

Internet Poverty Index

Methodology Note

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Access to the Internet has become a basic need.



What is the Internet Poverty Index?

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Internet Big **Poverty Byte** Index? Index? **Ranking for 169** US price fixed as countries by benchmark (100), number and prices of other share of people in countries shown in relation to internet poverty benchmark

by WORLD DATA LAB

The two indices offer two different perspectives on internet poverty and the underlying prices. The Internet Poverty Index (IPI) combines price and spending data to access how many people can (not) afford a basic package of mobile internet. The **Big Byte Index** ranks countries by their prices.

Hence, countries can rank very differently in the two indices. For example, a rich country could have high prices (i.e. have a high Big Byte Index), but still have low Internet Poverty, as people can afford these high prices.



How is Internet Poverty calculated?

CREATE COMPARABLE MEASURE - BASIC PACKAGE OF MOBILE INTERNET



speed



Affordability

- Price of mobile internet
- Share of total individual expenditure on access to mobile internet

Threshold: 10% of total spending



How is Internet Poverty calculated?

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CREATE COMPARABLE MEASURE

• Affordability threshold

- Around 20% of the population of West Africa have access to mobile internet (Rodríguez-Castelán et al. (2021))
- Combined with collated data on internet prices, evident that people in these countries spend up to 10% of their total expenditure on mobile internet services

• Quantity threshold

• Reasonable threshold for minimum package; also used by ITU

• Quality threshold

• Set as such that 25% of countries globally have worse connection, 75% have better quality (2019)

How is Internet Poverty calculated?

- **1.** Combine prices to receive quantity-adjusted prices for **1GB** in each country.
- 2. Train a Random Forest with the dependent (quantity-adjusted price) and fix all covariates related to internet quality to corresponding threshold to estimate quality- & quantity-adjusted prices (for 1GB of mobile internet) for 169 country.
- **3.** Combine quality- & quantity-adjusted prices with spending data from World Data Pro.
- **4.** Those who have to spend more than 10% of their monthly spending on a basic package (1GB with 10MBps download speed) of mobile internet are considered as internet poor.

| Internet price Price for 2.5 GB in USD | Internet quality Download/upload speed, 2G/3G/4G coverage | Infrastructure Electricity, urbanization | Economy GDP/capita, inflation, inequality, political stability |
|--|---|---|---|
| Internationally comparable internet prices Price for 1 GB (\$ 2017 PPP) at fixed quality | | WDL data on spending distributions | |
| | Internet share of population tha package of m | poverty at cannot afford a basic pobile internet | |



Partners and Sources





Our Partners.







Our Data Sources.

| OOIKLA | WORLD DATA PRO | | International Institute for Applied Systems Analysis |
|--------|----------------|----------------|---|
| GSMA® | THE WORLD BANK | A REAL ARY THE | A4AI |



Further information & citation

Publications & Blogs.





Ending internet poverty

Internet Poverty: The Next Frontier in Development Measuring Internet Poverty

ACCESSORIES

WHATSAPP SETTINGS SIM CUTTING



The 2023 Internet Poverty Index: Creating Connectivity for All

Read here

Read here

Read here

Read here

Citation.

World Data Lab (2023). Internet Poverty Index.

BibTex citation

@online{Internet Poverty Index, author = {World title = {Internet Poverty Index}, year = {2023}, url = {https://internetpoverty.io}, urldate = {...} }

Explore

by World Data Lab

References.

Rodríguez-Castelán, C., Ochoa, R., Lach, S., & Masaki, T. (2021). Mobile Internet Adoption in West Africa.





Let's connect.

Katharina Fenz

Lead Data Scientist katharina.fenz@worlddata.io

Isabell Roitner-Fransecky

Data Scientist isabell.roitner-fransecky@worlddata.io

Dirgantara Reksa

Strategic Initiatives Manager dirgantara.reksa@worlddata.io

internetpoverty.io

worlddata.io