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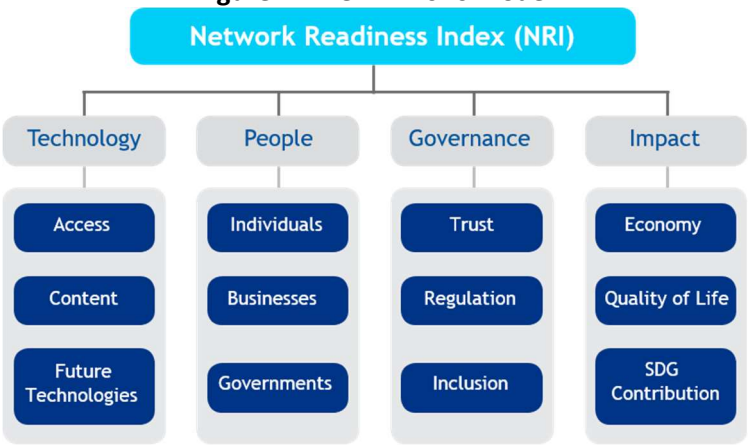
Network Readiness Index 2020 Jamaica

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 2020 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 60 variables.

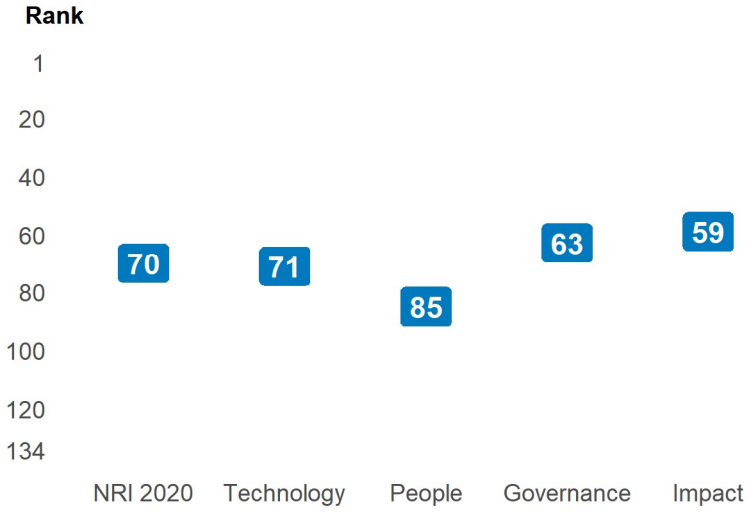
Figure 1: The NRI 2020 model



Global NRI position of Jamaica

Jamaica ranks 70th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Impact. The greatest scope for improvement, meanwhile, concerns People.

Figure 2: Jamaica global ranking, overall and by pillar



Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Jamaica relate to SDG Contribution, Quality of Life and Future Technologies, among others (Table 1). More could be done, though, to improve the economy's performances in the Governments, Individuals and Economy sub-pillars.

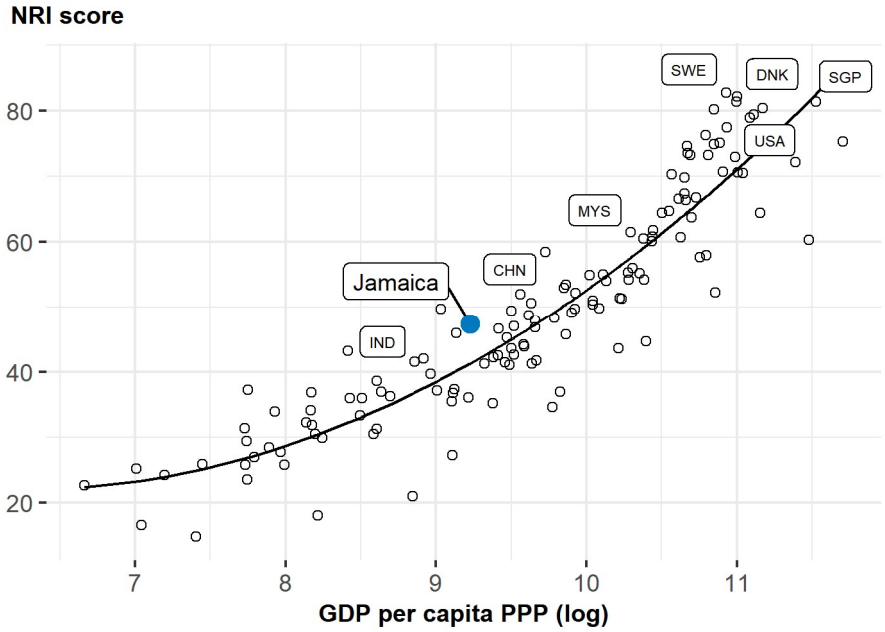
Table 1: Jamaica rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
SDG Contribution	43	Businesses	71
Quality of Life	48	Regulation	71
Future Technologies	64	Content	85
Inclusion	64	Governments	89
Access	66	Individuals	92
Trust	67	Economy	98

NRI score and income

Figure 3 shows the position of Jamaica 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, Jamaica is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

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



Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Jamaica belongs to the group of upper-middle-income countries, where the best performer is Malaysia (MYS). The top performer of its region-The Americas-is United States (USA).

Performance against its income group and region

Upper-middle-income countries

Jamaica is ranked 20th in the group of upper-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in three of the four pillars: technology, governance and impact. At the sub-pillar level, it outperforms upper-middle-income countries in seven of the twelve sub-pillars: Access, Future Technologies, Trust, Regulation, Inclusion, Quality of Life and SDG Contribution.

The Americas

Jamaica is ranked 9th within The Americas (Figure 4, right panel). It has a score above the regional average in three of the four pillars: technology, governance and impact. With regard to sub-pillars, it outperforms the average in The Americas in six of the twelve sub-pillars: Access, Future Technologies, Trust, Inclusion, Quality of Life and SDG Contribution.

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

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

Dimension	Jamaica	Upper-middle-income countries	The Americas
NRI	47.36	47.39	47.67
Technology	38.48	38.42	38.26
People	40.06	46.66	45.24
Governance	57.11	54.31	54.59
Impact	53.77	50.17	52.61

Strongest and weakest indicators

The indicators where Jamaica performs particularly well include e-commerce legislation, Gender gap in Internet use, and Rural gap in use of digital payments (Table 3). By contrast, the economy's weakest indicators include Government online services, E-Participation, and High-tech exports.

Table 3: Top-ranked and bottom-ranked indicators of Jamaica

Strongest indicators	Rank	Weakest indicators	Rank
e-commerce legislation	1	Mobile apps development	91
Gender gap in Internet use	2	Labor productivity per employee	91
Rural gap in use of digital payments	9	Firms with website	93
Computer software spending	26	Cybersecurity	94
Internet access in schools	34	Secure Internet servers	96
SDG 5: Gender Equality	38	Legal framework's adaptability to emerging technologies	98
Publication and use of open data	42	Active mobile-broadband subscriptions	100
SDG 11: Sustainable Cities and Communities	49	High-tech exports	106
Freedom to make life choices	50	E-Participation	114
Healthy life expectancy at birth	53	Government online services	116

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NRI 2020 At-A-Glance: Jamaica

Network Readiness Index — Rank: 70 (out of 134) — Score: 47.36

Pillar/sub-pillar	Rank	Score
A. Technology pillar	71	38.48
1st sub-pillar: Access	66	64.01
2nd sub-pillar: Content	85	23.13
3rd sub-pillar: Future Technologies	64	28.30
B. People pillar	85	40.06
1st sub-pillar: Individuals	92	43.62
2nd sub-pillar: Businesses	71	40.70
3rd sub-pillar: Governments	89	35.85

Pillar/sub-pillar	Rank	Score
C. Governance pillar	63	57.11
1st sub-pillar: Trust	67	41.46
2nd sub-pillar: Regulation	71	64.92
3rd sub-pillar: Inclusion	64	64.95
D. Impact pillar	59	53.77
1st sub-pillar: Economy	98	17.49
2nd sub-pillar: Quality of Life	48	71.35
3rd sub-pillar: SDG Contribution	43	72.48

The Network Readiness Index in detail

Indicator	Rank	Score
A. Technology pillar	71	38.48
1st sub-pillar: Access	66	64.01
1.1.1 Mobile tariffs	73	59.04
1.1.2 Handset prices	71	42.46
1.1.3 Internet access	78	52.76
1.1.4 4G mobile network coverage	87	73.00
1.1.5 Fixed-broadband subscriptions	62	68.63
1.1.6 International Internet bandwidth	68	67.88
1.1.7 Internet access in schools	34	84.31
2nd sub-pillar: Content	85	23.13
1.2.1 GitHub commits	74	2.86
1.2.2 Wikipedia edits	80	35.20
1.2.3 Internet domain registrations	*	*
1.2.4 Mobile apps development	91	52.96
3rd sub-pillar: Future Technologies	64	28.30
1.3.1 Adoption of emerging technologies	75	43.00
1.3.2 Investment in emerging technologies	71	38.07
1.3.3 ICT PCT patent applications	82	0.00
1.3.4 Computer software spending	26	32.12
1.3.5 Robot density	NA	NA
B. People pillar	85	40.06
1st sub-pillar: Individuals	92	43.62
2.1.1 Internet users	88	54.04
2.1.2 Active mobile-broadband subscriptions	100	19.19
2.1.3 Use of virtual social networks	87	43.30
2.1.4 Tertiary enrollment	86	19.37
2.1.5 Adult literacy rate	68	84.71
2.1.6 ICT skills	88	41.12
2nd sub-pillar: Businesses	71	40.70
2.2.1 Firms with website	93	31.23
2.2.2 Ease of doing business	66	69.78
2.2.3 Professionals	74	21.07
2.2.4 Technicians and associate professionals	84	23.57
2.2.5 Business use of digital tools	69	57.87
2.2.6 R&D expenditure by businesses	NA	NA
3rd sub-pillar: Governments	89	35.85
2.3.1 Government online services	116	36.97
2.3.2 Publication and use of open data	42	36.95
2.3.3 Government promotion of investment in emerging tech	77	33.63
2.3.4 R&D expenditure by governments and higher education	NA	NA

Indicator	Rank	Score
C. Governance pillar	63	57.11
1st sub-pillar: Trust	67	41.46
3.1.1 Secure Internet servers	96	39.70
3.1.2 Cybersecurity	94	43.23
3.1.3 Online access to financial account	NA	NA
3.1.4 Internet shopping	NA	NA
2nd sub-pillar: Regulation	71	64.92
3.2.1 Regulatory quality	58	57.55
3.2.2 ICT regulatory environment	86	78.19
3.2.3 Legal framework's adaptability to emerging technologies	98	23.96
3.2.4 e-commerce legislation	1	100.00
3.2.5 Privacy protection by law content	NA	NA
3rd sub-pillar: Inclusion	64	64.95
3.3.1 E-Participation	114	34.56
3.3.2 Socioeconomic gap in use of digital payments	82	57.26
3.3.3 Availability of local online content	65	60.38
3.3.4 Gender gap in Internet use	2	92.90
3.3.5 Rural gap in use of digital payments	9	79.63
D. Impact pillar	59	53.77
1st sub-pillar: Economy	98	17.49
4.1.1 Medium and high-tech industry	81	23.77
4.1.2 High-tech exports	106	3.99
4.1.3 PCT patent applications	77	0.09
4.1.4 Labor productivity per employee	91	12.67
4.1.5 Prevalence of gig economy	56	46.94
2nd sub-pillar: Quality of Life	48	71.35
4.2.1 Happiness	64	62.83
4.2.2 Freedom to make life choices	50	82.57
4.2.3 Income inequality	NA	NA
4.2.4 Healthy life expectancy at birth	53	68.64
3rd sub-pillar: SDG Contribution	43	72.48
4.3.1 SDG 3: Good Health and Well-Being	88	60.66
4.3.2 SDG 4: Quality Education	NA	NA
4.3.3 SDG 5: Gender Equality	38	80.66
4.3.4 SDG 7: Affordable and Clean Energy	82	73.48
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* Confidential data

Sources

Berry, B. (2019). berryFunctions: Function Collection Related to Plotting and Hydrology. R package version 1.18.2. URL: https://CRAN.R-project.org/package=berryFunctions

Dutta, S., & Lanvin, B. (eds.) (2019). The Network Readiness Index 2019: Towards a Future-Ready Society. Washington DC: Portulans Institute.

Dutta, S., & Lanvin, B. (eds.) (2020). The Network Readiness Index 2020: Fostering Digital Transformation in a post-COVID Global Economy. Washington DC: Portulans Institute.

Gohel, D. (2019). officer: Manipulation of Microsoft Word and PowerPoint Documents. R package version 0.3.6. URL: https://CRAN.R-project.org/package=officer

Gohel, D. (2019). flextable: Functions for Tabular Reporting. R package version 0.5.6. URL: https://CRAN.R-project.org/package=flextable

Milton Bache, S. & Wickham, H. (2014). magrittr: A Forward-Pipe Operator for R. R package version 1.5. URL: https://CRAN.R-project.org/package=magrittr

Nakazawa, M. (2019). fmsb: Functions for Medical Statistics Book with some Demographic Data. R package version 0.7.0. URL: https://CRAN.R-project.org/package=fmsb

R Core Team (2018). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. URL: https://www.R-project.org/.

Slowikowski, K. (2019). ggrepel: Automatically Position Non-Overlapping Text Labels with 'ggplot2'. R package version 0.8.1. URL: https://CRAN.R-project.org/package=ggrepel

Wickham, H. (2007). Reshaping Data with the reshape Package. Journal of Statistical Software, 21(12), 1-20. URL: http://www.jstatsoft.org/v21/i12/.

Wickham, H. (2016). ggplot2: Elegant Graphics for Data Analysis. Springer-Verlag. New York.

Wickham et al., (2019). Welcome to the tidyverse. Journal of Open Source Software, 4(43), 1686, URL: https://doi.org/10.21105/joss.01686