

**Launch of South-South Ideas Paper on Digital Transformation  
Economic Research Forum (ERF)' Research Project**

**"South-South Global Thinkers- A Global  
Coalition of Think Tank Networks For SSC"**

**(2022 GSSD Expo Side-event (Virtual), September 13, 2022)**

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**Research Paper:**

**South-South Cooperation, technology and digital  
transformation: the case of Arab countries**

**By**

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# Outline

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- **Aims of the research.**
- **Stylised facts about the Arab region.**
- **Relevance and contribution of the research.**
- **Research methodology.**
- **Main Results of the research.**
- **Conclusion and Policy Recommendations.**

# Aims of the Research

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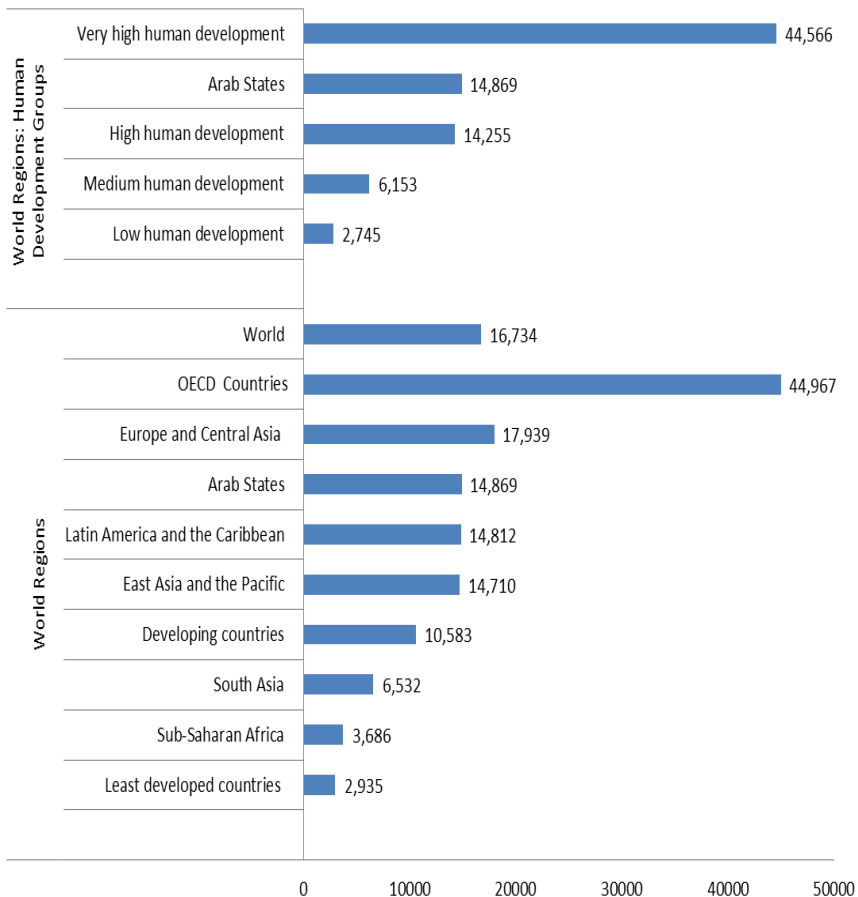
Explain the use of information and communication technologies (ICTs) and digital transformation in the Global South, mainly in the Arab countries. In particular it aims to:

- (1) explain potential opportunities and positive impacts of ICT and digital transformation in the Arab countries.
- (2) investigate the challenges and negative impact and the digital divide related to the use of ICT in the Arab countries.
- (3) provide policy recommendations to strengthen South-South cooperation including Arab countries cooperation in addressing the digital transformation, digital economy and digital divide.

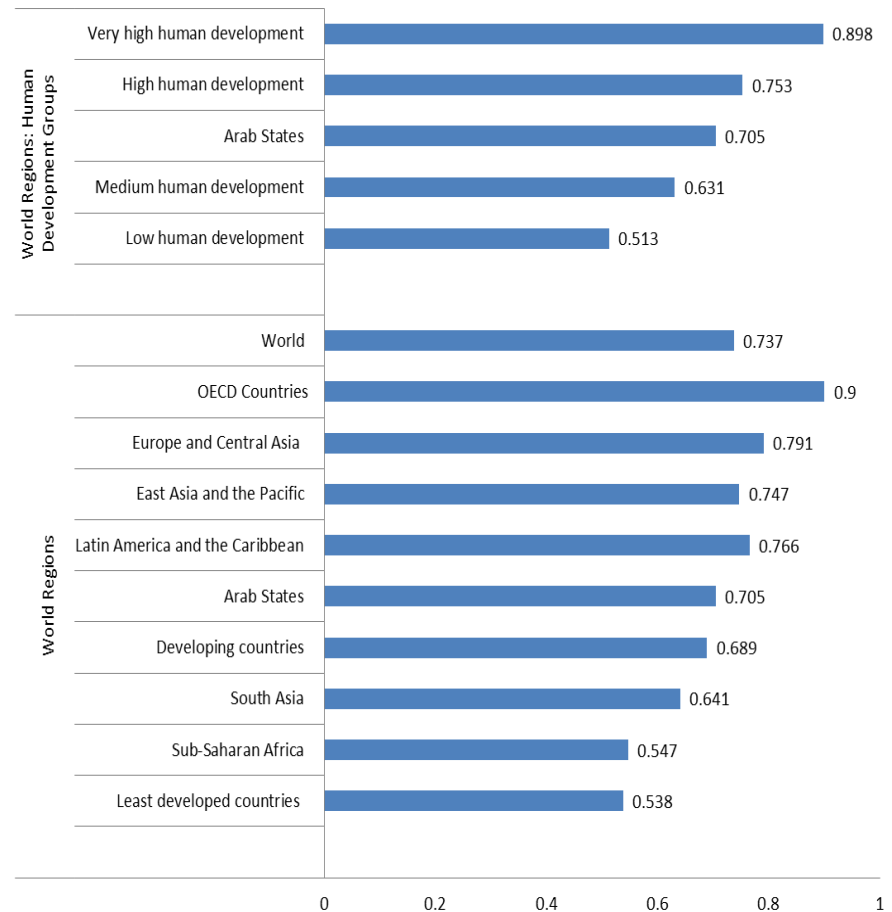
# Stylised facts about the Arab region (1)

- ❑ The Arab region is lagging behind the World regions in terms of standard of economic development (GDP per capita) and human development index

Gross national income (GNI) (2017 PPP \$) (2019)



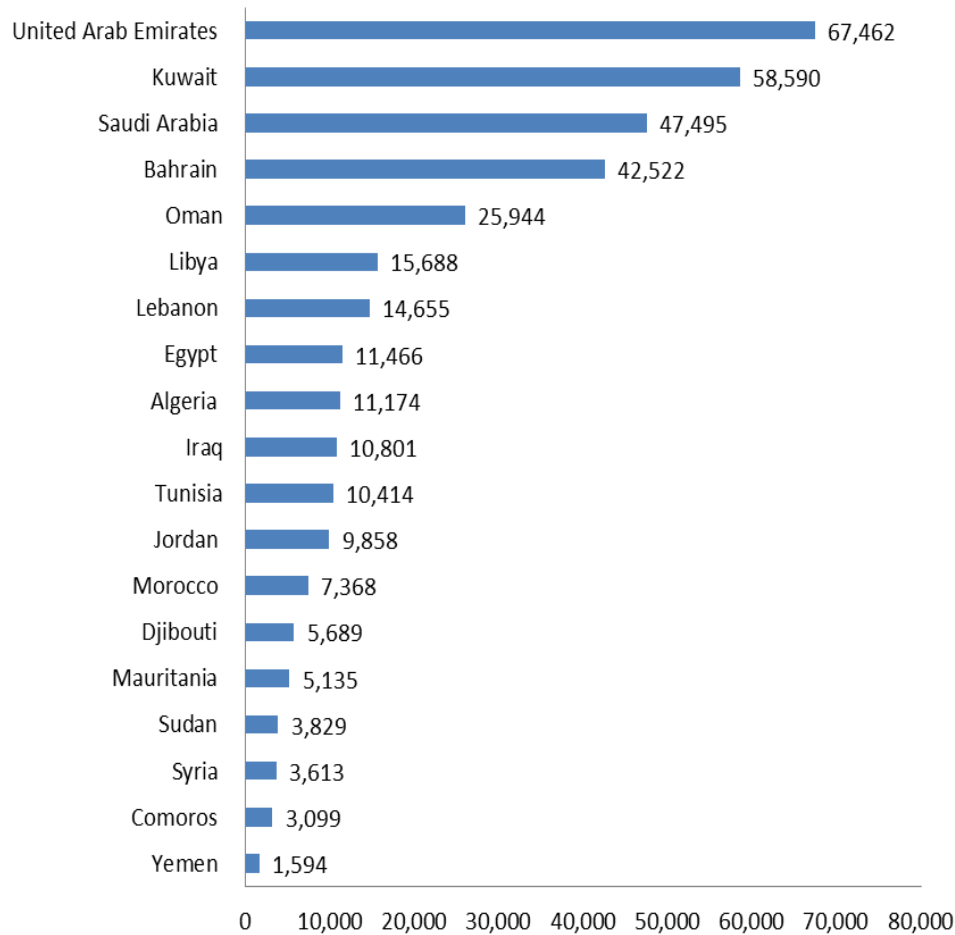
Human Development Index (HDI) (Value) (2019)



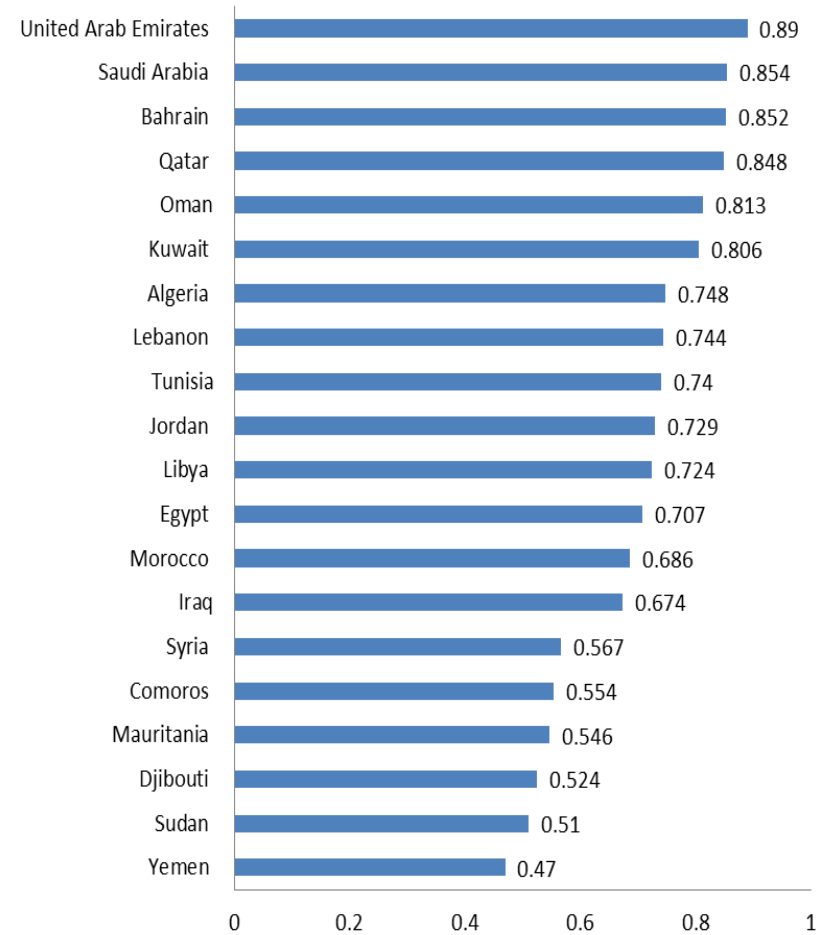
# Stylised facts about the Arab region (2)

- Regional disparity within the Arab countries in terms of standard of economic development (GDP per capita) and human development index.

Gross national income (GNI) (2017 PPP \$) (2019)



Human Development Index (HDI) Value (2019)



# Relevance and contribution of the research

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- ❑ Comprehensive and in-depth investigation of the impact of the use of ICT on digitalization, digital transformation, and digital divide in the Arab region.
- ❑ Fills the gap in the Arab literature by discussing the impacts of ICT on:
  - digitalization,
  - digital transformation, and
  - digital divide
- ❑ A novel element of our analysis is that we investigate the positive and negative impacts and opportunities and challenges related to utilization of ICT to
  - support the digital transformation in the Arab countries,
  - manage the digital divide in the Arab countries, and
  - manage the Coronavirus (COVID-19) pandemic in the Arab region.
- ❑ Comparative analysis explains the variation in the use and adoption of digital technologies to foster digital transformation and reduce the digital divides across Arab countries in three groups defined by income level.
- ❑ Use a new secondary data obtained from the World Bank and the International Telecommunication Union (ITU) World Telecommunication/ ICT Indicators database to discuss the impact of the use of ICT on digitalization, digital transformation, and digital divide in the Arab region.
- ❑ From policy perspective provides useful policy recommendations to support digitalization and digital transformation and to manage the digital divide.

# Research methodology

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- ❑ Uses recent Secondary data: (Arab region 2000-2021).
- ❑ Uses both the descriptive and comparative approaches,
- ❑ Uses new secondary data obtained from the World Bank and the International Telecommunication Union (ITU) World Telecommunication/ ICT Indicators database.
- ❑ Uses the data from the World Development Report (2016)
  - The Digital Adoption Index (DAI),
  - The Euler Hermes Enabling Digitalization Index (EDI) (2019), and
  - The Digital Index (DiGiX) (2020).
- ❑ Uses the International Telecommunication Union (ITU) World Telecommunication/ ICT Indicators database to:
  - Discuss the use of ICT and digitalization, and digital transformation in the Arab region,
  - Explain the use of ICT on the digital divide in the Arab region,
  - Provide insights to manage the impacts of the use of ICT on the digital divide in the Arab region.

# Main Results of the Research (1)

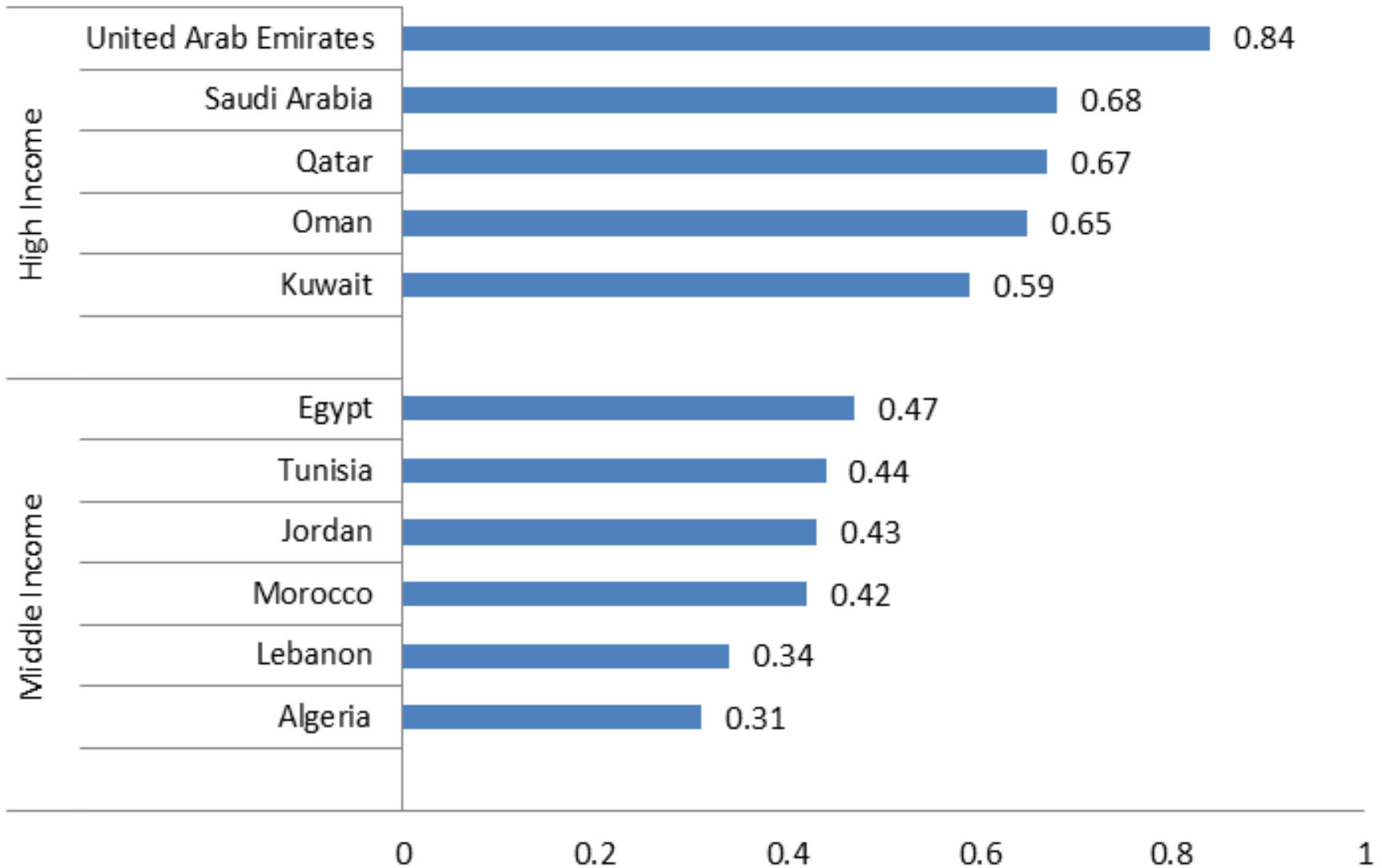
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- ❑ Use of ICT accelerated the digital transformation in some Arab countries.
- ❑ Opportunities and challenges related to utilization of ICT to:
  - support the digital transformation in the Arab countries,
  - manage the digital divide in the Arab countries, and
  - manage the Coronavirus (COVID-19) pandemic in the Arab region,
- ❑ ICT opportunity for supporting digital transformation in the Arab countries that demonstrated from several digital indices:
  - Digital Adoption Index (DAI),
  - Enabling Digitalization Index (EDI) (2019), and
  - The digital index (DiGiX) (2020).
- ❑ Substantial discrepancy in Arab countries in digital transformation (between Arab Gulf high-income and Arab middle-income and low-income countries):
  - Digital Adoption Index (DAI),
  - Enabling Digitalization Index (EDI) (2019), and
  - The digital index (DiGiX) (2020).
- ❑ Substantial discrepancy in digital transformation between the Arab countries due to substantial discrepancy in:
  - economic development, income level, and
  - human development in the Arab countries.
- ❑ Rich Arab Gulf countries have better opportunities for digital transformation
- ❑ Poor Arab countries have poor opportunities for digital transformation.



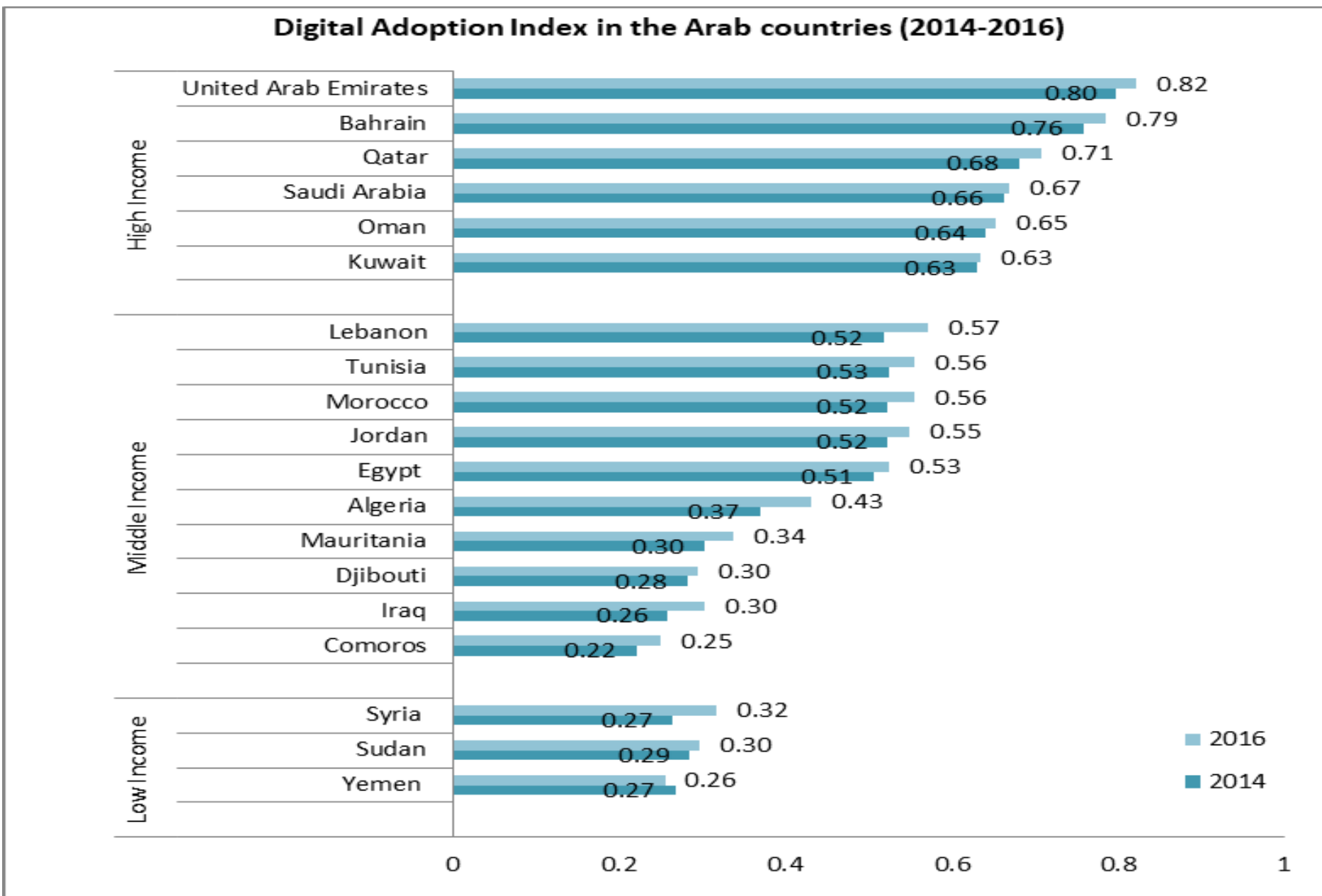
Figure 1 - The digital index (DIGIX 2020) (score value) in the Arab region (2020)

### The Digital Index (DiGiX 2020) Score in the Arab countries (2020)



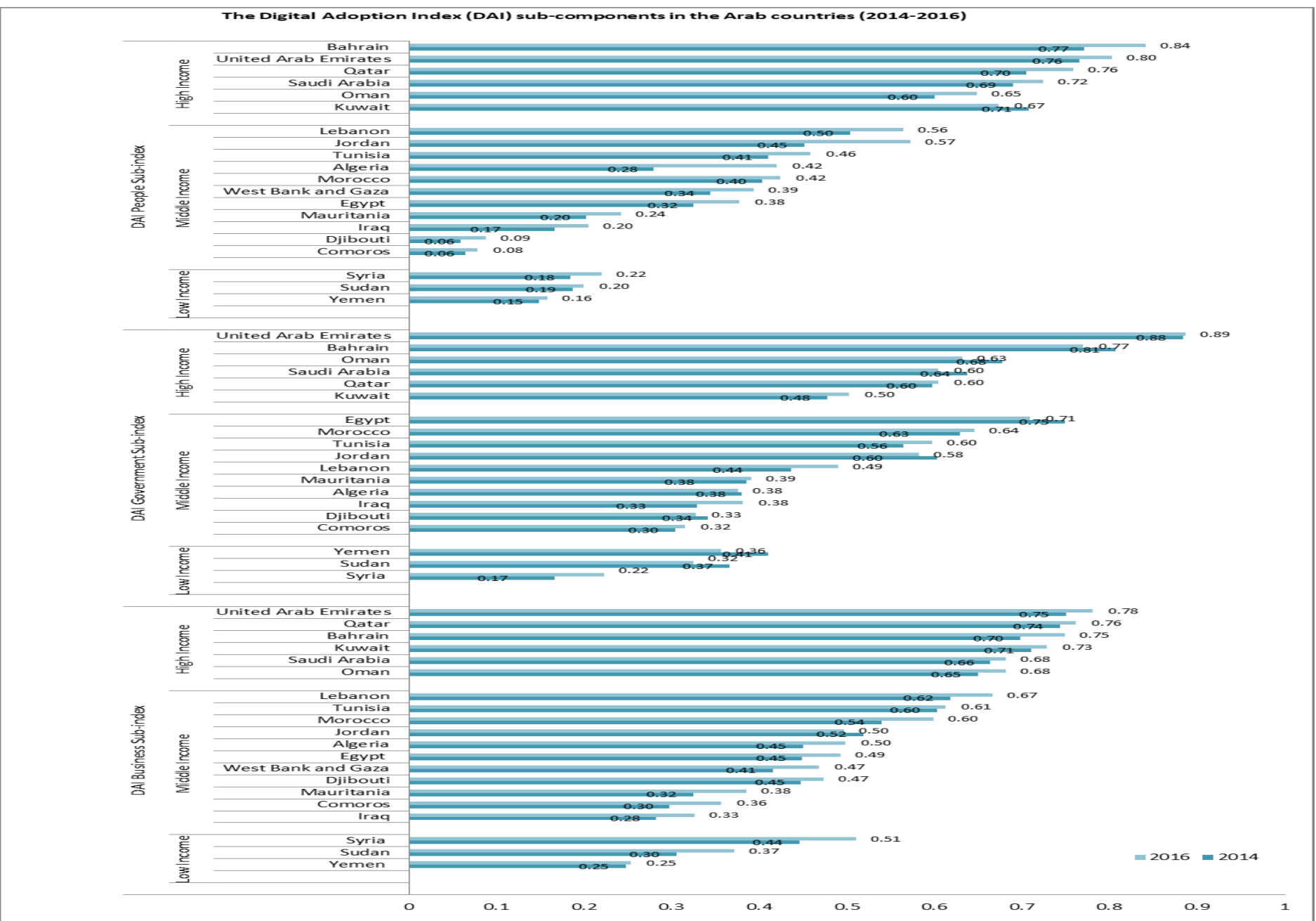
Source: Adapted from the Digital Index (DiGiX) (2020) (Accessed 30 August 2021)

Figure 2 - The digital adoption index in the Arab region (2014-2016)



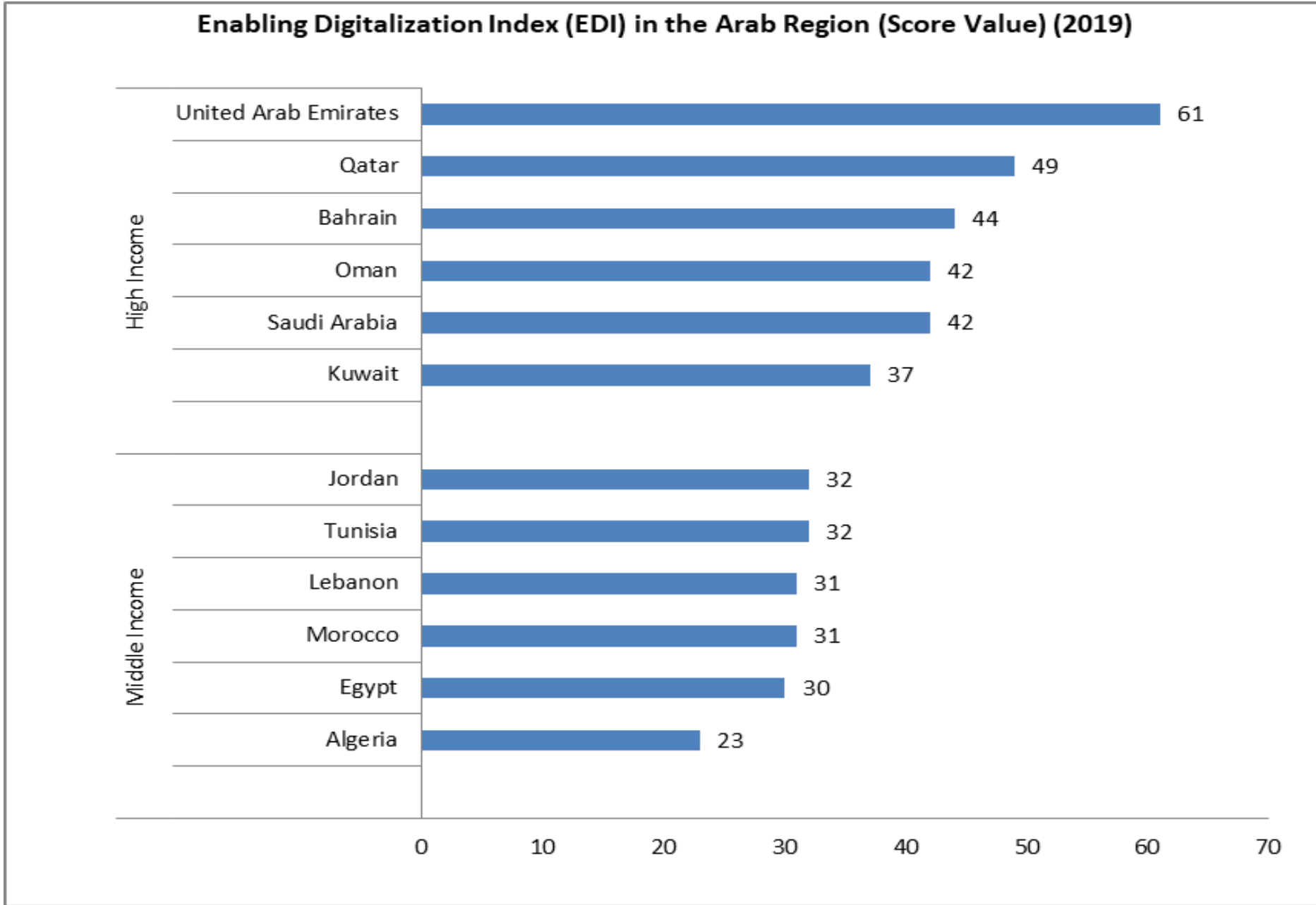
Source: Adapted from the World Development Report (2016) Digital Adoption Index (DAI) (Accessed 30 August 2021).

Figure 3 - The digital Adoption Index (DAI) sub-components in the Arab countries (2014-2016)



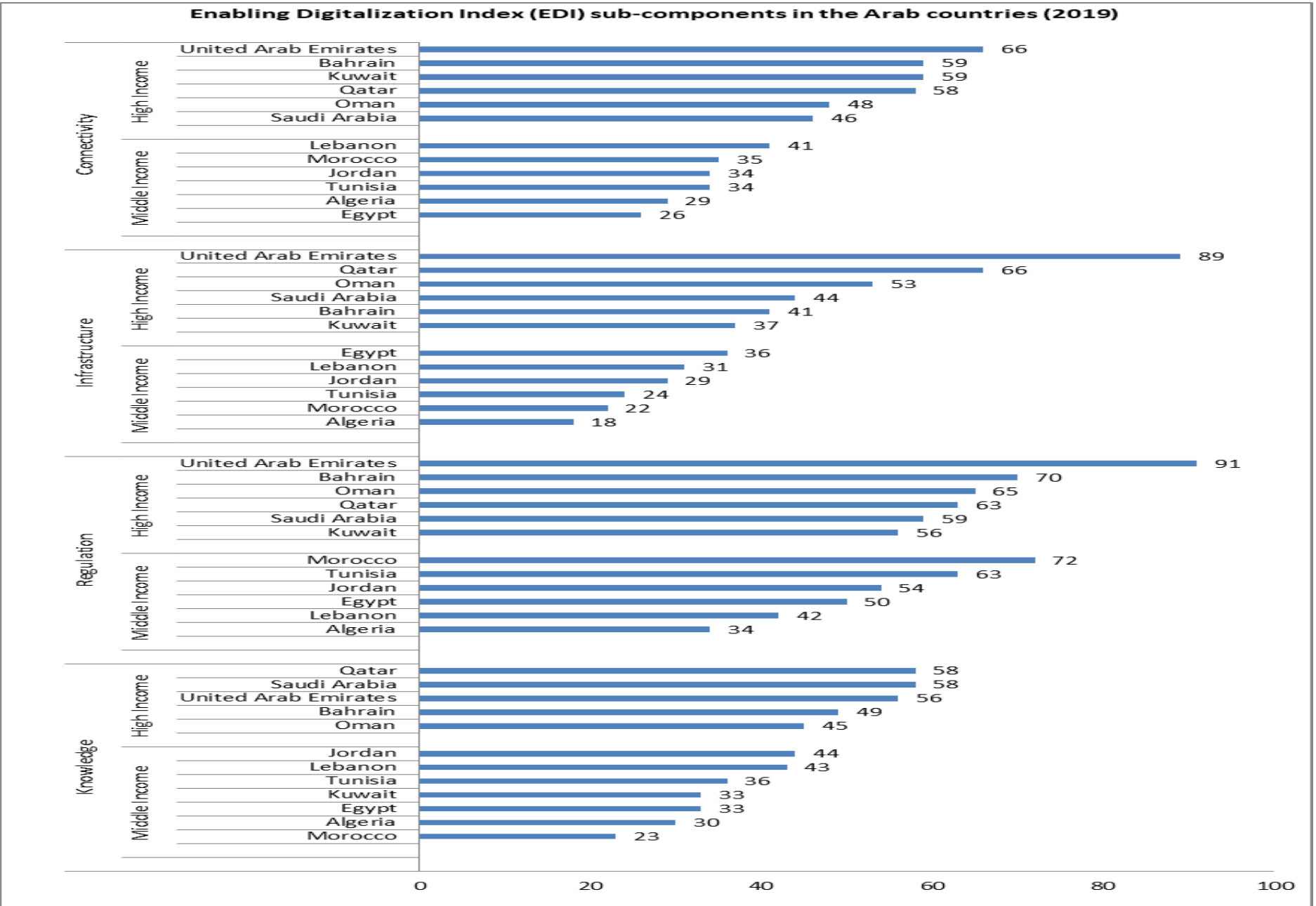
Source: Adapted from the World Development Report (2016) Digital Adoption Index (DAI) (Accessed 30 August 2021).

Figure 4 - The Enabling Digitalization Index (EDI) (score value) in the Arab region (2019)



Source: Adapted from the Euler Hermes Enabling Digitalization Index (EDI) (2019) (Accessed 30 August 2021).

Figure 5 - The Enabling Digitalization Index (EDI) sub-components in the Arab region (2019)



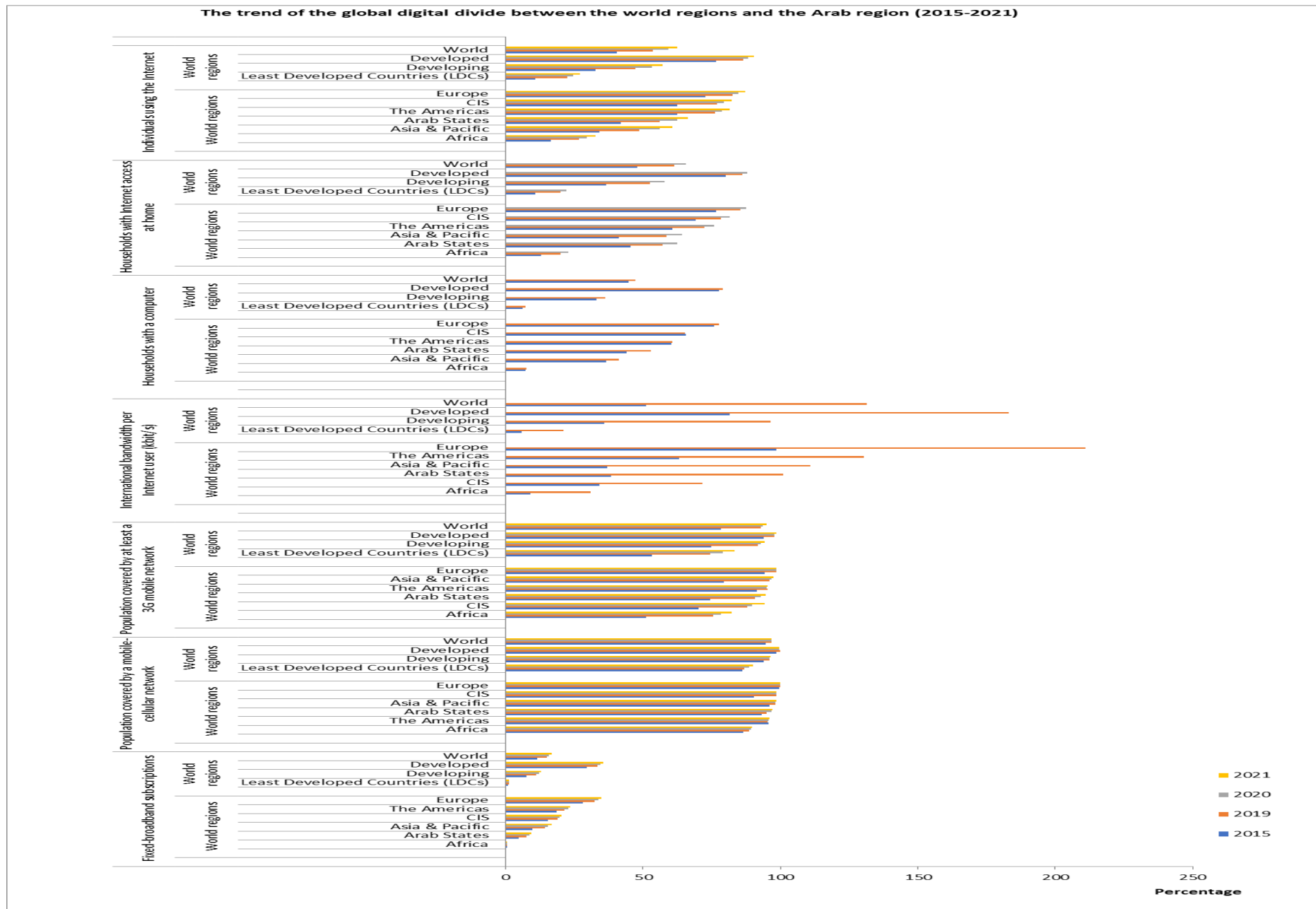
Source: Adapted from the Euler Hermes Enabling Digitalization Index (EDI) (2019) (Accessed 30 August 2021).

# Main Results of the Research (2)

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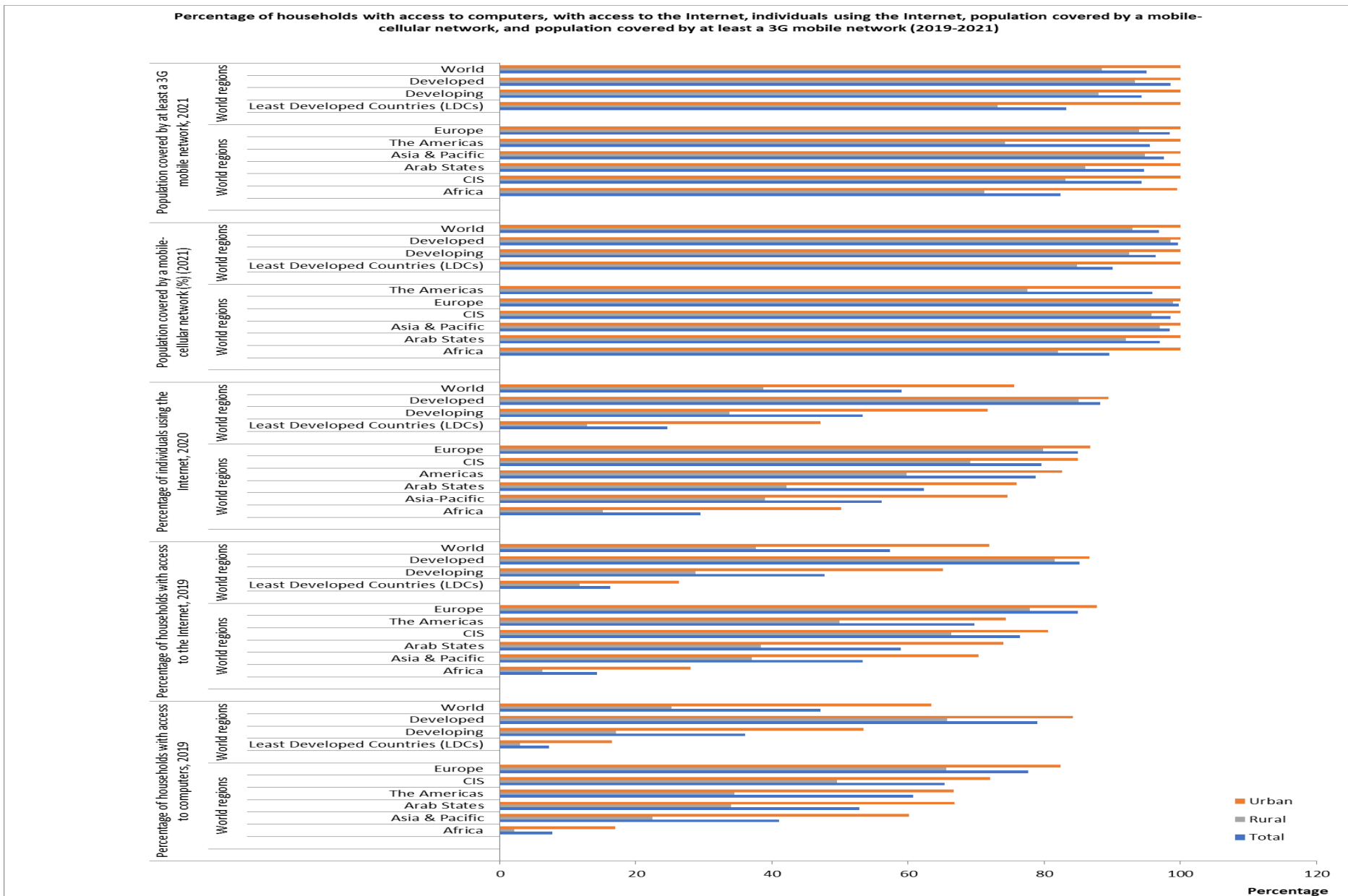
- ❑ Increasing trend and rapid diffusion of Information and Communication Technology (ICT) indicators in Arab region and world regions (2015-2021).
- ❑ The incidence of the global digital divide in ICT indicators between the Arab region and the world regions (2015-2021).
- ❑ The increasing trend and widening incidence of the digital divide in ICT indicators between the Arab region and the world regions (2015-2021).
- ❑ Concentration of ICT diffusion in Arab Gulf countries and wide disparities between these and other Arab countries in ICT use defined by:
  - percentage of population accessing the internet, and
  - internet subscribers and users.
- ❑ Substantial discrepancy in ICT indicators between the Arab countries, substantial digital divide between the Arab countries due to the substantial discrepancy in:
  - economic development, income level, and
  - human development.

**Figure 6- The trend of the global digital divide between the world regions and the Arab region (2015-2021)**



Source: Adapted from International Telecommunication Union (ITU) World Telecommunication/ICT Indicators database (2021) (October 2021 estimate) (Accessed 06 December 2021)

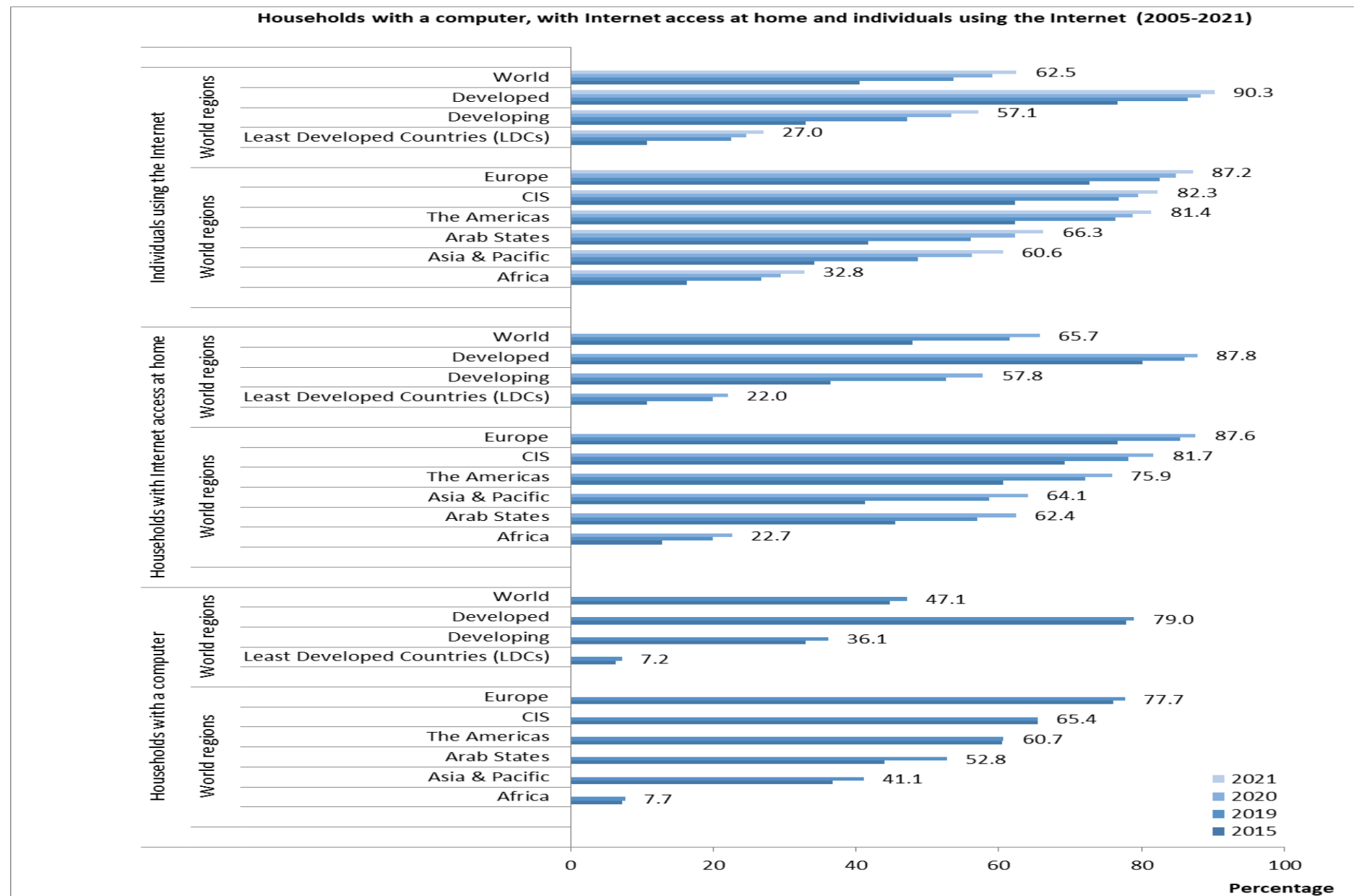
**Figure 7- Percentage of households with access to computers, with access to the Internet, individuals using the Internet, population covered by a mobile-cellular network, and population covered by at least a 3G mobile network (%) by urban/rural area (2019-2021)**



Source: Adapted from International Telecommunication Union (ITU) World Telecommunication/ICT Indicators database (2021) (October 2021 estimate) (Accessed 06 December 2021)

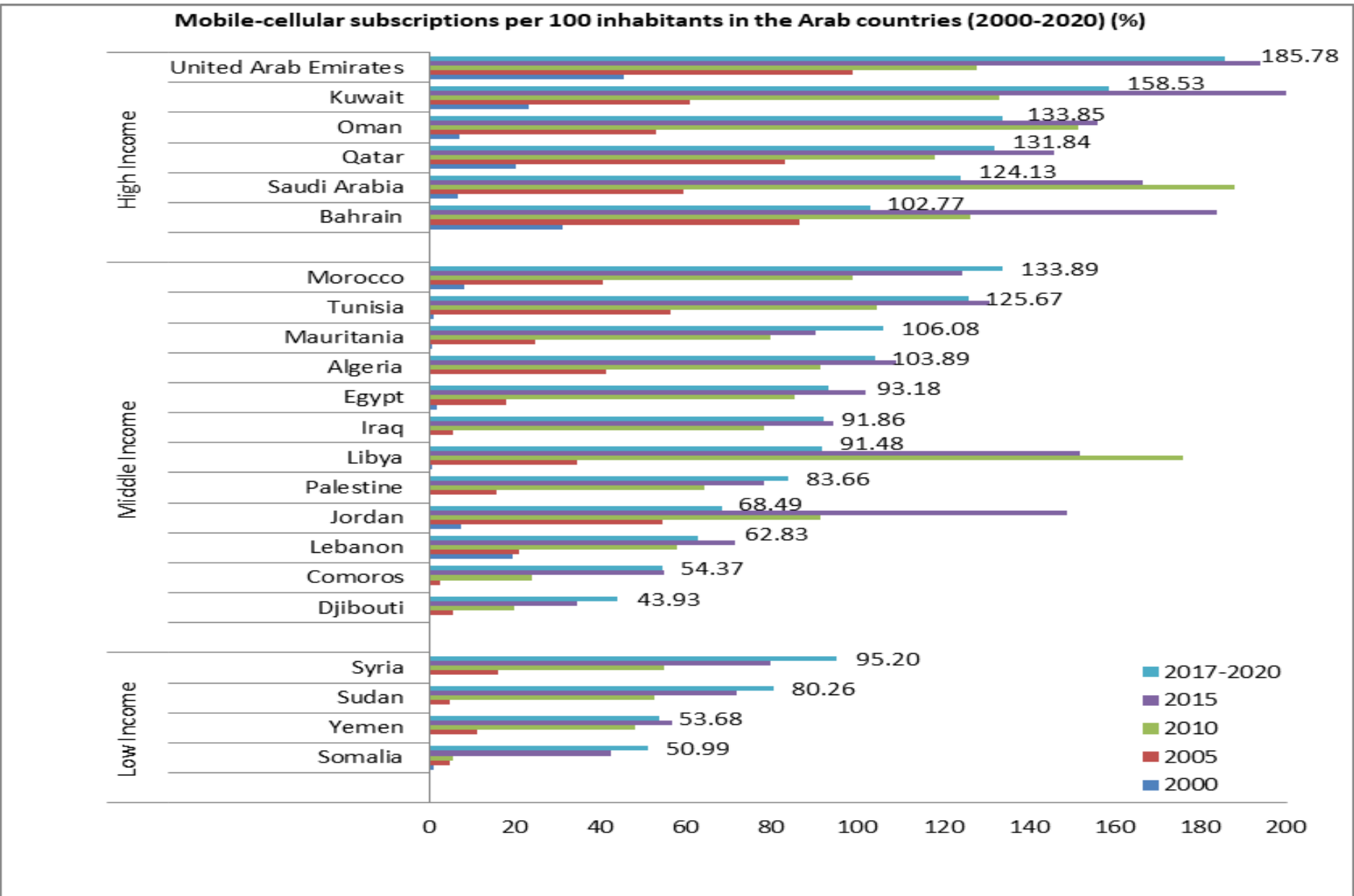


**Figure 8 - The trend of the global digital divide between the world regions and the Arab region: households with a computer, households with Internet access at home and individuals using the Internet (2015-2021)**



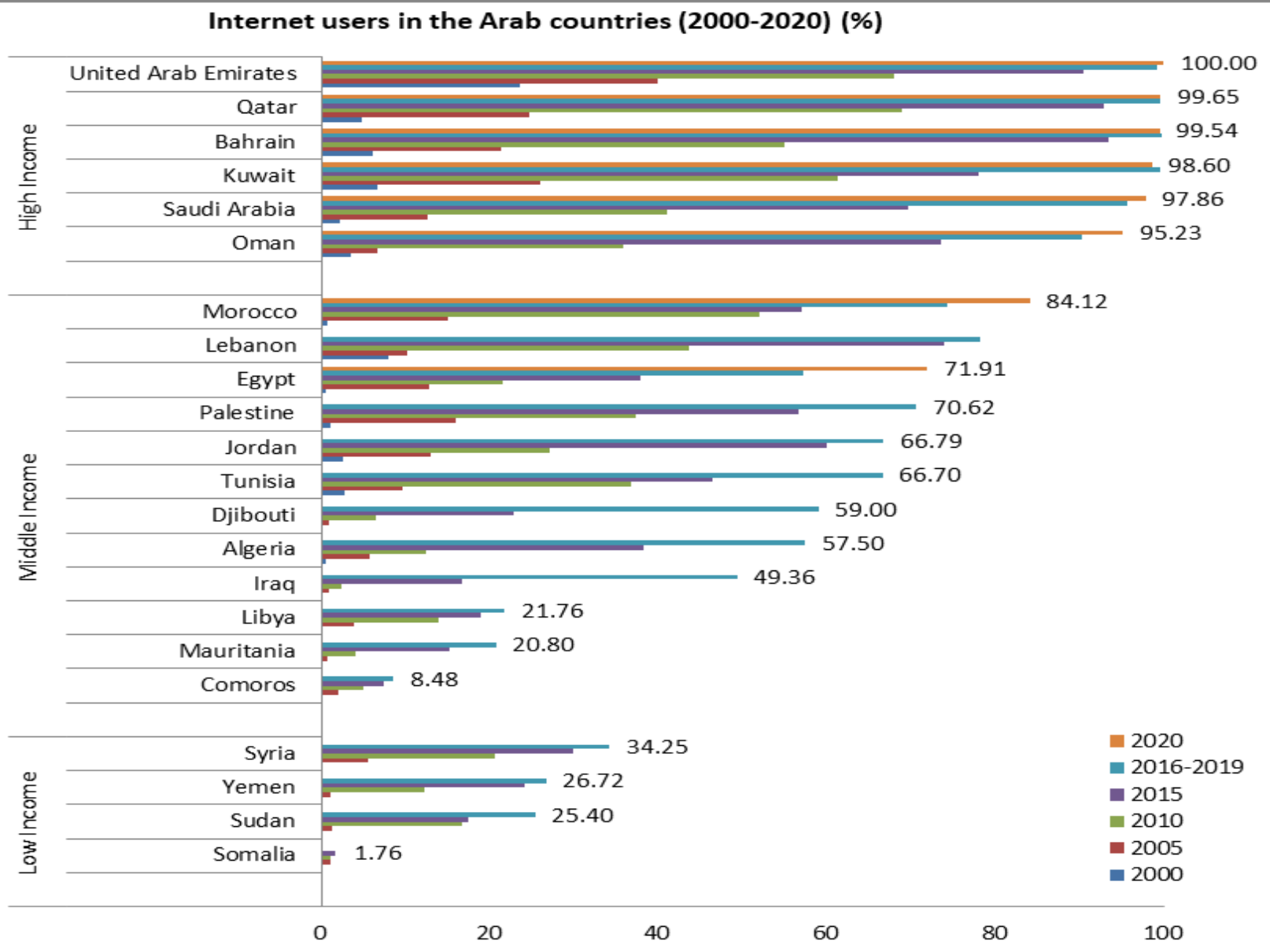
Source: Adapted from International Telecommunication Union (ITU) World Telecommunication/ICT Indicators database (2021) (October 2021 estimate) (Accessed 06 December 2021)

**Figure 9 - The digital divide within the Arab region: Mobile-cellular subscriptions per 100 inhabitants in the Arab countries (2000-2020) (%)**



Source: Adapted from International Telecommunication Union (ITU) World Telecommunication/ICT Indicators database (2021) (October 2021 estimate) (Accessed 06 December 2021)

Figure 10 - The digital divide within the Arab region: Internet users in the Arab countries (2000-2020) (%)



Source: Adapted from International Telecommunication Union (ITU) World Telecommunication/ICT Indicators database (2021) (October 2021 estimate) (Accessed 06 December 2021)

# Conclusion and Policy Recommendations

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- ❑ **ICT provides opportunities and challenges in the Arab countries:**
  - **ICT opportunities: support digital transformation in Arab countries.**
  - **ICT challenges: the incidence of digital divide in the Arab countries.**
- ❑ **Implementation of coherent and sound policies to:**
  - **supporting digital transformation in the Arab countries, and**
  - **reducing the digital divide between the Arab countries,**
- ❑ **Supporting digital transformation in the Arab countries by enhancing:**
  - **strengthening regulations, institutions, infrastructure, and connectivity, and**
  - **knowledge (education, human capital, skills, innovation capability, and R&D)**
- ❑ **Bridging the digital divide between Arab countries by enhancing:**
  - **Arab governments investment and spending on ICT,**
  - **public-private partnership in investment and provision of ICT services,**
  - **improvement of investment in ICT infrastructure, access, and use, and**
  - **ensuring equality of access and use of ICT.**
- ❑ **Supporting South-South cooperation including Arab-Arab cooperation in ICT:**
  - **to supporting the digital transformation in the Arab countries, and**
  - **to reducing the digital divide between the Arab countries.**

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**Comments are welcome,  
Thanks for Your Kind Attention**

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