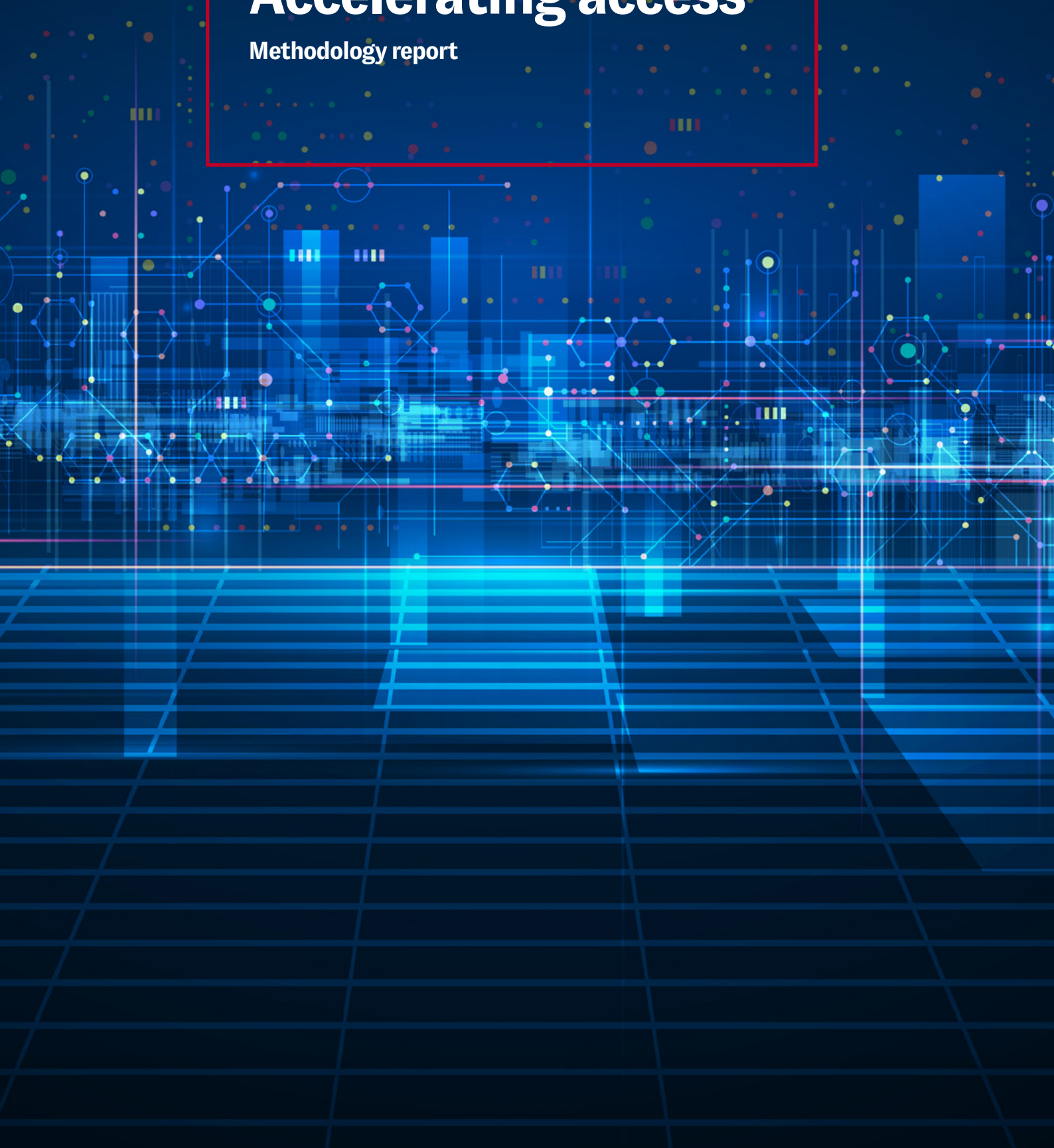


**ECONOMIST
IMPACT**

Accelerating access

Methodology report



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Appendix I:

Scorecard overview

Indicator	Unit	Source	Description	Scoring guidance	Normalisation categories	Rationale for inclusion
1) POLICY AND REGULATION						
1.1) Digital strategy						
1.1.1) Evidence of digital strategy with budget for implementation	Qualitative rating 0-3, 3=best	Government websites	Scoring based on whether there is evidence of a budget linked to the active implementation of a digital strategy.	<p>0 = No, the government has not yet published a digital transformation strategy</p> <p>0.5 = Yes, the digital transformation strategy exists but is neither current nor has a budget</p> <p>1 = Yes, the digital transformation strategy is current but with not budget OR has a budget but is outdated</p> <p>2 = Yes, the digital transformation strategy is current and has budget</p> <p>Current is defined as a strategy that covers the current year (e.g. Nigeria's National Digital Economy Policy and Strategy (2020-2030))</p>	<p>Data value of 0 scores 0</p> <p>Data value of 1 scores 33.3</p> <p>Data value of 2 scores 66.7</p> <p>Data value of 3 scores 100</p>	By having a recent digital strategy, the government is showing its commitment to enabling a safe and robust digital ecosystem which could incentivise individuals and SMBs to participate and engage in the digital economy. Moreover, by having a clear budget for implementing a digital strategy, the government is showing its commitment to enabling a safe and robust digital ecosystem which could incentivise individuals and SMBs to participate and engage in the digital economy
1.1.2) Evidence of dedicated digital entrepreneurship government body	Qualitative rating 0-1, 1=best	Government websites	Scoring based on whether there is evidence of a specific national government body responsible for foster digital entrepreneurship.	<p>0 = No, there is no dedicated national government body focused on fostering digital entrepreneurship</p> <p>Yes, there is a national government agency/ department(s) that includes initiatives focused on fostering digital entrepreneurship, regardless of whether the overall department/ agency has a specific mandate for entrepreneurship</p>	<p>Data value of 0 scores 0</p> <p>Data value of 1 scores 100</p>	By having a specific body dedicated to promoting digital entrepreneurship, the government is showing its commitment to supporting local business' efforts to access and participate in the digital economy

Indicator	Unit	Source	Description	Scoring guidance	Normalisation categories	Rationale for inclusion
1.1.3) Comprehensive planning to address digital skills gaps	Qualitative rating 0-3, 3=best	Government websites, Economist Impact Inclusive Internet Index	Scoring based on whether the government developed a comprehensive plan to address digital skills gaps and teacher training.	<p>0 = No, the government does not have a plan or strategy that addresses digital literacy for students and training for teachers at the secondary and tertiary school level</p> <p>1 = Yes, the government's plan or strategy addresses digital literacy for students at the secondary and tertiary school level,, but it does not include training for teachers or the plan is outdated</p> <p>2 = Yes, the government's plan or strategy is current, addresses digital literacy for students and includes training for teachers at the secondary and tertiary school level</p> <p>3 = Yes, the government's plan or strategy is current, addresses digital literacy for students and includes training for teachers and is introduced at the primary school level</p>	<p>Data value of 0 scores 0</p> <p>Data value of 1 scores 33.3</p> <p>Data value of 2 scores 66.7</p> <p>Data value of 3 scores 100</p>	Government-led intervention in addressing digital skills gaps will play an important role in ensuring individuals have the skills needed to access the digital economy and that there is growth in domestic talent that SMBs can attract to help build digital economy platforms
1.2) Enabling initiatives						
1.2.1) Digital ID system	Qualitative rating 0-2, 2=best	Government websites	Scoring based on whether there is a digital identification system (i.e. e-ID).	<p>0 = No National ID exists</p> <p>1 = Yes, National ID exists but it is NOT e-ID</p> <p>2 = Yes National ID exists and it IS e-ID (at least partially)</p>	<p>Data value of 0 scores 0</p> <p>Data value of 1 scores 50</p> <p>Data value of 2 scores 100</p>	Through a digital ID system, individuals may be more safeguarded when accessing the digital economy, thereby facilitating safe use of digital economy platforms
1.2.2) Evidence of open data policies	Qualitative rating 0-2, 2=best	Government websites	Scoring based on the presence of a current and updated open data policy, platform, commitment, and/or initiative.	<p>0 = No, the government has not published an open data policy</p> <p>1 = the government has published an open data policy which has not been introduced/ updated within the last 5 years</p> <p>2 = Yes, the government has published an open data policy which has been introduced/ updated within the last 5 years</p>	<p>Data value of 0 scores 0</p> <p>Data value of 1 scores 50</p> <p>Data value of 2 scores 100</p>	Open data policies allows SMBs' access to large troves of free data needed to enable other digital services

Indicator	Unit	Source	Description	Scoring guidance	Normalisation categories	Rationale for inclusion
1.2.3) Evidence of active data privacy/protection legislation	Qualitative rating 0-3, 3=best	Government websites	Scoring based on whether the government has an active and universal data privacy/protection law and/or sector-specific laws in place	<p>0 = No, the government has neither an active and universal data privacy/protection law, nor active sector-specific data privacy/protection laws</p> <p>1 = Yes, the government has some active sector-specific data privacy/protection laws, but no active and universal data privacy/protection law</p> <p>2 = Yes, the government has an active and universal data privacy/protection law, but no active sector-specific data privacy/protection laws</p> <p>3 = Yes, the government has an active and universal data privacy/protection law and active sector-specific data privacy/protection laws</p>	<p>Data value of 0 scores 0</p> <p>Data value of 1 scores 33.3</p> <p>Data value of 2 scores 66.7</p> <p>Data value of 3 scores 100</p>	<p>Having a data privacy policy/strategy ensures that individuals' data is safeguarded, thereby incentivising them to participate in the digital economy. Sector-specific data protection laws (e.g. only for fintech) may enable the digital economy for that industry but not across all sectors. A broader data protection strategy would enable wider access to the digital economy</p>

2) INFRASTRUCTURE

2.1) Internet Connectivity

2.1.1) Network Coverage of 4G	%	ITU, Economist Impact Inclusive Internet Index	Percentage of the population covered by at least an LTE/WiMAX mobile network.	N/A	<p>Score is linear transformation of data values to the scale 0-100 where 100=most accessible digital economy. A data value of 0 or below scores 0, a data value of 100 or above scores 100.</p> <p>Higher data values produce higher scores.</p>	Sufficient mobile internet coverage allows individuals to access digital economy platforms (e.g. e-commerce, social media, e-learning etc)
2.1.2) Fixed-line broadband subscribers	per 100 inhabitants	ITU, Economist Impact Inclusive Internet Index	Fixed-broadband subscriptions refers to fixed subscriptions to high-speed access to the public Internet; at downstream speeds equal to; or greater than; 256 kbit/s.	N/A	<p>Score is linear transformation of data values to the scale 0-100 where 100=most accessible digital economy. A data value of 0 or below scores 0, a data value of 100 or above scores 100.</p> <p>Higher data values produce higher scores.</p>	Sufficient fixed internet coverage allows individuals and SMBs to access digital economy platforms (e.g. e-commerce, social media, e-learning etc)
2.1.3) 5G deployment/rollouts	Qualitative rating 0-2, 2=best	OOKLA	Scoring based on commercial availability of 5G, i.e. whether a 5G network is present and devices are available for consumers to purchase and use.	<p>0 = No, 5G has not been implemented in any city in the country</p> <p>1 = Yes, 5G has been implemented in at least one city for trials</p> <p>2 = Yes, 5G has been implemented in at least one city for full commercial or public usage</p>	<p>Data value of 0 scores 0</p> <p>Data value of 1 scores 50</p> <p>Data value of 2 scores 100</p>	Deployment of 5G technologies will allow for faster access by individuals to digital economy platforms

Indicator	Unit	Source	Description	Scoring guidance	Normalisation categories	Rationale for inclusion
2.1.4) Average fixed broadband latency	milliseconds	Speedtest	Average milliseconds it takes for data to travel between its source and destination.	N/A	Score is linear transformation of data values to the scale 0-100 where 100=most accessible digital economy. A data value of 0 or below scores 100, a data value of 250 or above scores 0. Lower data values produce higher scores.	Lower fixed broadband internet latency is necessary for faster responsiveness of the internet network allowing individuals and SMBs to download, upload and share data
2.1.5) Average mobile latency	milliseconds	Speedtest	Average milliseconds it takes for data to travel between its source and destination.	N/A	Score is linear transformation of data values to the scale 0-100 where 100=most accessible digital economy. A data value of 22 or below scores 100, a data value of 299 or above scores 0. Lower data values produce higher scores.	Lower mobile internet latency is necessary for faster responsiveness of the internet network allowing individuals and SMBs to download, upload and share data
2.1.6) International internet bandwidth per internet user	bit/S	ITU, Economist Impact Inclusive Internet Index	International Internet bandwidth is the contracted capacity of international connections between countries for transmitting Internet traffic.	N/A	Score is linear transformation of data values to the scale 0-100 where 100=most accessible digital economy. A data value of 0 or below scores 0, a data value of 3000000 or above scores 100. Higher data values produce higher scores.	Higher bandwidth allows individuals and SMBs to transmit a greater amount of data over an internet connection in a given amount of time resulting in better quality and speed of internet interactions.
2.2) Enabling infrastructure						
2.2.1) Smartphone penetration	%	Newzoo	Share of the total population that uses a smartphone.	N/A	Score is linear transformation of data values to the scale 0-100 where 100=most accessible digital economy. A data value of 0 or below scores 0, a data value of 100 or above scores 100. Higher data values produce higher scores.	Smartphones are often the main point of access for digital economy platforms such as online banking, e-commerce, social media etc. Greater smartphone penetration means a greater proportion of the population is able to access the digital economy (so long as the device is connected to high-speed internet)
2.2.2) Account ownership at a financial institution or with a mobile money-service International provider	%	World Bank	The percentage of respondents who report having an account (by themselves or together with someone else) at a bank or another type of financial institution (see the definition for "financial institution account") or report personally using a mobile money service in the past year (see the definition for "mobile money account").	N/A	Score is linear transformation of data values to the scale 0-100 where 100=most accessible digital economy. A data value of 0 or below scores 0, a data value of 100 or above scores 100. Higher data values produce higher scores.	As more people access financial accounts to make digital transactions, the more they are likely to be able to access the digital economy.

Indicator	Unit	Source	Description	Scoring guidance	Normalisation categories	Rationale for inclusion
2.2.3) Access to electricity	% of population	World Bank	Percentage of population with access to electricity.	N/A	Score is linear transformation of data values to the scale 0-100 where 100=most accessible digital economy. A data value of 0 or below scores 0, a data value of 100 or above scores 100. Higher data values produce higher scores.	Consistent access to electricity will ensure digital technologies and connectivity are not interrupted, enabling the country's population to access the digital economy at all times
2.2.4) Financial institution account ownership	% of population	World Bank	The percentage of respondents who report having an account (by themselves or together with someone else) at a bank or another type of financial institution (% age 15+).	N/A	Score is linear transformation of data values to the scale 0-100 where 100=most accessible digital economy. A data value of 0.02 or below scores 0, a data value of 1.85 or above scores 100. Higher data values produce higher scores.	As more people have access to a financial institution bank account, the more they are likely to be able to access the digital economy through digital payment platforms.
3) AFFORDABILITY						
3.1) Device Cost						
3.1.1) Smartphone cost (handset)	Score 0-100; 100=most inclusive	GSMA	Indexed scores of the price of an entry-level handset to the consumer as a percentage of GNI per capita. Scored on a scale of 0-100 where 100=the most inclusive environment (i.e. more affordable handset) and the minimum threshold is 0.	N/A	Score is linear transformation of data values to the scale 0-100 where 100=most accessible digital economy. A data value of 0 or below scores 0, a data value of 100 or above scores 100. Higher data values produce higher scores.	As mentioned above, smartphones often the main point of access for digital economy platforms such as online banking, e-commerce, social media etc. As cost relative to income decreases, smartphones are more accessible to larger shares of the population, thereby a greater proportion of the population is able to access the digital economy (so long as the device is connected to high-speed internet)
3.2) Internet Cost						
3.2.1) Fixed-line monthly broadband cost	% of monthly GNI per capita	ITU, World Bank, Economist Impact Inclusive Internet Index	Price of fixed-line monthly broadband to the consumer as a percentage of monthly income.	N/A	Score is linear transformation of data values to the scale 0-100 where 100=most accessible digital economy. A data value of 0.6 or below scores 100, a data value of 31.25 or above scores 0. Lower data values produce higher scores.	Cheaper fixed-line internet cost will enable more individuals and SMBs to access digital economy platforms easily from their homes and offices
3.2.2) Mobile phone cost (prepaid tariff)	% of monthly GNI per capita	World Bank, Economist Impact Inclusive Internet Index	Price of prepaid mobile data plan, 1 GB, as a percentage of monthly income.	N/A	Score is linear transformation of data values to the scale 0-100 where 100=most accessible digital economy. A data value of 0.235 or below scores 100, a data value of 3.238 or above scores 0. Lower data values produce higher scores.	Cheaper mobile internet access (prepaid) will enable more individuals and SMBs to access digital economy platforms easily from their smartphones

Indicator	Unit	Source	Description	Scoring guidance	Normalisation categories	Rationale for inclusion
3.2.3) Mobile phone cost (post-paid tariff)	% of monthly GNI per capita	Economist Impact Inclusive Internet Index	Price of post-paid mobile data plan, 1 GB, as a percentage of monthly income.	N/A	Score is linear transformation of data values to the scale 0-100 where 100=most accessible digital economy. A data value of 0.538 or below scores 100, a data value of 11.813 or above scores 0. Lower data values produce higher scores.	Cheaper mobile internet access (postpaid) will enable more individuals and SMBs to access digital economy platforms easily from their smartphones
4) READINESS						
4.1) Consumer willingness						
4.1.1) Consumer skills for the digital economy	% of activities consumers know how to do easily (Q5 in the consumer survey)	Economist Impact consumer survey 2022	Consumer survey question that asks respondents to select all activities they know how to do easily and without the help of anyone else from a list of: : Turning a device on and off; : Updating passwords; : Browsing, searching and filtering information online; : Developing digital content (posts, blogs, websites); : Connecting a device to the internet; : Sending an email/internet message; : Opening a web application; : Making a video call on a device; : Downloading a file from the internet / Downloading an app; : Making purchases online (including food delivery); : Using social media; : Ordering a car/taxi using a ride-hailing app; : Reading the news online; : Making an online bank transfer.	N/A	Score is linear transformation of data values to the scale 0-100 where 100=most accessible digital economy. A data value of 0 or below scores 0, a data value of 14 or above scores 100. Higher data values produce higher scores.	The more skills individuals select, the more likely they are going to be able to access the digital economy
4.1.2) Consumer trust in the digital economy	% of activities consumers feel secure conducting (Q10 in the consumer survey)	Economist Impact consumer survey 2022	Consumer survey question that asks respondents to assess levels of trust in various aspects of the digital economy, including: : Making online payments and money transfers; : Sharing personal data (e.g. credit card information, address etc.); : Ordering products from any part of the world; : Using apps for ride-hailing, food delivery, ordering groceries; : Using social media; : Viewing/clicking on online advertisements; : Streaming content (e.g. videos, movies etc) online; : Using e-Government services/platforms.	N/A	Score is linear transformation of data values to the scale 0-100 where 100=most accessible digital economy. A data value of 0 or below scores 0, a data value of 8 or above scores 100. Higher data values produce higher scores.	Greater trustworthiness of digital economy platforms means individuals are more likely to access the digital economy

Indicator	Unit	Source	Description	Scoring guidance	Normalisation categories	Rationale for inclusion
4.1.3) Net Empowerment	Score 0-100, 100=best	Freedom House	Freedom on the Net measures the level of internet freedom in 70 countries. Each country receives a numerical score from 100 (the most free) to 0 (the least free), which serves as the basis for an internet freedom status designation of FREE (100-70 points), PARTLY FREE (69-40 points), or NOT FREE (39-0 points)	N/A	Score is linear transformation of data values to the scale 0-100 where 100=most accessible digital economy. A data value of 0 or below scores 0, a data value of 100 or above scores 100. Higher data values produce higher scores.	With greater internet freedom (i.e. greater freedoms of expression, access to information, privacy, and association and assembly) individuals will be more incentivised and feel safer in accessing the digital economy.
4.1.4) Use of digital payments	% of individuals (age 15+) that have made or received a digital payment	World Bank	Percentage of individuals that have made or received a digital payment (% age 15+)	N/A	Score is linear transformation of data values to the scale 0-100 where 100=most accessible digital economy. A data value of 0 or below scores 0, a data value of 100 or above scores 100. Higher data values produce higher scores.	
4.1.5) Consumer convenience in the digital economy	Average of % of responses that are "No impact - this does not restrict my access" across all options (Q4 of the consumer survey)	Economist Impact consumer survey 2022	Aggregated responses from the consumer survey question asking about the significance of the following challenges in impeding access to the digital economy: : Availability of necessary devices; : Affordability of necessary devices; : Availability of high-speed and reliable internet connection; : Affordability of internet connectivity; : Technical skills and knowledge; : Availability of content in my preferred language; : Risk of harassment; : Risk of cyber-attack and fraud; : My overall trust in the digital economy.	N/A	Score is linear transformation of data values to the scale 0-100 where 100=most accessible digital economy. A data value of 0 or below scores 0, a data value of 100 or above scores 100. Higher data values produce higher scores.	The accessibility of the digital economy will depend on individual consumers' confidence and perceptions of digital platforms - positive perceptions will facilitate greater uptake of such services
4.2) SMB readiness						
4.2.1) Business model readiness	% of responses that are "Our existing business model is completely ready for digital expansion" (Q3 of the executive survey)	Economist Impact executive survey 2022	Executive survey question asking respondents about the extent to which their firm needs to adapt its existing business model to operate in the digital economy, with options including: There is no clear opportunity for our business in the digital economy; We need to completely transform our business to participate in the digital economy; Our business needs to make extensive changes to adapt our business model for the digital economy; Our business needs to only add a new segment/division to our existing business model to participate in the digital economy; Our existing business model is completely ready for digital expansion	N/A	Score is linear transformation of data values to the scale 0-100 where 100=most accessible digital economy. A data value of 0 or below scores 0, a data value of 100 or above scores 100. Higher data values produce higher scores.	Greater adaptability of the business model will allow SMBs' to participate in the digital economy easily

Indicator	Unit	Source	Description	Scoring guidance	Normalisation categories	Rationale for inclusion
4.2.2) Ease of securing funding for digital expansion	Average of % of responses that are "Easy" across all options (Q4 of the executive survey)	Economist Impact executive survey 2022	Executive survey question asking respondents about the ease of securing funding for their company's digital expansion through the following sources: : Internal sources (e.g. retained profit); : Traditional banks; : Private equity and venture capital; : Crowdfunding; : Local government funding; : Foreign government funding; : International funds dedicated for digital tech expansion; : Angel investors; : Family and friends	N/A	Score is linear transformation of data values to the scale 0-100 where 100=most accessible digital economy. A data value of 0 or below scores 0, a data value of 100 or above scores 100. Higher data values produce higher scores.	Greater access to finance to expand e-commerce platforms will allow SMBs to enter and operate in the digital economy
4.2.3) Workforce readiness	Average number of lacking skills identified (out of 10) (Q8 of the executive survey)	Economist Impact executive survey 2022	Executive survey question asking respondents about the skills needed for digital transformation that their workforce currently lacks with options including: : Communicating digitally (e.g. sending and receiving emails and other digital content, conducting online video calls); : Collaborating with internal stakeholders (e.g. through slack, enterprise software, shared documents, cloud storage); : Collaborating with external stakeholders (e.g. through supplier management platforms, project management software etc.); : Browsing, searching and filtering information online; : Programming and coding; : Advanced data analytics; : User experience (UX) design skills; : Cybersecurity management; : Digital marketing (including social media proficiency); : Engaging with advanced emerging technologies (e.g. artificial intelligence, virtual reality platforms, Internet of Things)	N/A	Score is linear transformation of data values to the scale 0-100 where 100=most accessible digital economy. A data value of 0 or below scores 100, a data value of 10 or above scores 0. Lower data values produce higher scores.	The more skills companies' workforces possess, the more likely their company will be able to access and participate in the digital economy.
4.2.4) Upskilling initiatives	% of respondents that agree with the statement "My organisation is actively investing in and providing programmes for upskilling employees' digital skills" (Q11 in the executive survey)	Economist Impact executive survey 2022	Executive survey question asking respondents the extent to which they agree with different statements on upskilling in their organisation.	N/A	Score is linear transformation of data values to the scale 0-100 where 100=most accessible digital economy. A data value of 0 or below scores 0, a data value of 100 or above scores 100. Higher data values produce higher scores.	Providing upskilling opportunities allows SMBs to remain agile as technological advancements change the digital economy landscape

Indicator	Unit	Source	Description	Scoring guidance	Normalisation categories	Rationale for inclusion
4.2.5) Technological readiness	Average of % of respondents that selected "Already adopted" across all options (Q12 in the executive survey)	Economist Impact executive survey 2022	Executive survey question asking respondents about the extent to which they are adopting various digital technologies from the following: : Digital platforms and cloud computing for coordinating with internal and external stakeholders; : IoT-enabled and other big data analytics supported AI; : Blockchain solutions; : Digital payment platforms (for payments from customers and to vendors); : Other fintech solutions beyond payments; : A common ERP software for the business; : 5G-enabled solutions; : Advanced automation and robotics (including machine learning)	N/A	Score is linear transformation of data values to the scale 0-100 where 100=most accessible digital economy. A data value of 0 or below scores 0, a data value of 100 or above scores 100. Higher data values produce higher scores.	SMBs need to adopt the necessary digital technologies in order to operate in the digital economy
4.2.6) Legal readiness	Average number of governance challenges identified (out of 3) (Q14 in the executive survey)	Economist Impact executive survey 2022	Executive survey question asking respondents about the challenges their organisation faces related to the existing data governance and privacy laws in your country from the following: : My country's data governance and privacy laws are not easy to understand and comply with; : The data governance and privacy laws are evolving too quickly for my company to keep up; : I am not familiar with the laws	N/A	Score is linear transformation of data values to the scale 0-100 where 100=most accessible digital economy. A data value of 0 or below scores 100, a data value of 100 or above scores 0. Lower data values produce higher scores.	SMBs that are able to navigate the data regulatory landscape are more likely to be able to access and participate in the digital economy.

Appendix II: Scoring methodology

Indicator scores are transformed and then aggregated across categories to enable a comparison of broader concepts across countries. The process of transforming involves rebasing the raw indicator data to a common unit so that it can be aggregated. All indicators in this model are transformed into a 0 to 100 scale, where 100 refers to the most accessible digital economy and 0 indicates the least accessible digital economy

Most indicators are transformed on the basis of a min/max normalisation, where the minimum and maximum raw data values across data available for all countries are used to bookend the indicator scores. The indicators for which a higher value indicates a more accessible digital economy, such as access to smartphones, have been transformed on the basis of:

$$x = (x - \text{Min}(x)) / (\text{Max}(x) - \text{Min}(x))$$

where $\text{Min}(x)$ and $\text{Max}(x)$ are, respectively, the lowest and highest values in the 100 countries for any given indicator. The value is then changed from a 0–1 value to a 0–100 score to make it directly comparable with other indicators.

Appendix III-A:

Scorecard raw data

Measure	Unit	DRC	Egypt	Kazakhstan	Kenya	Nigeria	Pakistan	Saudi Arabia	South Africa	UAE
1) POLICY AND REGULATION										
1.1) Digital strategy										
1.1.1) Evidence of digital strategy with budget for implementation	Qualitative rating 0-3, 3=best	2	2	3	3	2	2	2	1	2
1.1.2) Evidence of dedicated digital entrepreneurship government body	Qualitative rating 0-2, 2=best	0	1	1	1	1	0	0	0	0
1.1.3) Comprehensive planning to address digital skills gaps	Qualitative rating 0-3, 3=best	3	3	3	3	3	1	3	3	3
1.2) Enabling initiatives										
1.2.1) Digital ID system	Qualitative rating 0-2, 2=best	0	1	2	1	2	1	2	2	2
1.2.2) Evidence of open data policies	Qualitative rating 0-2, 2=best	0	1	1	2	2	0	2	2	2
1.2.3) Evidence of active data privacy/protection legislation	Qualitative rating 0-3, 3=best	1	2	3	2	3	1	3	2	3
2) INFRASTRUCTURE										
2.1) Internet Connectivity										
2.1.1) Network Coverage of 4G	%	40.00	96.00	81.30	77.00	40.53	68.82	98.25	96.45	99.82
2.1.2) Fixed-line broadband subscribers	per 100 inhabitants	0.03	9.14	13.96	1.25	0.03	1.14	22.66	2.20	32.81
2.1.3) 5G deployment/rollouts	Qualitative rating 0-2, 2=best	0	1	1	1	1	1	2	2	2
2.1.4) Average fixed broadband latency	milliseconds	308	23	21	34	53	31	20	24	9
2.1.5) Average mobile latency	milliseconds	53	36	37	36	49	37	34	30	23
2.1.6) International internet bandwidth per internet user	bit/S	9,510	48,877	97,910	882,475	8,649	57,366	351,794	27,363	551,17

Measure	Unit	DRC	Egypt	Kazakhstan	Kenya	Nigeria	Pakistan	Saudi Arabia	South Africa	UAE
2.2) Enabling infrastructure										
2.2.1) Smartphone penetration	%	10.2	47.8	70.2	34.5	34.1	21.6	74.7	54.1	87.7
2.2.2) Account ownership at a financial institution or with a mobile money-service International provider	%	16.0	27.0	81.0	79.0	45.0	21.0	74.0	85.0	86.0
2.2.3) Access to electricity	% of population	19.1	100.0	100.0	71.4	55.4	75.4	100.0	84.4	100.0
2.2.4) Financial institution account ownership	%	15.0	26.0	81.0	51.9	45.0	16.0	74.0	84.0	85.0
3) AFFORDABILITY										
3.1) Device Cost										
3.1.1) Smartphone cost (handset)	Score 0-100; 100=most inclusive	25.3	50.9	48.5	40.6	51.3	34.5	42.1	47.9	84.1
3.2) Internet Cost										
3.2.1) Fixed-line monthly broadband cost	% of monthly GNI per capita	1,084.75	3.46	0.76	14.94	20.90	10.01	3.06	3.77	0.60
3.2.2) Mobile phone cost (prepaid tariff)	% of monthly GNI per capita	18.708	0.482	0.235	2.384	1.400	0.461	0.461	0.931	0.310
3.2.3) Mobile phone cost (post-paid tariff)	% of monthly GNI per capita	43.653	7.227	0.769	5.900	5.602	3.784	0.538	2.180	0.716
4) READINESS										
4.1) Consumer willingness										
4.1.1) Consumer skills for the digital economy	% of activities consumers know how to do easily	8.9	10.2	8.8	11.0	11.6	9.4	9.2	11.9	9.8
4.1.2) Consumer trust in the digital economy	% of activities consumers feel secure conducting	3.4	3.9	4.0	4.1	4.0	3.7	3.7	4.2	3.6
4.1.3) Net Empowerment	Score 0-100, 100=best	34	26	33	66	59	25	24	73	27
4.1.4) Use of digital payments	% of individuals (age 15+) that have made or received a digital payment	22.0	20.0	78.0	78.0	34.0	18.0	73.0	81.0	77.0
4.1.5) Consumer convenience in the digital economy	Average of % of responses that are "No impact - this does not restrict my access" across all options	27.1	27.4	29.2	34.9	35.0	29.3	23.6	37.6	24.4

Measure	Unit	DRC	Egypt	Kazakhstan	Kenya	Nigeria	Pakistan	Saudi Arabia	South Africa	UAE
4.2) SMB readiness										
4.2.1) Business model readiness	% of responses that are "Our existing business model is completely ready for digital expansion"	14.0	21.0	n/a	40.0	18.0	34.0	16.0	34.0	15.0
4.2.2) Ease of securing funding for digital expansion	Average of % of responses that are "Easy" across all options	58.7	63.0	n/a	51.8	50.4	61.2	60.1	60.1	76.7
4.2.3) Workforce readiness	Average number of lacking skills identified (out of 10)	2.6	3.4	n/a	3.1	3.0	3.1	2.9	2.8	3.2
4.2.4) Upskilling initiatives	% of respondents that agree with the statement "My organisation is actively investing in and providing programmes for upskilling employees' digital skills"	76.0	77.0	n/a	77.0	81.0	78.0	80.0	77.0	86.0
4.2.5) Technological readiness	Average of % of respondents that selected "Already adopted" across all options	23.0	43.0	n/a	31.0	25.0	29.0	24.0	40.0	34.0
4.2.6) Legal readiness	Average number of governance challenges identified (out of 3)	62.0	66.0	n/a	51.0	44.0	48.0	78.0	46.0	60.0

Appendix III-B: Scorecard converted scores

Series	Weight ¹	DRC	Egypt	Kazakhstan	Kenya	Nigeria	Pakistan	Saudi Arabia	South Africa	UAE
1) POLICY AND REGULATION	-	35.0	71.7	92.5	85.8	93.3	25.8	78.3	65.0	93.3
1.1) Digital strategy	50.0%	56.7	71.7	85.0	85.0	71.7	23.3	56.7	43.3	56.7
1.1.1) Evidence of digital strategy with budget for implementation	40.0%	66.7	66.7	100.0	100.0	66.7	66.7	66.7	33.3	66.7
1.1.2) Evidence of dedicated digital entrepreneurship government body	30.0%	0.0	100.0	100.0	100.0	100.0	0.0	0.0	0.0	100.0
1.1.3) Comprehensive planning to address digital skills gaps	30.0%	100.0	100.0	100.0	100.0	100.0	33.3	100.0	100.0	100.0
1.2) Enabling initiatives	50.0%	13.3	56.7	85.0	71.7	100.0	28.3	100.0	86.7	100.0
1.2.1) Digital ID system	30.0%	0.0	50.0	100.0	50.0	100.0	50.0	100.0	100.0	100.0
1.2.2) Evidence of open data policies	30.0%	0.0	50.0	50.0	100.0	100.0	0.0	100.0	100.0	100.0
1.2.3) Evidence of active data privacy/protection legislation	40.0%	33.3	66.7	100.0	66.7	100.0	33.3	100.0	66.7	100.0
2) INFRASTRUCTURE	-	21.6	57.4	70.0	58.6	44.8	45.1	76.3	71.1	82.9
2.1) Internet Connectivity	56.7%	25.1	63.1	60.7	59.7	45.3	54.7	73.4	68.0	77.8
2.1.1) Network Coverage of 4G	23.5%	40.0	96.0	81.3	77.0	40.5	68.8	98.3	96.5	99.8
2.1.2) Fixed-line broadband subscribers	17.6%	0.0	9.1	14.0	1.3	0.0	1.1	22.7	2.2	32.8
2.1.3) 5G deployment/rollouts	11.8%	0.0	50.0	50.0	50.0	50.0	50.0	100.0	100.0	100.0
2.1.4) Average fixed broadband latency	17.6%	0.0	90.8	91.6	86.4	78.8	87.6	92.0	90.4	96.4
2.1.5) Average mobile latency	17.6%	88.8	94.9	94.6	94.9	90.3	94.6	95.7	97.1	99.6
2.1.6) International internet bandwidth per internet user	11.8%	0.3	1.6	3.3	29.4	0.3	1.9	11.7	0.9	18.4
2.2) Enabling infrastructure	43.3%	17.0	50.0	82.1	57.1	44.0	32.6	80.2	75.1	89.5
2.2.1) Smartphone penetration	30.8%	10.2	47.8	70.2	34.5	34.1	21.6	74.7	54.1	87.7
2.2.2) Account ownership at a financial institution or with a mobile money-service International provider	23.1%	26.0	27.0	81.0	79.0	45.0	21.0	74.0	85.0	86.0

¹ The weight reflects the indicator's contribution to the category e.g. indicator 1.1.1) "Evidence of digital strategy with budget for implementation" makes up 40% of the category 1.1) "Digital strategy". Meanwhile, category 1.1) "Digital strategy" makes up 50% of the Policy and Regulation pillar.

Series	Weight ¹	DRC	Egypt	Kazakhstan	Kenya	Nigeria	Pakistan	Saudi Arabia	South Africa	UAE
2.2.3) Access to electricity	23.1%	19.1	100.0	100.0	71.4	55.4	75.4	100.0	84.4	100.0
2.2.4) Financial institution account ownership	23.1%	15.0	26.0	81.0	51.0	45.0	16.0	74.0	84.0	85.0
3) AFFORDABILITY	-	15.2	60.3	68.8	42.2	50.8	51.8	63.2	62.3	89.9
3.1) Device Cost	60.0%	25.3	50.9	48.5	40.6	51.3	34.5	42.1	47.9	84.1
3.1.1) Smartphone cost (handset)	100.0%	25.3	50.9	48.5	40.6	51.3	34.5	42.1	47.9	84.1
3.2) Internet Cost	40.0%	0.0	74.4	99.1	44.7	50.0	77.7	94.8	84.0	98.6
3.2.1) Fixed-line monthly broadband cost	25.0%	0.0	90.7	99.5	53.2	33.8	69.3	92.0	89.7	100.0
3.2.2) Mobile phone cost (prepaid tariff)	25.0%	0.0	91.8	100.0	28.4	61.2	92.5	92.5	76.8	97.5
3.2.3) Mobile phone cost (post-paid tariff)	25.0%	0.0	40.7	98.0	52.4	55.1	71.2	100.0	85.4	98.4
4) READINESS	-	42.8	45.4	n/a	57.5	50.5	46.6	46.7	60.7	51.4
4.1) Consumer willingness	46.7%	39.6	41.7	52.8	63.4	54.0	39.5	49.5	67.6	52.0
4.1.1) Consumer skills for the digital economy	28.6%	63.6	72.9	62.9	78.6	82.9	67.1	65.7	85.0	70.0
4.1.2) Consumer trust in the digital economy	14.3%	42.5	48.8	50.0	51.3	50.0	46.3	46.3	52.5	45.0
4.1.3) Net Empowerment	14.3%	34.0	26.0	33.0	66.0	59.0	25.0	24.0	73.0	27.0
4.1.4) Use of digital payments	21.4%	22.0	20.0	78.0	78.0	34.0	18.0	73.0	81.0	77.0
4.1.5) Consumer convenience in the digital economy	21.4%	27.1	27.4	29.2	34.9	35.0	29.3	23.6	37.6	24.4
4.2) SMB readiness	53.3%	45.5	48.7	n/a	52.3	47.3	52.8	44.3	54.6	50.9
4.2.1) Business model readiness	25.0%	14.0	21.0	n/a	40.0	18.0	34.0	16.0	34.0	15.0
4.2.2) Ease of securing funding for digital expansion	18.8%	58.7	63.0	n/a	51.8	50.4	61.2	60.1	60.1	76.7
4.2.3) Workforce readiness	18.8%	74.0	66.0	n/a	69.0	70.0	69.0	71.0	72.0	68.0
4.2.4) Upskilling initiatives	12.5%	76.0	77.0	n/a	77.0	81.0	78.0	80.0	77.0	86.0
4.2.5) Technological readiness	12.5%	23.0	43.0	n/a	31.0	25.0	29.0	24.0	40.0	34.0
4.2.6) Legal readiness	12.5%	38.0	34.0	n/a	49.0	56.0	52.0	22.0	54.0	40.0

Appendix IV-A: Consumer survey questionnaire

Survey specification

- Sample size: 4,300
- Geography: 500 each from UAE, Saudi Arabia, Egypt, Kenya, Nigeria, South Africa, Pakistan; 300 from Kazakhstan and 300 from Democratic Republic of Congo
- Age: 50% Millennials (1981-96) and Generation Z (1997-) / 50% Generation X (1965-80) and Baby Boomers (1946-64)
- Gender: At least 30% male/female
- Employment status: A range
- Education: A range
- Methodology: Online

1. How often do you use the following digital economy activities? Please select one option in each row.

	Less than once a month	Once a month	A few times a month	Once a week	A few times a week	Once a day	A few times a day	Never
Digital financial services (e.g. mobile banking, fund transfer, investment, financial trading)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e-Commerce (e.g. sales, purchases, digital payments, food delivery)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e-Health (e.g. telemedicine, prescriptions)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Less than once a month	Once a month	A few times a month	Once a week	A few times a week	Once a day	A few times a day	Never
e-Learning (e.g. online classes, digital learning resources)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
News and current affairs (e.g. news platforms, podcasts)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gaming/multimedia (e.g. video, music)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e-Government services (e.g. communicating with public authorities, permits)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Social networking and communication (e.g. messaging, video calling)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Travel bookings (e.g. hotel stays, airline tickets)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
E-mobility/ride-hailing services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. What are the main benefits you feel you gain by accessing the digital economy? Please rank up to three, with one being the most benefit

- A. More convenience (i.e. saves time, conducts tasks anytime and anywhere etc.)
- B. More information, including opportunities to discover new products and services and fulfil unmet demand (i.e. better access to information for purchases, investment decisions, education, employment, general knowledge etc.)
- C. More opportunities for wealth creation (i.e. entrepreneurial, employment or investment etc.)
- D. Improved well-being (i.e. increased social connectedness, greater work-life balance etc.)
- E. There are no benefits to accessing the digital economy

3. How would you characterise your current level of accessibility to the digital economy? Select one option.

- A. Low accessibility (i.e. the digital economy has significant barriers to access)
- B. Moderate accessibility (i.e. the digital economy has some barriers to access)
- C. High accessibility (i.e. the digital economy has few/no barriers to access)

4. To what extent do each of the following challenges impact your ability to access the digital economy? Please select one option for each row.

	No impact - this does not restrict my access	Moderate impact - this impacts me but does not restrict access entirely	Significant impact — this restricts my access entirely
Lack of availability of necessary devices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Affordability of necessary devices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of availability of high-speed and reliable internet connection	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Affordability of internet connectivity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of technical skills and knowledge	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of availability of content in my preferred language	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Risk of harassment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Risk of cyberattack and fraud	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My overall lack of trust in the digital economy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. Which of the following activities do you know how to do easily and without the help of anyone else? Please select all that apply

- A. Turn a device on and off
- B. Update passwords
- C. Browse, search and filter information online
- D. Develop digital content (posts, blogs, websites)
- E. Connect a device to the internet
- F. Send an email/internet message
- G. Open a web application
- H. Make a video call on a device
- I. Download a file from the internet/download an app
- J. Make purchases online (including food delivery)
- K. Use social media
- L. Order a car/taxi using a ride-hailing app
- M. Read the news online
- N. Make an online bank transfer
- O. None of the above

6. Which of the following digital skills do you require for your job? Please select all that apply.

- A. Communicating digitally (e.g. sending and receiving emails and other digital content, conducting online video calls)
- B. Collaborating with internal stakeholders (e.g. through Slack, enterprise software, shared documents, cloud storage)
- C. Collaborating with external stakeholders (e.g. through supplier management platforms, project management software etc.)
- D. Browsing, searching and filtering information online
- E. Programming and coding
- F. Advanced data analytics
- G. User experience (UX) design skills
- H. Cybersecurity management
- I. Digital marketing (including social media proficiency)
- J. Engaging with advanced emerging technologies (e.g. artificial intelligence, virtual reality platforms, Internet of Things)

7. To what extent do you agree or disagree with the following statements related to the digital divide in your country? Select one option in each row.

	Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree	Don't know/ Not Applicable
Wealthier people can more easily access and benefit from the digital economy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Men can more easily access and participate in the digital economy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People of all ages are able to participate in and benefit from the digital economy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am familiar with affordable and helpful resources to increase my digital skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Those with disabilities have all the resources necessary to participate in the digital economy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Minority communities (e.g. religious, ethnic, sexual orientation) are more likely to experience cyber violence than others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Over the next five years, I think the benefits of the digital economy will outweigh the risks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

8. Do you think any of the following payment methods are too expensive to use (e.g. because of high exit fees, transaction fees etc)? Please select all that apply.

- A. Debit cards
- B. Credit cards
- C. Prepaid cards
- D. Mobile money payments
- E. Online bank transfers
- F. Digital wallets
- G. Digital currencies (e.g. cryptocurrencies)
- H. None are too expensive
- I. Don't know

9. Which of the following factors most limit your use of e-commerce? Please rank the top three, where one is the most limiting factor

- A. Lack of digital payment tools (e.g. cards, bank accounts)
- B. Concerns with online security and privacy
- C. Limited availability of brands and retailers online
- D. Concerns with timeliness and reliability of delivery and logistics
- E. Lack of knowledge on how to shop online
- F. Lack of customer service and assistance
- G. Immediate need for products
- H. Limited access to infrastructure (e.g. reliable internet connection)
- I. Other, please specify
- J. None of the above

10. Which of the following activities do you feel secure conducting? Please select all that apply.

- A. Making online payments and money transfers
- B. Sharing personal data (e.g. credit card information, address etc.)
- C. Ordering products from any part of the world
- D. Using apps for ride-hailing, food delivery, ordering groceries
- E. Using social media
- F. Viewing/clicking on online advertisements
- G. Streaming content online (e.g. videos, movies etc)
- H. Using e-Government services/platforms
- I. None of the above

11. Which of the following factors are you most concerned about when participating in the digital economy? Please select the top two options.

- A. Risk of identity theft
- B. Risk of cyber-attack / hack
- C. Exposure to disinformation
- D. Risk of online harassment
- E. Too many requests for personal information
- F. Other, please specify
- G. None of the above

Appendix IV-B: Executive survey questionnaire

Survey specification

- Sample size: 750
- Geography (respondent location): 100 each from UAE, Saudi Arabia, Egypt, Kenya, Nigeria, South Africa and Pakistan and a minimum of 50 from Democratic Republic of Congo
- Seniority: Director +
- Function: Operations, strategy, finance, sales
- Industry: Range (no one industry to make up more than 20% of sample and incl. food, consumer goods, retail, finance, education, professional services, healthcare, transport, IT)
- Size (Employee numbers): 10 employees to 500 employees
- Methodology: Computer-Assisted Telephone Interview (CATI) and online

1. In what ways does your organisation use the digital economy? Please select all that apply.

- A. My organisation has no online presence at all
- B. Company website (but no processing of sales online)
- C. Company social media channels (e.g. Instagram, Facebook, WhatsApp etc.)
- D. Core product/service is a digital offering
- E. Company offers digital services bundled with physical products (e.g. remote maintenance services)
- F. Company has a direct-to-consumer desktop e-commerce platform allowing direct purchases
- G. Company has an app allowing processing of sales online
- H. Use a third-party e-commerce platform (e.g. a retailer like Amazon)
- I. Digital advertising
- J. Digital financial services (e.g. online banking)
- K. Digital platforms for collaboration with internal stakeholders (e.g. Enterprise resource planning (ERP) software and cloud storage)
- L. Digital platforms for collaboration with external stakeholders (e.g. supplier management platforms)
- M. Other, please specify:

2. What are the top benefits to your organisation of participating in the digital economy? Please rank one to three, where one is the top benefit

- A. More convenience (i.e. saves time, conducts tasks anytime and anywhere etc.)
- B. More information, including opportunities to discover new products and services and fulfil unmet demand (i.e. better access to information, investment decisions, training, access to talent etc.)
- C. More opportunities for wealth creation (i.e. larger customer base, higher revenues, productivity and profit, more funding sources etc.)
- D. There are no benefits to accessing the digital economy

3. Which of the following statements best reflects the extent your organisation needs to adapt its existing business model to operate in the digital economy? Please select one.

- A. There is no clear opportunity for our business in the digital economy
- B. We need to completely transform our business to participate in the digital economy
- C. Our business needs to make extensive changes to adapt our business model for the digital economy
- D. Our business needs to only add a new segment/division to our existing business model to participate in the digital economy
- E. Our existing business model is completely ready for digital expansion
- F. None of the above

4. How would you characterise the ease of securing funding for your organisation’s digital expansion through the following sources? Please select one in each row.

	Extremely easy	Somewhat easy	Neither easy nor difficult	Somewhat difficult	Extremely difficult	Don't know/ Not Applicable
Internal sources (e.g. retained profit)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Traditional banks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Private equity and venture capital	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Crowdfunding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Local government funding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Foreign government funding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
International funds dedicated for digital tech expansion	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Angel investors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Family and friends	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. Which of the following sources of funding do you prefer to fund your organisation digital expansion? Please select up to three options.

- A. Internal sources (e.g. retained profit)
- B. Traditional banks
- C. Private equity and venture capital
- D. Crowdfunding
- E. Local government funding
- F. Foreign government funding
- G. International funds dedicated for digital tech expansion
- H. Angel investors
- I. Family and friends
- J. Other, please specify
- K. None of the above

6. Which of the following challenges, if any, has your organisation faced when trying to secure funding for digital expansion? Please select all that apply

- A. Lack of formal/audited financial statements
- B. Lack of established relationships with banks
- C. Lack of sustainable/profitable business model
- D. Lack of awareness of national and regional public funding programmes
- E. Funding applications are too complex/lengthy
- F. Lack of tangible collateral
- G. High perception of risk among investors for innovative projects
- H. High perception of risk due to relatively small company size
- I. Other, please specify
- J. None of the above

7. How would you characterise your workforce readiness to participate in the digital economy? Please select one.

- A. **Not ready** - we do not have any of the staff required to access and benefit from the digital economy
- B. **Somewhat ready** - we have some staff with the right basic skills but no staff with advanced technical skills to create digital offerings
- C. **Moderately ready** - we have a good mix of basic and advanced digital skills but management understanding/buy-in is limited
- D. **Completely ready** - we have all the necessary skills to access and benefit from the digital economy with support from management

8. Which of the following, if any, skills needed for digital transformation does your workforce currently lack? Please select all that apply.

- A. Communicating digitally (e.g. sending and receiving emails and other digital content, conducting online video calls)
- B. Collaborating with internal stakeholders (e.g. through Slack, enterprise software, shared documents, cloud storage)
- C. Collaborating with external stakeholders (e.g. through supplier management platforms, project management software etc.)
- D. Browsing, searching and filtering information online
- E. Programming and coding
- F. Advanced data analytics
- G. User experience (UX) design skills
- H. Cybersecurity management
- I. Digital marketing (including social media proficiency)
- J. Engaging with advanced emerging technologies (e.g. artificial intelligence, virtual reality platforms, Internet-of-Things)
- K. Other, please specify
- L. None of the above

9. For which of the following services do you rely on external, third-party providers? Please select all that apply.

- A. Digital marketing services
- B. UX design and web development
- C. Web-hosting platforms
- D. Software services (e.g. cybersecurity software)
- E. Infrastructure-as-a-service (e.g. cloud computing, data storage)
- F. Digital payment processing
- G. Logistics services for e-commerce deliveries
- H. None of the above

10. What are the leading challenges your company faces in hiring and retaining the right talent for your digital operations? Please select up to two.

- A. Limited local talent pool with the necessary digital skills
- B. Limited incentives to retain employees (e.g. bonuses, work-life balance etc.)
- C. Limited brand recognition
- D. Inefficient hiring processes
- E. Unable to meet salary demands
- F. Other, please specify
- G. None of the above

11. To what extent do you agree or disagree with the following statements on upskilling in your organisation? Please select one option for each statement.

Statement	Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree	Don't know/ Not Applicable
My organisation is actively investing in and providing programmes for upskilling employees	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Providing upskilling opportunities will boost retention in my organisation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is limited buy-in from management to provide upskilling opportunities for digital skills.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12. To what extent is your organisation adopting the following digital technologies? Please select one option in each row.

	Already adopted	Planning to adopt over next 12 months	No plans to adopt	Don't know/ Not applicable
Digital platforms and cloud computing for coordinating with internal and external stakeholders	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Big data analytics (enabled by Internet of Things) and supported by artificial intelligence (AI)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Blockchain solutions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Digital payment platforms (for payments from customers and to vendors)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other fintech solutions beyond payments (e.g. cash-flow forecasting, fraud detection etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A common enterprise or ERP software for the business	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5G-enabled solutions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Advanced automation and robotics (including machine learning)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

13. Which of the following mechanisms has your organisation adopted as a means to increase consumer trust? Please select all that apply.

- A. Building cybersecurity measures into digital offerings (e.g. multifactor authentication, requiring regular password changes etc.)
- B. Communicating data protection policy publicly
- C. Alignment on cybersecurity protocols (e.g. penetration testing, incident response plan, employee access controls etc.)
- D. Internal coordination (within your firm) to manage all of your company's third-party partners
- E. Other, please specify
- F. None of the above

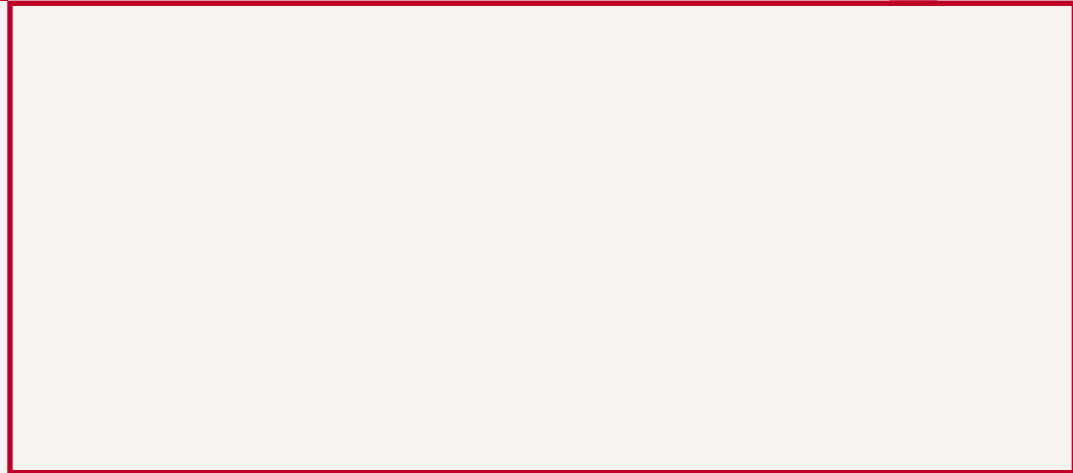
14. Which of the following challenges related to the existing data governance and privacy laws in your country does your organisation face? Please select all that apply.

- A. My country's data governance and privacy laws are not easy to understand and comply with
- B. The data governance and privacy laws are evolving too quickly for my organisation to keep up
- C. My country's data governance and privacy laws favour large corporations and do not promote competition
- D. Don't know, I am not familiar with the laws

15. Finally, now that you have considered the various challenges of accessing the digital economy, what would you say are the biggest impediments your organisation faces in participating in the digital economy? Please select up to two

- A. Adapting the firm's current business model
- B. Limited understanding within management of digital opportunities
- C. Overall scarcity of the necessary digital skills in the local workforce
- D. Inability to attract talent with digital skills
- E. Compliance with data governance laws
- F. Limited technology adoption within my company
- G. Limitations in national digital economy infrastructure (e.g. unreliable internet connectivity, digital payments)
- H. Risks of cyberattacks and fraud
- I. Lack of access to credit and finance to fund digital expansion
- J. Dominance of large tech companies
- K. Other, please specify
- L. None of the above

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