KHAZANAH RESEARCH INSTITUTE

VIEWS 9/23 | 30 MARCH 2023

The USP Fund: A Tool to Close Malaysia's Digital Divide

Rachel Gong and Azlin Natasha Mohd Ghazali

Introduction

As of 2013, Malaysia was one of 69 countries[1] with a Universal Service Provision (USP) Fund. The USP Fund was created to ensure that telecommunications services including accessible and affordable internet connectivity are accessible to as wide a population as possible.

In 2023, Malaysia continues to use its USP Fund to support a range of digital inclusion initiatives, from building communications towers in rural and remote areas to running business development workshops and promoting socio-economic development.

[1] ITU (2013)

This view was prepared by Rachel Gong (researcher) and Azlin Natasha Mohd Ghazali (research intern) from the Khazanah Research Institute (KRI). The authors are grateful for valuable comments from Lim Su Lin and reviewers at MCMC.

Corresponding author's email address: **rachel.gong@krinstitute.org**

In this article, we review the objectives and initiatives of Malaysia's USP Fund, assess the balance of funds available, and offer policy suggestions to improve the use of this fund to close Malaysia's digital divide.

The digital divide in Malaysia

At a macro level, household access to the internet in Malaysia was reportedly 95.5% in 2021[2]. However, this statistic reflects only internet access and does not account for the affordability or quality of internet connections.

Malaysia's digital divide came into the spotlight during the Covid-19 pandemic. From the education and healthcare sectors to mass communication and retail, a wide range of public and private services pivoted to the digital realm. Internet access increasingly became a necessity for all. For certain demographic groups such as lower income households, access to safe and secure digital devices and subscriptions to fast and reliable internet connections were particularly challenging[3].

Almost 100,000 workers were laid off by the end of 2020. Of this group, an estimated 75% were earning RM4,000 and below per month[4]. Many workers pivoted to digital services and the platform economy, such as operating home-based online businesses or by becoming delivery riders, all of which required reliable internet access.

In 2020, prolonged school closures affected the "learning activity of around 4.9 million pre-school, primary and secondary school students and around 1.3 million higher education students"[5]. A survey on online learning conducted by the Ministry of Education in the same year found that almost 37% of students across Malaysia did not own any electronic devices[6]. As a result of the digital divide, Malaysia had one of the highest learning losses among Asian developing nations, second only to Myanmar[7].

Overview of the USP Fund

Malaysia's USP Fund was set up in 2002 (with regulations last amended in 2010) to "provide collective and individual access to basic telephony and internet services throughout the country"[8]. This fund and its initiatives are administered by the Malaysian Communication and Multimedia Commission (MCMC).

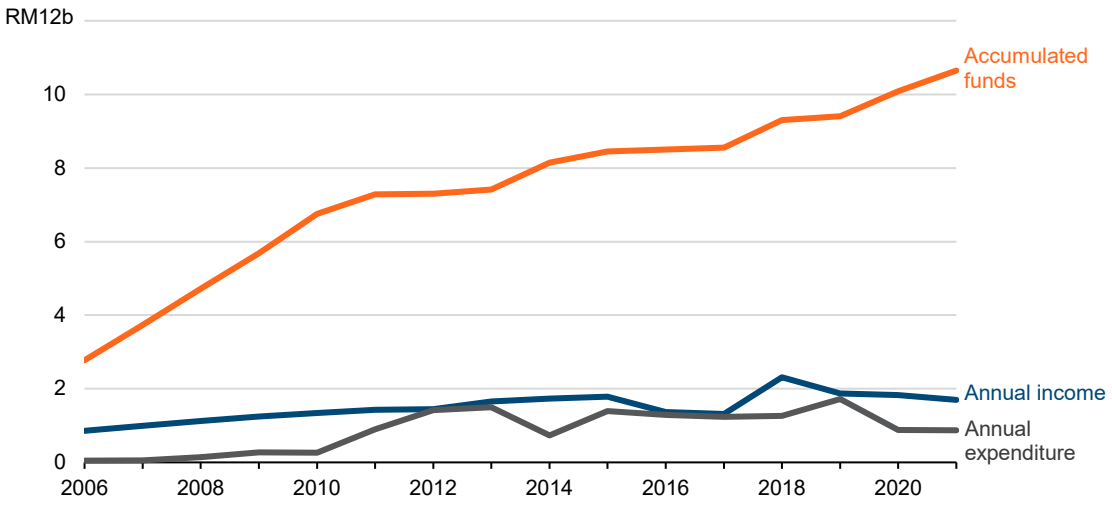
[2] DOSM (2022)
[3] NST (2021)
[4] BERNAMA (2020a)
[5] Gong, Ashraf Shaharudin, and Siti Aiysyah Tumin (2022)
[6] Fareez Azman (2020)
[7] Asian Development Bank (2021)
[8] MCMC (n.d.)

USP initiatives are intended to be implemented in underserved areas and communities generally considered to be less marketable to profit-seeking service providers. Per the Communications and Multimedia (Universal Service Provision) Regulations 2002, at present, licensed service providers, other than content applications service providers, whose revenue amounts to more than RM2 million per year must contribute 6% of their weighted revenue annually to the USP Fund.

Licensed service providers may register to be universal service providers and submit plans for USP initiatives to MCMC for approval. If approved, the USP provider then submits progress reports and claims to MCMC for payment out of the fund.

According to the 2021 USP Annual Report, the USP Fund's income totaled RM1.7b and expenditure totaled RM870m in 2021. By the end of 2021, the balance in the USP Fund had accumulated to RM10.6b[9] as a result of annual expenditure consistently being lower than annual income, according to annual reports. Figure 1 shows the USP Fund's income, expenditure, and accumulated funds from 2006 until 2021.

Figure 1: A summary of the USP Fund, 2006 - 2021 (RM)[10]



Source: USP Annual Reports (2006-2021), authors' calculations

[9] MCMC (2022)

[10] MCMC (2006); (2007); (2008); (2009); (2010); (2014a); (2014b); (2015); (2016); (2017); (2018); (2019); (2020); (2021); (2022), author-calculated total expenditure from 2006-2015, all figures retrieved from statement of accounts of USP annual reports 2006-2021

USP Fund programmes and initiatives

Per MCMC's website[11], the USP Fund's initiatives centre around four core goals: (1) expanding mobile broadband coverage, (2) expanding fixed broadband, (3) expanding backhaul networks by laying cable, and (4) supporting community access.

In line with KRI's earlier work on meaningful connectivity[12], these four cores may be further grouped into three target areas: (1) infrastructure development, addressing access issues, (2) device distribution and data affordability, addressing affordability issues, and (3) meaningful community outreach, addressing application issues. Tables 1, 2 and 3 highlight some initiatives under the USP Fund.

Infrastructure development

Table 1: A partial list of infrastructure programmes/initiatives carried out using the USP Fund

Initiative (year)	Objectives & achievements
Communication towers (TIME 3) (2009-2021)	• Addresses poor cellular service quality in rural, remote, and sparsely populated areas. • Encourages the usage of smart devices and online applications that require high capacity and high-speed broadband. • 2,289 towers built since 2009, base stations at existing towers are being upgraded for provisioning 3G and 4G services.
Kampung Tanpa Wayar (KTW) (2011-2014)	• Provides collective wireless internet access to remote village communities, especially for 1Malaysia Netbook programme recipients. • 4,874 KTWs with 622,852 registered users nationwide as of 31st December 2014.
Fiberisation of towers (2014-2020)	• Improves speed and service quality of mobile communications services, particularly in rural areas. • 2,473.06km of fibre has been deployed to fiberise communications towers as of 2020.
Submarine cable systems to Sabah and Sarawak (2015-2017)	• Partnership with Telekom Malaysia Berhad to replace existing domestic submarine cable services operating since 1995 to meet growing demand for bandwidth. • Total length of 3,819km and 4Tbps capacity.
Rural broadband (2015-2020)	• Increases national internet penetration rates by providing high-speed fixed broadband services at rural and suburban Universal Service Target (UST) areas nationwide. • Upgrading of network infrastructure and fixed broadband services at 312 selected exchanges, 119 districts and 243 *mukim*. • Concluded in March 2020 with 146,280 ports completed.
Submarine cable systems to islands (2017-2019)	• Installation of submarine cables from Peninsula Malaysia to Tioman Island, Pangkor Island and Perhentian Island. • Provided high-speed broadband to improve socio-economic development and meet demand for broadband services. • 99km length in total and 100Gbps capacity.

Source: USP Annual Reports (2006-2021)

[11] MCMC (n.d.)
[12] Gong (2020)

Besides the intiatives listed in Table 1 is Jalinan Digital Negara (JENDELA), a key infrastructure initiative supported by the USP Fund. JENDELA was announced in 2020 to address the short-term needs of the pandemic movement control orders and the long-term digital development goals of the nation. The implementation of JENDELA is targeted for rollout in two phases, namely Phase 1 (from 2020–2022) and Phase 2 (from 2023–2025).

The plan is projected to cost RM21.6 billion, of which 40% (RM8.6b) will come from the USP Fund[13]. According to the 2020 USP annual report, RM7.4b was allocated for Phase 1, to cover the costs of new infrastructure including 1,661 new sites to be deployed across Malaysia to enhance nationwide 4G coverage[14]. Besides increasing digital connectivity to 100% 4G coverage, JENDELA is also intended to prepare Malaysia for 5G network connectivity.

Device distribution and data affordability

Table 2: A partial list of device distribution programmes/initiatives carried out using the USP Fund

Initiative (year)	Objectives & achievements
1Malaysia Netbook (2010-2015)	• Devices distributed to underprivileged students and low-income households throughout the country. • Enabled users to access the internet through KTW. • 1,668,772 netbook recipients nationwide.
Smart devices with Internet package (2014-2020)	• Offered eligible users smart devices at a lower-than-retail price with free internet subscription for a year. • To encourage rural areas and lower income groups to upgrade their existing mobile devices to smart devices. • 2,512,342 smart devices distributed nationwide as of 2020.
Fixed broadband (Suburban and Urban Broadband) Deployment (2018-2021)	• Targeting urban poor and low-cost apartments in suburban and urban areas all over Malaysia. • Aims to expand the provisioning of fixed broadband services to designated household areas.. • 12,064 ports deployed in Johor, Perak, Penang, Selangor and Federal Territory of Kuala Lumpur as of 2021.

Source: USP Annual Reports (2006-2021)

Per MCMC[15], the "Unity Packages" (*Pakej Perpaduan*) for mobile broadband, announced in December 2022 to take effect in February 2023, and for fixed broadband, announced in February 2023 to take effect in March 2023, will not draw on the USP Fund.

Both these plans target lower-income households, senior citizens, persons with disabilities and veterans. The Unity mobile broadband plan is a prepaid six-month plan that costs RM30 for 30GB of mobile broadband data. The Unity fixed broadband plan costs RM69 per month for a 24 month contract offering unlimited data at a speed of 30Mbps.

[13] BERNAMA (2020b)
[14] MCMC (2021)
[15] 2023 email correspondence with author

Community outreach

Table 3: A partial list of community outreach programmes/initiatives carried out using the USP Fund

Initiative (year)	Objectives & achievements
Internet Community Centres (PIK)/Pusat Ekonomi Digital Keluarga Malaysia (PEDi) (2007-present)	• Serving low-income communities through community development programmes related to ICT, entrepreneurship, and multimedia. • Embracing digitalisation and the digital economy, PIK was rebranded to PEDi in 2021. • PEDis provide training services to entrepreneurs to adopt and digitalise their businesses. • 883 completed PEDi nationwide as of 2021.
Community Broadband Libraries (2007-2016)	• Carried out simultaneously with PIK, aimed to provide broadband access at selected state libraries nationwide. • 44 community broadband libraries have been completed as of 2016.
Mini Community Broadband Centres/CBC (2010-2015)	• Provides internet access to communities living within the vicinity of the Ministry of Information, Communication and Culture Department's offices. • To achieve the ultimate goal of a knowledge-based society quicker due to wider population reach. • As of 2015, 120 mini CBC sites were completed.
Community Wi-Fi Hotspots (2011-2020)	• Provides free hotspot wireless internet access at selected vicinities within a 3km radius of PIKs. • Provides internet speed up to 4Mbps. • 743 hotspots established nationwide as of 2020.

Source: USP Annual Reports (2006-2021)

The range of initiatives as outlined in the tables above suggest that the USP Fund has facilitated many digital inclusion programmes, especially in rural areas. However, from our reading of the annual USP reports, it is difficult to determine when or why some projects were discontinued or how much funding they received.

While infrastructure development is necessary, KRI has argued elsewhere that infrastructure alone is not enough to solve problems of inequality[16]. Affordability, development of digital skills and institutional coordination and cooperation must accompany infrastructure development to encourage usage and to create value[17]. As such, local community outreach programmes can move the needle of digital inclusion from service provision to value generation.

MCMC agreed that initiatives funded through the USP Fund need to evolve to continue meeting the objectives of universal service provision and addressing the connectivity needs of the country[18]. But it remains unclear how decisions to adjust projects are made and what becomes of infrastructure under discontinued initiatives.

[16] KRI (2021)
[17] Shenglin et al. (2020)
[18] 2023 email correspondence with author

Policy considerations for the USP Fund

1. Increase transparency and ease of use of USP initiatives and allocations data

In accordance with USP Regulation 36, MCMC publishes USP Annual Reports that contain information on USP initiatives, programmes, and the USP Fund. These reports are easily accessible by members of the public looking to gain general information about the Fund. However, they are less conducive for analytical purposes.

While the 2011-2021 annual reports are downloadable as PDFs, those dating back to earlier years such as 2006–2010 may only be viewed online via a 'flipbook'. The 2006 annual report, which is the earliest report made available to the public, contains some data for comparison from 2005, 2003 and 2004 (the latter years to a lesser degree). The data were not presented in a machine-readable format and thus had to be manually transferred into a database.

Due to inconsistencies in the depth of information presented in progressive reports, we found it particularly challenging to track programme allocation over time. From 2007–2010, the annual reports had stated the exact amount of funds disbursed into each USP initiative to each service provider involved. However, from 2011–2014 the reports only stated exact amounts disbursed into each initiative, but did not provide service provider information.

There was even more loss of detail from 2015 onwards, as only the total amount disbursed was reported with no indication of the specific amount that went into each project. This increasing loss of data granularity limited our efforts to produce a meaningful analysis on the USP Fund's programmes and initiatives, including JENDELA.

While MCMC does conform to existing regulations regarding the preparation of annual reports, there is room for more accessible and transparent reporting. In line with open government data objectives, MCMC could consider making all annual reports easily downloadable on its website. MCMC could also consider publishing time-series data on USP Fund contributions, expenditure and programme allocation in a machine-processable spreadsheet format. This would enable more in-depth analysis of existing programmes and help identify further use case opportunities.

2. Expand USP Fund access to local communities and partnering NGOs

Many early USP initiatives were focused on expanding infrastructure to reach rural and remote areas. As more backhaul networks and core networks are established, the issue of last-mile connectivity is rapidly becoming the next challenge for the government to tackle.

Per current USP regulations, only MCMC licensees are eligible to be universal service providers. This limitation is justifiable to a certain extent – not only do licensees contribute to the fund, they also have the resources needed to develop and implement large-scale USP plans.

It is important that access to the USP fund be carefully regulated through its provisions and regulations and that approved initiatives meet the Fund's objectives. In that regard, proposals from licensed contributors should have priority in being reviewed for approval. However, technology has advanced and more innovative methods of expanding connectivity to rural and remote areas are being developed.

It may be worthwhile to consider expanding access to the USP Fund, subject to appropriate approval and oversight processes, to interested and capable local communities and partnering NGOs. Giving these groups opportunities to implement cost-effective options and allowing them to claim expenses from the USP Fund could allow them to pilot projects that for-profit service providers may be less incentivised to do.

A good example lies in community networks, such as the one being piloted in Bawang Assan in Sarawak[19]. Community networks are last-mile connectivity networks built, managed, and used by local communities themselves instead of relying on service providers. Community networks may be a solution for remote, rural and underserved urban areas with limited business incentives for traditional internet service providers[20].

With the right tools and support, a community could develop and maintain its own internet network (e.g. fixing connection problems, upgrading equipment). As a starting point, interested communities or NGOs could partner with service providers who are eligible for USP funding to conduct pilot projects providing technical guidance and support to these communities.

Although community networks face regulatory and cost-sustainability challenges, research suggests that they can be developed for approximately USD10,000[21], depending on location. Interested local communities who develop robust business models to sustain a community network are likely to find these skills transferable to other economic opportunities.

Conclusion

The USP Fund is a useful tool in efforts to close Malaysia's digital divide. It has enabled infrastructure development, device and data subsidies, and community outreach programmes. We suggest that the fund has untapped potential in light of Malaysia's digital transformation.

As such we offer two policy considerations to improve its usefulness. First, increase transparency and ease of use of USP initiatives and allocations data by means of more detailed and program-specific reporting. This will enable better analysis and understanding of existing programme success and help identify further opportunities for intervention. Second, consider expanding access to the USP Fund to local communities and partnering NGOs to empower interested and capable communities to develop their technical and self-sustainability skills.

[19] The Borneo Post (2022)
[20] Internet Society (2019)
[21] Gwaka, Haseki, and Yoo (2022)

References

Asian Development Bank. 2021. "Learning and Earning Losses from COVID-19 School Closures in Developing Asia," Asian Development Outlook 2021, , April.

BERNAMA. 2020a. "COVID19: Nearly 100,000 Laid off since January." BERNAMA. March 12, 2020. https://www.bernama.com/en/general/news_covid-19.php?id=1908203.

———. 2020b. "Malaysia to See Greater Digital Connectivity through JENDELA." BERNAMA. December 13, 2020. https://www.bernama.com/en/business/news.php?id=1911660.

DOSM. 2022. "ICT Use and Access by Individuals and Households Survey Report, Malaysia, 2021." Department of Statistics Malaysia Official Portal. April 28, 2022. https://www.dosm.gov.my/v1/index.php?r=column/cthemeByCat&cat=395&bul_id=bCs4UlNSQktybTR3THZ3a0RzV2RkUT09&menu_id=amVoWU54UTl0a21NWmdhMjFMMWcyZz09.

Fareez Azman. 2020. "36.9 per Cent of Pupils Do Not Have Electronic Devices - Radzi Jidin." April 15, 2020. https://www.astroawani.com/berita-malaysia/369-cent-pupils-do-not-have-electronic-devices-radzi-jidin-238505.

Gong, Rachel. 2020. "Digital Inclusion: Assessing Meaningful Internet Connectivity in Malaysia." Kuala Lumpur: Khazanah Research Institute. https://www.krinstitute.org/Discussion_Papers-@-Digital_Inclusion-;_Assessing_Meaningful_Internet_Connectivity_in_Malaysia.aspx.

Gong, Rachel, Ashraf Shaharudin, and Siti Aiysyah Tumin. 2022. "Digital Transformation, Education, and Adult Learning in Malaysia." In *COVID-19 in Southeast Asia: Insights for a Post-Pandemic World.*, edited by Hyun Bang Shin, Murray Mckenzie, and Do Young Oh. London: LSE Press. https://doi.org/10.31389/lsepress.cov.c.

Gwaka, Leon, Müge Haseki, and Christopher S. Yoo. 2022. "Community Networks as Models to Address Connectivity Gaps in Underserved Communities." *Information Development*, March. https://doi.org/10.1177/02666669221089658.

Internet Society. 2019. "Impact Report 2019 - Community Networks." 2019. https://www.internetsociety.org/impact-report/2019/community-networks/.

ITU. 2013. "Universal Service Fund and Digital Inclusion for All." International Telecommunication Union. https://www.itu.int/dms_pub/itu-d/opb/pref/D-PREF-EF.SERV_FUND-2013-PDF-E.pdf.

KRI. 2021. *#NetworkedNation: Navigating Challenges, Realising Opportunities of Digital Transformation*. Kuala Lumpur: Khazanah Research Institute. https://krinstitute.org/Publications-@-NetworkedNation-;__Navigating_Challenges,_Realising_Opportunities_of_Digital_Transformation_.aspx.

MCMC. 2006. "Universal Service Provision Annual Report 2006." https://www.mcmc.gov.my/skmmgovmy/files/00/00617ae4-133a-4657-b8b2-a953edef6c64/files/assets/basic-html/page-29.html.

———. 2007. "Universal Service Provision Annual Report 2007." https://www.mcmc.gov.my/skmmgovmy/files/1e/1eaf62bc-a153-47c6-a6c4-b8f19105a752/files/assets/basic-html/page-19.html.

———. 2008. "Universal Service Provision Annual Report 2008." https://www.mcmc.gov.my/skmmgovmy/files/8e/8ea6c3f8-3508-41ac-bcbf-051b37c7ac9c/files/assets/basic-html/page-45.html.

———. 2009. "Universal Service Provision Annual Report 2009." December 31, 2009. https://www.mcmc.gov.my/skmmgovmy/files/7c/7c939e2c-5b85-491c-bbbc-45d37c1fb2db/files/assets/basic-html/page-17.html.

———. 2010. "Universal Service Provision Annual Report 2010." https://www.mcmc.gov.my/skmmgovmy/files/2a/2a825d4f-8b94-451c-bae7-d12eb6314f84/files/assets/basic-html/page-1.html#.

———. 2014a. "Universal Service Provision Annual Report 2012." https://www.mcmc.gov.my/skmmgovmy/media/General/pdf/SKMM-USP2012.pdf.

———. 2014b. "Universal Service Provision Annual Report 2013." https://www.mcmc.gov.my/skmmgovmy/media/General/pdf/USP-AR-2013.pdf.

———. 2015. "Universal Service Provision Annual Report 2014." https://www.mcmc.gov.my/skmmgovmy/media/General/pdf/SKMM-USP-2014.pdf.

———. 2016. "Universal Service Provision Annual Report 2015." https://www.mcmc.gov.my/skmmgovmy/media/General/pdf/MCMC_USP_Report_2015_bi.pdf.

———. 2017. "Universal Service Provision Annual Report 2016." https://www.mcmc.gov.my/skmmgovmy/media/General/pdf/MCMC_USP_Report_BI_2016.pdf.

———. 2018. "Universal Service Provision Annual Report 2017." https://www.mcmc.gov.my/skmmgovmy/media/General/pdf/USPAR17_Eng.pdf.

———. 2019. "Universal Service Provision Annual Report 2018." https://www.mcmc.gov.my/skmmgovmy/media/General/pdf/Universal-Service-Provision-Annual-Report-2018.pdf.

———. 2020. "Universal Service Provision Annual Report 2019." https://www.mcmc.gov.my/skmmgovmy/media/General/pdf/MCMC-USP2019AR-ENG.pdf.

———. 2021. "Universal Service Provision Annual Report 2020." Malaysian Communications And Multimedia Commission (MCMC). July 30, 2021. https://www.mcmc.gov.my/usp-annual-report/2020/index.html.

———. 2022. "Universal Service Provision Annual Report 2021." https://www.mcmc.gov.my/skmmgovmy/media/General/pdf2/MCMC-USP-2021_Eng.pdf.

———. n.d. "Universal Service Provision | Malaysian Communications And Multimedia Commission (MCMC)." Malaysian Communications And Multimedia Commission (MCMC). Accessed January 3, 2023. https://www.mcmc.gov.my/en/sectors/universal-service-provision.

NST. 2021. “NST Leader: The Digital Divide.” NST Online. September 29, 2021. https://www.nst.com.my/opinion/leaders/2021/09/731739/nst-leader-digital-divide.

Shenglin, Ben, Felice Simonelli, Romain Bosc, Ruidong Zhang, and Wenwei Li. 2020. “Digital Infrastructure: Overcoming Digital Divide in Emerging Economies.” G20 Insights. December 10, 2020. https://www.g20-insights.org/policy_briefs/digital-infrastructure-overcoming-digital-divide-emerging-economies/.

The Borneo Post. 2022. “UTS Establishing ‘Community Network’ with Bawang Assan in Sibu.” April 14, 2022. https://www.pressreader.com/malaysia/the-borneo-post/20220414/281801402501133.