

<https://www.itu.int/hub/2021/11/facts-and-figures-2021-2-9-billion-people-still-offline/>



<https://www.unescap.org/sites/default/files/Universal%20Access%20and%20Service%20Funds.pdf>

Regression analysis of fixed-broadband adoption	(1) OLS (robust)	(2) IV-Lewbel (robust)	(3) OLS (robust)	(4) IV-Lewbel (robust)
UASF including broadband (dummy)	-11.685 (3.994)***	-12.045 (3.948)***	-15.704 (4.300)***	-16.145 (4.223)***

Regression analysis of Internet users	(1) OLS (robust)	(2) IV-Lewbel (robust)	(3) OLS (robust)	(4) IV-Lewbel (robust)
UASF including broadband (dummy)	-1.409 (0.875)	-1.675 (0.931)**	-1.199 (1.089)	-0.686 (0.966)

Modern Mechanisms

Mechanism	Short Description
Operators as contractors	<ul style="list-style-type: none">• Operators in a given market are permitted to be active participants in the Universal Service Fund.
Reverse auction	<ul style="list-style-type: none">• The winning contract is awarded to the operator willing to accept the lowest subsidy amount for investment in the project.
Deliverables-based installments	<ul style="list-style-type: none">• Operators submit bids for public tenders for infrastructure projects that will be financed upfront and reimbursed as certain milestones are achieved.
Pay or Play	<ul style="list-style-type: none">• Operators have the option to contribute to the Universal Service Fund or to directly implement projects from a preselected list.
Pre-sale	<ul style="list-style-type: none">• Guarantee a specific amount of broadband capacity utilization from a service provider in advance and pay for this capacity prior to project implementation.

Projects design

Mechanism	Short Description
Traditional access expansion	<ul style="list-style-type: none">• Best-fit and/or least-cost technologies to expand access to underserved communities.• Extending broadband coverage and fiber backbone..
Anchor tenant	<ul style="list-style-type: none">• A single client (usually public entities, such as schools and hospitals) that agrees to purchase the service, thereby ensuring usage rates and revenue sufficient to attract investment.
Dual deployment	<ul style="list-style-type: none">• Pairing the expansion of digital infrastructure with the expansion of other critical infrastructure (e.g., transport, energy).
Community Networks	<ul style="list-style-type: none">• Public authorities exempting universal service obligations for communities deploying networks and/or providing backhaul/last-mile connectivity.
Demand aggregation	<ul style="list-style-type: none">• Demand aggregation incentivizes multiple users to sign up for the same service, which in turn provides sufficient profits to finance the underlying infrastructure.

Universal Service Fund programs (examples)

Country	
United States	<ul style="list-style-type: none">• SUPPLY: High-Cost Support to certain qualifying telephone companies that serve high-cost areas.• DEMAND: (lifeline) assists low-income customers by helping to pay for monthly telephone charges.• DEMAND: (E-Rate) provides telecommunication services to schools and Libraries• DEMAND: support to health care support to pay rates for telecommunications services making telehealth services affordable.
Brazil	<ul style="list-style-type: none">• SUPPLY: stimulate the expansion, use and improvement of the quality of telecommunications networks and services;• DEMAND: reduce regional inequalities; It is• SUPPLY: stimulate the use and development of new connectivity technologies to promote economic and social development.
Pakistan	<ul style="list-style-type: none">• SUPPLY: National Highways and Motorways• SUPPLY: Enabling Union Councils and small Towns to have backhaul connectivity• SUPPLY: Telecom services to the unserved Mauzas across the country.