

ASIA - PACIFIC INFORMATION SUPERHIGHWAY POLICY BRIEFS

NO.3, April 2020



Universal Access and Service Fund

“The universal access and service fund (UASF) is one of the key financing mechanisms used to connect the sparsely populated rural areas, where there is neither the density nor the capital for telecom operators to justify private sector infrastructure investments.”

The Impact of Universal Service Funds on Fixed-Broadband Deployment and Internet Adoption in Asia and the Pacific (2017)

Introduction

Extending information and communications technology (ICT) connectivity to remote and rural areas has been a perennial challenge in the development community.

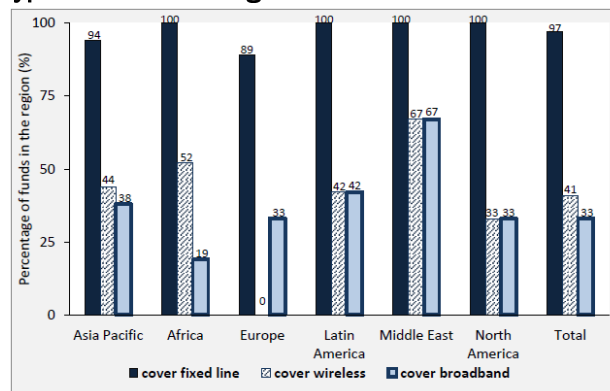
As in Asia and the Pacific, the digital divide continues to widen at various levels, limiting the potential for delivering transformative capabilities that the achievement of all SDGs requires. Universal access and service funds (UASF), however, have been adopted by some Asia-Pacific governments as a mechanism to expand ICT access in unserved and underserved areas. UASF are funding mechanisms established by national governments, which normally collect funds from telecommunication operators and reallocate them to augment investments in ICT infrastructure. UASF, therefore, play an important function in providing affordable and accessible telecommunication and broadband services for all. The effectiveness of UASF in delivering their core objectives, however, has been questioned and debated.

Recognizing the importance of developing enabling financing mechanisms for broadband connectivity projects under the Asia-Pacific Information Superhighway initiative the report on

“The Impact of Universal Service Funds on Fixed-Broadband and Internet Adoption in Asia and the Pacific” examines the extent to which UASFs have contributed to increased access to fixed broadband and the Internet in the region. It then identifies policy challenges and opportunities associated with UASF.

Asia and the Pacific has a considerable number of functioning UASF and is one of the two leading regions in which there is a high level of activity amongst the funds. In comparison with many other regions, Asia and the Pacific is placing a greater focus on deploying broadband and wireless infrastructure and services through UASF (see Figure 1).

Figure 1: UASFs areas of focus by technology types in different regions



Source: GSMA, "Survey of Universal Service Funds: Key Findings", April 2013

Mechanisms for UASF Implementation

UASFs are implemented and managed in a variety of ways, and each country has specific mechanisms for contribution to the fund, disbursement of the fund, and identification of priority areas to fund.

In the vast majority of countries, a percentage of the telecom operators' gross or net annual revenue is levied.¹ Some countries charge an overall regulatory fee every year or receive contributions from international financing institutions such as the World Bank, as well as licensing fees. In some cases, contributions are made directly from the government's budget. Funds are disbursed by the government through direct subsidies given to a pre-chosen UASF provider or through competitive bidding.² With competitive bidding, the project is undertaken by the operator that accepts the lowest subsidy.

While most UASF focus on remote and rural areas, they can also target specific types of populations or technologies. For example, some UASF take gender inclusion into consideration (e.g., in India and Malaysia), or design services for persons with disabilities (e.g., in India, Malaysia, New Zealand, Pakistan and Thailand).

As for technology types, some funds only focus on providing fixed telephone services while others include the Internet or more specifically, broadband.

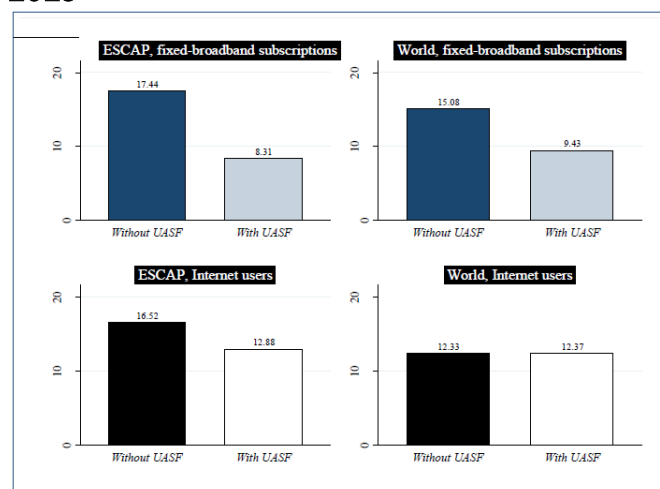
Whereas a variety of fund collection systems, disbursements mechanisms and focus areas exist, most UASFs share similar principles.

Main findings

The report's results highlight that countries with UASF targeting broadband/Internet expansion have not experienced better results in fixed-broadband and Internet growth than countries without such funds (see Figure 2). Based on the review of existing literature and publicly available documents, the effectiveness of UASF seems to be limited, possibly due to weakness in the design, structure and implementation, which impose

enormous pressure on timely disbursement of funds.

Figure 2: Average annual growth rates of fixed-broadband subscriptions per 100 inhabitants and Internet users per 100 inhabitants in middle-income countries with and without a UASF, 2010-2015



Source: ESCAP, based on ITU, "World Telecommunication/ICT Indicators Database 2016", 2016.

In fact, the econometric analysis in the report found systematically negative correlations between UASF and fixed broadband growth, while the existence of broadband policy (later years of 2010-2015) was found to be positively correlated to fixed broadband expansion. The findings on Internet and mobile broadband growth are less significant. It was also found that mobile broadband expansion does not have a statistically significant impact on fixed broadband expansion, according to the analytical context.

At the same time, the study identifies good examples from countries that have effectively used UASF to connect rural and underserved communities (e.g., Pakistan).

In the Asia-Pacific region, very few countries with a UASF have published ICT adoption statistics that are disaggregated by rural and urban locations. Where data is available, the digital divide between rural and urban areas has generally widened despite the implementation of UASF-led projects due possibly to faster Internet and broadband adoption in urban areas.

Those findings have important policy implications for governments and international organizations alike in promoting this financing mechanism and

¹ ITU, "Universal Service Fund and Digital Inclusion for All Study", June 2013. Available from <https://www.itu.int/en/ITUUD/Conferences/GSR/Documents/ITU%20USF%20Final%20Report.pdf>.

² Stephen L. Magiera, "Managing Universal Service Funds for Telecommunications: An ASEAN Manual for Output-Based Aid", United States Agency for International Development, September 2009. Available from http://pdf.usaid.gov/pdf_docs/pnaeb219.pdf.

understanding the likely impact that UASF can have on broadband expansion. In addition, how UASF can be better designed in order to fulfil their core objectives of bridging the digital divide could be a topic of further policy discussion.

Challenges

• Disbursement and Time Lag Challenges

Existing literature suggests that the disbursements rate of UASF has generally been low.³ Even when UASF have policies that specifically target broadband projects, it may take several years before the funds are allocated to these projects.

Another related challenge experienced in some countries is the misalignment between the fund objectives and their actual implementation. For example, in 2015 the Communications Ministry of the Russian Federation pointed out that its UASF spent too many financial resources dealing with budget problems, while these funds should be primarily used to subsidize fibre-optic infrastructure in rural areas⁴.

The lack of monitoring tools and mechanisms could lead to the non-compliance of implementing operators with their obligations.

• Structural and Operational Challenges

A lack of capacity may have hampered UASF effectiveness. Structural challenges include unfavorable local conditions. Geographical obstacles and security concerns may negatively impact the deployment of ICT infrastructure subsidized by UASFs in some countries.

The low rate of fund disbursement can often be attributed to the lack of clarity in the legal environment in which UASF operate. Legal disputes regarding the extent to which contributions are levied and the way the funds are managed have occurred between public agencies in charge of UASF and telecom operators in a number of countries.

• Additional Considerations

In addition to the challenges highlighted above, it should be noted that the examined UASF are mostly designed to accelerate deployment in rural

and remote areas. This is probably the fundamental reason why UASF have not led to any sizeable gains in terms of fixed-broadband subscriptions per 100 inhabitants. For countries characterized by a low Internet adoption rate overall, broadband is not widely deployed in urban areas either. This renders the UASF's mission less justifiable in rural areas, as the priority is to first sufficiently deploy broadband at the national scale and connect areas where the economic returns induced by broadband adoption are the highest.

On the other hand, for countries characterized by a higher broadband/Internet adoption rate, it may be more difficult to achieve significant gains at the national level as the proportion of unserved people may be located in very sparsely populated areas.

Overall, a small portion of UASF in the region have incorporated broadband and Internet access. The number of large-scale broadband/Internet projects implemented by these UASF have remained limited. Any significant progress in terms of broadband/Internet adoption appears to be rather a result of private initiatives and/or other factors such as national broadband plans without any substantial contributions from UASFs.

Conclusion

With universal broadband access remaining unrealized, UASF initially appears to be a viable option to kick-start infrastructure in unserved and underserved localities. While the Asia-Pacific region offers some success stories of UASF implementation, no best practice model has emerged as of yet. This may be because every country in the vast and diverse region of Asia and the Pacific has a unique set of challenges related to governance, geography, market development, foreign investment, leadership, rule of law, and other circumstances.

Since the majority of states in Asia and the Pacific are categorized as developing or least developed countries, policy-makers often view UASF as a necessary financing mechanism for equitable ICT benefit redistribution in poor, rural and remote areas.

There is likely no single solution to address these multiple challenges. To ensure that targeted populations and areas benefit from UASF-led projects, more transparency and accountability is required.

³ GSMA, "Survey of Universal Service Funds: Key Findings", April 2013, <http://www.gsma.com/publicpolicy/wpcontent/uploads/2013/04/GSMA-USF-Key-findings-final.pdf>.

⁴ Yekaterina Yezhova, "Focus: Russian ministry unhappy with use of universal services fund for other ends", *Prime Business News Agency*, 10 March 2015.

A better understanding of incentives and constraints faced by private operators is also needed, especially in early stages when countries have reached a certain level of broadband/Internet adoption. In this regard, identifying the determinants of ICT adoption at a national scale in developing countries could be an fruitful area for future research and policy analysis. It could help policy makers choose the most efficient instruments in each phase of ICT adoption to minimize assymetric access without hindering the overall objective and deployment.

Access the Gateway on
www.drrgateway.net



Launched by the ESCAP resolution 73/6 in 2017, the Asia-Pacific Information Superhighway (AP-IS) initiative aims to increase the availability and affordability of broadband connectivity across Asia and the Pacific through four pillars: (1) physical infrastructure development; (2) Internet traffic and network management; (3) promoting e-resilience and (4) broadband for all. The AP-IS Policy Brief Series is designed to deliver key messages emanating from the analytical research conducted by the ESCAP secretariat and AP-IS partners for member countries' informed decision making.

For more information and contact, please send e-mail to escap-ids@un.org visit the website at <http://www.unescap.org/our-work/ict-disaster-risk-reduction/asia-pacific-information-superhighway>.

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