

# DIGITALIZATION AND DISRUPTIVE TECHNOLOGIES IN MIDDLE EAST NORTH AFRICA (MENA) AND SUB- SAHARAN AFRICA (SSA) REGIONS

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# The Report

- revolves around the theme of digitalization and DTs in the two regions (SSA and MENA).
- simply answers what are the determinants of adopting digitalization and what are the effects of adopting digitalization in the two regions.
- is a synthesis report based on some specific country and regional studies.

# Definition and scope of digitalization used in the papers

- No unified definition used.
- Some used very narrow definition and some adopted a broad one.
- They used digitalization proxies depending on data availability and the nature of the sector studied

**What is  
digitalization ?**



# Determinants of adopting new technologies (readiness)

## □ ***Human Capital***

Both regions, to different extents, lack the human skills needed to allow them to reap the benefits of digitalization.

## □ ***Gender***

No clear cut answer was provided regarding the role of gender as determinant.

# Determinants of adopting new technologies (readiness)

- ❑ ***Status of national data infrastructure***
  - Modest in both regions
  - Includes other aspects as electricity and cyberspace
  - Differs within the country itself
  - Need to pay attention to differentiate between coverage and usage
  - *Business models and innovation*



# Network Readiness Index Overall Scores for 2022 in Selected Countries in MENA and SSA Regions in an ascending order

Countries	Scores
Israel	72.20
United Arab Emirates	65.64
Saudi Arabia	61.09
Qatar	57.87
Oman	54.72
Bahrain	54.34
Kuwait	51.04
South Africa	48.90
Jordan	48.31
Egypt, Arab Rep.	47.76
Kenya	46.90
Morocco	46.50
Iran, Islamic Rep.	46.07
Tunisia	45.46
Lebanon	42.30
Cabo Verde	41.68
Algeria	39.48
Rwanda	39.48
Botswana	37.72
Nigeria	36.67
Benin	36.05
Cameroon	33.72
Malawi	31.30
Burkina Faso	29.76
Burundi	21.11

Source: <https://networkreadinessindex.org/>

# Digital Adoption Index Overall Scores for 2016 in Selected Countries in MENA and Sub-Saharan Africa Regions in an ascending order

Countries	Scores
United Arab Emirates	0.822969
Israel	0.787858
Bahrain	0.786019
Qatar	0.707999
Saudi Arabia	0.669529
Oman	0.653574
South Africa	0.638084
Kuwait	0.634642
Lebanon	0.572988
Tunisia	0.555916
Morocco	0.55537
Jordan	0.549759
Egypt, Arab Rep.	0.525825
Iran, Islamic Rep.	0.509145
Botswana	0.472318
Kenya	0.454194
Cabo Verde	0.434231
Algeria	0.431103
Rwanda	0.427687
Nigeria	0.418749
Angola	0.334767
Syrian Arab Republic	0.317156
Iraq	0.303694
Cameroon	0.295594
Burundi	0.261421
Malawi	0.258931
Yemen, Rep.	0.255398
Burkina Faso	0.236155
Benin	0.224117
Central African Republic	0.147107

Source: <https://www.worldbank.org/en/publication/wdr2016/Digital-Adoption-Index#:~:text=The%20DAI%20is%20a%20worldwi>

## ***Institutional and regulatory infrastructure***

- The country studies identified that it plays a role both in MENA and SSA.

## ***Market structure***

- The country studies identified that it plays a role both in MENA and SSA.

## ***Physical infrastructure and an enabling environment (associated with geography and location)***

- The country studies identified that it matters a lot.

## ***Firm's characteristics***

- Younger are more often eager to adopt technology when compared to old ones.



# Effects (Implications)

## On SSA

- Individual country case studies as well as the regional study found that digitalization is likely to have an overall impact on SSA economies, whether in terms of economic growth, creating jobs and employment (for skilled and unskilled), international trade, or sectoral performance.
- There are major differences identified where some of the sectors in different countries might not have benefited as the industrial and financial sectors in Ethiopia, or agriculture sector in Kenya. Moreover, the differentiation in the impact of digitalization based on the skilled/unskilled dichotomy differs by country, sector, and methodology applied

# Effects (Implications) On MENA

- Positive as well
- *Comparison between MENA and SSA*
- Fear of de Melo and Solleder (2022)

# Conclusion and Policy Implications (lessons learnt)

- Questioning national strategies
- De Melo and Solleder(2022) versus country case studies
- Dichotomy of macro indicators and micro foundations
- Importance of focusing on servicification
- Expected gains should be treated with caution



**Thank you**