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LEVERAGING DATA TO FOSTER DEVELOPMENT: WHERE DOES THE MENA REGION STAND?

Insights from the World
Development Report 2021

Countries in the Middle East and North Africa (MENA) region stand to substantially benefit from digital transformation. Greater data flows facilitated by the proliferation of broadband connectivity can serve as a driver for economic recovery and long-term growth of the private sector, modernization of public service delivery, and enhanced transparency. Examples in the region abound: the vibrant start-up ecosystem in the region has raised nearly US\$ 550 million in the first half of 2021¹, and governments in the region – notably Bahrain, Morocco, Saudi Arabia, and Tunisia – have provided access to critical public services digitally, such as e-learning platforms to ensure continuity of learning amid the pandemic.² However, disparities within and across countries in the region leave the poorest populations and countries most at risk of being left behind in the data revolution.

Harnessing the development potential of these growing volumes of data requires bridging critical gaps in the ecosystem supporting their creation and reuse. This ecosystem comprises data infrastructure policy, the legal and regulatory framework for data, the related economic policy implications, and institutions. The World Development Report 2021: Data for Better Lives argues that these diverse elements are effectively the building blocks of a social contract that seeks to deliver the potential value of data equitably while building trust through safeguards against harmful outcomes. The following sections of this regional brief explores each of these elements, reviewing the landscape of data governance in the region to identify opportunities that, if seized, could facilitate the region's pathway to a green, resilient, and inclusive recovery.

¹ <https://www.wamda.com/2021/07/mena-startups-raised-267-million-june-pushing-q2-investment-552-million>

² <https://blogs.worldbank.org/arabvoices/digital-transformation-time-covid-19-case-mena>



DATA INFRASTRUCTURE POLICY

The potential of data to generate social and economic value relies on an infrastructure for collecting, exchanging, storing, processing, and distributing data. The MENA region is characterized by stark differences in the availability of digital infrastructure: on average, over 93 percent of the population live within range of a mobile network, with significant coverage gaps confined to just two countries: Djibouti and Iran. Usage gaps – which refer to the share of the population that is within range of a mobile network, but not using the mobile internet – remain a much more significant issue

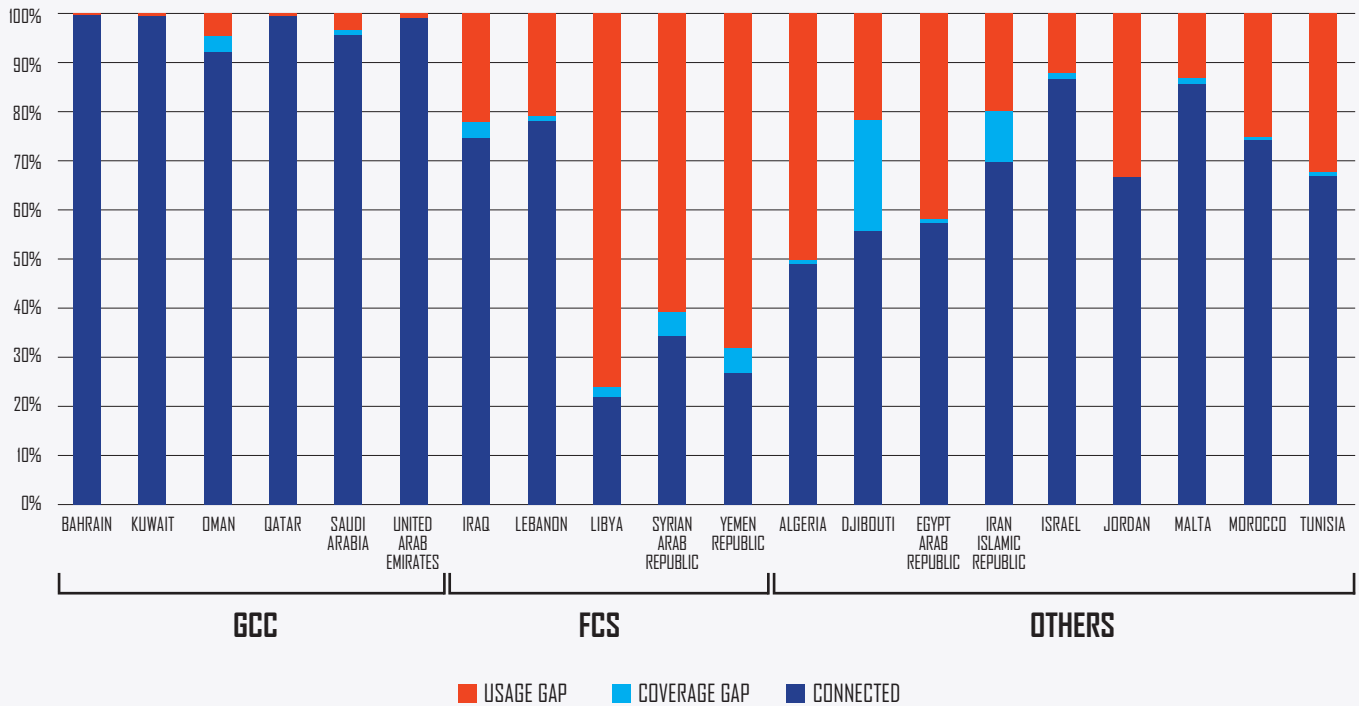
in about half of MENA countries, particularly the fragile states (Figure 1). The lack of affordability, poor digital skills, and the lack of relevant content are largely understood to be the key drivers of the usage gap, which often disadvantages the most economically and socially vulnerable populations within countries. MENA's ability to harness digital transformation will therefore be restricted without pursuit of demand-side policies to reduce the usage gap. These can take the form of schemes to enhance affordability, digital skills training, and the creation of locally relevant and local language content.

worldbank.org/digitaldevelopment





FIGURE 1: Coverage and Usage Gaps in the MENA Region



Source: ITU and GSMA (latest; 2019/2020 data)

Further, domestic data infrastructure to exchange data via internet exchange points (IXPs), store data (in carrier-neutral colocation data centers), and process data (on cloud platforms) are critical to maximizing the sharing and creative re-use of data. Countries in the MENA region have limited domestic data infrastructure except for those that are part of the Gulf Cooperation Council (GCC). Out of 21 countries in the region, only 10 have IXPs,

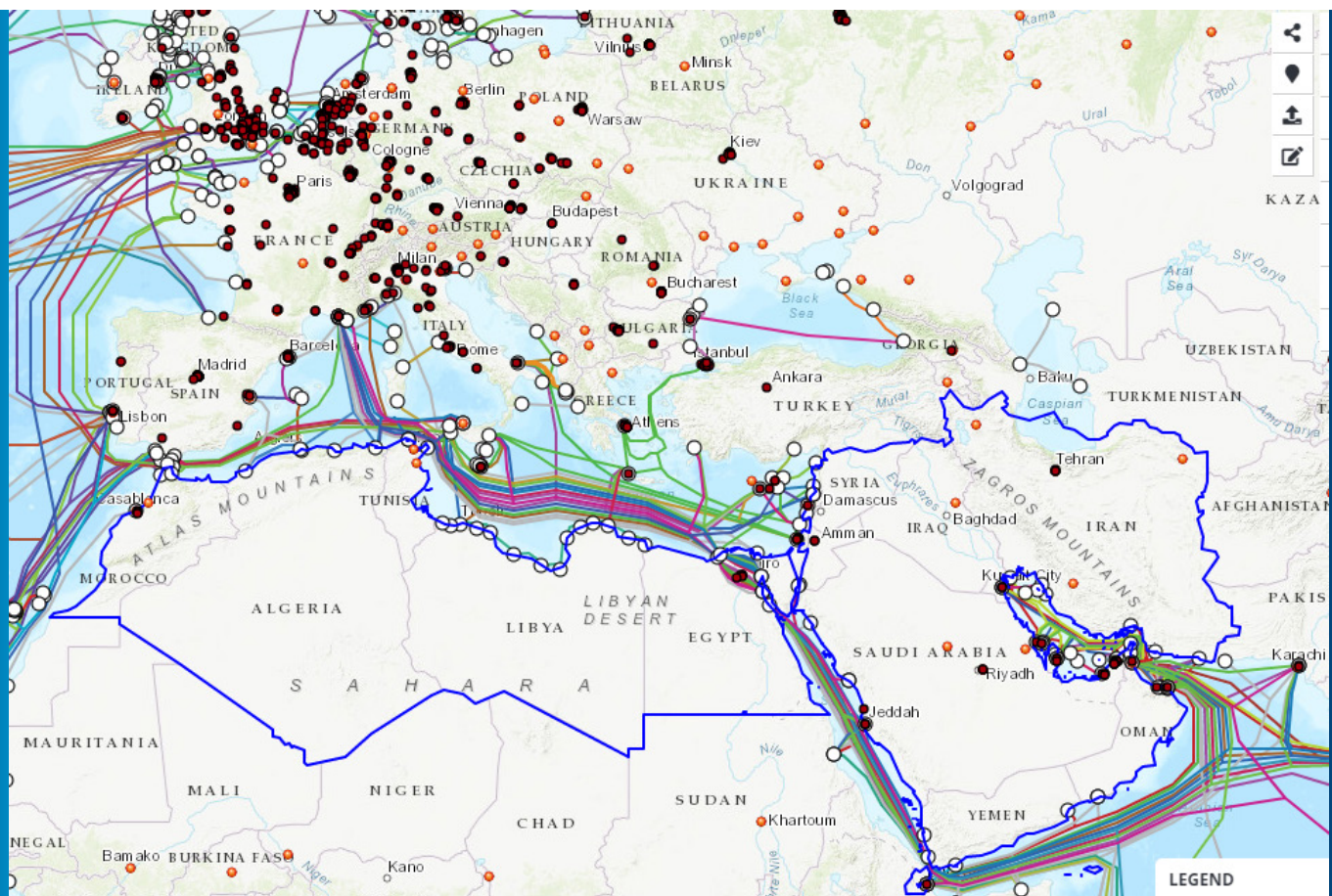
while 16 have colocation data centers, and only two (Bahrain and UAE) have cloud on-ramps (dedicated connections to the global cloud platforms). A country’s data infrastructure maturity can be envisioned as climbing a ladder: progressing from exchanging data overseas (Step 0), to establishing an IXP (Step 1), to attracting content providers and deploying data centers alongside IXPs that host a diverse group of participants (Step 2), to



establishing cloud on-ramps (Step 3). Most MENA countries land on Steps 0 or 2. It is also essential that the benefits of existing data infrastructure flow to end users: Djibouti in the region proves to be particularly instructive in this regard, as a country with highly advanced data infrastructure, yet a large

share of the population that remains unconnected, due to the lack of competition in the domestic market. The lack of domestic data infrastructure affects end-users adversely, owing to poor quality service at often high prices.

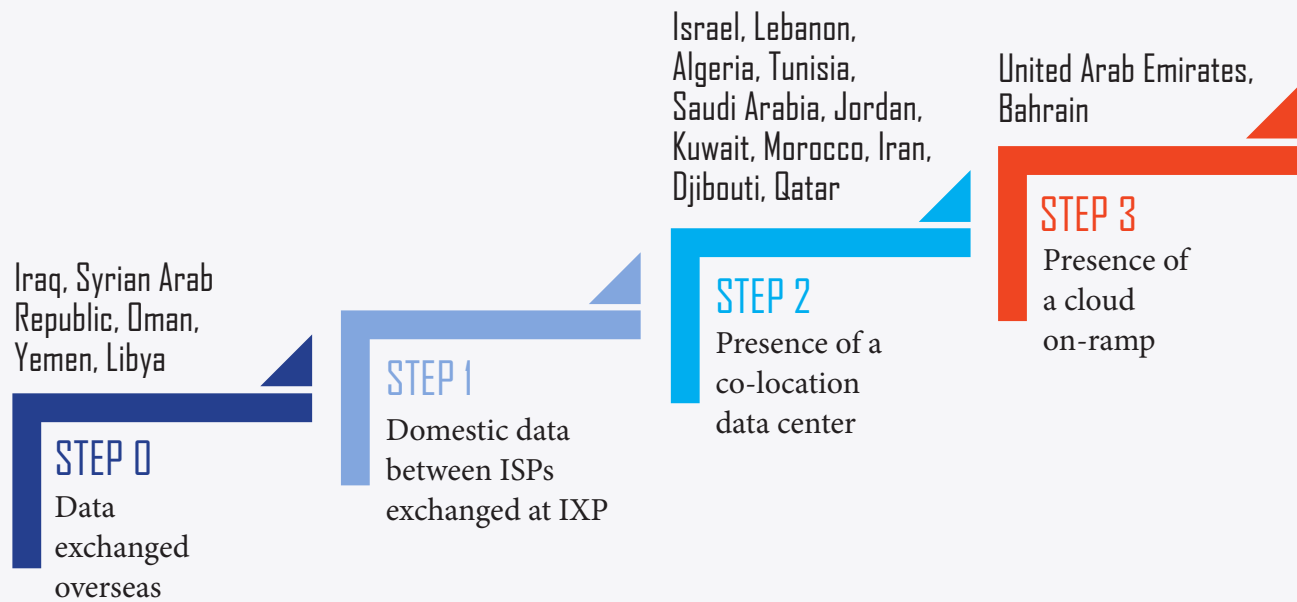
FIGURE 2: Data Infrastructure in the MENA Region



Sources: Packet Clearing House, CAIDA, PeeringDB, EURO-IX and AF-IX



FIGURE 3: Countries at various stages of data infrastructure maturity



As demonstrated in Figures 2 and 3, cross-country inequities in national data infrastructure are evident in the MENA region, exacerbating divides. Countries without requisite data infrastructure, especially IXPs, must urgently invest in them while establishing the right multistakeholder governance

structures for optimal participation and enhanced resilience. Regional data centers may also be beneficial to aggregate demand for investments in storage infrastructure and can prove to be a valuable solution to countries with smaller markets in MENA.

LAWS AND REGULATIONS

Alongside infrastructure, an appropriate legal and regulatory framework for data flows is essential to create a trust environment to enable the ongoing digital transformation in MENA. This

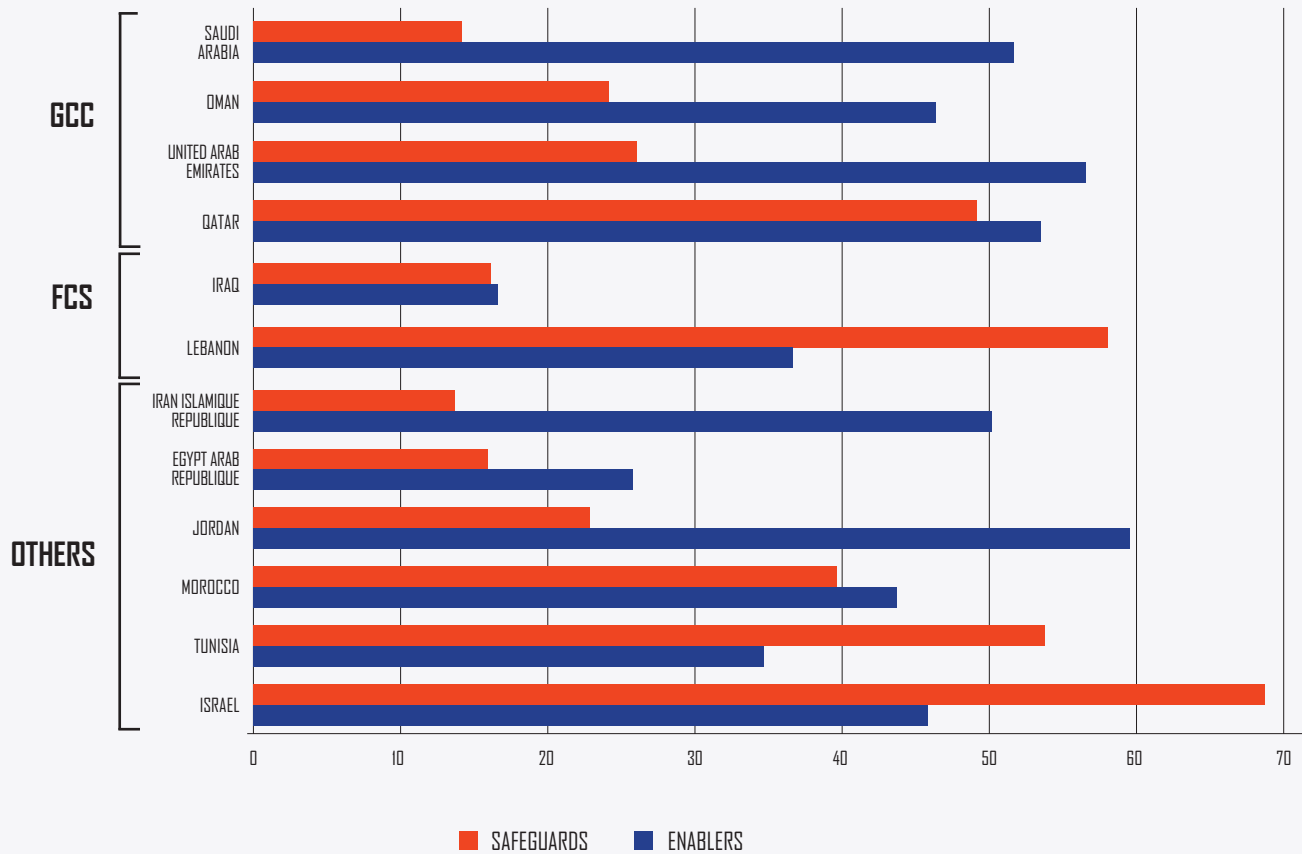
trust framework encompasses both safeguards to protect data, and enablers to enable data flows, and is underpinned by rule of law and good governance principles such as certainty,



transparency, accountability, nondiscrimination, fairness, inclusiveness, and openness. The Global Data Regulation Survey conducted for World Development Report 2021 provides an overview of the extent to which good-practice data safeguards and enablers have been adopted by 80 countries. In MENA, most countries have better policies to enable the sharing of data, compared to their

frameworks for safeguarding data. This pattern is consistent across almost all countries surveyed in the region, except for Lebanon, Tunisia, and Israel. While most MENA Countries outperform the global average score for enablers of data flows (48), the average across the region for safeguards remains well below the global average (58).

FIGURE 4: MENA Countries' Average Scores on Enablers and Safeguards



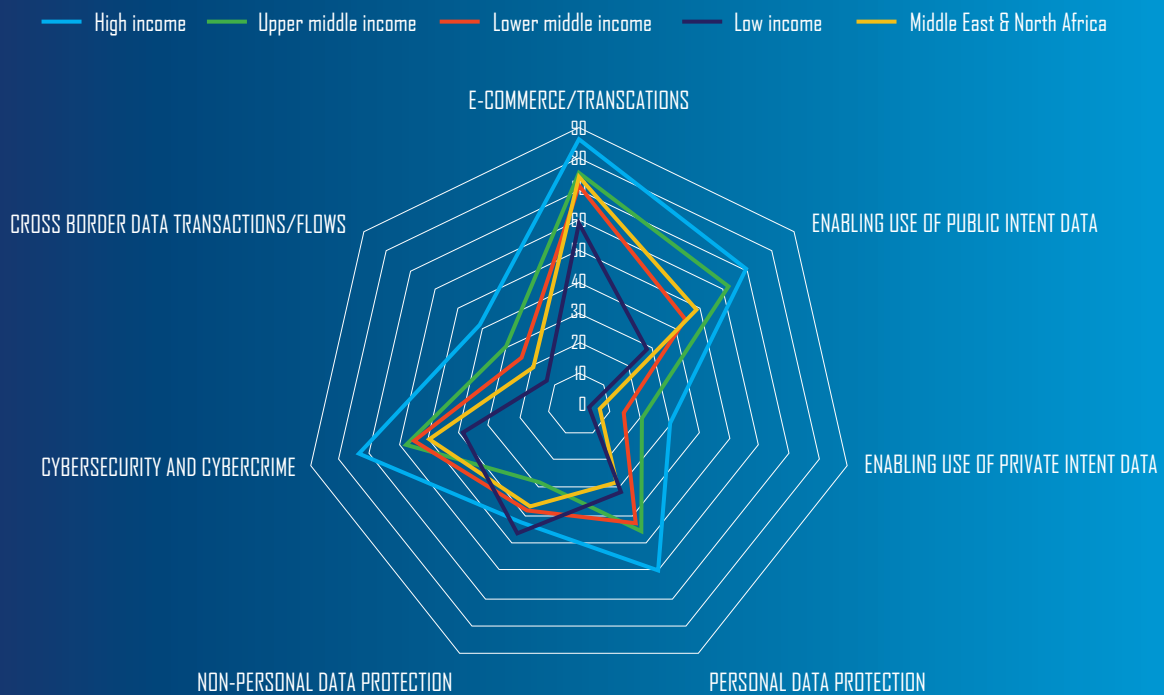
Source: World Global Data Regulation Survey 2021



When the MENA region’s performance on the various dimensions of enablers and safeguards is compared to surveyed countries across various income groups, the disparities in safeguards adoption are stark: the MENA region lags even low-income countries in the protection of personal data, which is the foundation of public trust in any data system. Such investments in personal data protection regimes are an essential complement to the investments that countries in the region

are already making in facilitating electronic commerce and digital transactions, where the region outperforms all but high-income countries. However, the region tracks upper-middle income countries on the legal environment for securing data flows through cybersecurity and cybercrime legislation and has a relatively better developed legal environment for the protection of non-personal data than for personal data (Figure 5).

FIGURE 5: Average data governance dimensions by income group/region



Source: World Global Data Regulation Survey 2021



Of particular concern is the MENA region’s lack of data sharing policies and openness as it pertains to public intent data, especially statistical microdata critical to economic research. Data transparency enhances accountability and trust in data collection and use, enabling better policymaking while also providing an attractive return at marginal cost. Previous research estimates the region’s lack of data transparency has resulted in losses of income per person ranging between 7% and 14% (Arezki et al. 2020). Despite this, very few MENA countries provide public access to (anonymized) microdata from establishment surveys, price surveys,

household/individual surveys, and censuses, as demonstrated in Figure 6). No MENA country makes price surveys (or at least item level price indices) publicly available, and while nearly all national statistics offices (NSOs) in MENA possess recent population census data, very few make them publicly available. Recent research shows that MENA countries collect only 81 out of a desirable 140 surveys of microdata and provide access to as few as 22 of the 81 that are collected by making them downloadable publicly from national and international databases (Eseosa Ekhatior-Mobayode and Hoogeveen, forthcoming).

FIGURE 6: Accessibility of microdata from NSO websites

	COUNTRY	ESTABLISHMENT SURVEY	PRICE SURVEY	CONSUMPTION SURVEY	LABOR FORCE SURVEY	HEALTH SURVEY	POPULATION CENSUS	ECONOMIC CENSUS
GCC	BAHRAIN							
	KUWAIT							
	OMAN							
	QATAR							
	SAUDIA ARABIA							
	UNITED ARAB EMIRATES							
FCS	IRAQ							
	LEBANON							
	LIBYA							
	WEST BANK & GAZA							
	YEMEN REPUBLIC							
OTHERS	ALGERIA							
	DJIBOUTI							
	EGYPT ARAB REPUBLIC							
	IRAN ISLAMIC REPUBLIC							
	JORDAN							
	MALTA							
	MOROCCO							
	TUNISIA							

Source: Eseosa Ekhatior-Mobayode and Hoogeveen, forthcoming



MENA countries must thus invest in efforts to ensure the timely collection and accessibility of foundational data, especially microdata, to enhance data transparency and advance data-driven policymaking. This includes publishing clear policies for access to restricted data for researchers and others, adopting policies to make publicly collected data open by default, and ensuring the adoption of open licensing regimes to facilitate the use and creative reuse of data to maximize its value. Such foundational databases are essential to provide the wider understanding of the economic

context that informs both public and private sector data analytics.

Alongside robust policies to ensure data sharing, MENA countries must prioritize the adoption of personal data protection legislation following a rights-based approach with urgency, to strengthen trust in the digital economy. To fortify the security of data flows, countries should also adopt and enact cybercrime legislation that balances security concerns with other fundamental rights.



ECONOMIC POLICIES

MENA countries' choices in the design of the legal and regulatory environment for data can affect competition, trade, and taxation policy. For instance, data sharing can play a valuable role in promoting competition; fast-growing opportunities to trade in data-enabled services can be hampered by the choice of laws and regulations affecting cross-border data flows; and taxation of digital platforms and services can support domestic revenue mobilization.

A clear illustration of the competition issues raised by digital platforms, as well as the potential policy responses, comes from the 2019 merger case involving the acquisition of a local ridesharing platform Careem by Uber. In this case, Egypt's Competition Authority (ECA) cleared Uber's acquisition subject to behavioral commitments,

including an obligation to provide data on mapping and user trips to potential rivals and imposing caps on pricing. Uber was obliged to grant access to Careem's "points of interest map data" on a onetime basis to future competitors; access to trip data (including rider and driver information) to current competitors, subject to data protection laws; and to give riders access to their own data. Uber also committed to removing exclusivity requirements in contracts with drivers to prevent them from being locked in the merged platform. While the specific remedies for data-driven platform businesses will vary based on the prevailing legal and regulatory environment and the specifics of cases, governments across the region should invest in building an understanding of data-driven business models and data ecosystems in selected agencies, such as sector regulators, and by industry-related policy makers.

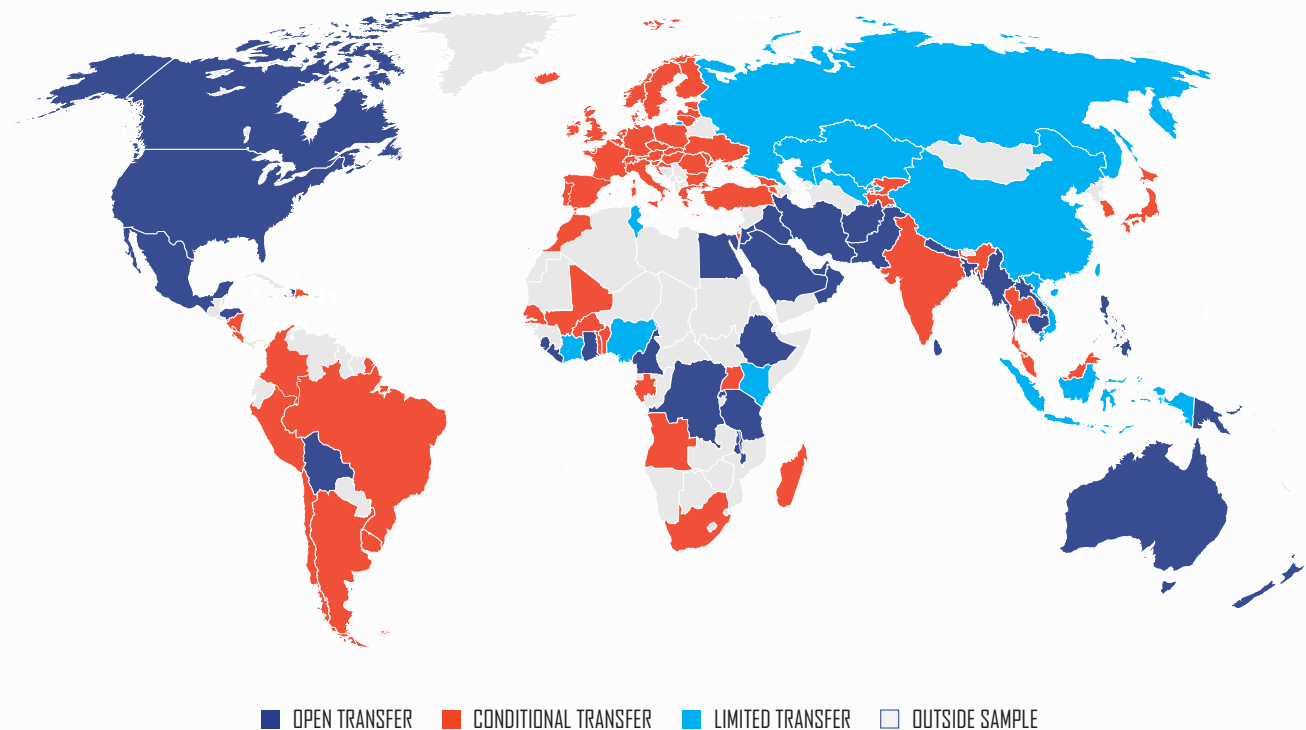




MENA countries' choice of safeguards and enablers can also directly influence cross-border digital trade: while strong safeguards are critical to data transactions, burdensome regulations may also serve to hinder small and new firms from engaging with the international market. Globally, data governance regimes on cross border data flows vary (Figure 7), but broadly range from an 'open transfers' approach allowing free movement of data based on privacy standards, to a 'conditional

transfers' approach based on conformity with established regulatory safeguards, to a 'limited transfers' approach that requires stakeholders to localize data and seek approval. MENA countries largely follow the open data flows approach, in alignment with the approach followed by the United States, Canada, and Australia, among others. The exception among surveyed countries in the region is Tunisia, which follows a limited transfers approach.

FIGURE 7: Uptake of regulatory models to cross-border data flows



Source: WDR 2021



Research suggests that strong data protection regulations complemented by a flexible regime for cross-border data flows can help boost digital trade (Ferracane and van der Marel 2021). However, the combination of a liberal regime for cross-border

data flows with a lack of personal data protection at the national level potentially poses risks for MENA countries, and underscores the importance of addressing this latter issue.

INSTITUTIONS



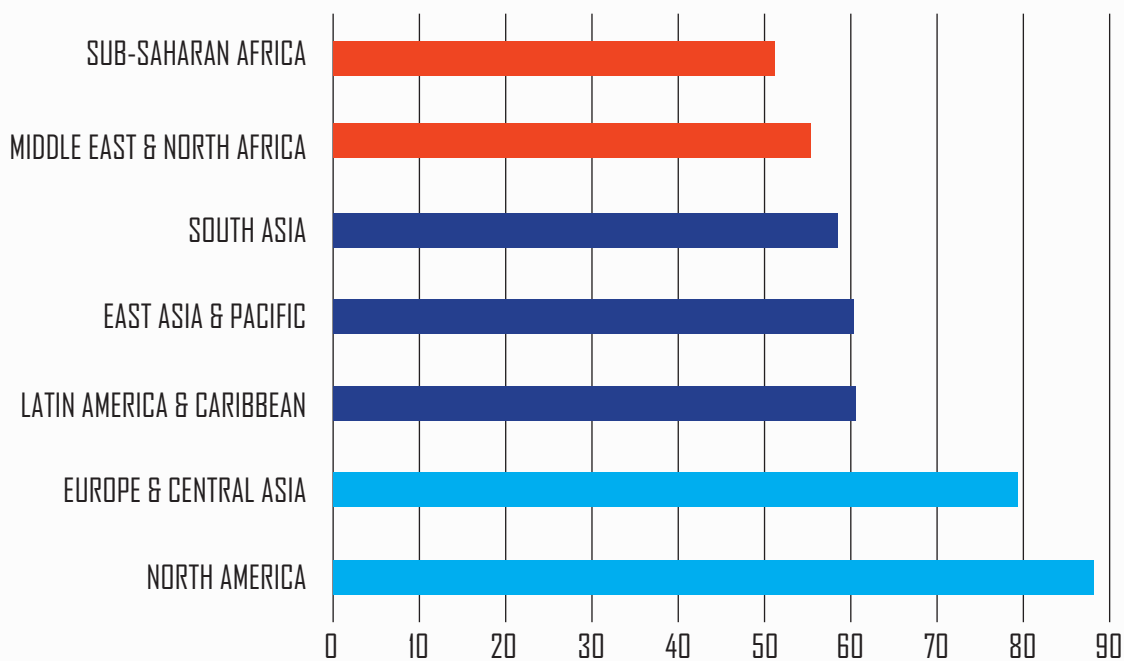
To effectively design and implement data governance frameworks, institutions for strategic planning, rulemaking and implementation, compliance, and learning are critical. These include national statistical agencies and NSOs dealing with the production, analysis, and dissemination of public intent data; data governance institutions for strategic planning and coordination; cybersecurity agencies for ensuring the security of data; and data protection authorities for enforcement of the legal and regulatory framework, among others.

The MENA region underperforms in terms of statistical capacity of its national statistical agencies

on average and is only lagged by Sub-Saharan Africa in the World Bank's Statistical Performance Indicators (SPI) (Figure 8). None are in the top 20 percent, 17 out of 21 countries fall in the bottom 60 percent, 8 out of 21 are in the bottom 40 percent and 5 out of 21 are in the bottom 20 percent. Most MENA countries also perform poorly relative to their own GDP, with the notable exceptions of Egypt and West Bank and Gaza (Figure 9). Fragile and conflict-affected states in MENA perform the worst, both relative to their GDP and relative to the global average SPI score.

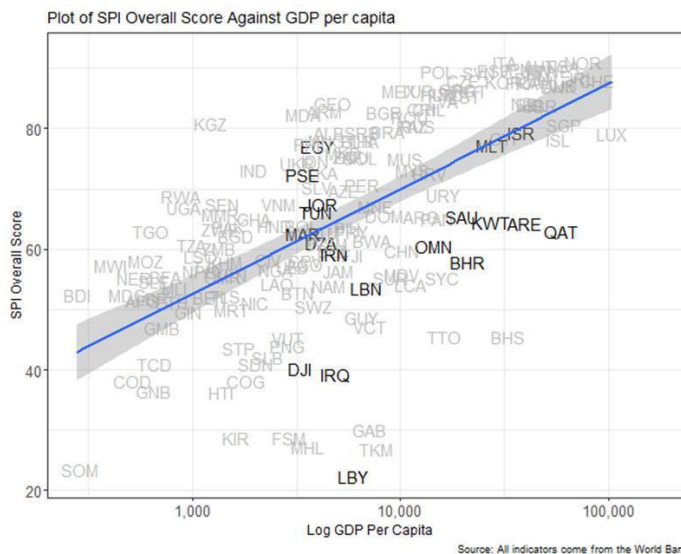


FIGURE 8: Statistical Performance Indicators (SPI) overall score by region



Source: World Bank Statistical Performance Indicators

FIGURE 9: Plot of overall SPI score against GDP per capita



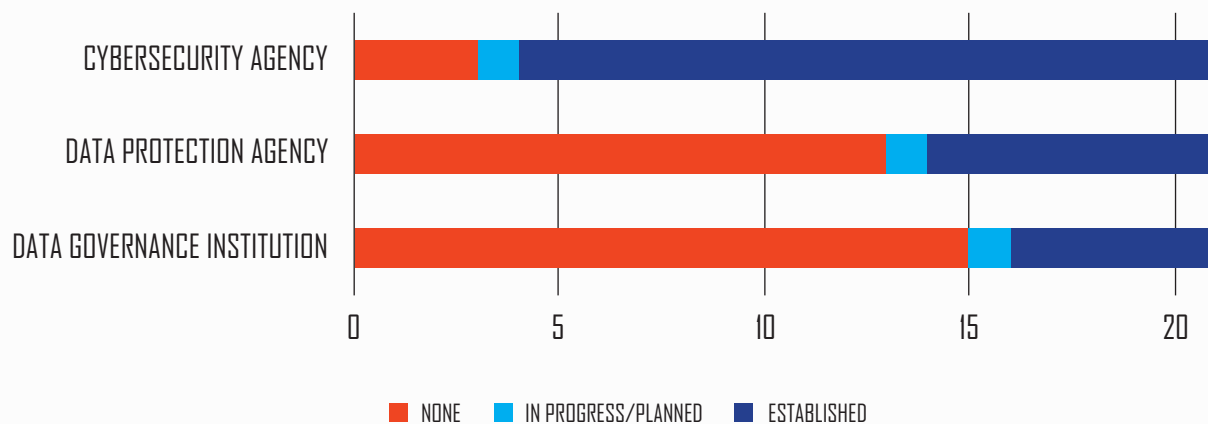
Source: World Bank Statistical Capacity Indicators



The MENA region also lacks data governance institutions and data protection authorities. Data governance institutions are critical to the implementation of whole-of-government approaches to the collection, processing, and use of data, while data protection authorities are key to

the adjudication of cases relating to the processing and use of personal data. Of 21 countries in the region, 15 have no data governance institutions, and 13 have no data protection authorities (Figure 10). However, all but three countries in MENA have cybersecurity agencies.

FIGURE 10: Status of key institutions to implement data governance frameworks in MENA countries



Source: Global Data Regulation Survey 2021

Investing in the set-up and capacity building of these key institutions is essential to ensuring a robust trust environment for data. MENA countries must therefore carefully assess the presence and capacity of their institutions, investing in their set-up within countries that lack them, and enhancing the technical capacity of staff in the institutions that

already exist to respond quickly to the everchanging demands of the digital economy. In addition, countries must enable institutions that govern the data ecosystem to be financially and legally autonomous and ensure that existing institutions are sufficiently resourced to effectively implement activities within their mandates.



CONCLUSION



To harness digital transformation in MENA, countries must forge a new social contract for data founded on three principles: value, trust, and equity. First, countries must strive to maximize the social and economic value of data by enabling the collection and sharing of data for creative re-use, including by investing in the capacity of institutions that can facilitate these processes. In the case of MENA, a relatively liberal regime exists in most countries for enabling data exchanges. However, a salient challenge is the limited collection and public availability of foundational microdata sets. Second, countries in this region must invest in the legal and institutional safeguards needed to build trust in the data system. When it comes to MENA, the lack of strong safeguards for personal data protection, as well as the lack of institutions

to effectively implement data protection, stand out as critical gaps. Finally, the social contract for data must ensure – through infrastructure policies and economic policies – that the benefits of data are shared equitably. Here, MENA’s immediate challenges are to support increased uptake of data services through demand-side policies addressing digital literacy and affordability of data services, as well as developing adequate data infrastructure at the national level to support cost-effective exchange, storage, and processing of data. As the digital economy expands in the region, further attention will also need to be given to anti-trust and taxation challenges posed by digital platforms. A social contract of this nature can help to ensure that all in MENA – individuals and businesses alike – can thrive in the region’s growing digital economy.



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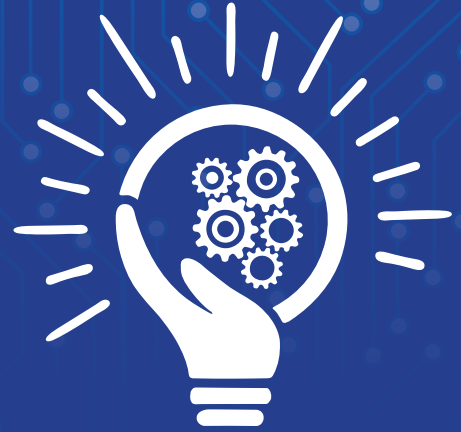
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