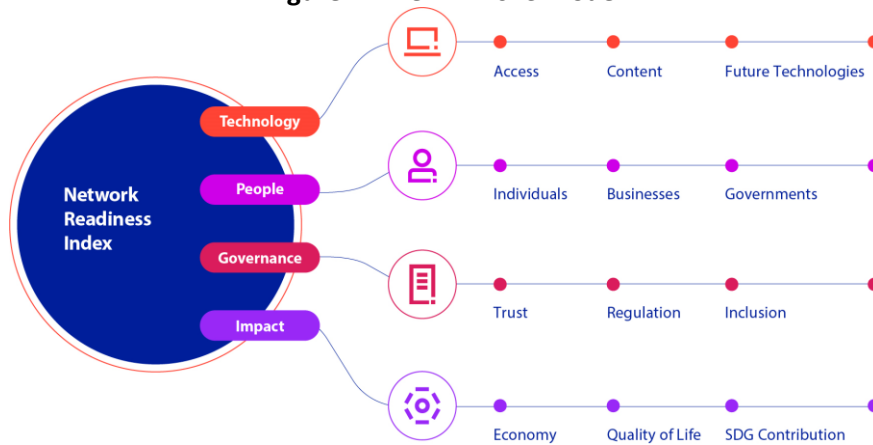




Ethiopia

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2023 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 58 variables.

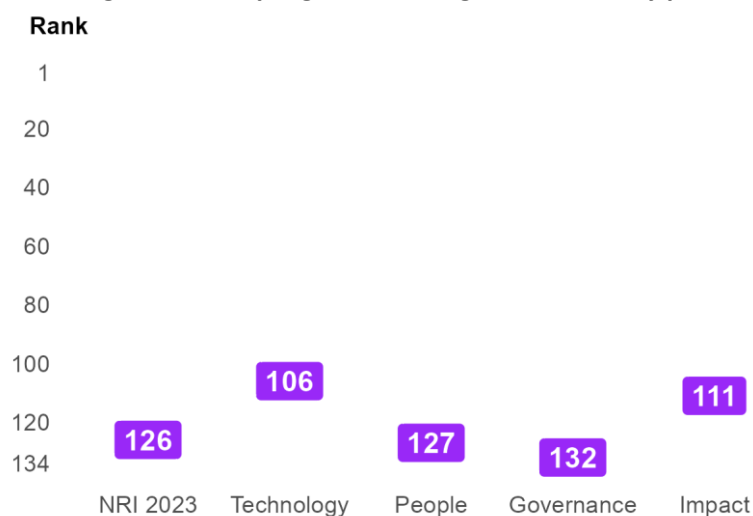
Figure 1: The NRI 2023 model



Global NRI position of Ethiopia

Ethiopia ranks 126th out of the 134 economies included in the NRI 2023 (Figure 2). Its main strength relates to Technology. The greatest scope for improvement, meanwhile, concerns Governance.

Figure 2: Ethiopia global ranking, overall and by pillar



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Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Ethiopia relate to Economy, Content and Access, among others (Table 1). More could be done, though, to improve the economy's performances in the Regulation, Individuals and Trust sub-pillars.

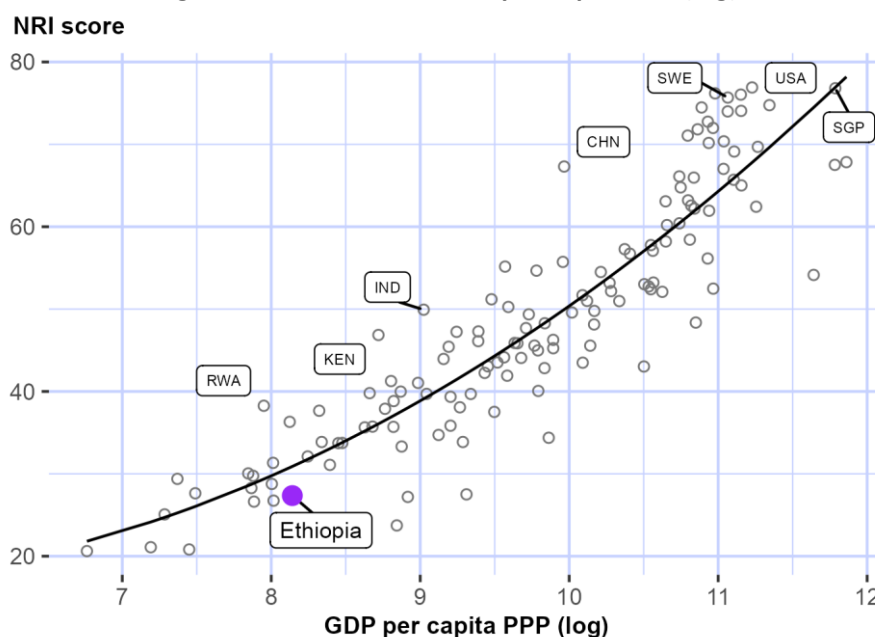
Table 1: Ethiopia rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Economy	71	Inclusion	123
Content	87	Businesses	126
Access	107	SDG Contribution	126
Quality of Life	112	Regulation	130
Governments	113	Individuals	132
Future Technologies	118	Trust	133

NRI score and income

Figure 3 shows the position of Ethiopia in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Ethiopia is well below the trend line, which suggests that it is underachieving and that one would expect it could raise its network readiness in view of its income level.

Figure 3: NRI score and GDP per capita PPP (log)



Note: USA = United States (rank: 1), SGP = Singapore (rank: 2), FIN = Finland (3), NLD = Netherlands (4), SWE = Sweden (5), CHN = China (20), IND = India (61). Ethiopia belongs to the group of low-income countries, where the best performer is Rwanda (RWA). The top performer of its region-Africa-is Kenya (KEN).

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Performance against its income group and region

Low-income countries

Ethiopia is ranked 7th in the group of low-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in two of the four pillars: NRI, Technology and Impact. At the sub-pillar level, it outperforms low-income countries in five of the twelve sub-pillars: Access, Content, Governments, Economy and Quality of Life.

Africa

Ethiopia is ranked 24th within Africa (Figure 4, right panel). It has a score above the regional average in two of the four pillars: Technology and Impact. With regard to sub-pillars, it outperforms the average in Africa in four of the twelve sub-pillars: Access, Content, Economy and Quality of Life.

Figure 4: Performance of Ethiopia against its income group and region, overall and by pillar

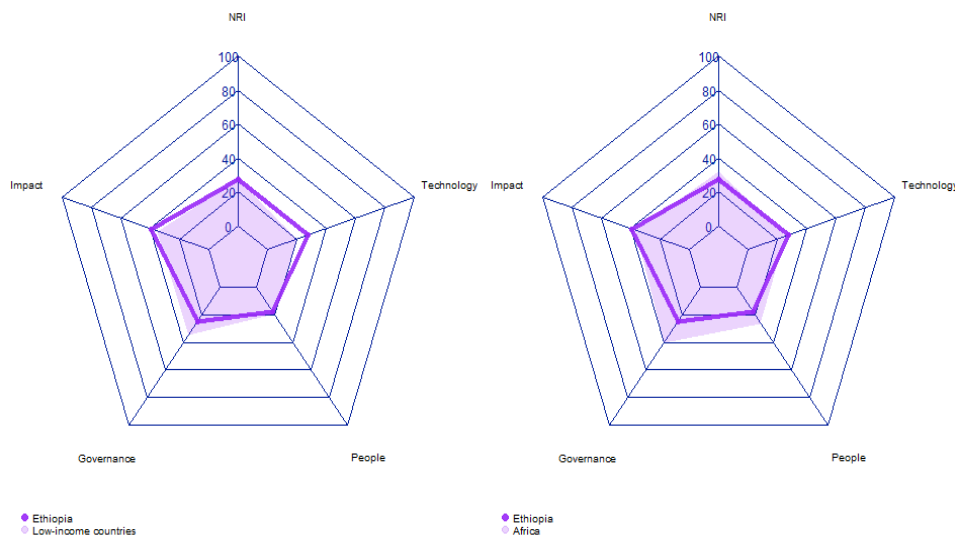


Table 2: Ethiopia scores vs. averages of its income group and region, overall and by pillar

Dimension	Ethiopia	Low-income countries	Africa
NRI	27.36	27.19	32.14
Technology	27.58	19.75	25.14
People	17.80	19.57	26.19
Governance	24.76	34.61	40.44
Impact	39.28	34.82	36.77

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Strongest and weakest indicators

The indicators where Ethiopia performs particularly well include 1.2.4 AI scientific publications, 4.1.2 High-tech exports, and 4.2.3 Income inequality (Table 3). By contrast, the economy's weakest indicators include 1.2.2 Internet domain registrations, 3.1.1 Secure Internet servers, and 3.2.2 ICT regulatory environment.

Table 3: Highlight of Strengths and Opportunities for Ethiopia

Strongest indicators	Rank	Weakest indicators	Rank
1.2.4 AI scientific publications	35	3.1.3 Online access to financial account	126
4.1.2 High-tech exports	40	1.3.4 Computer software spending	128
4.2.3 Income inequality	49	2.1.3 Use of virtual social networks	130
4.1.4 Domestic market size	55	4.3.1 SDG 3: Good Health and Well-Being	130
2.1.1 Mobile broadband internet traffic within the country	80	3.2.2 ICT regulatory environment	131
4.1.6 ICT services exports	80	3.1.1 Secure Internet servers	132
2.3.4 R&D expenditure by governments and higher education	82	1.2.2 Internet domain registrations	134
3.3.5 Rural gap in use of digital payments	90		
1.1.5 International Internet bandwidth	92		
4.3.3 SDG 5: Women's economic opportunity	96		

Note: For the full list of strengths and weaknesses, see At-A-Glance table.

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NRI 2023 At-A-Glance: Ethiopia

Network Readiness Index

Rank: 126 (out of 134)

Score: 27.36

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	106	27.58	C. Governance pillar	132	24.76
1st sub-pillar: Access	107	46.45	1st sub-pillar: Trust	133	10.22
2nd sub-pillar: Content	87	18.27	2nd sub-pillar: Regulation	130	32.40
3rd sub-pillar: Future Technologies	118	18.01	3rd sub-pillar: Inclusion	123	31.67
B. People pillar	127	17.80	D. Impact pillar	111	39.28
1st sub-pillar: Individuals	132	12.02	1st sub-pillar: Economy	71	26.61
2nd sub-pillar: Businesses	126	21.08	2nd sub-pillar: Quality of Life	112	49.07
3rd sub-pillar: Governments	113	20.29	3rd sub-pillar: SDG Contribution	126	42.17

The Network Readiness Index in detail

Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	106	27.58	C. Governance pillar	132	24.76
1st sub-pillar: Access	107	46.45	1st sub-pillar: Trust	133	10.22
1.1.1 Mobile tariffs	103	36.59	3.1.1 Secure Internet servers	132	13.34 ○
1.1.2 Handset prices	120	19.80	3.1.2 Cybersecurity	110	26.47
1.1.3 FTTH/building Internet subscriptions	105	11.53	3.1.3 Online access to financial account	126	0.00 ○
1.1.4 Population covered by at least a 3G mobile network	100	97.74	3.1.4 Internet shopping	125	1.06
1.1.5 International Internet bandwidth	92	66.60 ●	2nd sub-pillar: Regulation	130	32.40
1.1.6 Internet access in schools	NA	NA	3.2.1 Regulatory quality	122	28.64
2nd sub-pillar: Content	87	18.27	3.2.2 ICT regulatory environment	131	22.35 ○
1.2.1 GitHub commits	111	1.18	3.2.3 Regulation of emerging technologies	NA	NA
1.2.2 Internet domain registrations	134	0.00 ○	3.2.4 E-commerce legislation	121	33.33
1.2.3 Mobile apps development	94	56.82	3.2.5 Privacy protection by law content	107	45.26
1.2.4 AI scientific publications	35	15.09 ●	3rd sub-pillar: Inclusion	123	31.67
3rd sub-pillar: Future Technologies	118	18.01	3.3.1 E-Participation	125	17.45
1.3.1 Adoption of emerging technologies	113	25.79	3.3.2 Socioeconomic gap in use of digital payments	119	38.94
1.3.2 Investment in emerging technologies	102	28.25	3.3.3 Availability of local online content	112	30.53

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Indicator	Rank	Score	Indicator	Rank	Score
1.3.3 Robot density	NA	NA	3.3.4 Gender gap in Internet use	102	21.26
1.3.4 Computer software spending	128	0.00	3.3.5 Rural gap in use of digital payments	90	50.20
B. People pillar	127	17.80	D. Impact pillar	111	39.28
<i>1st sub-pillar: Individuals</i>	132	12.02	<i>1st sub-pillar: Economy</i>	71	26.61
2.1.1 Mobile broadband internet traffic within the country	80	6.38	4.1.1 High-tech and medium-high-tech manufacturing	79	15.25
2.1.2 ICT skills in the education system	NA	NA	4.1.2 High-tech exports	40	23.51
2.1.3 Use of virtual social networks	130	2.35	4.1.3 PCT patent applications	NA	NA
2.1.4 Tertiary enrollment	111	5.20	4.1.4 Domestic market size	55	56.64
2.1.5 Adult literacy rate	101	34.15	4.1.5 Prevalence of gig economy	96	27.91
2.1.6 AI talent concentration	NA	NA	4.1.6 ICT services exports	80	9.72
<i>2nd sub-pillar: Businesses</i>	126	21.08	<i>2nd sub-pillar: Quality of Life</i>	112	49.07
2.2.1 Firms with website	90	29.23	4.2.1 Happiness	120	23.73
2.2.2 GERD financed by business enterprise	90	1.87	4.2.2 Freedom to make life choices	114	49.78
2.2.3 Knowledge intensive employment	121	2.68	4.2.3 Income inequality	49	70.35
2.2.4 Annual investment in telecommunication services	107	71.49	4.2.4 Healthy life expectancy at birth	104	52.43
2.2.5 GERD performed by business enterprise	84	0.14	<i>3rd sub-pillar: SDG Contribution</i>	126	42.17
<i>3rd sub-pillar: Governments</i>	113	20.29	4.3.1 SDG 3: Good Health and Well-Being	130	16.26
2.3.1 Government online services	117	30.70	4.3.2 SDG 4: Quality Education	NA	NA
2.3.2 Publication and use of open data	77	16.18	4.3.3 SDG 5: Women's economic opportunity	96	67.26
2.3.3 Government promotion of investment in emerging tech	92	29.51	4.3.4 SDG 7: Affordable and Clean Energy	123	42.99
2.3.4 R&D expenditure by governments and higher education	82	4.76	4.3.5 SDG 11: Sustainable Cities and Communities	108	42.15

NOTE: ● a strength and ○ a weakness.

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