

Promoting high-quality broadband

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Executive summary

Promoting high-quality

It has always

Promotion of broadband

C
P

Germany, France and other

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B



1 Challenge

SDG 9 (SDG 9), *build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation*, *significantly increase access to ICT and strive to provide universal and affordable access to internet in LDCs by 2020*.¹

B **ad** **d** **e**
a **b**
e **a** **d** **e**
f **e** **-** **b** **a** **d** **e**
e **c** **e** ; **f** **e**
e **a** **e** **c**

et al, 2011; C et al, 2021). A network effects. B GDP (R, 2001; C et al, 2021). COVID-19 (M et al, 2022), H COVID-19. F I G20 A M usage deployment (), adoption (), M. O red P D mobile C 100 (LDC), (LLDC), (SIDS) (I, 2021). I (R. IC A, 2016).

¹ See <https://www.un.org/sustainabledevelopment/industry-innovation-and-infrastructure/>.



2 Proposal

D
 ; A
 : (1) ; (2)
 ; (3) ; (4)
 ; (5)
 ; (6) ()

O E C - D Recommendation
 on Broadband Connectivity (OECD, 2012), 2021

(M et al, 2021; F , 2022) H
 CO-19

R
 (M et al, 2022)
 (B2C), (B2B) -2 () () 6.9, 2022 L () 7 () -4 ()

R
 2 () 4 () 1 () 5 () J-1.44
 -6.9
 C 1.1 () -7 () 4.1 () 5 () 7 () 1 () 1 () 11.1 () 7 () 11 ()
 () 21 () J/ 1 2 1 () -4 () -3 - 2.22,) 2 () 1 () 1 () 4 () () -2.9 (-) 5 (-6.9
 (() -6.9) 5 () 7 () 1 () 7 () 4 () 15.1 () 1 () 1 () 11 () 2 () -7
 -M () 1 () 29 () -3.9 () -3 (2.3) J1.444 -1.444 P
 () -2 ((-150.9) 7 () 1 ()) 22 , 202 , 202 1
 24 71 () 2.1 s37(tr)-7(t)-0.9a ppo -19 . I (-161) 4 (() J0



Recommendation 4: Consider accelerating network infrastructure deployment by providing regulated, cost-oriented access to ducts, poles and other civil engineering infrastructure used by other telecom operators or other utilities.

S... P... H... E... F... S... (NIMB)

Recommendation 5: Ensure that permitting processes are prompt, effective and efficient.

I... (R... IC A... , 2016). C... S... I... G...

Recommendation 6: Avoid placing taxes or other unnecessary expenses on access to landing stations for submarine cables.

2.1.4 Enabling mobile network deployment

A... N... D... (H... M... , 2009; E... C... , 2017, ... 364-366).

Recommendation 7: Ensure radio spectrum assignments for mobile services are carried out promptly, effectively, efficiently and fairly.

P... (E... C... , 2017, ... 367-368).

... (C... , 1959) ...

Recommendation 8: Resist the temptation to use the spectrum assignment process to maximise government revenue.

M... 5G, ... O... NIMB ... (...) ...

Recommendation 9: Consider simplified permitting processes for small mobile base stations (eg for 5G in dense metropolitan regions).

(...) ... 5G ... H ... I ... P ... (E ... C ... , 2019, ... 103-123; M ... et al, 2021, ... 27).

Recommendation 10: Measures to deal with possible health effects of mobile services should not go substantially beyond what is called for based on scientific and medical advice.

2.2 Demand-side measures

I ... (...) ... E (F ... 3) ... S ... (M ... et al, 2021, ... 57). P ... (...) ... S ...

Figure 3: Reasons given for not having internet access at home by households without internet access, European Union (2008 - 2019)

Source: Bruegel based on Eurostat (ISOC_PIBI_RNI last updated 30 March 2022)⁴.

On the other hand, the reasons for not having internet access at home by households without internet access, European Union (2008 - 2019) are: (1) lack of need; (2) lack of skills; (3) lack of time; (4) lack of money; (5) lack of access to internet services.

M... (M... et al, 2022). COVID-19 I... M... (A..., 2017). H... 5. (S... 2022). I... (P... et al, 2019).

Recommendation 13: Education and training focusing on digital skills are fundamental to the modernisation of society, adaptation to the changing workplace, and the avoidance of digital divides. There is an urgent need to move beyond traditional models of education and training, towards a focus on lifelong learning.

(... F... 3). M...

Recommendation 14: Ensure broadband internet services are secure, reliable, robust and respectful of personal privacy.

2.3 Financing deployment of broadband infrastructure

2.3.1 Investment needs

... (A... J, K... N... F... E... I... B... (EIB, 2018) D... A... E... (E... C... , 2010) E... G... S... (EGS) (E... C... , 2016). EGS 2020 (1) 5G 2025 (2) Gigabit connectivity for all main socio-economic drivers such as schools, transport hubs and main providers of public services as well as digitally intensive enterprises ; (3) 5G ; (4) 100 M... E... EIB \$453

5 For instance, the work of truck drivers and taxi drivers might be changed profoundly (if not eliminated) by vehicles that are partly if not fully self-driving, or that support platooning of trucks.

2025 EIB \$153 (33)

\$300

(M et al, 2021).

A 2018, S, E, D C (E C , 2021)

be covered by a Gigabit network, with all populated areas covered by 5G

F S , SF C C P S (2016)

25 M

3 M

14

160

S

(F P)

98

(

2

).

A ()

1S.()15 7 ()15 J0 --3.9 ()122 9

-4 ()1 ()A ()7

being relatively rare.” N et al (2021) “Chinese representation within standards bodies is far from reaching a disproportionate level, especially in comparison to the country’s economic weight.

I de-facto (G D , 2021; S D 2021) (1) (2) ; (3) ; (4) ; (5)

Recommendation 15: While trade restrictions may be unavoidable in a world subject to increasing geopolitical stress, policymakers should evaluate the economic, operational, social and practical costs of such restrictions for their country and other countries.

2.3.3 Private investment

domestic F foreign M A P (S I). I S C H ? I . N

Recommendation 16: Because of the critical nature of electronic communications and the increasingly tense geopolitical situation, weigh carefully the risk of future conflict or stress with the country concerned before permitting FDI into core electronic communications assets.

F I A

Recommendation 17: Weigh carefully the risk of possible future conflict or stress with the supplier country when selecting equipment that will play a key role in core telecommunication networks.

2.3.4 Targeted public subsidy

Infrastructure grants of \$42.45 billion for broadband deployment grants from 2022-2026.⁷ A household that lacks access to reliable broadband service offered with a speed of not less than 25 megabits per second for downloads; and 3 megabits per second for uploads; and a latency sufficient to support real-time interactive applications.

100 Mbps download and 20 Mbps upload speeds.

Infrastructure (RRF), National Geographic (NGE), RRF.

338 million households (2018) lack access to broadband service.

37 million households (2021-2026) lack access to broadband service.

40 million households (2021) lack access to broadband service.

RRF (Economic Recovery Act, 2021). B (10.7%) of RRF (D et al, 2021).

Recommendation 20: Many countries provide public funding to help recovery from the COVID 19 pandemic. Modernisation of society should be among the goals when countries decide how best to apply these funds. Public subsidy for broadband can thus be an appropriate use of pandemic recovery funds.

2.3.6 Possible earmarking of new corporate taxation revenues

Companies should contribute fairly to network costs (E NO, 2021).

Multinational corporations (MNCs) should contribute to network costs (OECD BEPS).

OECD/G20, 2021). MNCs contribute to network costs (OECD/G20, 2021). MNCs contribute to network costs (OECD/G20, 2021).

(1)

⁷ This is the largest element of broadband funding in the Infrastructure Act, but by no means the only one. There are for instance rural development programmes in support of distance learning, telemedicine and broadband. The total funding for all broadband programmes is \$65 billion. Treasury also has \$350 billion in additional funds allocated under the American Rescue Plan Act, a portion of which might be spent on the digital divide.

2.3.7 Loans from multilateral development banks and other sources

F... (MDB), B...
 EIB, A, D, B (ADB), B, MDB, RRF, E, A, E, 385.8, RRF, 166.0, RRF, RRF, A, 2023, E, B, E, G, E

Recommendation 22: Consider using a loan to accelerate the availability of funds for public subsidies for broadband deployment. This might be provided by (for instance) one of the Multilateral Development Banks, or might be obtained by tapping pandemic recovery funds.

3 Conclusions

B... COVID-19... R... S-C...
 N... S... D... G 9 (SDG 9), build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation.
 O... :-



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