CHAPTER 8

Fintech and the Real Economy: Lessons from the Middle East, North Africa, Afghanistan, and Pakistan (MENAP) Region

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8.1 Introduction

Development of micro, small, and medium-sized enterprises (SMEs) has become the centerpiece of strategies to achieve inclusive growth in the Middle East, North Africa, Afghanistan, and Pakistan (MENAP) region. Countries across the region are, in varying degrees, faced with high youth unemployment rates, declining capacity of the public sector to absorb new labor entrants, lower and volatile oil prices, and widening income disparities. Against this backdrop, policymakers have been designing strategies to catalyze the growth of SMEs with a view to create jobs and ensure that growth is inclusive. In commodity-dependent economies, promotion of SMEs is also intended to help diversify economies.

Strategies to promote SMEs in the MENAP region aimed at easing barriers to entry, growth, and exit of businesses. Toward these objectives, many countries tried to reduce the time and costs of starting businesses by establishing one-stop shops and online platforms as well as reducing capital requirements (World Bank 2019). They also created incentives to enhance access to bank

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finance by establishing credit guarantees and strengthening financial infrastructures—credit registries/bureaus, collateral registries, and insolvency regimes. Some countries also implemented reforms to develop non-bank funding sources, including alternative equity markets for SMEs, venture capital, microfinance, and leasing. Increasingly, countries have also been providing business support, such as facilitating SMEs access to public procurement and export markets, and supporting innovation through incubators, accelerators, and training, etc. Dedicated institutions were also established (Lukonga 2020).

But despite the multitude of incentives, SMEs continue to face barriers to growth and their contribution to employment remains below potential. SMEs continue to experience challenges accessing financing and the business environment has not been sufficiently enabling. The enterprises also face internal constraints related to weak managerial capacities and are not able to attract the talent needed to support their operations and innovate (Saleem 2017). These constraints have manifested in the concentration of SMEs in low capital-intensive activities that are low value adding, such as trade and services and in the predominance of microenterprises that generate limited employment opportunities and are low paying. Educated youths, therefore, prefer to take up jobs in the public sector and large corporations that offer better salaries and benefits.

This modest success in boosting SMEs growth can be attributed to incomplete reforms, but frictions in the strategy also played an important role. Development of financial infrastructures—credit bureaus, collateral registries, and insolvency regimes—remain incomplete. Limited progress has also been made in developing venture capital and crowdfunding regulations. The SME strategy exhibits inherent tensions. For example, bank lending, which the reforms focused on, is influenced by shareholder returns and is not suitable for lending to SMEs that are characterized by high credit risk and low returns. Credit guarantee schemes faced implementation challenges (Sharekh 2018), but the schemes also only mitigate credit risk and not the high maintenance costs which banks cite as a major constraint to lending to SMEs. Alternative equity markets are not effective in MENAP because of the predominance of microenterprises and the preference, in some cases, to own rather than grow companies. The lack of audited accounts, which banks cited as a major constraint to lending to SMEs, has received little attention and statistics on SME demographics are lacking, thus policies have not been evidence-based (Lukonga 2020).

The COVID-19 pandemic has added to the challenges that SMEs in MENAP face and threatens to accentuate already elevated levels of unemployment in the region. The SMEs are concentrated in sectors that have been badly hit by measures to contain the spread of the virus—such as trade, tourism, and transportation. Most SMEs have also not digitalized their business operations, thus the "great lockdown" threatens to bring business operations to a sudden standstill. With microenterprises predominating the SME sector, the level of cashflows is unlikely to withstand substantial periods of business disruptions.

In addition, since SMEs are the predominant form of business and significant contributors to employment, a weakening of the SMEs productive capacity has potential to significantly increase unemployment.

For SMEs to be the engines of inclusive growth in MENAP countries, a rethinking of SME development strategies is needed that puts digitalization at the center of reforms.[1] Digital technologies have potential to boost the growth of SMEs as well as enhance their resilience to shocks. Empirical studies show that technology can enhance operational efficiencies, innovation, access to international markets. and overall productivity (Accenture 2016; OECD 2017; WTO 2019). Digital innovations can also help unlock funding for SMEs, improve government efficiencies, and integrate women in the labor force (Watson et al. 2018). The "great lockdown" to contain the spread of COVID-19 has brought to the fore how digital technologies can facilitate business continuity and enhance resilience to shocks. But equally important, digital technologies are rapidly transforming consumer expectations and the business environment. SMEs, therefore, need to adapt to remain competitive in the digital economy.

This chapter aims to identify the policy mix that can enable MENAP SMEs to leverage digital technologies to boost growth and promote inclusive growth. The analysis addresses three principal questions relating to the digitalization of SMEs in MENAP:

- Can digital technologies usher in a new era of resilience, growth, and quality employment generation among SMEs?
- How digitalized are SMEs and what constraints do they face in digitalizing their businesses?
- What policy mix can enable SMEs to leverage digital technologies to boost their growth and achieve inclusive growth, and what role should the government play?

The assessment applies benchmarking techniques and gap analysis to evaluate the performance of MENAP SMEs and identify needed policies. The review covers 21 of the 24 countries that make up the MENAP region.[2] The analysis is based on both primary and secondary data sources from central bank reports, presentations by senior government officials, World Bank enterprise surveys and other studies, as well as information obtained through seminars at the IMF, World Bank and the MENA region.

The chapter is organized as follows: Section 8.2 provides an overview of the landscape for SMEs in MENAP, focusing on their structure, performance, and constraints to growth and employment contribution. Section 8.3 discusses the benefits of SMEs adopting digital technologies, reviews digitalization trends of MENAP SMEs and the broader economy, and identifies the factors that hamper digital transformation among SMEs. Section 8.4 summarizes the findings and discusses policy strategies to enable SMEs to leverage

digital technologies to boost their growth and employment creation, thereby facilitate inclusive growth.

8.2 The MENAP SME Landscape

8.2.1 Economic Significance of SMEs and Structure

As with other regions, SMEs are the predominant form of businesses in MENAP and are significant contributors to employment and GDP. SMEs, on average, account for over 90% of total businesses in the MENAP region (Fig. 8.1). The share of employment accounted for by SMEs ranges from the low teens in Algeria to more than 50% in several countries (Bahrain, UAE, Iran, Jordan, Lebanon, Egypt, Pakistan, Tunisia). SME contributions to GDP range from a low of 10% in Qatar to more than 70% in some of the oil-importing countries (Egypt, Tunisia, Yemen). The significance of SMEs in the economies is even greater when the informal sector is considered (Saleem 2017).

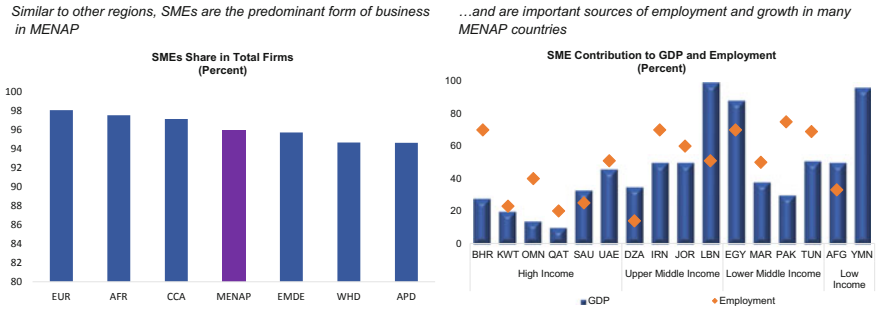


Fig. 8.1 Economic significance of SMEs in MENAP (*Source* World Bank Enterprise Surveys, latest available data. *Note* EDE = Emerging and Developing Europe; SSA = Sub-Saharan Africa; CCA = Caucasus and Central Asia; MENAP = Middle East, North Africa, Afghanistan, and Pakistan; EMDE = Emerging Markets and Developing Economies; LAC = Latin America and the Carribean; EDA = Emerging and Developing Asia; SME = small and medium-sized enterprise. *Source* World Bank, Saudi Gazette citing Bloovo.com, Allied Investment Partners. *Note* Data labels use International Organization for Standardization [ISO] codes)

SMEs in MENAP are concentrated in selected sectors and their business operations mostly target the domestic sector (Fig. 8.2).[3] Trade, retail distribution, and simple contracting account for over 70% of the business activities in most countries (World Bank 2017). SME exports account for 16% of overall exports in the Middle East and indirect exports through participation in global value chains (GVC) are estimated at 2.4% (WTO 2019). Across the region, there are significant cross-country differences in the importance of exports in SMEs sales with Jordan, Morocco, and UAE recording notable magnitudes of

exports (Fig. 8.2). This overall gravitation of SMEs toward the domestic trade and service sectors, in part, reflects the fact that these sectors have low entry costs and resource requirements.

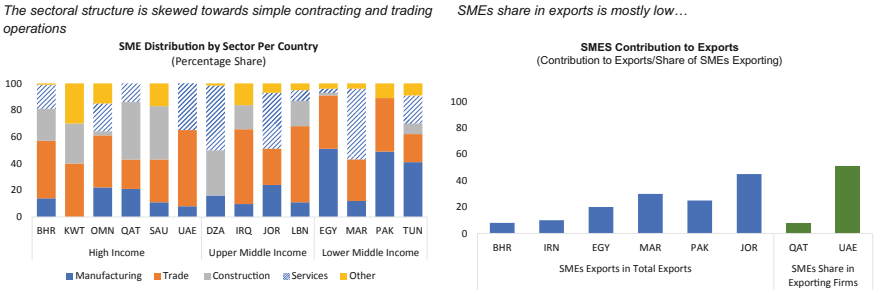


Fig. 8.2 Scale and composition of SMEs in MENAP (*Sources* World Bank and official publications. *Note* Data labels use International Organization for Standardization [ISO] codes. *Source* Various National Reports. *Note* Data labels use International Organization for Standardization [ISO] codes)

Startups are growing rapidly in number and scale, but activities are concentrated in a few countries. Investments in startups increased at a compound annual growth rate of 22.5% between 2015 and 2019 and the number of startups worth over US$100 million also increased (Magnit 2019). The activities are, however, geographically concentrated, with eight countries (Bahrain, Egypt, Jordan, Lebanon, Oman, Saudi Arabia, Tunisia, and UAE) accounting for over 85 percent of all startups and the UAE alone accounting for a third of the activities. The startups are creating employment but not in magnitudes that significantly reduce unemployment levels among the youth (WAMDA 2016).

8.2.2 Constraints to SMEs Growth and Employment Generation

The growth of SMEs in MENAP has been hampered by both external and internal constraints. Limited access to finance is the most commonly cited factor but unfavorable business environments, and talent gaps are also reported to be important. Other constraints tend to be more country-specific and include corruption, unreliable supply of electricity, high tax rates, competition from imports, lack of access to public procurement, high interest rates, political instability and informality (Saleem 2017; IFC 2017; WEF 2016).

These constraints have contributed to the predominance of micro enterprises and the lower shares of SME employment relative to other regions (Fig. 8.3). Microenterprises account for the bulk of the SMEs in most MENAP countries and the contribution of SMEs to employment trails other regions. Funding gaps for SMEs in MENAP are also higher than other regions. The SME sector in MENAP is, therefore, highly vulnerable to economic shocks due to limited capital buffers, weak governance, and limited digital capabilities. The vulnerabilities posed by the lack of digital capabilities have become

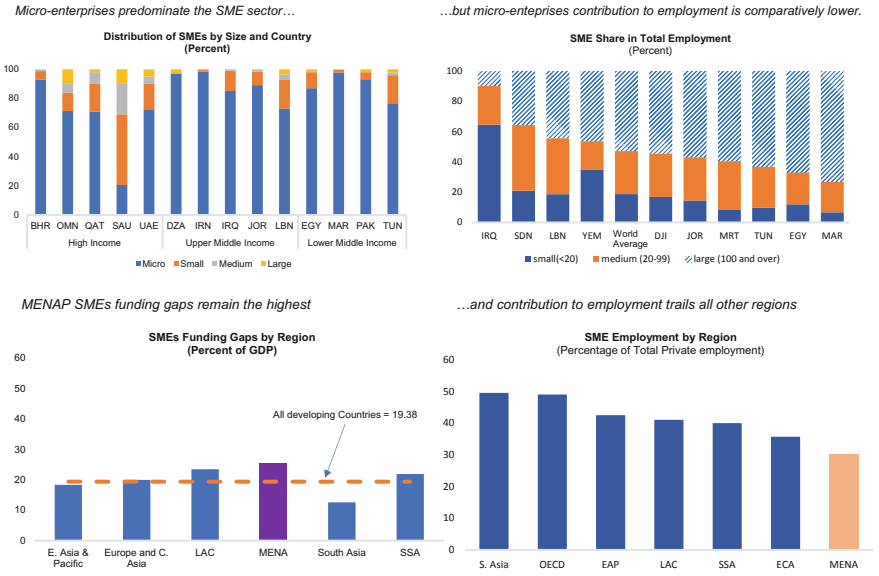


Fig. 8.3 Comparative performance of SMEs (*Source* World Bank Enterprise Surveys, Latest Available. *Note* Data labels use International Organization for Standardization [ISO] codes. *Source* World Bank and various country reports. *Note* Data labels use International Organization for Standardization [ISO] codes. *Source* World Bank. *Note* Data labels use International Organization for Standardization [ISO] codes)

more visible as the "great lockdown" halted the business operations of SMEs that are not able to work remotely.

MENAP SMEs could, therefore, benefit from greater adoption of digital technologies to boost growth and employment generation. Digitalization could help microenterprises scale up faster with favorable consequences for employment generation of the quality that can attract educated youth. Digitalization of business operations can foster greater resilience by enabling business continuity in pandemics. More critically, digital technologies are changing the way firms do business as well as consumer expectations, thus digitalization is no longer an option for SMEs in MENAP but a strategic imperative to remain competitive.

8.3 Digitalization of MENAP SMEs—Opportunities, Trends, and Constraints

8.3.1 Salient Issues

The OECD (2019a) defines digitalization as the use of data, digital technologies, and interconnections that result in new or changes to existing activities. The conversion of analogue data and processes into a machine-readable

format—known as digitization—has made gathering, storing, and managing data amenable to algorithmic management, while the proliferation of devices and sensors has increased capacity for acquiring and managing data—termed as "big data" and "Internet of Things (IoT)." In this highly connected environment, algorithms create value from data and the data improve algorithms, leading to "machine learning (ML)" and the development of Artificial Intelligence (AI). Distributed ledger technology (blockchain) enables open shared and distributed public record of information that cannot be altered. Cloud technology, with its cost-efficient processing capabilities and data storage possibilities, unlocks the potential of blockchain, AI, and IoT.

The growing interaction between data, algorithms, things, and people translates into a "data-driven" or digital economy and society. This transformation makes data a resource and an asset to be traded that underpins the trade of other goods and services. The new generation of technologies—Big data, IoT, AI, ML, cloud computing, and blockchain—are also transforming how value is created, how businesses are connected, how goods and services are delivered, and the speed with which services reach end users and across borders. With digitally savvy millennials accounting for large shares of the populations, consumer expectations have changed to increasingly value goods and services, not just for their utility and cost, but also for the speed and convenience with which they are delivered. Businesses that do not digitalize, therefore, risk being marginalized.

Broadband internet is a critical input in the transition to the digital economy. It is the foundation for digital services, applications, and business models and is a pre-requisite for the adoption of other digital technologies. Broadband networks encompass international, domestic backbone and backhaul, and local access connectivity.[4] All three network components need to be in place and optimally utilized to facilitate access to affordable and reliable broadband connectivity that can support digitalization of businesses, including SMEs. Internet Exchange Points (IXPs) are also vital for improving the affordability and quality of broadband connectivity, within and between countries, as they ensure that Internet traffic remains "local" thereby keeping costs and latency low.

SMEs' growth prospects can be significantly boosted by digitalizing their operations. Going online enables SMEs to reach new clients and markets at low cost, reduce communication costs, and conduct business during the lockdowns. Big data, cloud computing, IoT, AI, and ML improve efficiencies, reduce capital expenditures and operational costs, and speed up cross-border transactions (OECD 2019b). Through these channels, broadband internet and digital technologies help firms scale up faster, increase employment, and boost output growth.

But for digital dividends to materialize, countries need robust digital ecosystems. The principal elements of the ecosystem include availability of affordable high-speed internet, a labor force that has digital skills, digital platforms to connect businesses with consumers, and digital financial services. Other

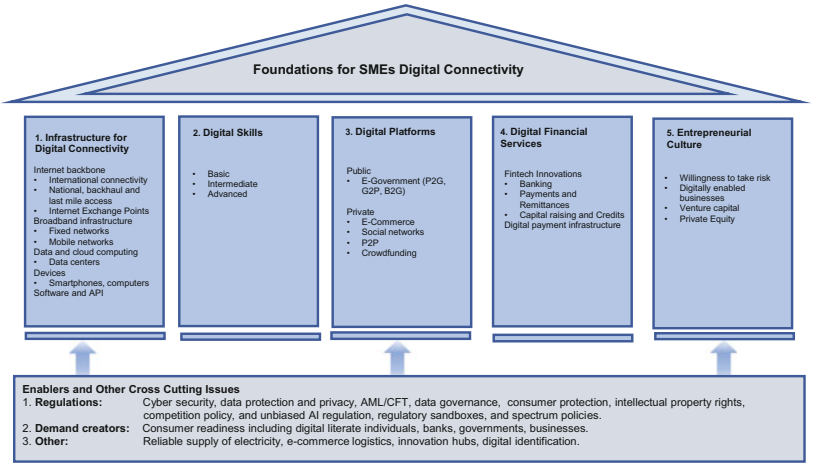


Fig. 8.4 Pillars of a digital ecosystem for enterprises (*Source* World Bank and Author)

important elements include digital identities (IDs) and interoperable digital payment systems to facilitate transactions, digitally literate consumers, affordable devices, and entrepreneurial culture. There is also need for a reliable supply of electricity, e-commerce logistics, and digital identification and data centers for cloud computing. A robust regulatory framework is also needed that promotes innovation while mitigating risks, such as cyber risks, data protection and privacy, consumer protection, fraud, and money laundering (Fig. 8.4).

8.3.2 Benefits and Risks of Digitalizing MENAP SMEs

Digital solutions can directly boost MENAP SMEs' growth and employment creation and contribute to the realization of the policy objective of inclusive growth. Efficiency and productivity gains enabled by digital technologies can help accelerate the migration of SMEs from microenterprises to larger firms that are more resilient and competitive with greater scope to create employment. Specifically:

- Broadband internet can help SMEs reach a larger market at low cost and allow for business continuity during the lockdown.
- IoT enables efficiencies in stock management and transportation, while Global Positioning System (GPS) Apps can help ease logistical challenges and promote e-commerce.[5]
- Cloud-based services can help alleviate financial and talent constraints by reducing ICT upfront capital expenditures, provide ICT expertise, improve digital security, and benefit from lower cost cloud-based communication services.

- Big data analytics can improve customer service.

Besides the job creation arising from SME growth, digitalization promises other employment advantages. Digital jobs and skills are better able to adjust to new technological demands. The jobs are also likely to come with a more flexible working culture that allows self-employment and remote work, giving women and youth more opportunities to participate in the labor force. Additionally, these jobs can help countries realize national plans for digitizing their economies (PwC 2017). Thus far, the total number of jobs created by startups in MENAP is still small, but technology-enabled businesses have potential to generate employment opportunities through network effects.[6]

Digital technologies can also facilitate SMEs' access to credit and ease a key impediment to their growth. Electronic payments create a digital trail of transactions that enables banks to lend to SMEs against cashflows if audited accounts and collateral are unavailable. Digitizing payments across supply chains can also help SMEs optimize account receivables and free up cash flows for working capital. Big data enhances banks' credit risk assessment capabilities, improves AML/CFT compliance, which can reduce wholesale de-risking that has disproportionately impacted SME lending, and enables banks to create products tailored to SMEs. Blockchain facilitates faster cross border payments and the establishment of reliable electronic registries of leased and moveable assets, thereby enabling SMEs to pledge moveable collateral.[7] Digital innovations—Crowdfunding and P2P platforms—help provide alternative funding sources.

A digital government reduces costs and improves outcomes. E-government services can enhance the quality of interactions with businesses and citizens, such as facilitating more transparent tender processes, and reducing time for business registration and tax compliance. Internet and other digital applications (AI, ML) can facilitate electronic reporting and the development of structural and demographic statistics on SMEs to provide perspectives on entry, exit, growth, and job creation. More granular data on SMEs facilitates evidence-based policies and better monitoring and analysis of regulatory policy impact, which improves the effectiveness of SME policies. Moreover, the significant size of the public sector in most countries and the pervasiveness of making payments to, or receiving payments from, governments mean that when authorities introduce digital payment options, they can influence the behavior of a mass of individuals, incentivizing them to switch to digital payments.

Digital innovations in payments can help facilitate efficiencies in domestic and cross-border trade. Digital payments infrastructures enable real time payments that increase operational efficiencies and blockchain has emerged as a key technology to facilitate international remittances and other cross-border transactions. Payment instruments (credit and debit cards) also alleviate payment delays and reduce cash management costs.

Digital dividends can, however, be neutralized if risks are not well managed (IMF 2019). The "data-driven" economy and society has made data an asset to be traded and a resource that underpins trade of goods and services. How to fully exploit the potential of data to stimulate innovation and productivity while protecting privacy, intellectual property rights, and ensuring security is a new challenge. Increasing connectivity and dependence on technology also increases IT risks, and broadens the threat landscape for cybercrime, digital fraud, money laundering, biased AI decisions, as well as fake news, such as deep fake.[8] SMEs have not been the target of cybercriminals, but they lack in-house IT expertise to monitor and secure their networks and devices. Further, without appropriate retooling programs, automation can also displace labor and increase unemployment.

8.3.3 Status of MENAP SMEs Digital Transformation

Businesses, in MENAP, have generally been slow to adopt the internet to boost productivity despite many governments' initiatives to promote digitalization. The digitalization process has not followed the path typically seen in other markets where consumers moved online and businesses immediately followed, enabling a gradual development of the digital ecosystem. In MENAP, mass internet adoption, especially in the GCC, took off around the mid-2000s, but businesses only began to digitalize after 2010 (Fabre et al.). The internet continues to be used mostly for entertainment and to communicate and much less to make transactions or to innovate, thus businesses trail governments and consumers in internet usage (McKinsey 2016).

SMEs in MENAP are increasing their digital presence, but their overall footprint remains small (Fig. 8.5). Despite the increase in internet usage among the population, only 15–25% of SMEs in MENAP had online web presence at the end of 2012 (Deloitte 2014), and recent surveys indicate that these shares have only marginally changed (WTO 2019). Use of social media

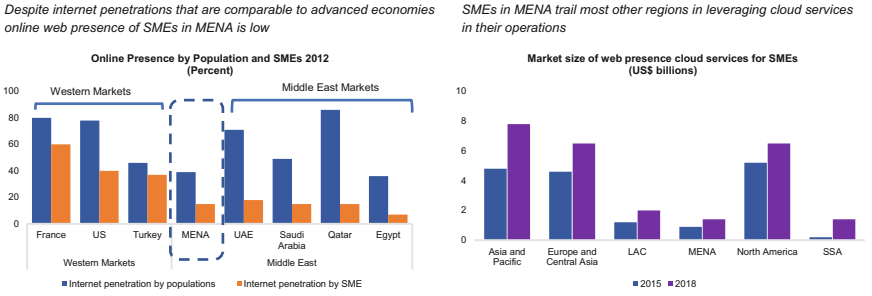


Fig. 8.5 Web presence and cloud adoption by MENAP SMEs (*Source* Google Survey [2013] and Deloitte [2018]. *Source* Statistica 2019)

platforms such as Instagram and Pinterest by SMEs has increased, but the technological absorption at the firm level shows that firms in the middle to lower income countries are lagging in embracing technologies in their business operations (WEF 2019). Data centers have been established that are facilitating the adoption of cloud computing but deployment of cloud services by SMEs remains low.[9]

Interest in e-commerce is growing but the share of SMEs that have embraced online trading as a consumer sales channel and the share of e-commerce transactions in SMEs total sales remain small. Data on e-commerce transactions by SMEs are scanty, but overall e-commerce transactions for the MENA region accounts for less than 2% of total sales and less than 1% of the global e-commerce market (Fabre et al. 2019). The UAE, Saudi Arabia, and Egypt account for 80% of the MENA e-commerce market followed distantly by other GCC countries (Bahrain, Kuwait, Oman, and Qatar). Governments in several countries (GCC, Egypt, Pakistan, Jordan, Tunisia, Lebanon) have begun to formulate policies to promote e-commerce, big retail companies are increasing online sales, and several e-commerce platforms have emerged, but SMEs are still largely absent from virtual marketplaces (US Export. Gov).[10]

Technology startups and technology-enabled businesses are increasing but activities remain concentrated in a few countries (Fig. 8.6). Boosted by government and other initiatives, investment in technology startups grew at an annual compound growth rate of 36.6%. UAE accounts for 31% of all deals and 70% of funding in the region. Other countries with significant digital start-up ecosystems include Saudi Arabia, Egypt, and Lebanon followed distantly by Iran, Jordan, Kuwait, Tunisia, and Bahrain. E-commerce, Fintech, technology, and transport logistics account for half the investments (Magnit 2019).

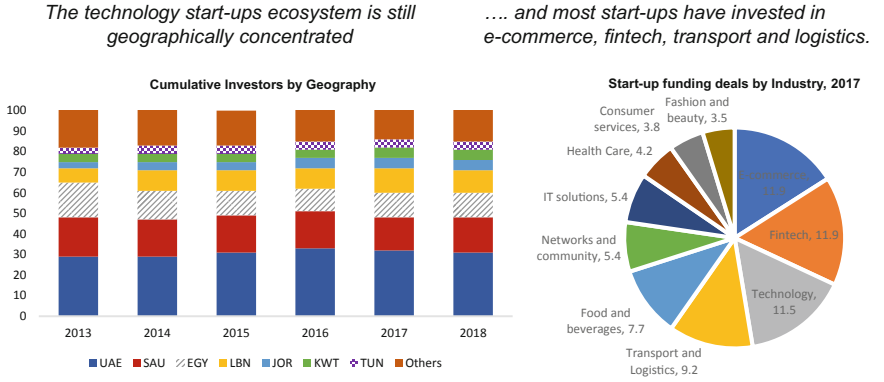


Fig. 8.6 The digital technology start-up ecosystem in MENAP (*Source* Arabnet Business Intelligence, Dubai SME. *Note* The State of Digital Investments in MENA 2013–2018. *Source* Statistica)

8.3.4 The Digital Ecosystem for SMEs and Constraints to Digitalization

SMEs in MENAP are at different stages of digital transformation but, generally, the preconditions for effective use of new technologies are missing in many countries. The SMEs face significant constraints on the supply side but demand factors also play an important role in slowing the digitalization process.

8.3.5 The Digital Landscape in MENAP and Supply-Side Constraints

The preconditions for the development of information and digital economy are lacking in many countries, particularly in the non-GCC MENA countries. Access to international connectivity is good but barriers to entry and competition have constrained capacity utilization. These barriers are resulting in underinvestment in national backbone infrastructures and inefficiencies across the internet value chain that manifest in low broadband penetration rates and unaffordable internet services. Progress has also been slow in developing digital financial infrastructures, e-commerce logistics, enabling regulations, digital skills gaps, and entrepreneurial culture are just emerging.

All countries have easy access to international fiber-optic networks. The region is strategically positioned with respect to international connectivity as most of the submarine fiber optic cable infrastructure linking Europe and China crosses the Mediterranean Sea, the Sinai Peninsula, descends through the Red Sea, and through the Yemen-Djibouti strait to reach the Arabian Peninsula. This infrastructure is complemented by terrestrial cables built across the Middle East to provide alternative connectivity between Asia and Europe (World Bank 2014, 2018). Most data traffic is, therefore, transferred internationally through submarine cables, with terrestrial fiber, microwave, and satellite transmission accounting for a smaller amount.

Effective use of this good international connectivity infrastructure is, however, constrained by lack of competition and open access regulations. Several MENAP countries restrict access to international gateways and international fixed long-distance lines in the form of monopolies and other restrictions to competition (Fig. 8.7). Entry barriers constrain investment and result in capacity underutilization of international bandwidth and higher international charges, which spill over to downstream domestic markets.

The domestic telecom market has been increasingly liberalized, but some countries continue to maintain restrictions that constrain investments and increase inefficiencies. For instance, a few countries (Djibouti) maintain monopolies across the whole value chain. About a third of the countries still restrict competition in their mobile and fixed broadband markets through monopolies, state ownership, or limits on foreign ownership and control (Fig. 8.7). Restrictions on peering and network development coupled with limited market contestability have also constrained the development of Internet Exchange Points (IXPs), resulting in domestic networks having to

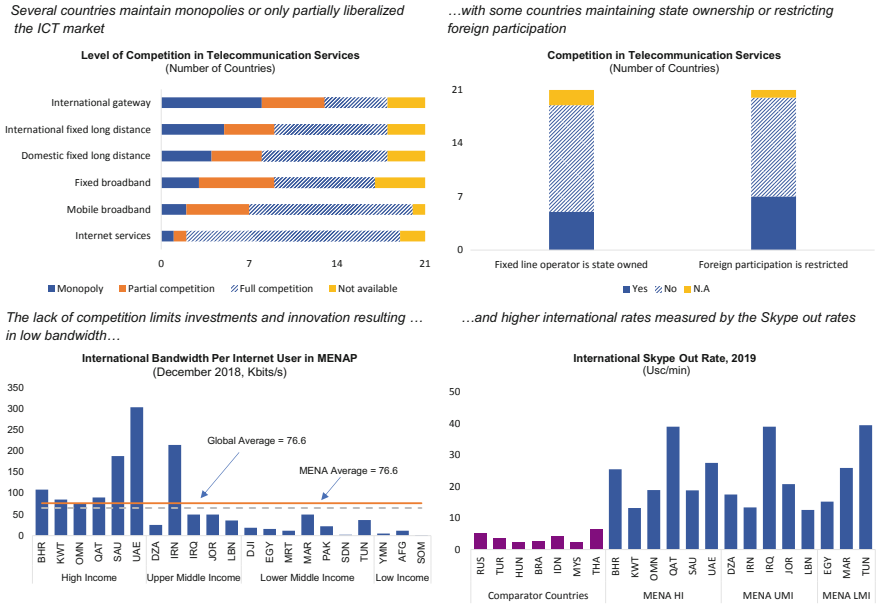


Fig. 8.7 Entry barriers in MENAP telecom market (*Source* ITU. *Note* No restrictions to foreign participation. *Source* ITU. *Note* Data labels use International Organization for Standardization [ISO] codes. *Source* Skype, http://www.skype.com. *Note* Data labels use International Organization for Standardization [ISO] codes. HI = High Income, UMI = Upper Middle Income, LMI = Lower Middle Income, LI = Low Income)

send local traffic to Europe to exchange data before backhauling it to the Middle East. Internet services, therefore, exhibit lower latency, high costs, constrained bandwidth, and low speed, which limits the adoption of cloud services.

Entry barriers and high capital investment requirements have slowed the deployment of advanced network technologies which impact the adoption of digital technologies. Fixed broadband markets are largely underdeveloped with very countries (UAE, Qatar) currently deploying fiber optic-based access technologies. Greater progress has been made in developing the mobile broadband market but the agenda for further action remains large. A few countries (Saudi Arabia, Bahrain) have launched 5G, several countries (GCC, Algeria, Jordan, and Lebanon) have rolled out the higher speed fourth generation of mobile telecommunication technology (4G) but most low-income countries still rely on 3G technologies that are slower (Fig. 8.8). In countries with monopolies across the broadband value chain (Djibouti) or with geopolitical tensions (Iraq, Afghanistan, Yemen), access is limited, network quality is poor and internet costs are higher. Slow internet constrains adoption of cloud services, AI, and IoT.

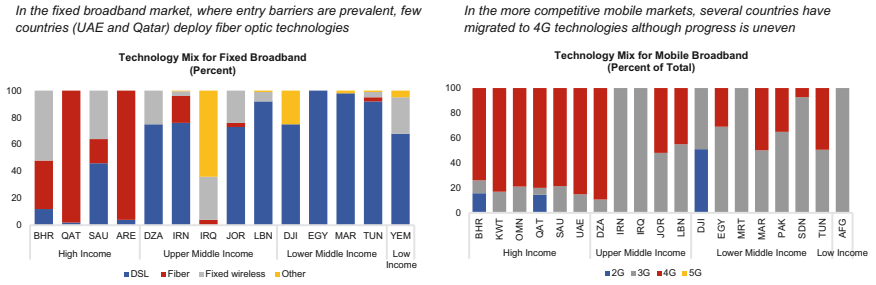


Fig. 8.8 ICT infrastructure in MENAP countries (*Source* Telegeography, World Bank 2018. *Note* Data labels use International Organization for Standardization [ISO] codes. *Source* Fitch Solutions, Telecommunication Country Reports. *Note* Data labels use International Organization for Standardization [ISO] codes)

Access to broadband internet is limited in some countries, particularly in the lower income countries, and this constrains SMEs' ability to embrace digital solutions, including e-commerce. Fixed broadband subscriptions are the second lowest in the world after Sub-Saharan Africa (SSA) and, with few exceptions (UAE, Lebanon), all countries trail global averages. Mobile broadband has become the predominant platform for internet access, but subscriptions trail all other regions after SSA (Fig. 8.9). Within MENAP,

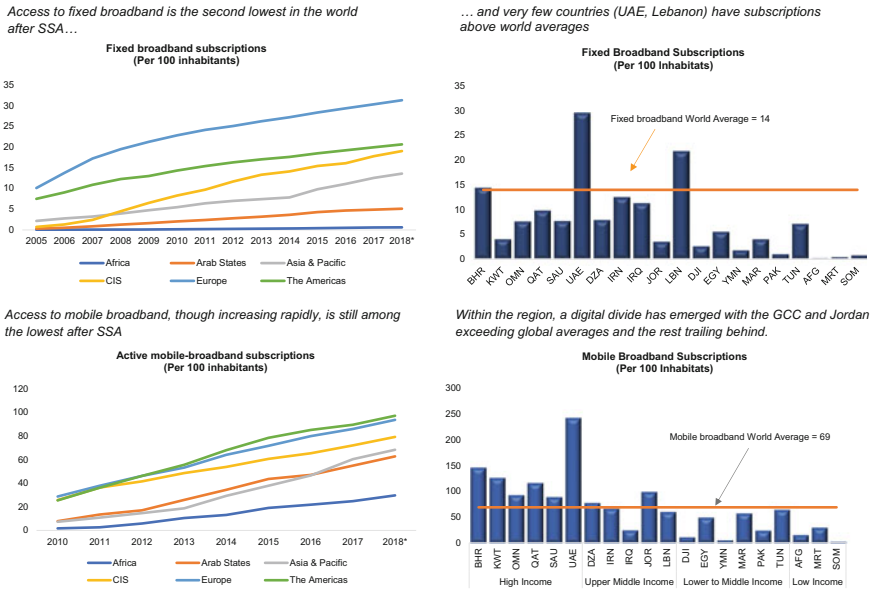


Fig. 8.9 Access to broadband internet (*Source* ITU. *Note* CIS = Commonwealth of Independent States. *Source* ITU. Note: Data labels use International Organization for Standardization [ISO] codes. *Source* ITU. *Note* CIS = Commonwealth of Independent States)

subscriptions are higher in the GCC and Jordan, while other countries are below the global average. Deploying infrastructure for rural coverage remains an economic challenge for many countries, thus a rural–urban digital divide has emerged.

Network quality and reliability continues to improve but remains a challenge, especially in the lower income countries, and this adversely impacts internet usage and adoption of digital solutions. Internet-connection-speeds in MENA for fixed broadband are below global averages for all countries, and the subscriptions are mostly at speeds below 10 Mbit/s,[11] reflecting the slow transition to fiber optics. For mobile broadband, the GCC, Iran, and Jordan are among the few countries where the speeds are above global averages (Fig. 8.10), reflecting advancements in rolling out 4G and spectrum allocation, especially above 1 GHz. For some countries general restrictions designed to limit the influence of social media negatively impact network reliability. Low download speeds constrain e-commerce which requires high bandwidth to download images and videos. The low speeds coupled with regulatory constraints and insufficient local hyper-scale data center further inhibit the growth of bandwidth reliant technologies, such as cloud computing, IoT, and AI.

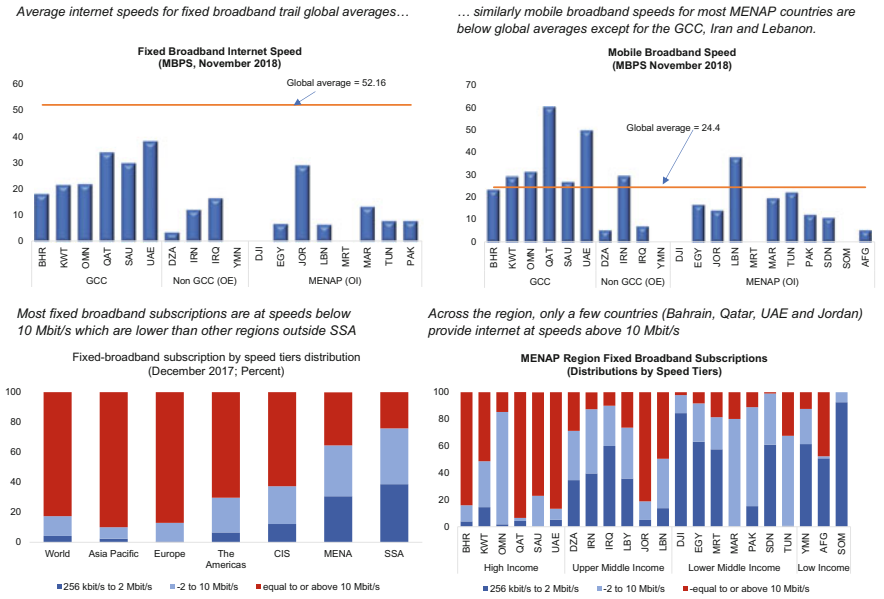


Fig. 8.10 Internet speed (*Source* Speedtest Global Index. *Note* Data labels use International Organization for Standardization [ISO] codes. *Source* ITU. *Note* CIS = Commonwealth of Independent States; MENA = Middle East and North Africa; SSA = Sub-Saharan Africa)

The high cost of internet also hampers SMEs' digital transformation. The average cost of broadband packages has been declining but remains unaffordable in several low-income countries (Fig. 8.11). Constrained access to the international gateway and the absence of IXPs in many countries also contribute to higher international internet costs. Limited competition in some countries (UAE) and underdeveloped technological infrastructure (Mauritania) also push up prices and limit capacity to provide businesses with affordable bandwidth. With regional bandwidth costs several times higher than many other countries, businesses could face challenges developing cloud-centric business models or competing.

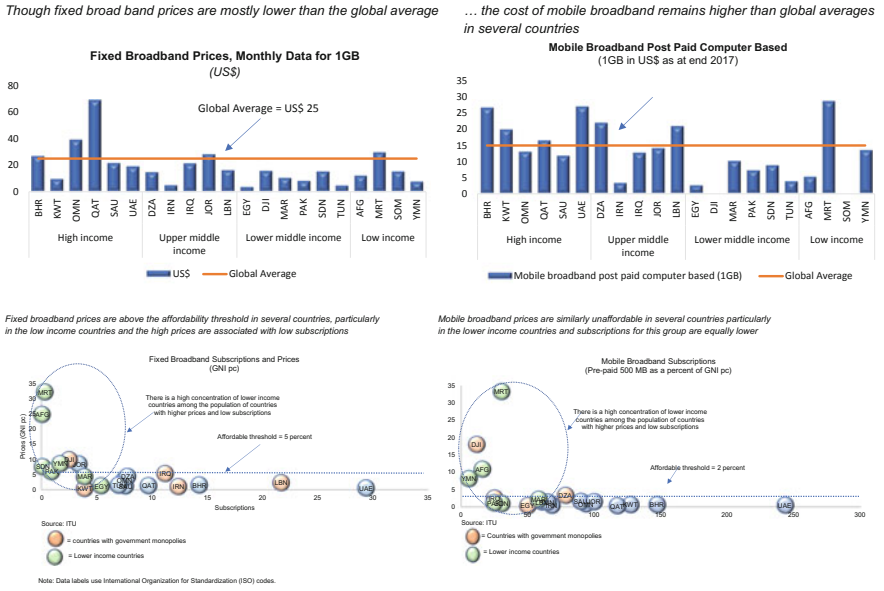


Fig. 8.11 Broadband prices (*Source* ITU. *Note* Data labels use International Organization for Standardization [ISO] codes)

The large and growing digital skill gaps constitute another major challenge for SMEs' ability to compete for IT skills and adopt digital solutions. The MENAP region rates the second lowest after SSA in basic, standard, and advanced digital skills (Fig. 8.12). The skill gaps cut across the region, but low-income and conflict countries face more fundamental challenges in developing their human capital through education (WEF 2016). In addition to the ability to invest in education, higher income countries (GCC) also attract expatriates but some countries (Lebanon, Egypt), with high levels of digital expertise suffer brain drain. The digital skill gaps are reportedly more acute in the areas of cloud, AI, machine learning, mobile technologies, blockchain, data analytics, and advanced security (Galviz 2020). A misalignment between

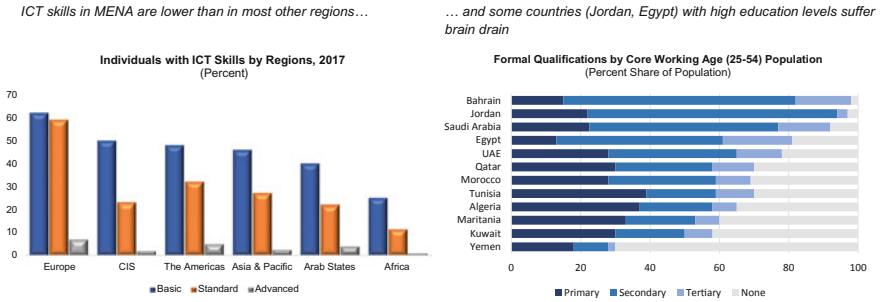


Fig. 8.12 ICT digital skills (*Source* WEF and the Global Competitiveness Report 2019. *Source* World Economic Forum, Human Capital Index 2016)

educational curriculum and labor market demands together with the rapid pace of technology contributes to the gaps (EY 2015; Bricker 2019). Public sector digital transformation projects in some countries (GCC, Egypt, Jordan, Lebanon, Tunisia, Pakistan) will increase demand for IT skills relative to supply (EY 2015).

Digital financial services (DFS), though growing rapidly, do not yet provide a strong foundation for SME digital transformation across the region. The infrastructure critical for SMEs to accept electronic payments—such as Point of Sale (POS) terminals—have limited penetration, in part, reflecting restrictions on the role of agents in financial services delivery. Few countries (Jordan, Egypt, and Morocco) have achieved interoperability in their mobile payments systems. Digital payment instruments (credit and debit cards) are also still limited in most non-GCC countries. Debit cards, which are more prevalent, are not accepted in e-commerce transactions. Fintech innovations are still concentrated in seven countries (UAE, Saudi Arabia, Bahrain, Egypt, Iran, Jordan, and Lebanon) and are focused more on payments and less on the provision of credits, such as P2P and crowdfunding (Fig. 8.13). Banks' capacity to assess digital projects also remains limited.

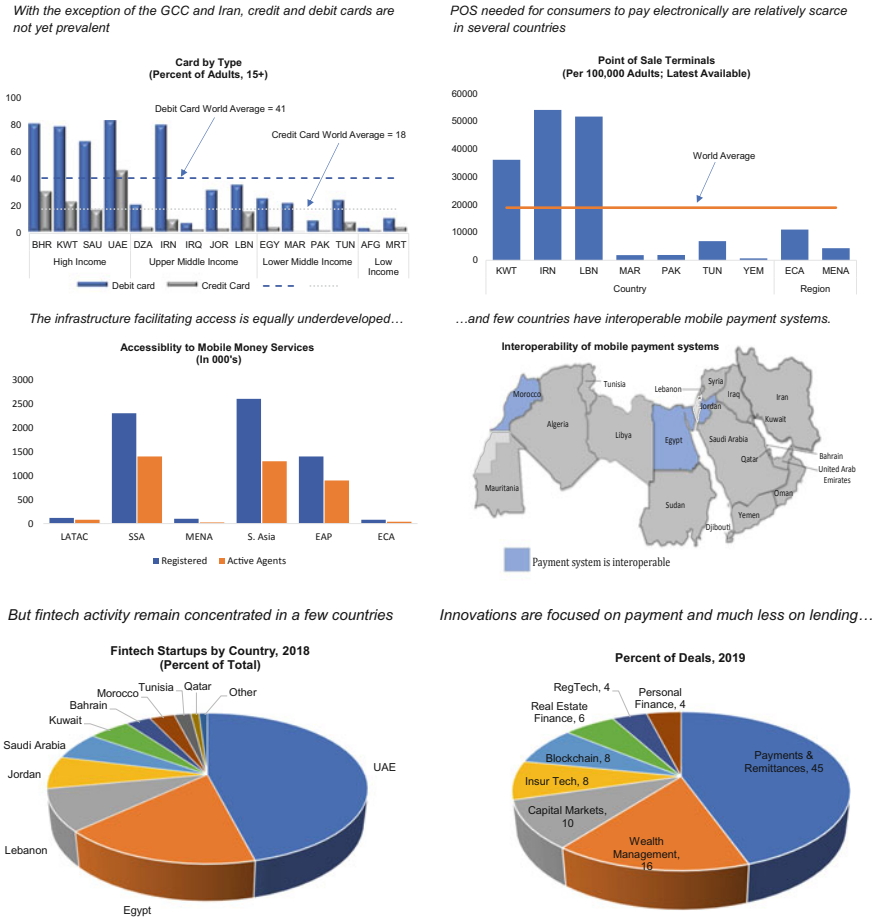


Fig. 8.13 Digital payment infrastructure and finance (*Source* World Bank Findex Database. *Note* Data labels use International Organization for Standardization [ISO] codes. *Source* World Bank. *Source* GSMA. *Source* Magnitt and Abu Dhabi Global Market, MENA Fintech Venture Report)

The importance of e-commerce is well recognized in the region, but preconditions are lacking in most countries (Fig. 8.14).[12] In 2016, the Arab Federation of e-commerce was established to develop the MENA's e-commerce sector.[13] However, e-commerce logistics—unified address systems, area codes, postal service, land customs—are deficient, and this hampers last-mile delivery,[14] causes delays in delivery, and increases dependence on more expensive air-shipments (Fabre 2019). Online marketplaces and digital payment instruments are limited while many SMEs lack the skills to develop effective websites. Outside of the GCC, many countries in MENAP have large shares of unbanked and unconnected populations which limits demand.

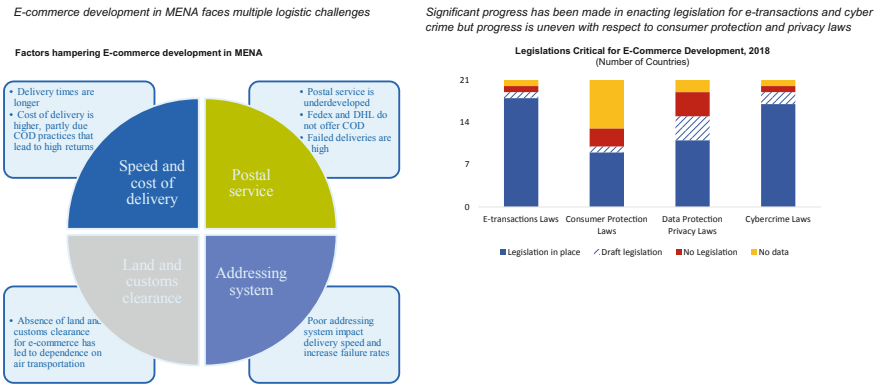


Fig. 8.14 Factors constraining e-commerce development in MENAP (*Source* Google and Bain, White Paper 2018)

Legislative measures for e-transactions and cybercrime are largely in place, but less progress has been made with respect to consumer protection and data protection and privacy legislation. Several countries, for instance, the GCC and Jordan have launched digital signature services which should help increase e-commerce.

Digital government or e-government strategies have become prevalent, but few have developed nationwide digital strategies (McKinsey 2016). At the end of 2018, half the countries ranked very high (Bahrain, UAE) or high (Jordan, Iran, Kuwait, Lebanon, Morocco, Oman, Qatar, Saudi Arabia, and Tunisia) on the UN E-government development index. With respect to online provision of government services, seven countries (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, UAE, and Tunisia) rank very high followed by Egypt, Iran, Morocco, and Pakistan. The strategies, however, mostly focus on the digitization of government services, which is a good starting point, but few countries (Egypt and Oman) have nationwide digital strategies (McKinsey 2016). Similarly, few countries (Saudi Arabia) have developed online services that target SMEs.[15]

8.3.6 Demand-Side Constraints

Demand-side constraints currently constitute the immediate impediment to the digitalization of SMEs in MENAP. The large digital "usage gap" that is several multiples of the "coverage gap" suggests that the constraints to digital adoption go beyond coverage.[16] In particular, while the coverage gap has significantly declined, the "usage gap" increased before plateauing at an elevated level. Lack of internal digital capabilities, high cost of broadband internet, knowledge gaps in SMEs about suitable digital solutions, financial constraints, and limited implementation capacity are some of the factors constraining demand for digital solutions by SMEs. The readiness of

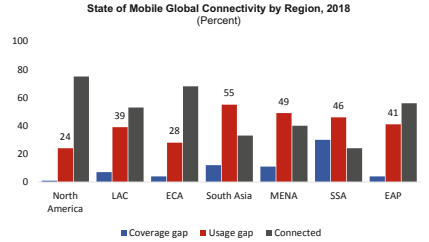
consumers is another limiting factor. There is still widespread lack of trust in digital payments which, in part, reflects concerns with cyber risks and privacy breaches which is coupled, in some cases, with a lack of devices to access internet.

The lack of internal digital capabilities and knowledge gaps among SMEs in MENAP are, in part, a reflection of the disproportionate impact of skill gaps on SMEs. While the MENAP region faces digital skill gaps in general, the scale of SMEs and limited financial resources make it difficult to compete for talent with big corporations and governments that offer higher wages.

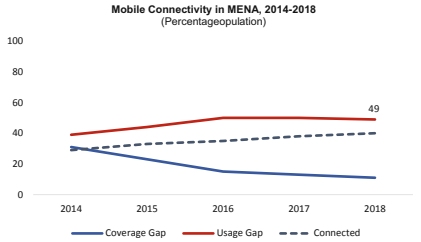
Consumers in many of the non-GCC frontier markets are not well equipped to adopt digital solutions needed to support SMEs' digital transformation. In many lower income countries, half the population do not have access to affordable quality internet and unconnected persons cannot participate in the digital economy. Ownership of smartphones and other internet-enabled devices is also uneven along income lines with the higher income countries (GCC) exhibiting high penetration rates (Fig. 8.15). The cost of internet-enabled devices has not fallen sufficiently and remains a key barrier to mobile ownership in lower income countries (GSMA 2019).

Lack of trust, slow pace of modernizing the banking sector, and regulatory gaps also constrain adoption of digital payments. Consumers still do not trust websites to handle their information and are unaware of their consumer rights, thus Cash on Delivery (COD) is the preferred method of payment even for online purchases (Fig. 8.15). Countries with low penetration of debit and credit cards have been associated with low adoption of digital payments. Moreover, most telecoms-led mobile digital wallets that are available in the region offer basic functions, such as person-to-person credit transfer, but they do not yet support online payments. Restrictive regulations that limit non-banks from issuing e-money also constrain adoption and usage of mobile money (Lukonga 2018).

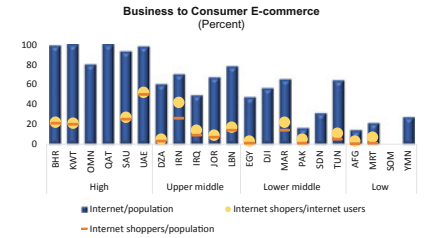
The MENA has the second highest usage gap globally and the usage gap exceeds the coverage gap suggesting that demand constraints are binding



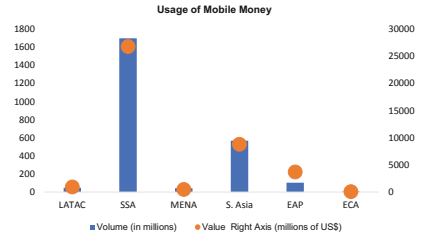
Moreover, while the coverage gaps has been declining, the usage gap increased before plateauing at elevated levels



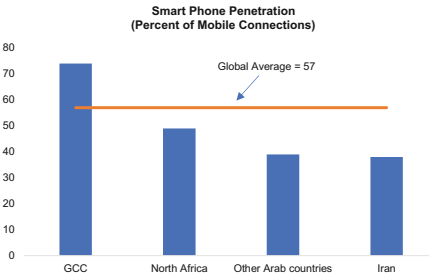
The share of internet shoppers in relation to internet users and populations is low for most countries



…and usage of mobile money is much lower than many other regions



Higher smartphone penetration in the GCC also facilitate internet usage



Households with computers and capability to participate in the digital economy are mostly in the higher income

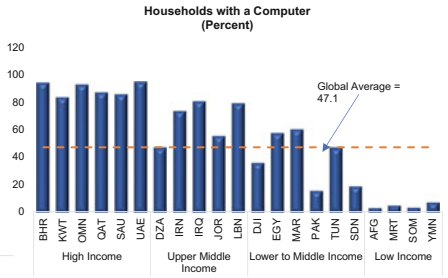


Fig. 8.15 Consumer readiness (*Source* GSMA. *Note* EAP = East Asia and Pacific, ECA = Europe and Central Asia; MENA = Middle East and North Africa; S. Asia = South Asia; SSA = Sub-Saharan Africa. *Source* UNCTAD. *Source* GSMA. 2017. The Mobile Economy Middle East and North Africa. *Note* Data labels use International Organization for Standardization [ISO] codes. GCC = Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, UAE. North Africa = Maurtitania, Morocco, Algeria, Tunisia, Libya, Egypt other Arab countries = Somalia, Sudan, Jordan, Syria, Iraq, Lebanon, Palestine. *Source* ITU. *Note* Data labels use International Organization for Standardization [ISO] codes. *Source* Bain & Co. Commerce in MENA Opportunity beyond the Hype. *Source* World Band Findex Database)

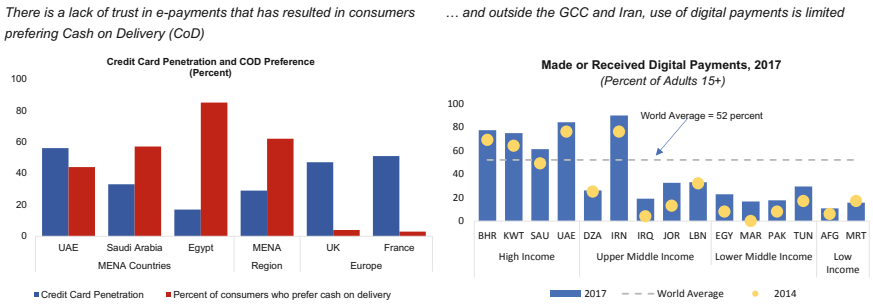


Fig. 8.15 (continued)

8.4 Conclusions and Policy Options

Policies to promote SME growth and contribution to employment have not had the envisioned success, thus a fundamental rethinking of the strategy is needed. Partial implementation of reforms and idiosyncratic factors contributed to the underperformance, but frictions in the design of SME policies also played important roles. A perpetuation of the same strategy, therefore, cannot yield the needed growth in SMEs and in employment. In a rapidly digitalizing global economy, the growing digital divide will increase inequalities between countries and firms without a digital presence can become marginalized.

Digital technologies promise to be a game changer in boosting the growth of businesses and their resilience to shocks, but technology by itself will not lead to broadly shared prosperity. Transformational visions outlined by some of the countries are the right path forward but there is a need to move from e-government-focused digital initiatives to full digital economy development (McKinsey 2016), and for more countries to create the needed enabling environment to foster digital innovation. Firms will need to embrace agility through digital to address the ever-faster changing business environment. Overall, a well-articulated strategy that addresses supply and demand constraints to digital adoption by businesses and sustained efforts to implement financial sector and business support reforms is the key to success.

8.4.1 An Enabling Environment for the Digitalization of SMEs in MENAP

Digital ecosystems have developed unevenly across the MENAP region, thus the priorities for countries differ. The GCC has achieved a high level of connectivity and broadband penetration, but the scope remains to strengthen other elements of the digital ecosystems for SMEs and develop the frameworks for adoption of cloud technologies and services. For most other countries the connectivity infrastructure remains inadequate, access and usage of broadband

internet remains a challenge for large segments of the populations, and the digital ecosystem exhibit major gaps, thus the reform agenda is much broader.

Investments in ICT and other digital infrastructures should be a top priority, and universal access to affordable high-speed quality internet a key objective. The GCC has achieved high levels of 4G coverage and network performance, but could benefit from further investment in fiber networks, cloud computing, IXPs, and data centers, as well as improved spectrum allocation and increased competition. For most other countries, improving access and quality of internet is a priority, and this requires removing barriers to entry and competition across the value chain—eliminating monopoly status over the international gateway, liberalizing the market for building and operating domestic backbone networks, encouraging open access to networks for fixed international and domestic long distance, and allowing competition in end-user connectivity. These measures, along with initiatives related to decreasing costs, are crucial to creating a favorable investment climate and boosting infrastructure rollout.

Educational and labor market reforms should be accelerated and aligned with industry needs to reduce the digital skill gaps. Efforts should focus on increasing the supply of digital skilled staff to enable businesses to fill positions and the labor force to participate in the digital economy. Creation of digital curricula and seamless learning pathways from primary schools to higher education and into employment will be essential (McKinsey 2016). This entails mandating Science, Technology, Engineering, and Mathematics (STEM) subjects in school curriculums, providing technical and vocational education and training through public–private partnerships. The fast pace of digital evolution also requires that investments in education provide lifelong access to learning opportunities. Easing labor restrictions to facilitate expatriates in highly technical areas can also help reduce the skill gaps in the immediate term.

Digital financials services (DFS) are the lifeblood for digitalization and require policies that promote innovation policies while mitigating the risks. Banks need to develop expertise in assessing digital projects, but governments can create an enabling environment by ensuring that reforms address the regulatory constraints that impede innovation as well as investments in the payment infrastructures. More specifically:

- Central banks, in collaboration with financial institutions, should strive to have retail digital payment systems that are interoperable and facilitate real time, convenient, safe, and ubiquitous payment services.
- Regulations should facilitate the establishment of P2P and crowdfunding platforms, payment gateways, and Points of Sale (PoS) terminals.
- Regulators should step up oversight activities of digital financial services to fully monitor and ensure safety, efficiency, and reliability of DFS and engage telecom regulators to enhance operational reliability of DFS.

- Collaboration with telecom regulators can help enhance operational reliability of DFS, particularly in remote and rural areas, which may pose operational risks that could adversely affect agent and customer confidence in DFS.
- Regulatory sandboxes can help enhance supervisory communications with market participants, accelerate digital transformation of traditional entities, and improve their knowledge of technologies, market development, and application of regulatory and supervisory frameworks. Risks will, however, need to be addressed, including ensuring an even playing field between fully regulated entities and those operating in the sandbox to avoid regulatory arbitrage (Wilson and Anastasiia 2019).

Digital government or e-government strategies should go beyond digitization of government services to include national strategies. Digitalizing government services can also help in collection of data for effective policy formulation. Electronic procurement can stimulate the modernization of SMEs and provide incentives for SME use of ICTs and e-commerce.

Other infrastructure gaps will need to be closed. There is a need to address logistics challenges such as inadequate warehouse coverage, scarcity in regional distribution centers, weaknesses in postal services, and lack of postal codes as well as limitations in land and customs clearance. As internet requires a reliable supply of electricity, infrastructure gaps in the energy sector, though not discussed in the paper, will need to be addressed.

The large internet "usage gap" indicates that demand constraints are binding, thus policies to promote SMEs' uptake of digital solutions are needed. Gaps in digital skills and know-how call for awareness campaigns on the benefits of digital technologies; promoting relevant content, including in Arabic; providing SMEs with training facilities in ICT; and holding digital literacy programs to enable consumers to participate in the digital revolution while avoiding fraud and costly mistakes. Barriers relating to affordability of ICT services call for policies that encourage competition and a review of how ICT taxation impacts affordability of devices. Trust is also fundamental to SMEs adopting digital technologies, thus coherent strategies for digital security and privacy and online consumer protection are critical. In addition, internet cannot function without electricity, thus ensuring reliability of electricity supply should be an equal priority.

There is merit in reviewing regulatory and supervisory frameworks to ensure that they allow the appropriate and safe use of innovative technologies. Investments in ICT and payment infrastructure should be complemented with regulations for e-transactions, consumer protection, and data privacy so as to balance the need for firms to collect and analyze data for innovation and efficiency gains with the concerns about security, privacy, and data governance as well as e-signatures and e-contract laws. Other areas deserving attention are electronic signature laws, contract enforcement, insolvency, intellectual property laws, KYC requirements, and cross-border remittances.

The rural-urban digital divide requires government intervention. The digital divide threatens to widen income inequalities and render the policy objective of inclusive growth elusive. National digital strategies should have clear targets to achieve universal affordable high-speed internet, and policies should address the commercial viability of rural telecom infrastructure rollout.

8.4.2 Financial Sector and Business Environment Reforms

For digital benefits to materialize, further reforms are needed in the financial sector and business environment. Five reform areas warrant attention, including deepening the financial sectors, ensuring coherence in policy mix, improving the business environment, strengthening the institutional support framework, and developing SME statistics.

Financial sectors need further development to strengthen financial infrastructures, non-bank financial segments, and capital markets. Further efforts are needed to deepen and broaden the coverage of credit registries and bureaus to include SMEs, to modernize the insolvency regime to avoid criminalizing bankruptcy that occurs as part of normal business operations and reduce the time for resolution and improve recovery rates. There is also a need to enact secured transactions laws for moveable collateral to allow a broader range of collaterals (immovable and movables) with clear priority rankings of claims over collateral supported by electronic registries that make priority interests publicly known. Improvements are needed to regulatory frameworks for microfinance, factoring, and leasing. Corporate bond markets, private equity, and venture capital have room for improvement in all countries (McKinsey 2016). Regulators should also ensure comparable supervisory approaches across financial institutions, albeit on a proportional basis.

Macro and regulatory policies need careful calibration to ensure a coherent policy mix and minimize unintended consequences. Interest rate caps can discourage bank lending to SMEs since it limits the ability to price risk appropriately, thus a relaxation of interest rate caps is needed. Policies to promote bank lending to SMEs should be balanced to ensure that financial inclusion objectives are not achieved at the cost of financial stability. Public sector wages should be reviewed from the perspective of competitiveness. Government borrowing to finance fiscal deficits should take account of the risks of crowding out the private sector, especially SMEs.

The institutional support framework for SMEs needs streamlining and to be refocused. There is a need to address fragmentation and overlapping mandates, improve coordination and establish a formal definition of SMEs that is consistently applied. SME support policies should tilt from providing soft financing toward enabling SMEs to qualify for financing by enhancing their managerial capabilities. There is a need to institutionalize programs such as business incubators to assist entrepreneurs effect their ideas and raise the level of patentable

innovation. Regulatory impact studies should be undertaken at regular intervals and special incentives should be given to SME scale ups or "gazelles" that have potential to create quality job opportunities.

More systematic and regular compilation of SME data is needed to facilitate policy formulation that is evidence-based. This requires information on the number of firms—characteristics of the SMEs by size, gender, age and education, their sectoral distribution, their contribution to output and employment, new entries and exits, gender participation, and bank credit to SMEs and SMEs share of NPLs.

Notes

1. Digitalization is the use of data, digital technologies, and interconnections to create business or change existing activities.
2. The three countries not covered include Syria, Libya and West Bank and Gaza (WBG).
3. There is no universally agreed definition of SMEs
4. International and regional infrastructure provides connection to the rest of the world, the national backbone and backhaul then carriers traffic from international gateways to other regions of the country, and access networks or local loop provides the links between the domestic backbone to the customers, and uses either fixed or mobile broadband technologies.
5. Many countries in MENAP don't have postal codes and this makes locating an unfamiliar residential address very challenging when delivering products ordered online. New apps with GPS functionality can now help locate a recipient using their phone numbers and ease last minute delivery challenges.
6. For example, Alibaba has 30,000 employees, but provides a platform for more than 10 million ancillary jobs. Uber has a few hundred coders, but it supports the livelihoods of around 1 million on-demand drivers (World Bank 2016).
7. For instance, Georgia has successfully created an electronic land and property registry using blockchain.
8. In MENAP, cyber-attacks particularly targeting the GCC have been increasing (Symantec 2019). Policy makers are giving these risks increasing attention, but many countries have not developed solid digital strategies.
9. Data centers and cloud services are provided by Microsoft, Amazon Web Services (AWS), Oracle, Alibaba, and SAP.
10. In Bahrain local merchants are not utilizing online-platforms, so customers purchase goods from other markets. In Kuwait, most e-transactions are related to banking or brokerage services. Overall, the products mostly traded in online sales are consumer electronics, computers, fashion accessories, women's apparel, cosmetics perfumers, etc.
11. While there are no defined thresholds for what constitutes reasonable high-quality services, regulators consider download speeds above 10 Mbps as decent broadband speed and 30 Mbps is considered superfast (GSMA 2019).
12. To thrive, E-commerce needs to be supported by high speed internet, logistics and trade facilitation, e-payment, e-platforms, skill development, talent, awareness, e-procurement and legal and regulation governing e-transactions, data protection and privacy, consumer protection and cybersecurity.

13. The Arab Federation represents 14 countries across the broader MENA region. Some countries (Saudi Arabia, Egypt) have also embarked on national strategies to promote e-commerce among SMEs.
14. Innovative solutions that use GPS functionality to locate customers using their phones are in early stages.
15. Saudi Arabia's digital portal Etimad enables easy access for all SMEs to government tenders, ensure fair competition, increase transparency and greater opportunities.
16. The "usage gaps" captures the disparity between people who live in areas covered by mobile broadband but who are not using internet.

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