

AFRICA BRIDGING THE DIGITAL DIVIDES

POLICY NOTE NO 4:2017



Africa bridging the digital divides

Policy Note No 4:2017

© The Author and the Nordic Africa Institute (NAI),
September 2017

The opinions expressed in this volume are those of the author and do not necessarily reflect the views of the Nordic Africa Institute.

This work is made available as an e-booklet and pdf-file under a Creative Commons Attribution-Non Commercial-No Derivatives 4.0 International (CC BY-NC-ND 4.0) Licence. Further details regarding permitted usage can be found at www.creativecommons.org/licenses/by-nc-nd/4.0



You can find this, and all other titles in the NAI policy notes series, in our digital archive Diva, www.diva-portal.org, where they are also available as open access resources for any user to read or download at no cost.

Cover photo: El Fasher, North Darfur, 18 July 2012. A young girl takes a picture with a cell phone during the opening ceremony of the new Library at the Cultural Center. Photo by Albert González Farran, Unamid, CC BY-NC-ND 2.0.

ISSN 1654-6695

ISBN 978-91-7106-809-5 pdf

ISBN 978-91-7106-810-1 epub

AFRICA BRIDGING THE DIGITAL DIVIDES

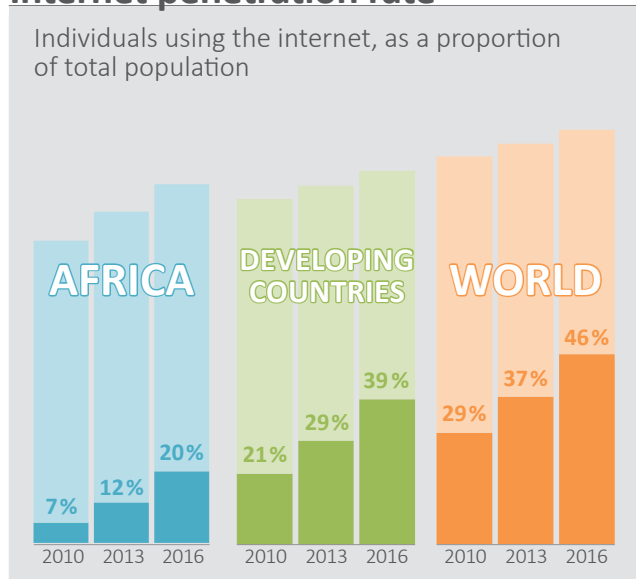
Africa's leapfrogging information and communication technology development is fueled by mobile broadband. The number of mobile-broadband subscriptions on the continent has increased more than 15 times over the past six years, a growth rate that is three times the global average. However, there are also worrying trends, such as a growing digital divide between men and women, and between urban and rural areas.

SAMIA SATTI MOHAMED NOUR, Professor of Economics at Khartoum University and Guest Researcher at NAI

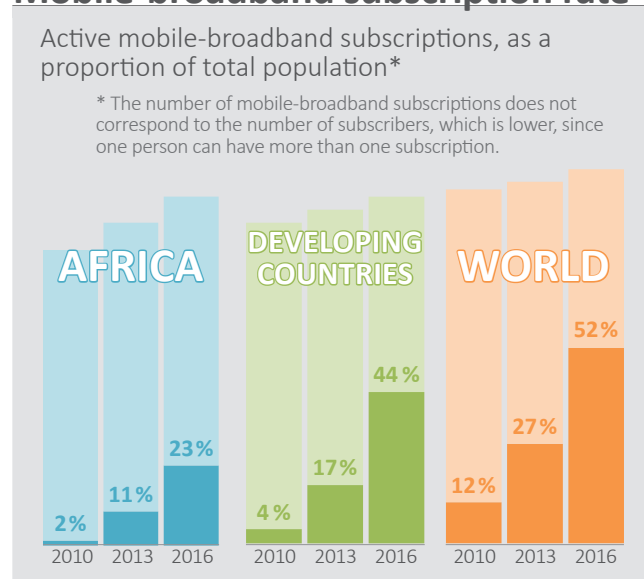
According to the International Telecommunication Union (ITU), a UN agency that specialises in information and communication technology (ICT), 2.6 billion of the world's total 3.6 billion internet users are from developing countries. The relative number of internet users in the developed countries (80 percent) is, however, more than twice the level in

the developing countries (39 percent). In recent years, the global digital divide has received increasing interest from researchers, practitioners and policymakers in developed and developing countries. It describes a gap between those who have ready access to ICT and the skills to make use of it and those who do not have ICT access or skills.

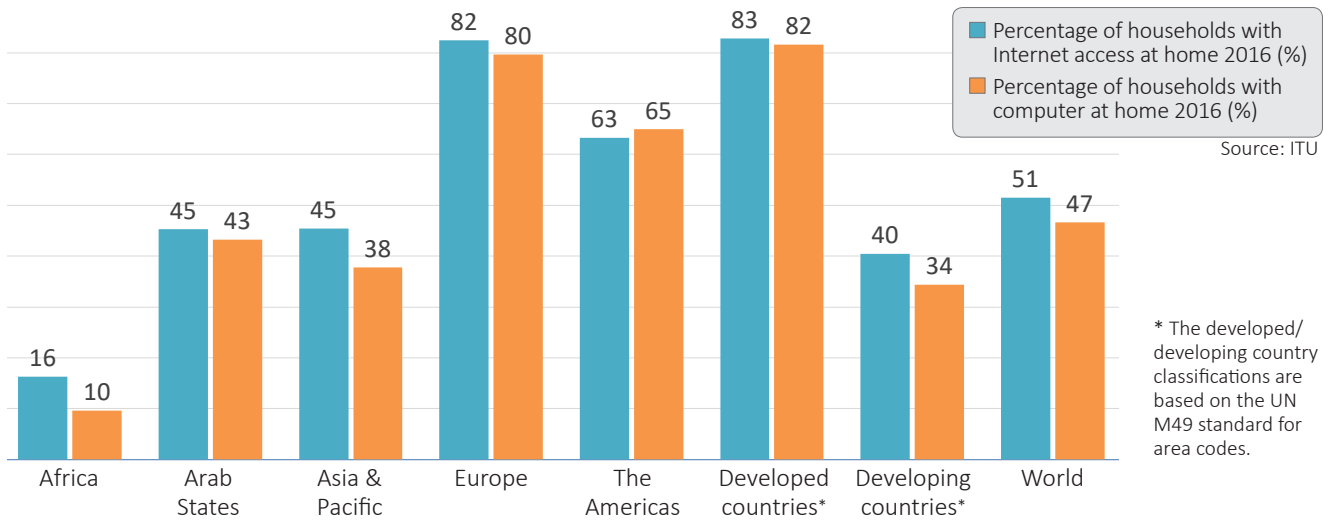
Internet penetration rate



Mobile-broadband subscription rate



Source: ITU. The developed/developing country classifications are based on the UN M49 standard for area codes, based on UNDP's Human Development Index (HDI).



Assessing the divide

At global level, a standard method for identifying the extent of the digital divide and differences between countries is to examine national ICT levels and performance compared with global averages in developed and developing countries respectively. Some indicators, such as mobile-broadband subscriptions, fixed-broadband subscriptions, and the percentages of individuals using the internet, with access to internet at home and with a computer, are especially useful indicators for assessing and bridging the global digital divide. The ITU provides comprehensive indicators that show the extent and development of the global digital divide. The ITU indicators are particularly useful for illustrating the position of Africa.

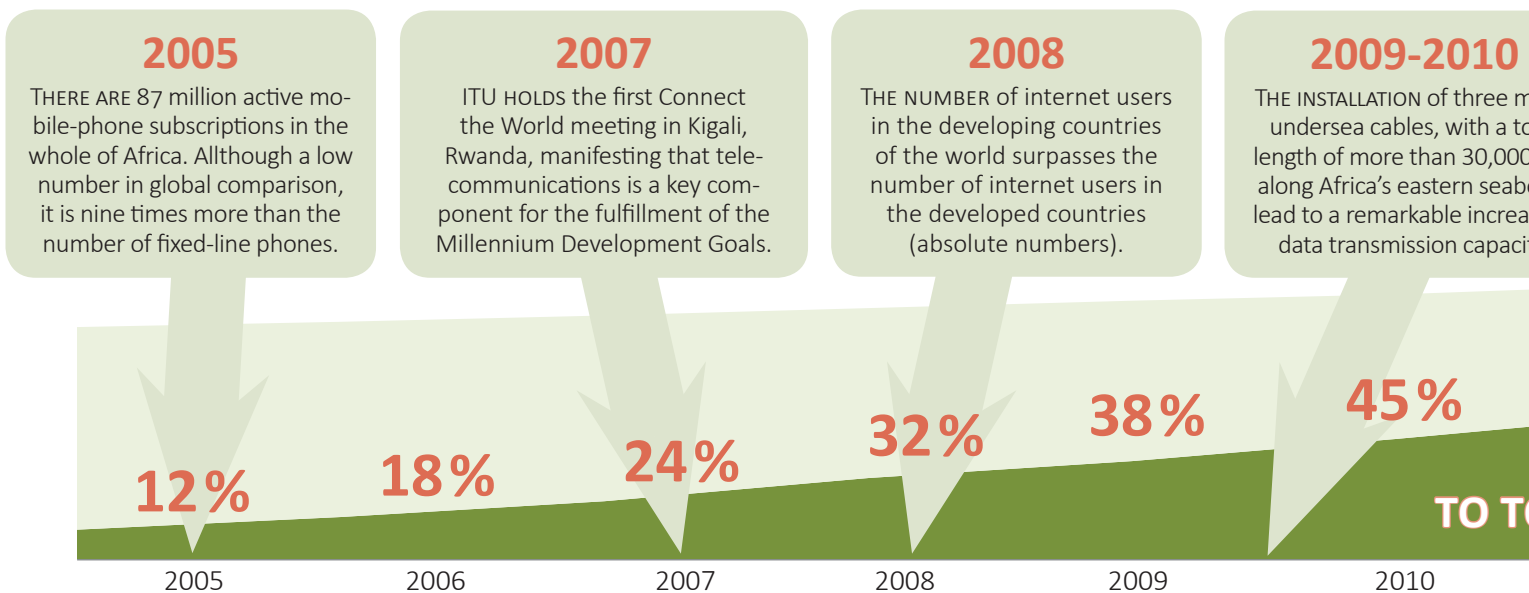
By the end of 2016, only one in five people in Africa were using the internet compared with almost one out of every two people worldwide. The global digital divide

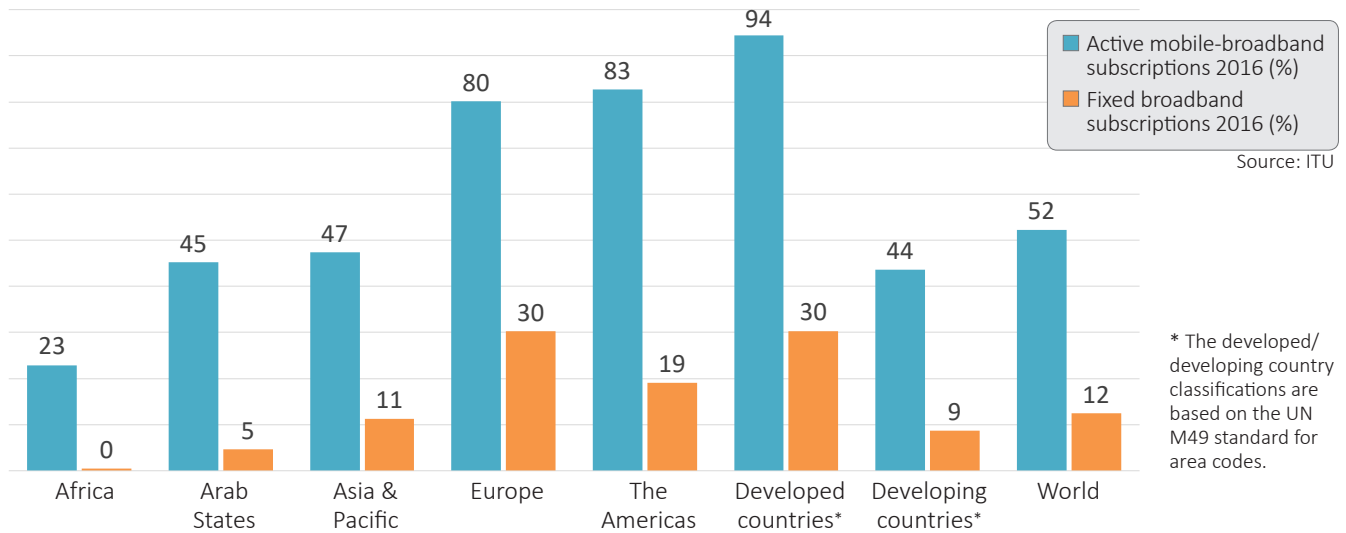
is even more palpable when it comes to internet access at home. Only 16 percent of households in Africa have internet access at home, compared to the global average of 51 percent. Another relevant measure is broadband subscriptions. Only 0.4 percent of Africans have fixed broadband subscriptions and less than one-quarter have active mobile broadband subscriptions – the global averages are 12 and 52 percent, respectively.

Moreover, there is the digital divide in terms of urban/rural location. This divide is very large in parts of sub-Saharan Africa. For example, in Zimbabwe 36 percent of the urban population use the internet, but less than 7 percent of the rural, according to ITU.

The gender divide – large and growing

Internet penetration rates are higher for men than for women in all regions of the world. In 2016, 28 percent





of men in Africa were internet users but only 22 percent of women. This means that the digital divide by gender is 23 percent in Africa, the highest of all regions in the world, almost twice as high as the global average of 12 percent. Moreover, while the global average grew from 11 percent in 2013 to 12 percent in 2016, the gender gap in Africa grew from 21 to 23 percent during the same period, a greater increase than any other region in the world.

The causes of the divide

The global digital divide is closely related to differences in economic development, literacy, schooling and education levels. Average gross national income per capita worldwide is more than four times above the level in Africa. In sub-Saharan Africa, adult illiteracy rates and gross enrolment ratios in secondary and tertiary educa-

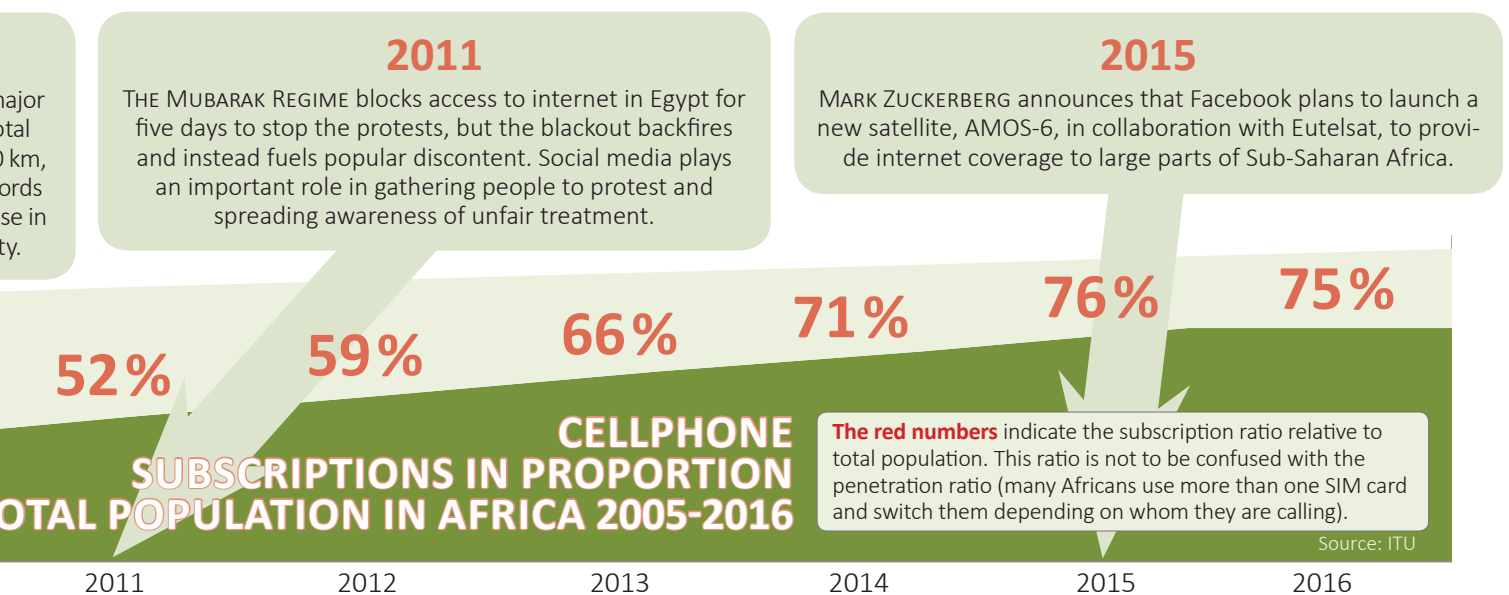
tion are very much lower than the global average.

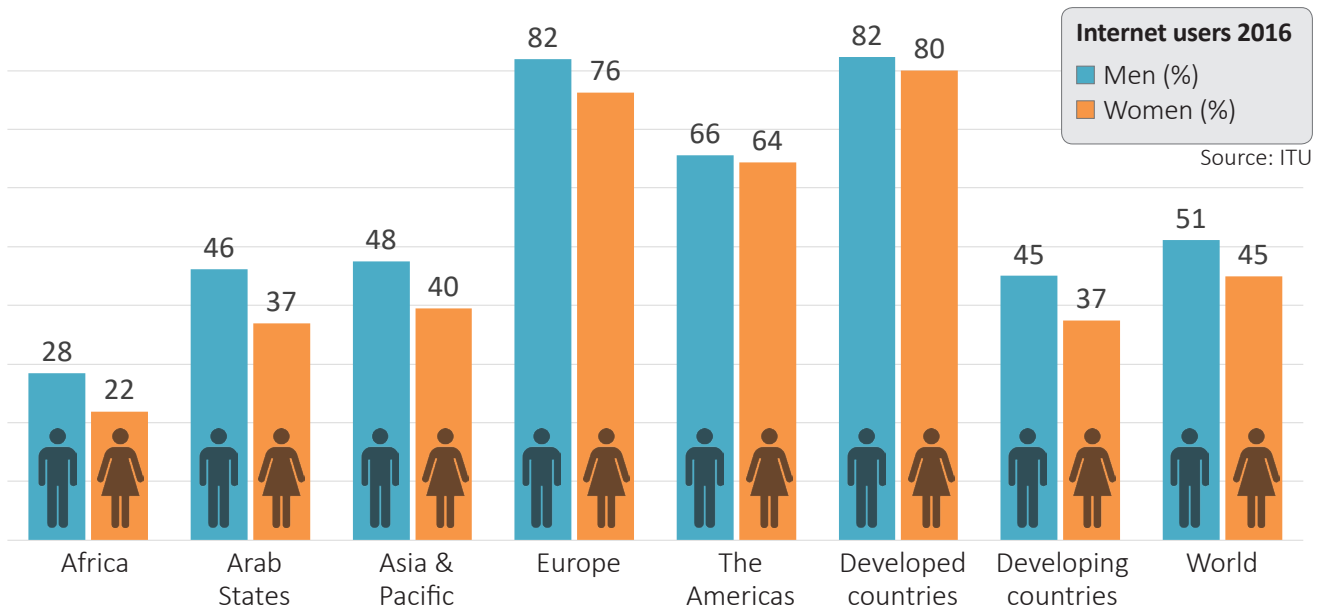
In many parts of Africa, there is also a language problem. For instance, insufficient knowledge of English limits access to the internet. The English language has a dominant position in the ICT domain and less than 20 percent of Africa's total population speak English as either their native or a foreign language.

Moreover, the global digital divide is closely related to differences in the access to ICT. The lack of access to ICT is closely related to insufficient public and private spending and investment in ICT, insufficient ICT infrastructure and poor quality of ICT services.

Internet shutdowns

Lack of democratic institutions is also a cause of the digital divide. In weak democracies all over the world, the internet has been a target for censorship interven-

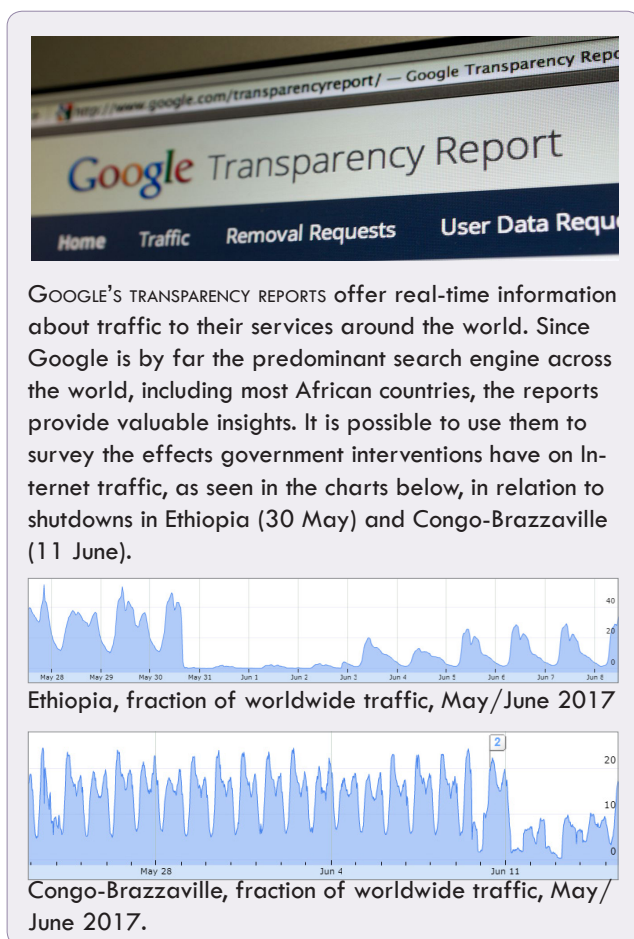




tions by regimes that wish to limit or deny freedom of information. Over the past couple of years, we have seen how many governments on the African continent

have blocked and/or filtered access to social media and other parts of the internet, often by closing internet service providers. Different pretexts have been used. Shutdowns are often done under the guise of national security. In Ethiopia, in June 2017 government officials explained a nationwide shutdown of internet access as an attempt to stop leakage of school exam papers.

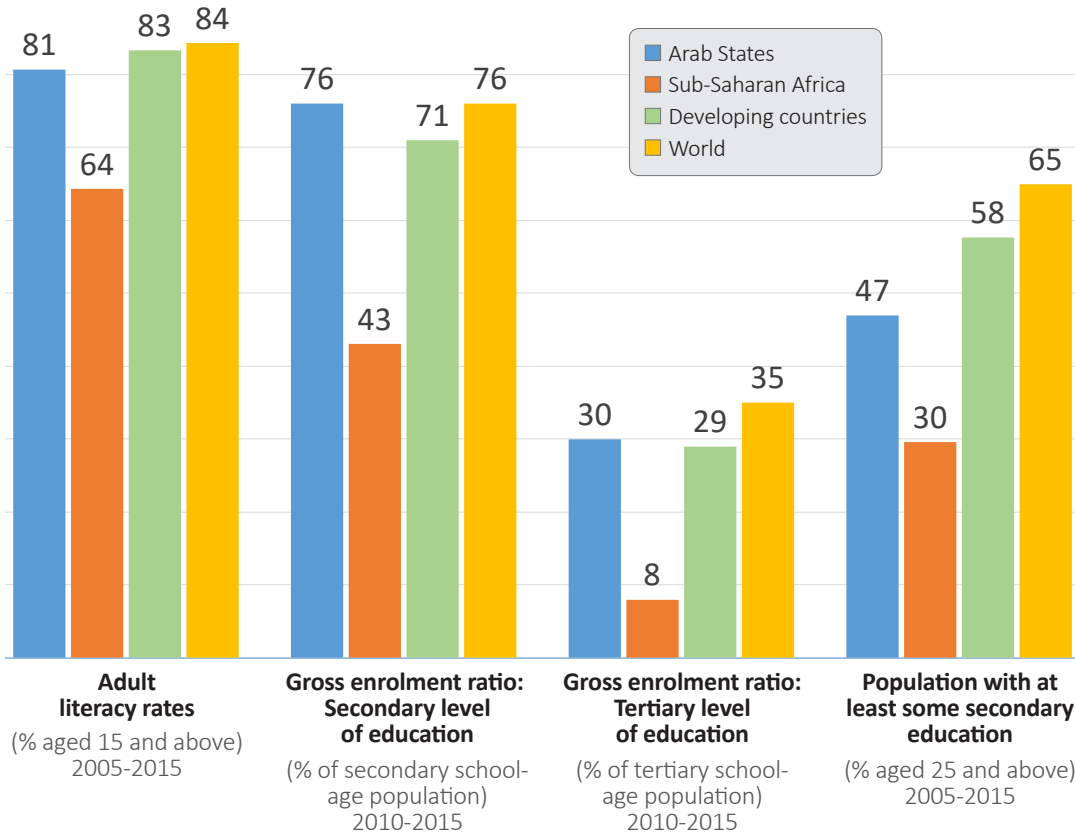
Censorship, surveillance and self-censorship, which often follows in the wake of surveillance, are mainly caused by the lack of strong democratic institutions. The situation impedes many Africans from developing their ICT skills and deriving educational and entrepreneurial benefits from full access to the internet. Hence, it contributes to the global digital divide. The trend seems to be towards increased government abuse of internet users' rights. Access Now, a non-profit advocacy group dedicated to an open and free internet, reported 56 documented internet shutdowns by governments around the world in 2016, compared to only 15 in 2015.



Policy recommendations

Sound and coherent policies, on both the supply and demand sides, are needed to further bridge the digital divide between Africa and other regions of the world. The major policy recommendations on the supply side are:

- Increase government investment and spending on ICT.

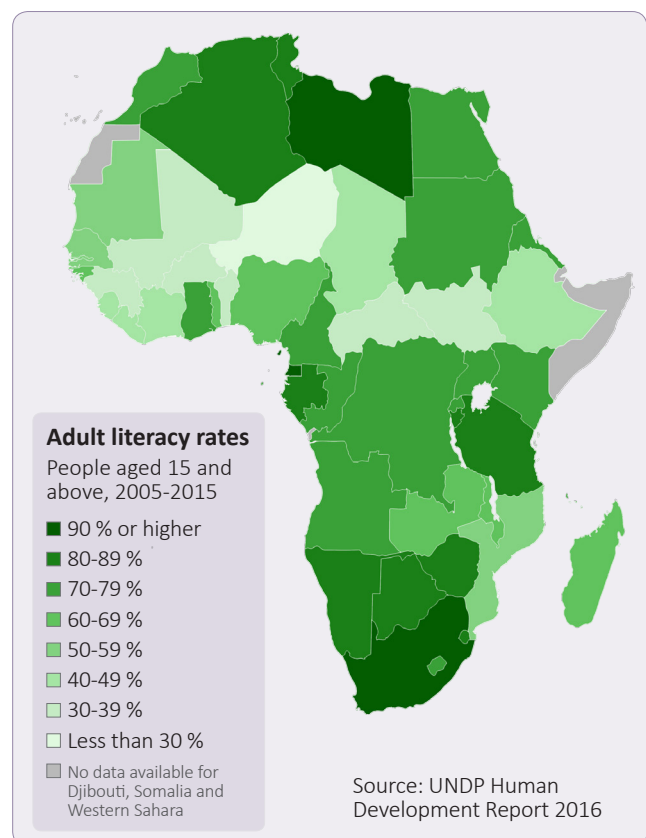


Source: UNDP Human Development Report 2016

- Improve quality, efficiency and speed of ICT services.
- Improve ICT infrastructure, including even very basic elements like the public electricity grid, which is of poor quality in many parts of Africa, also with a focus on reducing the urban/rural disparity.
- Improve technical skills, with special emphasis on empowering women through ICT knowledge.
- Enhance public-private partnership in investment and provision of ICT services.
- Strengthen democratic institutions and prevent internet censorship.

The major policy recommendations on the demand side are:

- On a more general level, fight poverty and facilitate access to ICT for poor populations.
- Improve literacy, including electronic literacy (ICT knowledge) for women and men.
- Improve access to secondary and tertiary education and implement more ICT education at all levels of education.
- Increase awareness of the economic and social importance and impact of ICT for all people in Africa.



Literacy rates of course vary a lot between Africa's countries. 11 African countries have an adult literacy rate above the global average of 84 percent.



SAMIA SATTI MOHAMED NOUR is a Professor of Economics at Khartoum University, and a Guest Researcher at the Nordic Africa Institute. Her main fields of research are economics, science and technology development, and knowledge economy.

About the Author



NAI POLICY NOTES is a series of short briefs on policy issues relevant to Africa today, intended for strategists, analysts and decision makers in foreign policy, aid and development. They aim to inform public debate and generate input into the sphere of policymaking. The opinions expressed in the policy notes are those of the authors and do not necessarily reflect the views of the Institute.

About our Policy Notes



THE NORDIC AFRICA INSTITUTE (Nordiska Afrikainstitutet) is a center for research, documentation and information on Africa. It is based in Uppsala, Sweden, and jointly financed by the governments of Finland, Iceland and Sweden.

About the Institute

All our policy notes can be downloaded from our web site or ordered free of cost.

Please visit www.nai.uu.se for more information.