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Insight Report

The Arab World Competitiveness Report 2018

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The Arab World Competitiveness Report 2018

The Arab World Competitiveness Report 2018 is a special project within the framework of the World Economic Forum's Future of Economic Progress System Initiative. It is the result of collaboration between the World Economic Forum and the International Finance Corporation / World Bank.

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Preface

Børge Brende
President, World Economic Forum

Philippe Le Houérou
Chief Executive Officer, International Finance Corporation

The Arab world is at a critical juncture. Ambitious economic and social reforms bring great economic promise to the region and at the same time we continue to see fragility and persisting inequalities that can potentially erode social cohesion. Within a rapidly changing geopolitical landscape, the world is moving from a unipolar system of governance toward a multipolar and multi-conceptual order grounded in competing sets of values and precarious friction points. In this context, much of the hope in the region rests on the imperative of constructing a social contract between the population and the state that is based on a more competitive and open economy, with a dynamic and entrepreneurial private sector offering employment prospects for the region's youth.

The swiftly spreading Fourth Industrial Revolution—a dramatic change that involves a range of new technologies that are fusing the physical, digital, and biological worlds, impacting all disciplines, economies, and industries—provides new opportunities that can support growth. In this context, entrepreneurship and diversification will be key to enabling Arab societies to thrive and prosper in the coming decades. *The Arab World Competitiveness Report 2018* presents a timely diagnostic of the competitiveness landscape in the Arab world and provides guidance about what can be done to boost competitiveness and economic and social progress in the region.

The report, which is the result of a long-standing collaboration between the International Finance Corporation (IFC), the World Bank, and the World Economic Forum, leverages the joint knowledge and expertise of each organization to present a shared policy vision to transform the region's economies. It delivers detailed competitiveness profiles for 12 economies of the region, providing a comprehensive summary of the drivers of productivity and competitiveness in the Arab world. It also identifies strengths of the region's economies country by country. Some improvements have been seen in investments in infrastructure and connectivity; the business environment and institutional quality that enables more private-sector investment; the relatively high levels of manufacturing and service exports in some of the region's resource-poor economies; and the achievements of its leading entrepreneurs. Finally, the report highlights areas requiring immediate action to ensure that the societies and the private sector can thrive in a 21st century economy.

The previous *Arab World Competitiveness Report,* published in 2013, just two years after the Arab Spring, identified youth unemployment as a clear challenge that requires a range of efforts. To address those challenges, the World Bank Group has been focusing its work on areas that have the potential to accelerate job creation and economic growth. The World Economic Forum paid special attention to preparing the Arab youth for a changing work landscape through the New Vision for Arab Employment initiative. One manifestation of collaborative efforts for youth empowerment is the partnership between the World Economic Forum and the IFC to identify, support, and enable innovative entrepreneurs of the Arab world through the 100 Arab Start-Ups Shaping the Fourth Industrial Revolution initiative. We are also devoting a special chapter on entrepreneurship in this report to take stock of where we are today since the 2013 edition of the *Arab World Competitiveness Report.*

We hope that the 2018 *Arab World Competitiveness Report* will stimulate discussions resulting in government reforms that could unlock the entrepreneurial potential of the region and its youth and accelerate progress toward an innovation-driven economic model that creates productive jobs and widespread opportunities. This should be the basis of a new social contract that can support inclusive growth and shared prosperity in the region.

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Executive Summary

The Arab world is undergoing an uncertain transition. In the past, most states in the region offered a social contract where citizens received stability and security in return for limits on individual economic opportunity. This system, largely financed by exports of natural resources and foreign assistance, permitted expansive employment in the public sector, widespread subsidies, and government control over large parts of the economy. Unfortunately this approach is proving increasingly unable to provide the number of jobs needed for the region's growing populations and has resulted in very high rates of youth unemployment, low rates of female labor force participation, and widespread social frustration. Addressing these challenges will require implementing a new social contract that focuses on offering opportunities for the region's youth and future generations.

The region's growing young, educated, and technologically connected population presents an unprecedented opportunity to foster development. Yet challenges to achieving it remain. Most economies in the region still need to implement a range of reforms to encourage the development of a more dynamic and sophisticated private sector. Moreover, they do not enjoy the luxury of a long timeframe to develop plans for addressing these challenges. The increasing size of the youth population and the low rate of labor force participation in the Arab world are already causing significant economic and social stresses. In addition, job creation in the context of high global economic integration and rapid technological change requires both governments and the private sector to make continued investments in education, innovation, and connectivity.

The development of a new social contract in the Arab world through reforms leading to better institutional frameworks, including appropriate macroeconomic, trade, and investment policies and more enabling business environments, would allow key productive investments in technology, education, and financial sector development to take place, offering the prospect of transforming the region's economies. The analyses in the *Arab World Competitiveness Report 2018* aim to shed light on these opportunities and to identify the changes needed to create more competitive, open, diverse, and entrepreneurial private sectors in the region.

Key global and regional trends

Rising income and wealth disparities and increasing polarization of societies are contributing to profound changes in the political and economic environments of many countries and are affecting the Arab world as well. For example, 56 percent of respondents to the World Economic Forum's Executive Opinion Survey in Jordan are worried about persistent unemployment or underemployment, and about 40 percent of Tunisian and Algerian respondents place profound social instability and failure of national governance, respectively, among their top concerns. Cyber-dependency is also rising as a concern for some Arab countries. In the United Arab Emirates (UAE), for example, half of the respondents to the Executive Opinion Survey are worried about cyberattacks (up from 30 percent only one year ago) and one in five (twice the figure of last year) is concerned about data fraud. Finally, although adaptation to a difficult natural environment has always been a necessity for the entire Arab world, climate change might render this challenge significantly more difficult. Already today about 40 percent of Executive Opinion Survey respondents in Jordan and Qatar are worried about water crises.

In addition to these global trends, the region faces specific risks—separate from those generated by conflicts in some parts of the region—that are a direct consequence of its current economic structure. In resource-rich countries, excessive dependence on raw materials and lack of economic diversification have increased concern about fiscal sustainability and potential asset bubbles in the face of energy price shocks. These concerns have forced many Arab countries to pursue policies that aim at fiscal consolidation and allow a greater role for the private sector, including in infrastructure financing.

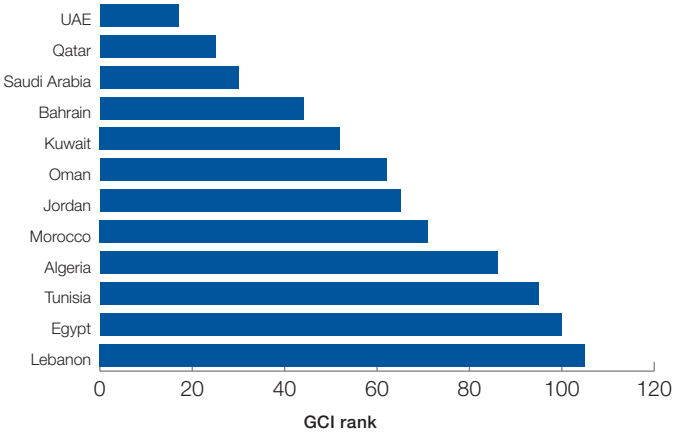
Increasing the competitiveness of the Arab world's economies, diversifying their structures, and developing more entrepreneurial private sectors are vital to addressing the above risks. They are also essential for creating greater shared prosperity in the region. These are the key themes of the 2018 *Arab World Competitiveness Report.*

Competitiveness in the Arab world: Achievements and the way ahead

Even though a handful of countries have made intense efforts to reform and increase investments to improve their level of competitiveness, the region still lags in many areas. Overall, the aggregate competitiveness of the Arab world economies has not significantly changed over the past decade as measured by the World Economic Forum's Global Competitiveness Index (GCI). It is, overall, less competitive than East Asia and Europe and more than Latin America and the Caribbean, South Asia, and sub-Saharan Africa.

Yet the Arab world is composed of a set of very diverse economies, which include some of the richest countries in the world, middle-income countries with varied economic structures, and conflict-affected countries where it is difficult to satisfy even

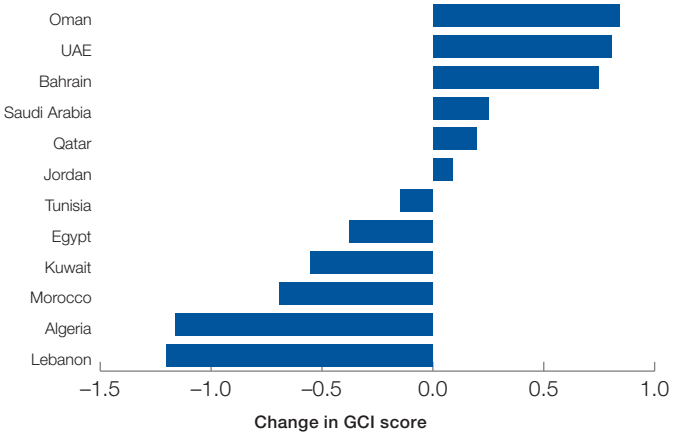
Figure 1: Arab world country rankings, Global Competitiveness Index 2017–2018



Source: World Economic Forum, Global Competitiveness Index 2017–2018, available at www.wef.ch/gcr.

Note: GCI = Global Competitiveness Index; UAE = United Arab Emirates.

Figure 2: Change in competitiveness in the Arab world, 2007–17



Source: World Economic Forum, Global Competitiveness Index 2007–2008 and 2017–2018, available at www.wef.ch/gcr.

Note: GCI = Global Competitiveness Index; UAE = United Arab Emirates.

basic needs. As a result, the region contains some of the world's most competitive economies, such as the UAE, Qatar, and Saudi Arabia, ranked 17, 25, and 30 out of 137 countries on the GCI (Figure 1); as well as a number of states—such as Iraq, Libya, and Syria—where fragility, conflict, and violence (FCV) precluded the collection of the data necessary for the calculation of the index. There are also large differences in changes in competitiveness by country over the past decade (Figure 2). While Bahrain, Oman, and the UAE have made notable gains, competitiveness has eroded the most in Morocco, Algeria, and Lebanon. It also declined in Libya and Syria before conflict made the calculation of the GCI impossible.

In general, resource-rich countries not affected by conflict rank much higher on the GCI than resource-poor ones do. The competitiveness gap between resource-rich and resource-poor countries reached its maximum with the peak in oil prices in 2013 and has slowly decreased since. The region as a whole has generally suffered from declines in oil prices over the past few years and the region's overall competitiveness gap vis-à-vis Organisation for Economic Co-operation and Development (OECD) countries has widened over the past two years.

Of the 12 pillars of the GCI, infrastructure and technological readiness are the areas where the Arab world has made the most significant progress over the past decade relative to OECD countries, a result of heavy investments in transport and information and communication technologies (ICT) connectivity. However, these improvements have not led to gains—relative to OECD countries—in innovation.[1] The gap between the OECD and the Arab world has widened on two pillars, the macroeconomic environment and labor market efficiency (Figure 3). While financial market development was negatively impacted by the global financial crises, the region suffered fewer consequences from it than OECD countries.

Figure 3: Comparative strengths of the Arab world vs the OECD average and factors of relative strength

	Comparative strength vs OECD (percent)		Relative strength (percent)		
Pillar	2007–2008	2017–2018	2007–2008	2017–2018	Pillar delta (score)
Institutions	–7.8	–2.8	5.0	4.1	0.09
Infrastructure	–18.6	–10.4	–6.2	6.6	0.69
Macroeconomic environment	4.3	–14.1	24.7	3.6	–0.79
Health and primary education	–9.1	–7.4	26.9	30.8	0.33
Higher education and training	–22.1	–18.9	–8.6	–2.5	0.39
Goods market efficiency	–11.5	–6.6	0.4	1.8	0.19
Labor market efficiency	–10.6	–14.4	–4.5	–11.4	–0.19
Financial market development	–16.5	–10.4	–0.2	–8.8	–0.27
Technological readiness	–28.8	–20.6	–22.4	0.9	1.15
Market size	–21.4	–5.9	–18.3	–1.5	0.86
Business sophistication	–16.0	–13.3	–4.1	–5.3	0.07
Innovation	–25.5	–21.9	–25.3	–21.3	0.27

Source: Calculations based on the results of the Global Competitiveness Index 2007–2008 and 2017–2018.

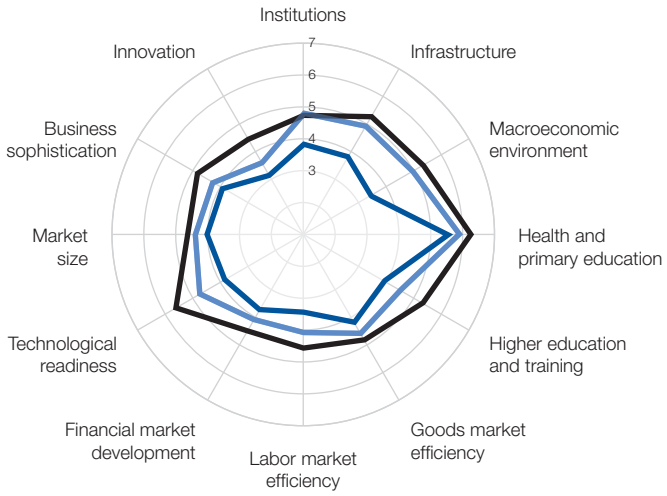
Note: The figure is based on a constant sample of 10 countries: Algeria, Bahrain, Egypt, Jordan, Kuwait, Morocco, Oman, Qatar, Saudi Arabia, and the United Arab Emirates. Comparative strengths represent percentage differences with respect to the OECD average score. Relative strengths represent percentage differences between the actual contribution of the pillar to the countries' overall competitiveness and the one expected on the basis of their stage of development. For example, for the Arab world countries, health and primary education contributed to 11.5 percent of the final competitiveness score in 2017, but—based on the stages of development of the countries composing the group—its average weight was expected to be 8.8 percent. Hence the observed contribution was 30.8 percent higher than expected, making it a relative strength of the group. Results are shown irrespective of their statistical significance.

Resource-rich countries have increased their competitiveness the most over the past 10 years. Investments in infrastructure and connectivity were particularly notable in the Gulf Cooperation Council (GCC) countries where, in 2017, the total value of infrastructure projects in the planning or delivery stage amounted to US$2.7 trillion. The macroeconomic environment of these countries was hit heavily by the decrease in oil prices, but most have implemented effective countercyclical policies to shield their economies from adverse consequences. Similarly, the impact of investment booms and busts has been largely limited to the financial sector. In addition, perceptions of public institutions among businesses improved, while the perceived ethics of private boards and managers has deteriorated according to the World Economic Forum's Executive Opinion Survey. The functioning of the labor markets and extent of training remain key areas of reform for resource-rich countries. Lack of adequate talent and private-sector competition, along with low labor force participation, weigh down their capacity to innovate, by far their biggest weakness.

The performance of resource-poor economies stagnated, with signs of improvement evident only in the past two years. Infrastructure, especially seaport connectivity, improved rapidly and has become one of these countries' relative strengths. ICT use and technological readiness also advanced significantly, recovering ground compared with OECD countries, but these improvements have not turned into increased innovation or business sophistication. Although low oil prices have recently eased macroeconomic pressures on oil-importing countries, most of them have nonetheless experienced a stark deterioration in this area over the past decade. Finally, these countries continue to suffer from very low rates of labor force participation and high skill mismatches, leading to especially high rates of youth unemployment.

Overall, the analysis of the competitiveness strengths and weaknesses of the region compared with OECD countries shows today that innovation, technological readiness, higher education and training, and labor market efficiency are the four areas where the region is lagging furthest behind advanced economies (Figure 4). The region will need to invest in its people.

Figure 4: Performance of the Arab world and OECD average along the 12 pillars of competitiveness



Key: Resource rich — Resource poor — OECD average

Source: Calculations based on the results of the Global Competitiveness Index 2017–2018.

Key challenges to increase competitiveness

Attaining a new social contract for the Arab world fundamentally requires countries to increase the competitiveness of their economies. It requires far-reaching changes in the way societies produce economic resources and distribute them, and in the way incentives for both citizens and businesses are structured.

A new social contract will be based on different roles and interactions for governments, citizens, and the private sector and will require addressing the following four challenges.

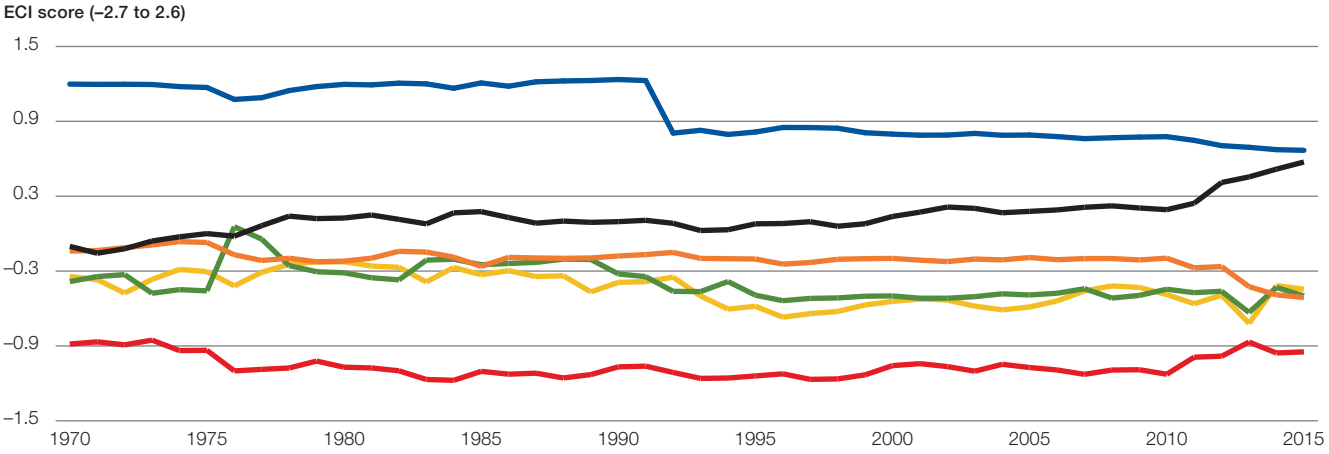
Transitioning away from natural resources and diversifying the economy. Oil and gas remain the largest export from the Arab world, accounting for close to half the region's merchandise exports. Changes needed to encourage more rapid diversification in the Arab world include regulatory frameworks that ensure competition and support private-sector investment; improvements in the quality of education; openness to trade and foreign investment; and a financial sector that better meets the needs of micro, small, and medium enterprises (MSMEs). Some of the Arab world's resource-poor countries—especially Jordan, Lebanon, Morocco, and Tunisia—have managed to diversify better by making advances in these areas.

Increasing the role of the private sector and diminishing the state's intervention in the economy. Constraints to private-sector development remain substantial in many countries in the Arab world. States remain present as active market participants in a number of sectors, including construction, finance, transport, manufacturing, and infrastructure. Apart from state presence, a number of investment climate factors deter private-sector investment, including a complex regulatory environment, political instability in some countries, barriers to competition in markets such as finance and land, and skills mismatches.

Ensuring opportunities for the youth and the workforce of the future. In 2015, close to one person out of five in the region was aged between 15 and 24. The Arab world could reap significant benefits from its young, technologically connected, and increasingly educated workforce. However, the region is not making use of this opportunity, as this cohort suffers from low labor force participation and high unemployment. To realize youth potential in the region will require placing higher emphasis on the role of youth in society, using more merit-based systems for employment, making education systems more responsive to skills the markets demand, and fostering a culture of entrepreneurship and risk-taking.

Preparing for the Fourth Industrial Revolution and improving the innovation ecosystem. The Fourth Industrial Revolution is characterized by a fusion of technologies that is blurring the lines between the physical, digital, and biological spheres. The speed of technological development is increasing and eroding advantages of market proximity and low wages in the manufacturing and service sectors in favor of innovation and effective absorption of new technologies. The Arab world still needs to address some of the basic issues that will allow it to navigate through these developments. With half of the population not connected to the Internet, connectivity remains problematic for large parts of the region, especially in rural areas. In addition, the education systems need to train students to have a flexible,

Figure 5: Diversification by region, 1970–2015



Key: Arab world | Sub-Saharan Africa | South Asia | Latin America and the Caribbean | Europe and Central Asia | East Asia and Pacific

Source: MIT Observatory of Economic Complexity, Economic Complexity Index, available at https://atlas.media.mit.edu/en/.

Note: ECI = Economic Complexity Index.

creative, and critical mindset, as well as the capacity to learn continuously and adapt to the challenges that the production and economic systems created by the Fourth Industrial Revolution will impose on them. Finally, it will be necessary for the financial sector to broaden beyond bank lending and provide financing opportunities to new investors with innovative and risky projects.

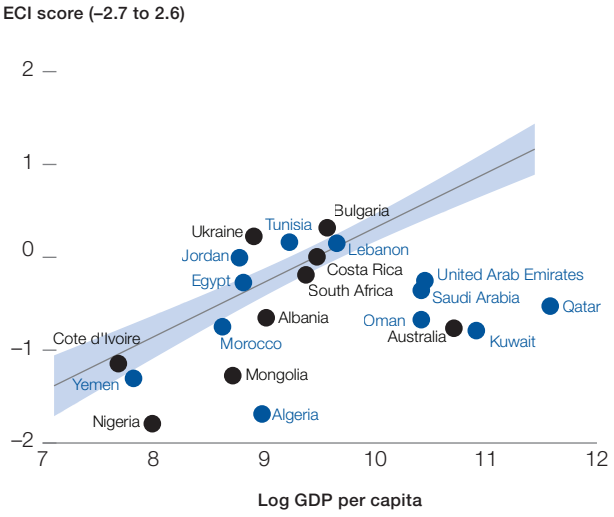
Solving the first two challenges, diversification and private-sector development, is essential for addressing the last two, job creation and mastering the rapidly advancing Fourth Industrial Revolution. The next sections analyze current barriers to diversification and more entrepreneurial private sectors in the Arab world as well as policies to address and overcome them.

Developing more diverse economies

For years, countries in the Arab world have faced difficulties in diversifying their economies away from areas of low productivity and exports of fossil fuels toward production and exports of higher-value-added goods and services. Although some countries in the region, such as Egypt, Jordan, Lebanon, and Tunisia, have levels of diversification that compare well to others at their level of income, most Arab world countries have levels of diversification that are well below it (Figures 5 and 6).

Diversification is a high priority for the Arab world for two principal reasons. First, **diversification contributes to job creation as new sectors emerge.** Creating a more dynamic private sector is especially important, as the region faces a large jobs challenge. Second, **more diverse economies are less volatile.** Economies dominated by a small number of sectors are highly vulnerable to fluctuations in global demand for those products. Prices of natural resources, in particular, can be especially sensitive to changes in global economic conditions. Such volatility can also can also discourage investment in new export sectors.

Figure 6: Economic complexity and per capita GDP, 2016



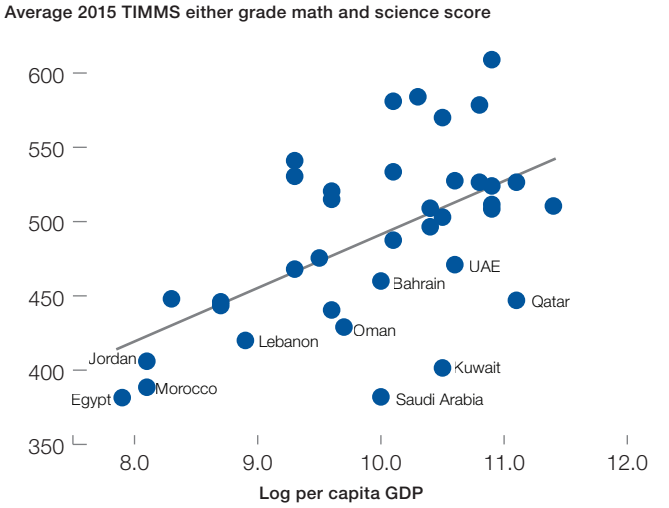
Sources: World Bank, *World Development Indicators,* January 2018, available at https://data.worldbank.org/data-catalog/world-development-indicators; MIT Observatory of Economic Complexity, Economic Complexity Index, available at https://atlas.media.mit.edu/en/.

Notes: The figure shows a 95 percent confidence interval. Arab world countries are highlighted. Recent ECI data for most states affected by fragility, conflict, and violence in the Arab world are lacking, hence these countries do not appear on this graph. ECI = Economic Complexity Index.

Barriers to diversification in the Arab world

A key reason for low diversification in resource-rich countries is that the persistent reliance on oil and gas exports exposes them to volatile macroeconomic conditions resulting from changes in the prices of these commodities and may reduce incentives for reforms to the business environment. Oil and gas exports accounted on average, over 2005–15, for more than 70 percent of

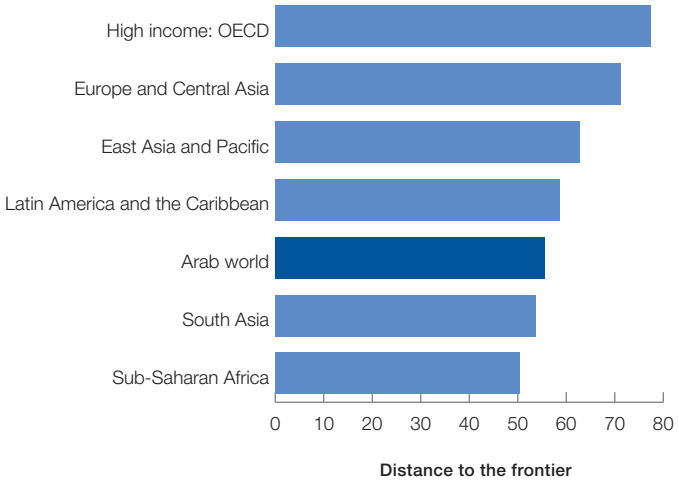
Figure 7: TIMSS score vs income level in the Arab world, 2015



Sources: Calculations based on World Bank, *World Development Indicators,* available at https://data.worldbank.org/data-catalog/world-development-indicators; and TIMSS database, available at https://timssandpirls.bc.edu/timss2015/international-database.

Notes: The line shows the global best fit between TIMSS score and income rather than the best fit line for the Arab world. UAE = United Arab Emirates.

Figure 8: Average distance to the frontier per region, 2017



Source: World Bank's 2018 Doing Business indicators, available at http://www.doingbusiness.org/rankings.

Note: OECD = Organisation for Economic Co-operation and Development.

exports of merchandise in nine countries in the region. Oil and gas are the main export for many comparatively stable countries, such as Qatar and the UAE, as well as some of its most unstable and weakly governed ones, such as Libya and Yemen.

Weaknesses in education and innovation are significant. Education and innovation promote diversification through multiple channels, including raising labor productivity, facilitating entrepreneurship, and enhancing a country's capacity to produce higher-value-added goods and services. In addition, rapid technological change and intensifying global economic competition are making high levels of education and investments in innovation increasingly necessary for diversification. Although the Arab world ranks reasonably well in enrollment rates compared with other regions, the quality of education, as measured by scores on international tests, is low, especially in math and science (Figure 7). Likewise, most countries in the Arab world have low levels of innovation for their levels of income with the exception of Jordan, Qatar and, to a lesser extent, Morocco and the UAE.

The financial sector does not meet the needs of productive sectors. A competitive and well-regulated financial sector facilitates economic diversification by encouraging efficient capital allocation, competition, and new firm creation. In general, banks in the Arab world are not serving these functions well. Rather they tend to lend to large, sometimes state-owned or well-connected firms, and have few incentives to serve MSMEs. Loans to MSMEs account for a smaller share of bank loans in the Arab world than in any other region. This results in less competition, does not encourage the development of new firms and new sectors, and eventually impedes the diversification process.

A legacy of large state involvement is another key reason why many countries in the Arab world have struggled to diversify. State-owned enterprises stifle competition, often have privileged access to factors of production (land and finance, particularly), and are frequently inefficient and protected. State ownership was dominant in the early years of industrial policies that aim to spur diversification. These policies have mostly failed in Arab countries, but state-owned firms remained, keeping their competitive advantage, privileged access to resources, and soft budget constraints.

Weaknesses in governance and the business environment act as a major impediment to diversification. Institutional quality is a strong determinant of diversification. The Arab world fares poorly compared with other regions on most measures of governance quality, with the partial exception of some GCC countries. Political stability remains a serious concern, and not only in conflict-affected countries. Frequent changes of governments and recurrent policy reversals hurt government credibility in a number of countries. In terms of the business environment, the Arab world does not fare very well in regional comparisons of the World Bank's Doing Business rankings: only South Asia and sub-Saharan Africa have worse average Doing Business rankings when using the distance-to-the-frontier measure (see Figure 8).[2]

Trade policy impediments exist. The Arab world is the least integrated region in the world, despite its attractive geographical positioning at the crossroads of Europe, Africa, and Asia's trade routes. Trade policy in many countries is impeding diversification. The Arab world has high average effective tariff rates, mainly resulting from non-tariff barriers. In addition, the region is not well integrated in global value chains, has relatively protected service sectors, and has low levels of regional trade and investment.

Policies to promote diversification

There are broadly two large sets of policies that countries in the Arab world would need to implement to encourage diversification and the transformation of their economies. These will apply to various degrees depending on specific country situations and priorities. Some of these policies are core and apply to most countries, while others are more targeted to country-specific circumstances.

Core policies should first and foremost focus on **education and innovation.** The former includes promoting access to education, improving education outcomes, reducing the gender gap, and alleviating skills mismatches between the needs of the productive sectors and the skills students learn. Encouraging innovation involves creating an enabling environment that includes a modern ICT infrastructure, support for research and development as well as human capital development, and policies to promote technology transfer. Such policies foster the productivity of the labor force and firms themselves, both being key drivers of growth, employment, and diversification. **Second, sound macroeconomic management,** including countercyclical fiscal policies and competitive exchange rates, can reduce volatility and encourage investment in new tradable sectors. Sound macroeconomic management is essential for creating positive incentives for investment and business development. **Third, firm-level interventions and microeconomic reforms,** in particular **firm-level support policies,** should target firms to help them improve their productivity, export potential, and capabilities, in particular in technology adoption. In some cases, this could involve providing targeted support to exporters through services to improve export capabilities, developing appropriate export financing schemes, or improving trade logistics.

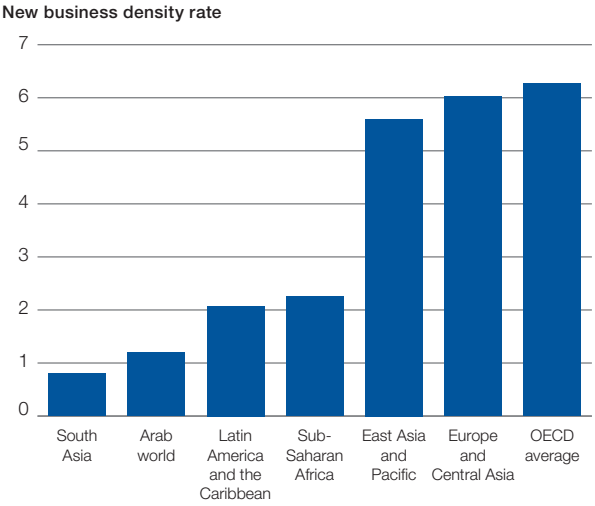
Tailored policies would cater to the specific circumstances and needs of certain country groups—countries affected by fragility, conflict, and violence; resource-poor countries; and resource-rich countries.

In countries affected by **fragility, conflict, and violence** (FCV), implementing programs addressing the basics in terms of infrastructure (including special industrial zones), limited mobility to connect people to jobs, access to finance (including restoring payment systems), and skills development should be prioritized. Supporting local economic development and increasing the job content of investments in sectors that are at the forefront of reconstruction and post-conflict situations (such as construction or retail and trade) are also crucial for promoting stability. In addition, targeted policies such as those that provide programs for vulnerable populations, investments in specific value chains, focus on isolated and lagging regions, and/or increase the quality of jobs are likely to be needed. Finally, there is a need to attract private-sector investment in addition to donor funds. Reducing risk, promoting realistic investment opportunities, and linking foreign and domestic investors are possibilities for FCV-affected countries.

For **resource-poor countries,** the most pressing reforms are to improve the business environment, including encouraging the development of MSMEs, especially in the service sector; and removing constraints to competition, including by implementing effective competition policies and reducing skills mismatches. Enhancing access to finance for MSMEs is especially crucial for the development of new firms. Furthermore, developing infrastructure and reducing non-tariff barriers is necessary for expanding opportunities for trade and facilitating regional integration.

Finally, in **resource-rich countries,** lowering restrictions on trade in services and reducing energy subsidies to remove distortions toward energy-intensive activities are often crucial reforms to encourage diversification. In addition, many resource-rich countries still need to implement business environment reforms, even if a number of them have made great strides in this area in recent years, particularly in the GCC. Governments in these countries can also accelerate diversification by making private-sector employment more desirable by transforming benefits enjoyed by public-sector employees into more broad-based social welfare programs. Finally, targeted vertical/sector-level policies to develop linkages from the natural resources sectors to the rest of the economy could have strong impacts on the development of a domestic private sector, particularly MSMEs.

Figure 9: New business entry density by world region, 2009–16



Source: Doing Business Indicators 2018, available at http://www.doingbusiness.org/Custom-Query.

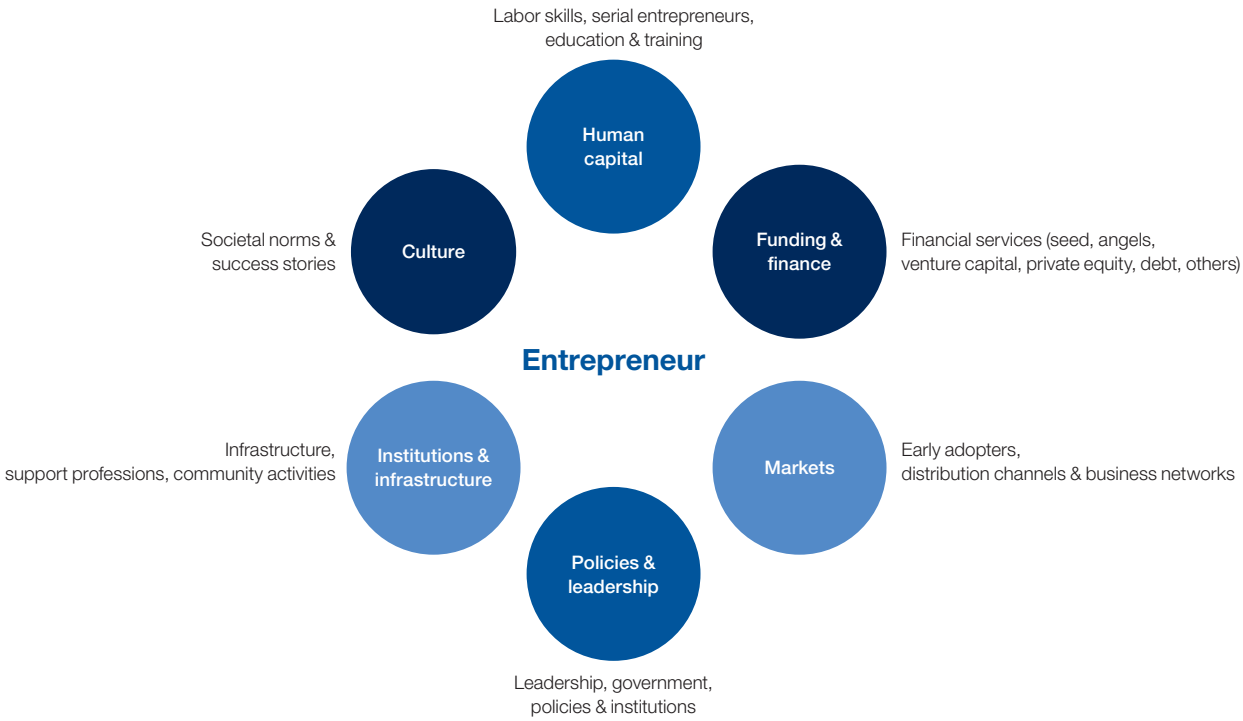
Notes: New business density rate measures the number of new businesses per 1,000 working-age population.

Encouraging more entrepreneurial private sectors

Global experience shows that entrepreneurship stimulates job creation in the economy, as most new jobs are created by young firms, typically those three to five years old. The degree of success, however, varies, since new firms build on the maturity of the underlying ecosystem. With traditional pathways for job creation and growth through industrialization and export expansion at risk of not bringing enough jobs in the future, the Arab world's policymakers have been encouraging entrepreneurship to accelerate rates of job creation.

Time is of the essence to reap the benefits of the growing new (digital) economy as entrepreneurship is lagging in the Arab world. The region has low rates of firm entry. According to World Bank data, about 4.1 new limited liability companies (LLCs) per 1,000 working-age population were registered between 2006 and 2016, compared with approximately 6.3 new companies on average in other regions. When excluding the UAE, the Arab world average firm annual entry rate over this period drops to 1.2, just about 20 percent of the global average (Figure 9).[3] At the same time, there are signs of progress in many countries. The formation rate of firms increased significantly between 2006 and 2016 not only in the UAE (from 19.60 to 29.69), but also in Oman (from 0.48 to 2.11) and Morocco (from 0.89 to 1.65) as well.

Figure 10: Entrepreneurship ecosystem model



Source: The Babson College Entrepreneurship Ecosystem Project, available at http://entrepreneurial-revolution.com/.

Determinants of entrepreneurship

The level of entrepreneurship in an economy is largely a function of the quality of its entrepreneurship ecosystem. These systems tend to be hyper-local, are usually located in urban areas, are cultivated by stakeholders rather than designed by governments, and are self-sustaining. The key priority for nurturing an effective entrepreneurship ecosystem is to support entrepreneurs through the processes of designing, launching, and running a new business. It also requires supporting pre-entrepreneurship activities, such as raising awareness of the possibility of entrepreneurship as a career choice and improving the chances that individuals will choose it as a career by providing effective support systems.

The ecosystem approach recognizes that entrepreneurship is a complex activity and that the success or failure of individual entrepreneurs and their ventures is not dependent just on their own skills and aspirations, but also on the quality of the surrounding ecosystem in which they seek to grow. Although no single ecosystem can simply be copied, their growth can be assisted or hindered by government interventions in various domains. The ecosystem framework used in this report is composed of six mutually influencing components, ranging from macro-level policies to firm-level policies that build firm capabilities, management, and technical skills (Figure 10):

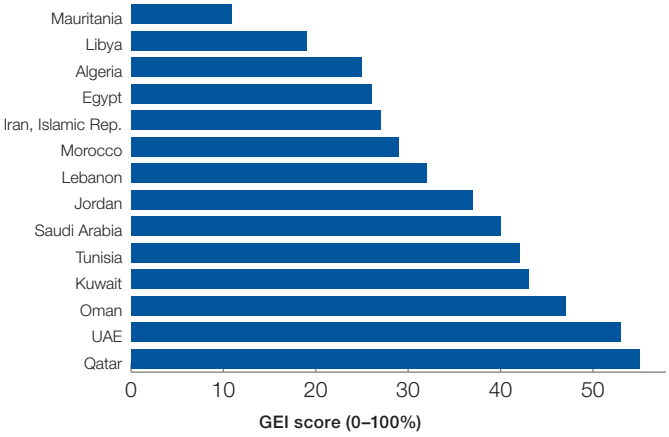
- quality human capital,
- the availability of funding and finance,
- venture-friendly markets for products,
- enabling policies and leadership,
- institutional and infrastructure supports, and
- conducive culture.

Results from a survey of leading Arab world entrepreneurs conducted jointly by the World Bank and the World Economic Forum in May 2017 suggest that, in the Arab world, the three domains critical for business success are access to markets (68 percent), access to finance (66 percent), and availability of talent (65 percent).

Entrepreneurship ecosystems in the Arab world

The Arab world entrepreneurship ecosystems are underdeveloped and require a concerted effort on behalf of policymakers to address the significant gaps that are hindering existing and potential entrepreneurs. The annual Global Entrepreneurship Index (GEI) measures the quality of entrepreneurship as well as the extent and depth of the supporting entrepreneurial ecosystem across 14 components. Scores on the GEI range from 0 to 100 percent. The average score for the region's countries in the 2018 GEI is 37 percent. Qatar, the UAE, and Oman are the top performers, while Algeria, Libya, and Mauritania are at the bottom (Figure 11). Among the 14 components of the GEI, the region scores worst in risk acceptance, technology absorption, and competition (Figure 12). The 2017 survey of leading Arab world entrepreneurs conducted by the World Bank Group and the World Economic Forum noted

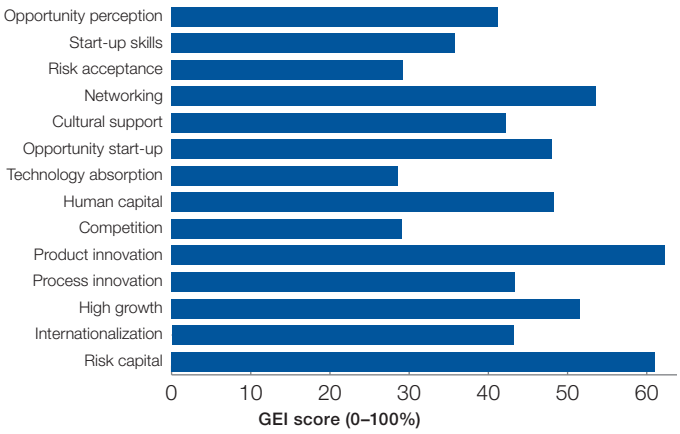
Figure 11: Arab world country scores, GEI 2018



Source: The Global Entrepreneurship Index, available at https://thegedi.org/global-entrepreneurship-and-development-index/.

Note: GEI = Global Entrepreneurship Index; UAE = United Arab Emirates.

Figure 12: Arab world component average scores, GEI 2018



Source: The Global Entrepreneurship Index, available at https://thegedi.org/global-entrepreneurship-and-development-index/.

Note: GEI = Global Entrepreneurship Index.

earlier provides additional insights on the most acute impediments entrepreneurs in the region encounter. The three most severe obstacles faced by the leading entrepreneurs are lack of access to finance (42 percent), an inadequately educated workforce (28 percent), and business licensing and permits (27 percent). Furthermore, only 65 percent of those surveyed had received mentorship, and even fewer (about 42 percent and 44 percent respectively) had gone through incubation/acceleration and training.

Policies needed to develop entrepreneurship ecosystems

Although no single factor can aid the development of entrepreneurship in the Arab world, the region's economies will not prosper unless businesses that aspire to take risks and grow can succeed within their communities, regardless of their social or economic privilege.

The most effective government policies for fostering entrepreneurial ecosystems in the region would employ a bottom-up and holistic approach. Most important, government policies need to change their focus from supporting broad-based entrepreneurship to more targeted policies aimed at innovation and growth-oriented firms. Furthermore, policies need to acknowledge the distinction between transformational and subsistence entrepreneurship and target their approaches accordingly. Governments also need to work with entrepreneurs to develop entrepreneurship ecosystems to give them space to create their own markets and sectors. Specifically, better business-enabling environments tend to have more favorable environments for promoting entrepreneurship.

More broadly, policies should include improvements in human capital, specific financing instruments for that segment of new firms (start-ups, etc.), the development of market opportunities, and the fostering of an entrepreneurial culture.

Investment in education at all levels will continue to be a cornerstone in building the skill sets of tomorrow's entrepreneurs. In particular, government policies on entrepreneurship education should ensure that entrepreneurship is embedded into the formal educational system, either public or private. For example, INJAZ Al-Arab, a Jordan-based non-profit organization, is a good example of the type of entrepreneurship education programs needed in the Arab world. It works in three areas: workforce readiness, financial literacy, and skills needed to start and run a business. About 3 million students in more than a dozen Arab world countries have participated in its entrepreneurship training programs.

Angel investment networks have been growing in a few countries of the Arab world, but are not widely accessible to young entrepreneurs. Governments should support the development of angel investment in the Arab world to include private investments, bridge equity gaps, and improve the pipeline of investment-ready start-ups for venture capital and private equity firms. Growth of the Arab world angels would provide access to early-stage financing to start-ups that can easily be combined with mentorship and market-access connections. Within the Arab world, GCC countries generally are undertaking the most intensive efforts to increase the amount of available seed capital to MSMEs, but other countries, such as Lebanon, Egypt, and Morocco, have been more active lately in this market.

Public procurement continues to dominate large parts of the Arab world economies and could be leveraged as part of the solution to give more opportunities for entrepreneurs. Policies to promote the growth of global value chains can also increase export opportunities for entrepreneurs. Each strategy comes with its own challenges and opportunities and countries need to gauge which is most to their benefit considering their own development interests.

Finally, developing the entrepreneurial culture in the region is key. Governments and the private sector can work to raise awareness about the benefits of entrepreneurship and to build an entrepreneurial culture. Furthermore, to foster female entrepreneurship, governments should support a cultural transformation process to encourage more women-owned businesses by eliminating gender-biased legal and regulatory restrictions, and should offer women-focused support programs for joining or start entrepreneurial initiatives.

Notes

1 Our measure of innovation is the World Economic Forum's Global Competitive Index innovation pillar. The innovation pillar combines survey questions from business executives on quality of scientific research institutions, company spending on R&D, university-industry collaboration in R&D, government procurement of advanced technology products, and availability of scientists and engineers with data on patent applications and intellectual property protection.

2 In the Doing Business framework, the distance-to-the-frontier (DTF) score helps assess the absolute level of regulatory performance over time. It measures the distance of each economy to the "frontier," which represents the best performance observed on each of the indicators across all economies in the Doing Business sample since 2005. An economy's distance to the frontier is reflected on a scale from 0 to 100, where 0 represents the lowest performance and 100 represents the frontier.

3 The regional average of new business entry density is skewed because the UAE is a large outlier. Therefore the reported number excludes the UAE.

Part 1

Harnessing an Entrepreneurial Youth

Chapter 1.1

Staying Competitive in the Next Economic Model: Key Challenges for the Arab World

MARGARETA DRZENIEK-HANOUZ and **ATTILIO DI BATTISTA,** World Economic Forum

Over the past several decades, the economies of the Arab world have experienced alternating successes and challenges, partially driven by the fluctuations in energy prices (Figure 1) and the political tensions that have torn some of these countries. Natural resources have played a particularly important role in the region, affecting resource-rich countries, such as the economies of the Gulf and Algeria, differently from those that are resource poor—the rest of North Africa and the Levant.[1]

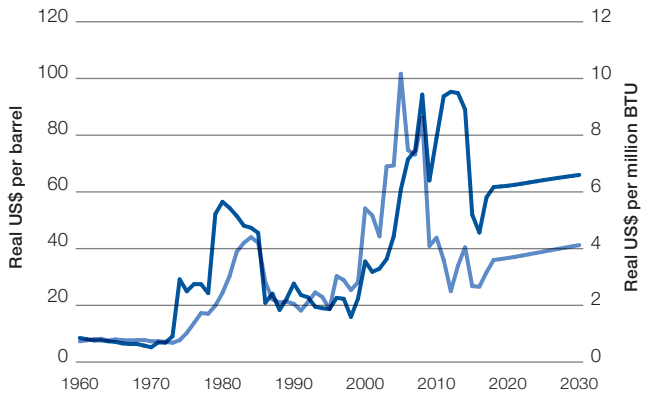
The Arab world is composed of a set of very diverse economies, which includes some of the richest countries in the world and others where conflicts have made it difficult to satisfy even basic needs. Even the oil wealth that has benefited part of the region for many years has been used quite differently in different countries, with some becoming early movers toward ambitious diversification policies and investment plans in infrastructure and technology, and others lagging behind.

These differences are reflected in today's situation and crystallized by the Global Competitiveness Index (Figure 2). The gap between resource-rich and resource-poor countries is particularly large when it comes to infrastructure and the macroeconomic environment, but even within these groupings distinctions can be made between countries whose macroeconomic situation has proved more resilient to energy price fluctuations (e.g., the United Arab Emirates, Qatar) and others that have been faced with bigger challenges.

In spite of all differences, most countries in the region will have to address some common challenges in the medium-long term and work toward similar objectives: increasing the private sector's role in the economy, transitioning toward a more diversified and less oil-based economic structure, creating opportunities and leveraging the potential of an extremely young population, and preparing for the difficulties and opportunities posed by the Fourth Industrial Revolution.

This chapter provides an overview of how the competitiveness performance of the Arab countries has evolved over the past 10 years in the areas where the most progress has been made and those where reform has been slower. It then frames the current challenges faced by the region in the context of the broader global trends and the risks that those trends pose for the Arab countries. For each of the main challenges, the chapter puts forward recommendations stemming from conversations with local stakeholders and grounded in previous literature and collected data. Finally, a short description of the competitiveness landscape of each of the 12 countries included in the analysis is provided.

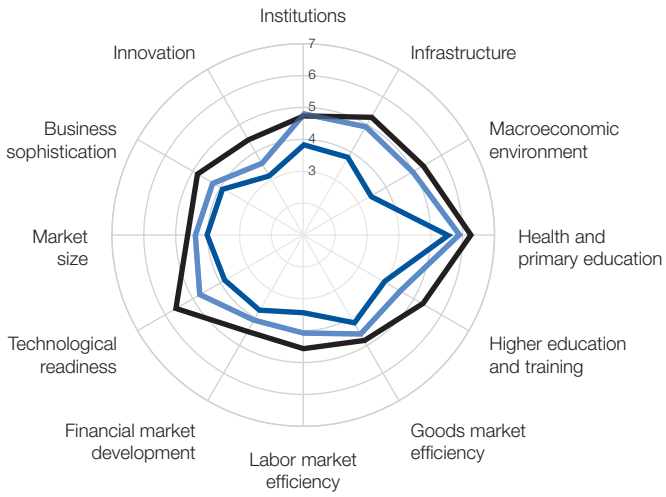
Figure 1: Evolution of oil and natural gas prices, 1960–2030



Key: Natural gas, average Crude oil, average

Source: World Bank, *World Development Indicators,* available at https://data.worldbank.org/data-catalog/world-development-indicators.

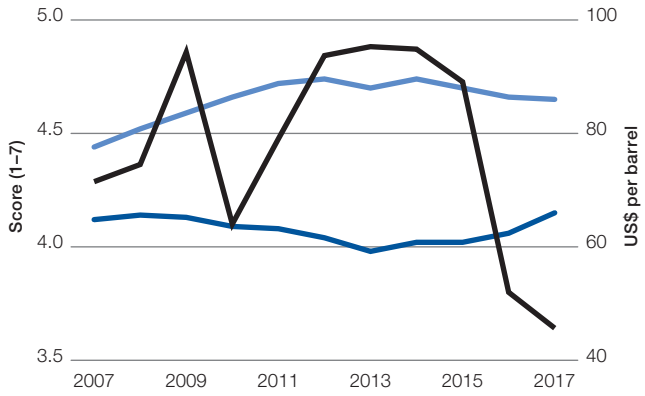
Figure 2: Performance of the Arab world and OECD average along the 12 pillars of competitiveness



Key: Resource rich Resource poor OECD average

Source: Calculations based on the results of the Global Competitiveness Index 2017–2018.

Figure 3: Competitiveness performance in resource-rich and resource-poor Arab countries and crude oil price, 2007–2017

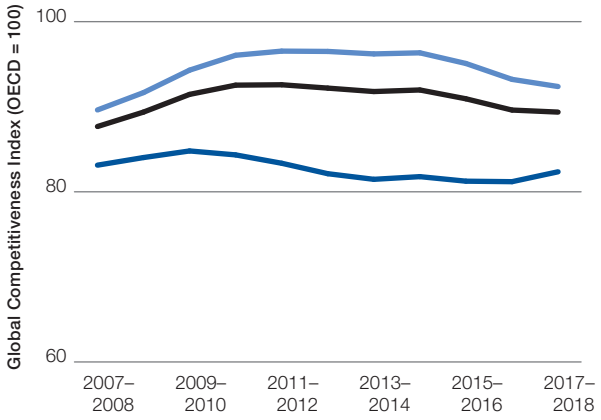


Key: GCI resource rich — GCI resource poor — Crude oil price (one year lag)

Sources: Calculations based on the results of the Global Competitiveness Index 2007–2008 through 2017–2018; World Bank, *World Development Indicators,* available at https://data.worldbank.org/data-catalog/world-development-indicators.

Note: The graph is based on a constant sample of 10 countries: Algeria, Bahrain, Egypt, Jordan, Kuwait, Morocco, Oman, Qatar, Saudi Arabia, and the United Arab Emirates. GCI = Global Competitiveness Index.

Figure 4: Evolution of competitiveness performance in the Arab world, 2007–2017



Key: Resource rich — Resource poor — Arab world

Source: Calculations based on the results of the Global Competitiveness Index 2007–2008 through 2017–2018.

Note: The graph is based on a constant sample of 10 countries: Algeria, Bahrain, Egypt, Jordan, Kuwait, Morocco, Oman, Qatar, Saudi Arabia, and the United Arab Emirates.

Ten years of competitiveness in the Arab world

The past decade opened with the collapse of the financial sector in the United States and other advanced economies, followed by a sharp decline in global trade, 10 years of extremely lax monetary policies, and slow economic and productivity growth across the globe. Oil prices reflected the uncertainty of the crisis as well as the long-term changes in both the supply (the shale-oil revolution in North America) and the demand (the shift toward renewable energies) of the market. The quotation of one barrel spiked to an average of over US$94 in 2008, dropped to US$64 the following year, bounced back to US$90 in 2012 and stayed above that mark until 2014, before falling again to US$46 in 2016. Prices partially recovered over the course of 2017 thanks to production cuts in some of the main exporting countries, and reached above US$60 per barrel at the beginning of 2018.

Figure 3 shows how the gap in competitiveness between resource-rich and resource-poor economies reached its maximum when oil prices were at their peak, between 2011 and 2013, to shrink again in recent years as macroeconomic conditions converged with spillovers on investment and on many other competitiveness factors. Although lower oil prices had a negative effect on resource-rich countries' competitiveness, they had a positive impact on the performance of resource-poor economies, as explained below.

Changing food, energy, and commodities prices played a key role for resource-poor economies that are dependent on imports of food and, in many cases, subsidize food and energy. Lower food and energy prices improved the fiscal situations of these countries. High food prices contributed to triggering protests and political instability, which led to uncertainty and economic slowdowns in many countries in the region. The most resilient ones have navigated through this period with only minor consequences or none at all, but in many cases support from international institutions was provided to protect the stability of the economies. Morocco received a 24-month precautionary loan—a loan that could be used if needed—of US$6.2 billion from the International Monetary Foundation (IMF) in 2012. This precautionary loan was renewed twice (in 2014 and 2016, but for smaller amounts) and, while it served to secure public finances, it was never actually drawn on by the government. Also in 2012, Jordan received a precautionary loan of US$2 billion from the IMF, and more recently—in 2016—a smaller financing of US$700 million through the Extended Fund Facility (EFF), which was only partially used. Egypt was also supported in 2016 through the EFF with a three-year US$12 billion loan, and Tunisia requested a Stand-By Arrangement of US$1.7 billion in 2013.[2]

Although it has served to moderate the gap among countries in the region, the fall in oil prices has widened differences between Organisation of Economic Co-operation and Development (OECD) members and resource-rich economies of the Gulf. These differences were smallest in 2011 but are now at levels similar to those of 2008 (Figure 4).[3] We observe a comparable trend for the Arab world as a whole.

Lower prices for oil and gas imports have benefitted resource-poor countries in the short term but not significantly improved their macroeconomic performance in the long term because additional challenges have emerged. On one hand, the reduction in employment opportunities and real salaries in the Gulf Cooperation Council (GCC) countries (the result of slower growth and increased taxes to offset the fall in oil revenues) has reduced the flow of remittances into the rest of the region as well as lessening import volumes from neighboring countries. For example, in 2014, Jordanian workers abroad sent back home savings equivalent to 10.3 percent of the country's GDP, of which almost half (4 percent of GDP) came from Saudi Arabia.[4] On the other hand, countries such as Jordan and Lebanon (and to a lesser extent Egypt) have had to accommodate large inflows of refugees from Syria and other neighboring countries in recent years, with large implications for their fiscal budgets. The improvement in competitiveness of the past two years shown in Figure 4 is therefore mostly attributable to better infrastructure and technological readiness.

Figure 5 (on page 6) shows the comparative and relative strengths of the Arab world in 2007 and 2017, as well as the increase or decrease (delta) in score across the 12 pillars of competitiveness over the same decade. The comparative strength measures the difference in percentage between the Arab world and the OECD averages, while the relative strength measures the percentage difference for the Arab world between the pillar's observed contribution to competitiveness and its expected contribution, in light of the countries' stage of development.

The macroeconomic environment and labor market efficiency are the only areas where the gap between the Arab countries and the OECD economies has widened over the past decade. This pattern is constant across both subgroups and highlights some of the key challenges that the region will need to face in order to develop in a sustainable and inclusive way in the near future. In the first case, the sharp and prolonged fall in oil prices is prompting resource-rich and resource-poor countries to profoundly rethink their fiscal policies, cutting subsidies and introducing standard forms of taxation such as the value-added tax (VAT). In the second case, the result is mostly driven by the Gulf economies and other resource-rich countries in the region, which have been able to postpone reforming their labor markets thanks to the conspicuous resources that the oil and gas industry was providing.

Financial market development is the only other driver of competitiveness that has deteriorated in the region over the past decade. However, the consequences of the global financial crisis were less acute in the Arab world than in most developed countries and, on average, the gap between the OECD and these countries in financial market development shrank during this period.

Infrastructure and technological readiness used to be among the region's relative weaknesses; they are now relative strengths. They are also the factors where the distance from the OECD was shortened the most. When it comes to technological readiness, growth over the past decade is a trend that occurred globally, but the Arab countries experienced on average the fastest improvement in the world, with an increase in pillar score of 1.15 points.

In spite of the improvements that allowed the region to reduce its gap with respect to developed countries, innovation remains the biggest challenge for the Arab world in relative terms. Comparing the innovation and technological readiness performances highlights the fact that the investments and efforts made in past years to improve connectivity and digital uptake have paid off and the region, especially its most-advanced economies, is now ready to generate more innovation domestically.[5]

Resource-rich countries

Over the past decade, GCC countries have led the Arab world in investing heavily in infrastructure and technology in order to diversify their economies and create the conditions for more innovation-driven and high-value-added businesses (Figure 5b). In 2017, in spite of the decrease in oil revenues, the total value of projects either in the planning stage or in the delivery stage across the GCC amounted to US$2.7 trillion.

Unsurprisingly, the fall in oil prices has hit this group of countries the most, with a decrease in the macroeconomic environment pillar score of almost one full point. Most economies had a sufficient buffer to navigate through the crisis and calibrate fiscal and financial reforms to stabilize public finances and the economy in general. A stable macroeconomic environment remains one of the relative strengths of these countries, although they lost ground with respect to the OECD.

Reinforced by a stable economic outlook, institutions in GCC countries are the only ones in the region to have improved over the past decade, in line with the overall progress in competitiveness. This was driven exclusively by improved perceptions of public institutions, while the perceived ethics and accountability of the private sector have stalled or decreased, respectively. In particular, the strength of investor protection—measured by the World Bank's Doing Business indicators—decreased significantly after 2011, and GCC countries, while they are the best performers within the Arab world, are on average among the worst globally, followed only by Sub-Saharan Africa.[6]

Boosting the accountability of the private sector will also be a key determinant for deepening the financial market and improving its efficiency. Over the past decade, some of the oil-rich economies in the region have experienced investment booms and subsequent slowdowns, which often caused a misallocation of resources. The efficiency of their financial markets has been affected by the 2008 financial crisis—though less than in many developed countries—as well as by the real estate bubble and more recently the decrease in oil prices. A relative strength of these countries in 2007, the financial market is today their third biggest weakness, after innovation and the functioning of the labor market.

A more inclusive labor market and a better education and training system are key to ensuring that talent is adequately rewarded and businesses can find workers with the set of skills they are looking for and high-quality graduates. At only half the rate of men, the participation of women in the labor market is better than in the rest of the Arab world, but still far from the levels of OECD countries.

A mismatch between the competences developed by local students and those demanded by the private sector persists, due both to the low attractiveness of vocational training programs and to the quality of academic education, in spite of recent improvements and efforts made to attract top international universities to the region. These factors weigh heavily on the countries' capacity to create thriving innovation ecosystems. Governments' focus in the past years has been stronger on infrastructure and information and communication technology (ICT) connectivity, with considerable progress being made in both areas. However, innovation performance has not followed automatically, and it remains the biggest challenge for the most-advanced economies in the Arab world.

Resource-poor countries

The dynamics of the past 10 years for resource-poor countries has been somewhat different from that of GCC and other oil-exporting economies in the Arab world. Their competitiveness has stagnated throughout most of decade, with a small recovery made only in the last year, but overall these countries stood still with respect to both the OECD and their oil-exporting neighbors. There were significant improvements only in five pillars out of twelve: infrastructure, health and primary education, goods market efficiency, technological readiness, and market size (Figure 5c).

Figure 5: Comparative strengths of the Arab world vs the OECD average and factors of relative strength

5a: Arab world countries

	Comparative strength vs OECD (percent)		Relative strength (percent)		
Pillar	2007–2008	2017–2018	2007–2008	2017–2018	Pillar delta (score)
Institutions	–7.8	–2.8	5.0	4.1	0.09
Infrastructure	–18.6	–10.4	–6.2	6.6	0.69
Macroeconomic environment	4.3	–14.1	24.7	3.6	–0.79
Health and primary education	–9.1	–7.4	26.9	30.8	0.33
Higher education and training	–22.1	–18.9	–8.6	–2.5	0.39
Goods market efficiency	–11.5	–6.6	0.4	1.8	0.19
Labor market efficiency	–10.6	–14.4	–4.5	–11.4	–0.19
Financial market development	–16.5	–10.4	–0.2	–8.8	–0.27
Technological readiness	–28.8	–20.6	–22.4	0.9	1.15
Market size	–21.4	–5.9	–18.3	–1.5	0.86
Business sophistication	–16.0	–13.3	–4.1	–5.3	0.07
Innovation	–25.5	–21.9	–25.3	–21.3	0.27

5b: Resource-rich countries

	Comparative strength vs OECD (percent)		Relative strength (percent)		
Pillar	2007–2008	2017–2018	2007–2008	2017–2018	Pillar delta (score)
Institutions	–5.8	1.4	5.4	5.3	0.19
Infrastructure	–15.4	–6.4	–4.3	8.0	0.75
Macroeconomic environment	14.7	–6.9	34.5	8.7	–0.94
Health and primary education	–8.0	–5.5	26.1	29.3	0.39
Higher education and training	–21.1	–15.0	–9.0	–1.0	0.54
Goods market efficiency	–9.9	–4.6	0.3	0.8	0.21
Labor market efficiency	–5.6	–10.7	–1.0	–10.5	–0.26
Financial market development	–13.4	–8.8	1.6	–10.1	–0.36
Technological readiness	–25.4	–15.4	–20.2	4.2	1.28
Market size	–24.0	–5.1	–22.4	–3.7	1.01
Business sophistication	–14.9	–11.3	–4.5	–6.0	0.11
Innovation	–25.4	–18.8	–26.5	–20.7	0.40

5c: Resource-poor countries

	Comparative strength vs OECD (percent)		Relative strength (percent)		
Pillar	2007–2008	2017–2018	2007–2008	2017–2018	Pillar delta (score)
Institutions	–12.7	–12.6	5.5	1.6	–0.14
Infrastructure	–26.0	–19.8	–9.6	3.5	0.56
Macroeconomic environment	–19.8	–30.8	1.6	–9.4	–0.44
Health and primary education	–11.6	–11.9	30.8	35.0	0.20
Higher education and training	–24.6	–27.9	–6.1	–6.0	0.03
Goods market efficiency	–15.3	–11.1	1.9	5.1	0.16
Labor market efficiency	–22.2	–22.8	–11.9	–13.4	–0.04
Financial market development	–23.7	–14.0	–3.3	–5.1	–0.06
Technological readiness	–36.7	–32.6	–26.8	–7.1	0.83
Market size	–15.4	–7.8	–6.7	4.8	0.50
Business sophistication	–18.7	–18.0	–1.5	–2.8	–0.03
Innovation	–25.9	–29.0	–21.2	–22.4	–0.04

Source: Calculations based on the results of the Global Competitiveness Index 2007–2008 and 2017–2018.

Note: Figure 5a is based on a constant sample of 10 countries: Algeria, Bahrain, Egypt, Jordan, Kuwait, Morocco, Oman, Qatar, Saudi Arabia, and the United Arab Emirates. Figure 5b is based on a constant sample of seven countries: Algeria, Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates. Figure 5c is based on a constant sample of three countries: Egypt, Jordan, and Morocco. Comparative strengths represent percentage differences with respect to the OECD average score. Relative strengths represent percentage differences between the actual contribution of the pillar to the countries' overall competitiveness and the one expected on the basis of their stage of development. For example, for resource-rich countries, health and primary education contributed to 10.7 percent of the final competitiveness score in 2017, but—based on the stages of development of the countries composing the group—its average weight was expected to be 7.8 percent. Hence the observed contribution was 29.3 percent higher than expected, making it a relative strength of the group. Results are shown irrespective of their statistical significance.

Infrastructure has become one of the relative strengths of these countries, with large improvements especially in terms of seaport connectivity. In Jordan, the capacity of the container terminal in Aqaba was doubled in 2013 and additional projects are underway for general cargo. Egypt inaugurated the new Suez Canal in 2015 and invested in the expansion and modernization of both the Suez and Port Said ports. In Morocco, the Tangier-Med port, opened in 2007, has been attracting growing traffic and is now one of the main gateways to the Mediterranean; the Tangier Med II expansion project scheduled to be completed in 2019 will triple its capacity and make it one of the largest ports in the world. Morocco has also been investing in its railroad infrastructure, with the first high-speed train connection of the African continent scheduled for inauguration in 2018.

Technological readiness has also improved rapidly, partially reducing the gap with the OECD economies, but at a slower pace than in the GCC and other oil-exporting countries in the region. In parallel, these countries' innovation and business sophistication performances were disappointing, with no improvements over the decade and, in the case of innovation, a growing gap with respect to both OECD and GCC countries. Innovation also remains the biggest relative weakness of the region.

Health and primary education, goods market efficiency, and market size are, on average, areas of relative strength for the resource-poor countries in the region.[7] The perceived quality of public and private institutions is also a positive factor, although over the past decade this has slightly deteriorated in Jordan and Egypt and improved in Morocco.

The macroeconomic environment in these countries has experienced a smaller deterioration than in oil-driven economies but, starting from a less comfortable position 10 years ago, it is now on average among their biggest weaknesses in relative terms. Egypt had to face higher inflation and fiscal budget deficits together with a worsening of country credit rating. Jordan experienced a rise in public debt, partly as a consequence of the support given to the millions of refugees it is currently hosting from neighboring countries, and its balance of payments was negatively impacted by the decrease in remittances from the Gulf economies as well as the slowdown in tourism. Morocco showed significantly different dynamics and benefitted from greater stability, reducing debt and inflation and increasing national savings.

Finally, labor market efficiency in this group remains hindered by a number of rigidities and cultural factors that exclude large portions of women and youth. The participation of women in the labor market is less than one-third the participation of men, the worst of both subgroups of countries in the Arab world. This keeps practically half of the talent pool available in the countries out of the economic system, in spite of the increasing participation of women in the academic system, which has been at par with that of men in the past decade. Historically one of the weaknesses of these countries, labor market efficiency has further deteriorated over the past decade and exhibits a growing gap with respect to OECD economies—making it now these countries' second biggest relative weakness after innovation.

The competitiveness agenda for the Arab world in a new economic context

Although oil prices have been at historic highs during the past decade, only some of the oil-exporting Arab countries have fully taken advantage of this opportunity to make appropriate investments and implement reforms to foster diversification, efficient allocation of resources, and innovation. Today the Arab world is facing a number of challenges stemming both from global trends and from idiosyncratic issues that pertain specifically to the region. In light of this context and of its current competitiveness landscape, the region needs to focus on a number of key long-term objectives through policies that can ensure broad-based economic progress.

According to the Global Risk Perception Survey conducted by the World Economic Forum in both 2016 and 2017 across different stakeholder groups and areas of expertise, the world will be affected the most in the next 10 years by five key trends: rising income and wealth disparity, increasing polarization of societies, rising cyber dependency, changing climate, and aging population. The same survey also identifies the causal connections between those trends and the potential risks that could materialize globally.

While trends are global in nature, not all countries and regions will be exposed to their consequences with the same intensity and pace. With one of the youngest populations in the world, the Arab countries are unlikely to be affected by the negative consequences of an aging population in the near term. In contrast, the other four trends are likely to influence the region's prospects.

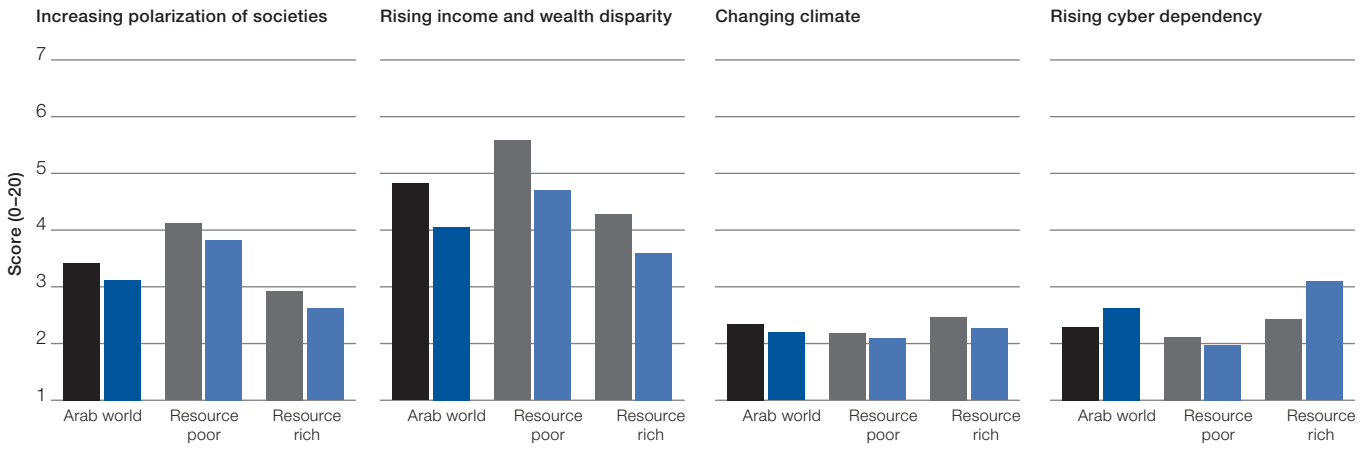
The results from the Global Risk Perception Survey respondents' assessment to the relevance of global trends and their interconnections with potential risks were linked to the perceptions of executives in the Arab countries of how worrisome those same risks are for the future of their businesses, based on the results of the Executive Opinion Survey conducted yearly by the World Economic Forum. This exercise produces an estimate of the impact of trends on businesses that takes into account the degree of concern among the business community in each country about selected risks and weighs it by the extent to which those risks are driven by the global trends selected.[8]

Since 2016, *rising income and wealth disparity* has been the trend with the most worrisome consequences according to the Arab business community, followed by *increasing polarization of societies* and *rising cyber dependency,* which has overtaken *changing climate* this year (Figure 6 on page 8). Income inequality is particularly relevant in resource-poor countries, but tops all other trends across all subgroups. Concern about the consequences of rising cyber dependency has increased across the region, but especially in resource-rich economies, where it became the trend with the second-highest impact coefficient. In the past year, there has been a general decrease in the level of concern about consequences of income inequality and polarization of societies. While this can be attributed to a natural adjustment in business priorities in light of improved stability in many Arab countries, focus on building more inclusive and cohesive societies should remain strong.

In spite of a decrease in the coefficient since 2016, Tunisia remains the country where rising income inequality and wealth disparities might have the strongest impact. Morocco and Oman follow together with Algeria, the only Arab country where concern about the consequences of rising income and wealth disparities increased (Figure 7 on page 8).

Executives across most of the region show their concern about long-term unemployment or underemployment (56 percent of Jordanian businesses), profound social instability (40

Figure 6: Business concern about consequences of key global trends in the Arab world, 2016–2017

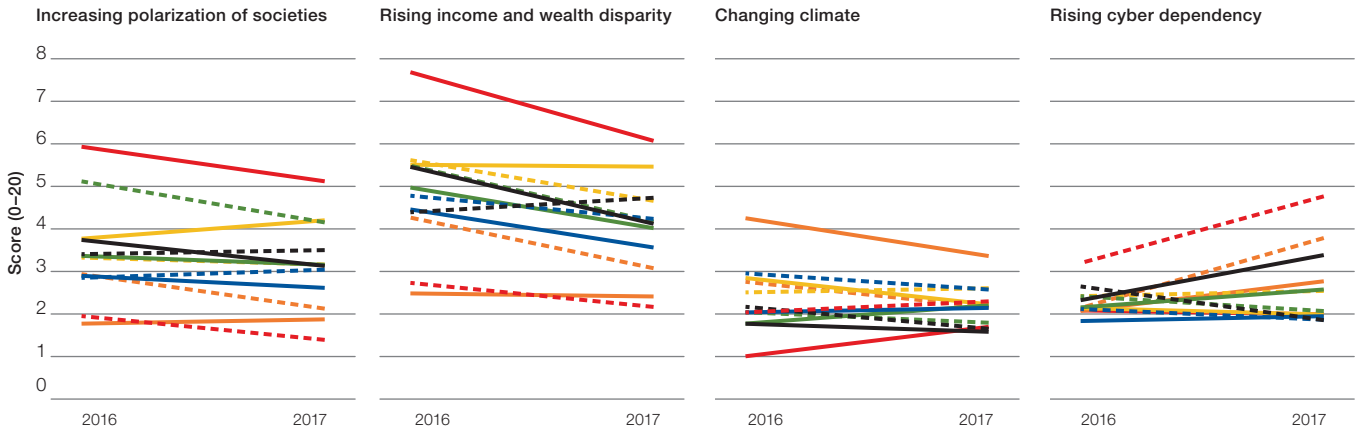


Key: ■ 2016 ■ 2017

Source: Calculations based on the results of the World Economic Forum, Global Risk Perception Survey and Executive Opinion Survey 2016 and 2017.

Note: For Egypt, 2017 Executive Opinion Survey data were used for both 2016 and 2017. Similarly, for Oman, 2016 Executive Opinion Survey data were used for both 2016 and 2017.

Figure 7: Business concern about consequences of key global trends in the Arab countries, 2016–2017



Key: Algeria Bahrain Egypt Jordan Kuwait Lebanon Morocco Oman Qatar Saudi Arabia Tunisia, United Arab Emirates

Source: Calculations based on the results of the World Economic Forum, Global Risk Perception Survey and Executive Opinion Survey 2016 and 2017.

Note: For Egypt, 2017 Executive Opinion Survey data were used for both 2016 and 2017. Similarly, for Oman, 2016 Executive Opinion Survey data were used for both 2016 and 2017.

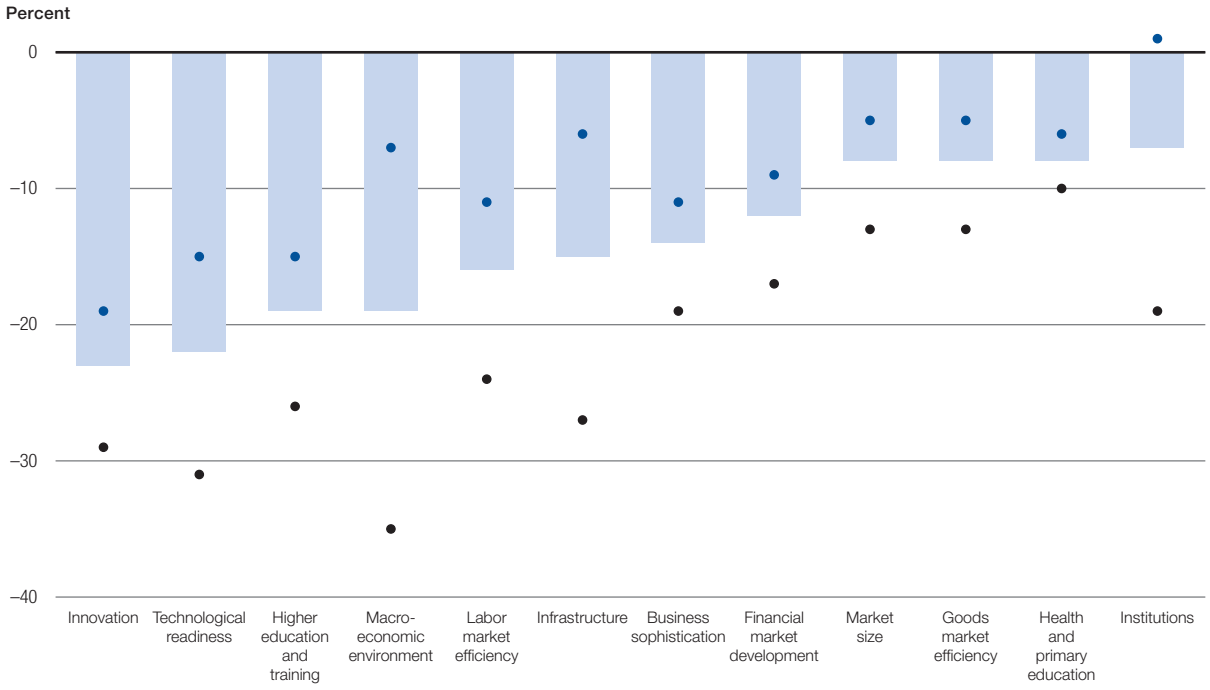
percent of Tunisian businesses), and failure of national governance (38 percent of Algerian businesses). At the other end of the spectrum, businesses in countries such as Qatar and the United Arab Emirates (UAE) are less worried about the consequences of increased inequality.

Closely linked to income inequality, the growing polarization of societies is also poised to affect the region in the future since it exacerbates the risk of social instability and failure of national governance. Concern about polarization of societies has lessened in most countries, with the exceptions of Morocco, Algeria, Jordan, and Qatar.

The concern about the consequences of cyber dependency has increased dramatically in resource-rich economies, making this trend the one with the third highest potential impact on the region. Not surprisingly, cyber dependency is raising more concerns in those countries where ICTs have developed more and a failure of critical information infrastructure or a cyberattack could have larger effects. In the UAE, half of companies are worried about cyberattacks (up from about 30 percent in 2016) and one in five (it was one out of ten in 2016) sees data fraud as one of the risks of major concern. Large increases in concern were also observed in Bahrain and Saudi Arabia.

The level of concern about the consequences of climate change has also decreased in most of the region; this concern is greater in those countries that are less likely to successfully adapt to climate change and its consequences because their environmental and geographic conditions are more fragile. Forty-four percent of businesses in Jordan and 36 percent in Qatar are worried about water crises, with both countries having experienced shortages in recent years; for the second year, they remain the ones in the region with the highest level of concern

Figure 8: Competitiveness gaps of the Arab world countries with respect to the OECD average



Key: ● Resource rich ● Resource poor ■ Arab world

Source: Calculations based on the results of the Global Competitiveness Index 2017–2018.

about climate change. Kuwait, Tunisia, and the UAE all experienced sizeable increases in concern.

In addition to the consequences of these global trends, the region faces specific risks that are more directly linked to its economic and competitiveness structure. The recent fall in oil prices has uncovered once again the risks associated with excessive dependence on raw materials and a lack of economic diversification. Countries in the region have been forced to take measures to stabilize fiscal budgets, privatize national assets, and facilitate private-sector development outside of the oil and mining industries.

Yet in 2017 40 percent of businesses in the UAE were concerned about energy price shocks; in Kuwait this was 42 percent; in Algeria, 44 percent; in Egypt, 45 percent; in Saudi Arabia, 46 percent; and in Qatar, 51 percent. Closely linked to oil price shocks, fiscal crises were also on the watch list of executives in the region, staying high in the minds of 34 percent of them in Saudi Arabia, 40 percent in Bahrain, 42 percent in Kuwait, 54 percent in Egypt, and 73 percent in Algeria. Finally, asset bubbles fueled by excessive and unsustainable investment of oil revenues in previous years concerned 39 percent of executives in Qatar, 43 percent in Kuwait, and 51 percent in the UAE.

How are the Arab countries equipped today to address these challenges? How can improving the region's competitiveness help ensure that the right solutions are found?

As illustrated so far in this chapter, the Arab world is comprised of a diverse set of economies at different stages of development and with different strengths and weaknesses. However, there are some areas where the lag with OECD countries is generally bigger and common across most countries in the region. On one hand, in spite of improvements in some of the region's leading countries, innovation and technological readiness are still the two pillars where the gap is biggest. On the other hand, the conundrum of policies and factors that relate to higher education and training and labor market efficiency and that contribute to the region's high levels of unemployment should be addressed (Figure 8).

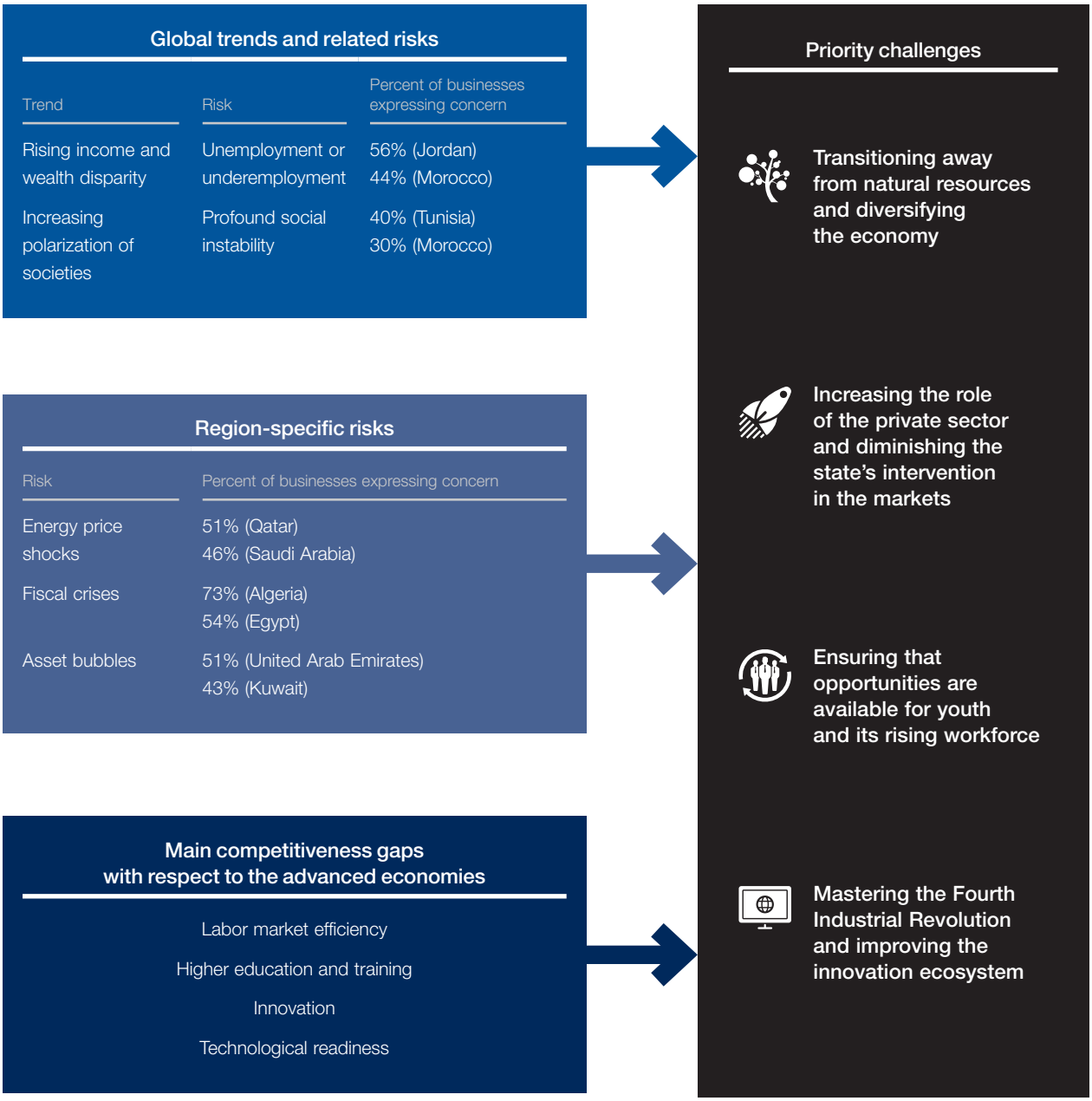
On the basis of the information outlined so far, Figure 9 (on page 10) helps to identify four key challenges to address in the medium to long term. These deeply interlinked challenges are discussed in detail below.

Transitioning away from natural resources and diversifying the economy

Fluctuations in energy prices are not new, and the Arab world—especially in its most resource-rich economies—has been adapting to the ups and downs these fluctuations have caused to its economy (Figure 10 on page 11). In 2015, oil rents amounted to about 15 percent of GDP in resource-rich economies, with peaks of 38 percent in Kuwait and 23 percent in Saudi Arabia. Four years earlier, those percentages were twice as high: 31 percent in oil-rich countries, 60 percent in Kuwait, and 49 percent in Saudi Arabia. Over the past 25 years, only in 1998 were these figures lower, but 20 years ago the rebound was quick. Most observers estimate that this time lower prices for natural resources are here to stay as global demand for energy products is shifting toward cleaner sources, giving to this challenge a much stronger sense of urgency than in the past.

Many countries in the region have adopted diversification plans and other economic strategies, often focusing on a number of key sectors including finance, logistics, tourism and tech-based services, and manufacturing. Yet successes have been limited in most cases because a number of key obstacles remain.

Figure 9: Identification and source of priority challenges for the Arab world

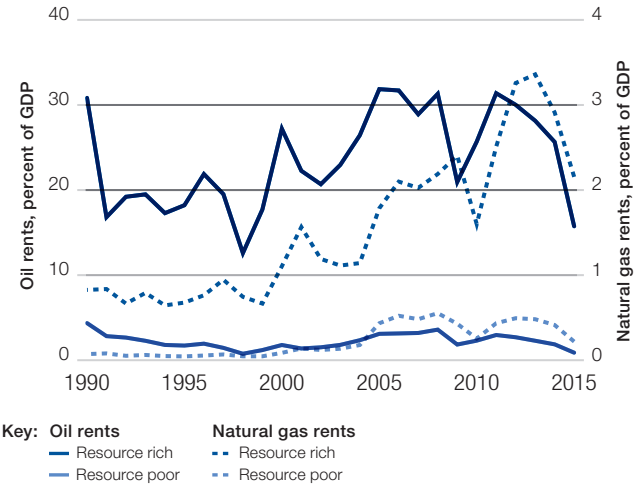


Energy subsidies are still high in most Arab countries, leading to economic distortions that favor industries that make intense use of capital and energy rather than labor. In 2011, implicit and explicit energy subsidies accounted for as much as 10 percent of GDP in Egypt, Algeria, and Saudi Arabia and surpassed public expenditure on education in all of the Arab countries except for Morocco and Tunisia.[9] Energy subsidies not only create distortions to the economy but disproportionately benefit the most affluent portion of the population. Forced by budgetary restrictions, most Arab countries have approved reform programs to reduce energy subsidies in recent years. The success of the long-term implementation of these reforms will depend on the capacity of governments to inform the population about the magnitude and implications of current subsidies, use savings from subsidies for socially and economically meaningful expenditures, and resist pressures by organized interest groups.

Diversification of the economy is also hindered by the lack of workers with the right set of skills. There is a scarcity of local graduates in technical and scientific subjects as well as students from vocational training programs, and especially in resource-rich countries domestic workers are less inclined to take jobs in the private sector (more on this below). Many Arab countries (especially in the GCC) have had recourse to foreign workers to fill this gap, but this model has a number of shortcomings.

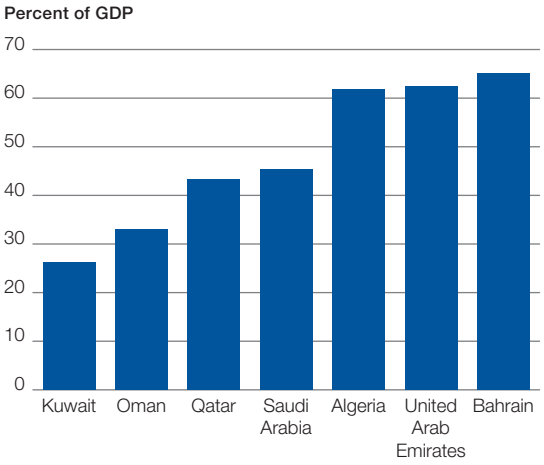
First, most countries have not been able to attract qualified foreign talent to work in technical positions outside of the oil and gas industry, with a few exceptions—such as finance and other

Figure 10: Evolution of oil and gas rents in the Arab world, 1990–2015



Source: Calculations based on World Bank, *World Development Indicators,* available at https://data.worldbank.org/data-catalog/world-development-indicators.

Figure 11: Non-government, non-oil GDP



Source: International Monetary Fund 2016.

advanced service sectors in the UAE. In addition to legal restrictions, labor conditions and differences in remuneration across sectors, especially for foreign workers, might be driving this. In 2009, manufacturing wages in Saudi Arabia were approximately three times higher for Saudis than for foreigners.[10]

Second, many legal restrictions still prevent foreign workers from being employed in some sectors or functions, from moving freely in and out of the country, and from switching employers. These restrictions create frictions in the allocation of talent to more advanced sectors.[11]

Unfortunately, in recent years many governments have been implementing additional restrictions on foreign workers in the form of increased visa fees, larger quotas for nationals, and outright bans in some sectors. The two-year flexible work permit (Flexi Permit) implemented by Bahrain represents a positive exception and a step in the right direction. The scheme allows, under certain conditions, expatriates to reside and work in the country for a renewable period of two years without a sponsor; they are thus able to choose one or multiple employers (see Box 1 on page 12).[12]

Economic diversification is also slowed by the absence of a thriving private sector in most Arab countries. The rise of private entrepreneurship has been weighed down by the specific history and development path of many Arab countries, and continues to be hindered today by a series of policies, restrictions, and economic conditions. The next section discusses this issue in detail.

Increasing the role of the private sector and diminishing the state's intervention in the markets

The public sector still represents a large share of the economy in most Arab countries, either directly or through state-owned enterprises, especially in the oil and gas industry. The private-sector, non-oil economy represented less than 30 percent of GDP in Kuwait in 2014, while the shares in Oman, Qatar, and Saudi Arabia were all below 50 percent (Figure 11). As mentioned above, insufficient private entrepreneurship has been identified as one of the obstacles to the diversification of the region's economy and more generally as a source of potential distortions.

Why does private-sector development lag behind in the Arab world? **In many countries, inadequate legal frameworks and a lack of policy stability discourage private-sector investments, especially from abroad.** According to the World Bank's Doing Business indicators, the Arab countries are among the worst performers globally when it comes to protecting minority shareholders. Policy instability also creates an unfavorable environment for private investors in many countries in the region. According to the World Economic Forum's Executive Opinion Survey, policy instability was among the top five most problematic factors for business in seven of the eleven Arab countries covered in 2017: Egypt (1st, the most problematic factor); Jordan and Tunisia (3rd most problematic); Algeria and Saudi Arabia (4th); and Kuwait and Lebanon (5th).[13]

Public employees are granted disproportionately generous benefits, which discourage employment in the private sector among nationals. Public jobs often enjoy wages that are twice as high as those in most private industries and require shorter working hours. In spite of the fiscal crisis due to the oil price slumps, attempts to cut benefits and perks for public employees have often failed or have later been repealed as a result of rising discontent among the affected cohorts. Governments have often taken direct or indirect measures to reserve these public employment jobs for national workers. The Government of Saudi Arabia is among those that stepped in most strongly, first pledging to remove all expatriate workers from the public sector by 2020 and then reserving certain job categories in the private sector for national workers only.[14] This problem is compounded by a lack of entrepreneurial role models and a widespread culture of risk aversion that highly values the security of public jobs. Already today, the great majority of public employees is constituted by nationals in many Arab countries, especially the resource-rich ones: 50 percent in Qatar, 67 percent in Bahrain, 85 percent in Kuwait, and 99 percent in Saudi Arabia. Domestic workers are generally concentrated also in other sectors with a high degree of public ownership (education, utilities, health, and finance) but are present to a lower degree in labor-intensive private-sector activities such as manufacturing (Figure 12 on page 13).

Box 1: The Flexi Permit: Bahrain Explores a Labor Market without Kafala

Ausamah Alabsi, The Labour Market Regulatory Authority, Kingdom of Bahrain

The sponsorship system—or *Kafala* as it is known in the Middle East—was devised in the early 1960s to address labor shortages in economies that were evolving as a result of their new-found wealth. The first shortages were those of skills, where workers did not have the required expertise. By the 1980s the shortages were in numbers of workers; at the time, the Gulf states had reached full employment yet needed a larger workforce.

The sponsorship system was devised to manage the influx of needed workers. On one hand the system appealed to society's conservative side by making the employer responsible for the migrant. It also ensured that the newcomers had real jobs that required their presence—thus making the employer responsible for the migrants' entry into the country and for the administrative control of the new demographic.

The principal regulations of Kafala stipulated that migrants would work only for their own sponsor—they could not leave the job without the sponsor's consent. This stipulation, along with its social, legal, and human side effects—is the most well-known aspect of the sponsorship system. Less well known is that the system further stipulates that the sponsor *himself* could not hire a migrant who was not under his sponsorship—that is, the sponsor was prohibited from hiring a migrant who was in the country under the sponsorship of a different employer. A sponsor who did hire someone in violation of this regulation risked heavy legal and financial penalties. In a labor market comprised of at least 80 percent imported labor, that is a big restriction.

This system continued for six decades, creating a labor market that was easy for a migrant to enter but difficult to move within. The shortcomings of the imbalanced labor relationship that Kafala produces are widely discussed and criticized, and their remaining severity depends on the extent of reform that has been attempted over the years from country to country.

In the last decade the new phenomenon of economic inflexibility has manifested itself. From the employer's perspective, the rigidity of Kafala meant that businesses were not able to address a sudden need, avail themselves of a market opportunity, or satisfy a short-term contract without going through the administrative process of applying for a permit, sourcing the workers, and flying them in. The sponsorship system also meant that a law-abiding business would have to pay for a full-time wage even if the job was part-time.

The Kafala restrictions may have been tolerable in the economic structures of the 1970s and 1980s, but in the fast-moving economies of the 21st century they are a heavy burden slowing down growth. The regulatory inability to satisfy demand for casual, temporary, or short-term labor resulted in a gray market that supplied the workers needed, albeit illegally. And, like all gray markets working outside the law, the system produced its own spin on rights and human infringements.

Realizing this, Bahrain launched a new scheme to manage expatriate labor that eliminated the sponsor, dubbed the *Flexi Permit.* This scheme—the first of its kind in the region, perhaps globally—categorizes the migrant permit holder as "Self-Employed" with a permit and residency that allows him or her to work in any occupation and at any skill level, with any employer or number of concurrent employers, on a short- or long-term basis, full or part-time. This permit is issued for two years and renewable indefinitely. The Flexi Permit has no restrictions, and no quid-pro-quos or provisos. It signifies a paradigm shift in addressing labor market inefficiencies and improving flexibility in migration management.

The Flexi Permit, launched in July 2017, automatically provides medical insurance and allows free movement and travel. For now it is a sizable pilot program that aims to attract 48,000 permit holders, equivalent to 8 percent of the migrant labor force. Several thousands of migrant workers are already making use of this new system.

The program empowers the worker, gives flexibility to the market, and addresses all the historic shortcomings of a legacy system that has outlived its economic and social relevance in the age of Uber.

The shortcomings of local financial markets—which are generally unable to fund new projects or small- and medium-sized enterprises (SMEs)—also explain the delay in private-sector development in Arab countries. These shortcomings are further addressed below when discussing the need for more modern forms of financing for innovation.

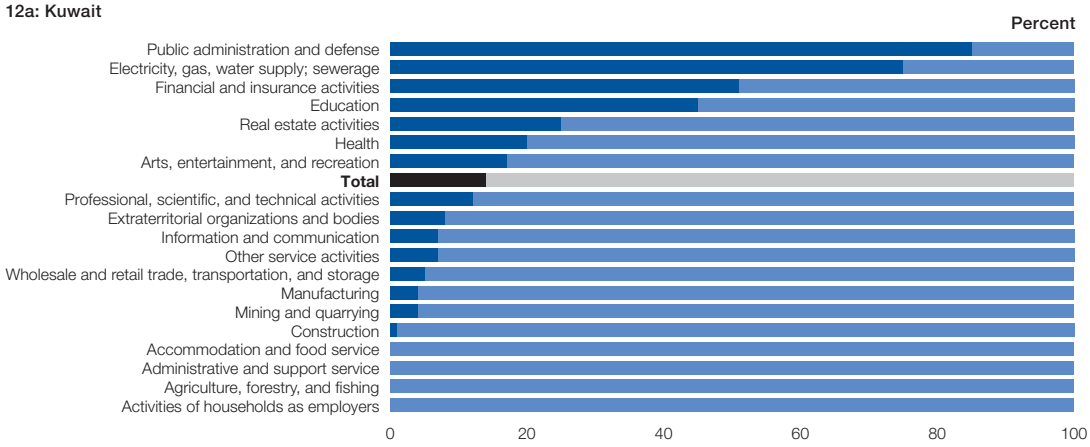
Ensuring opportunities for the youth and the workforce of the future

The share of people aged 15–24 in the Arab world peaked in 2005 at 21 percent (Figure 13 on page 14). In the course of the current century, the region's population is expected to double to almost 700 million people, but longer life expectancy will drive a lot of this trend and the share of youth population is set to slowly decrease. The current years therefore are those when Arab countries could potentially enjoy the benefit of a young, dynamic, and increasingly educated workforce. Yet this opportunity is being missed because the region grapples with low labor force participation and high unemployment rates among its youth.

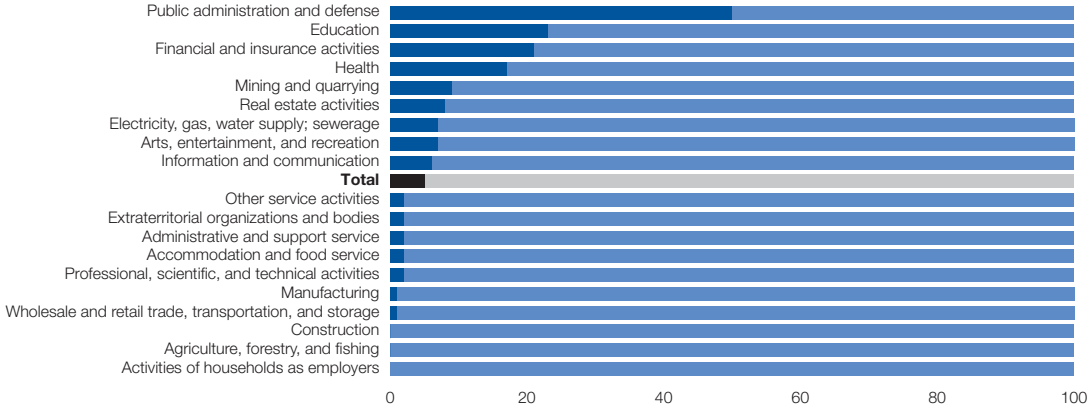
Data on youth not in education, employment, or training (NEET) are available for only a few Arab countries, but provide an indication of the extent of the problem: in 2015 16.1 percent of young people aged 15–24 were idle and unemployed in Saudi Arabia; 21.2 percent in Algeria, 27.6 in Egypt, and 44.8 in Yemen (in 2014).[15] Available data on youth unemployment and labor force participation confirm this picture (Figure 14). There is an almost linear relationship between youth unemployment and the

Figure 12: Employment composition in the main economic sectors by worker nationality, 2015

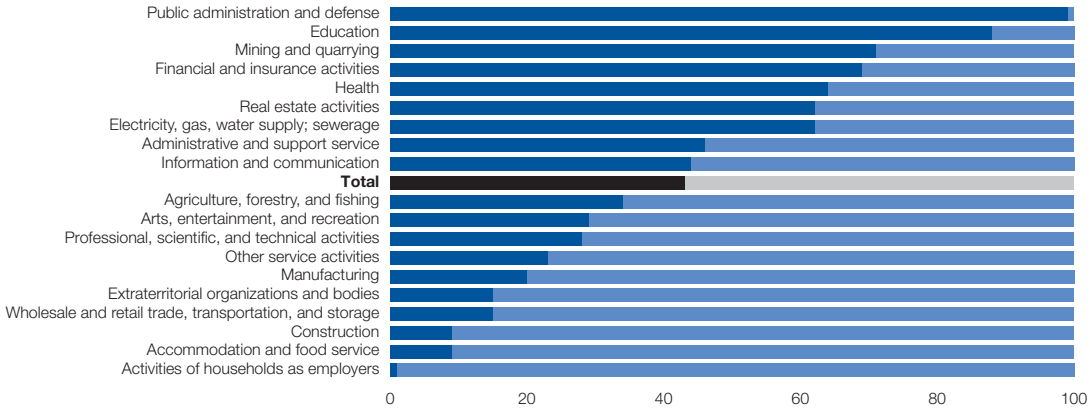
12a: Kuwait



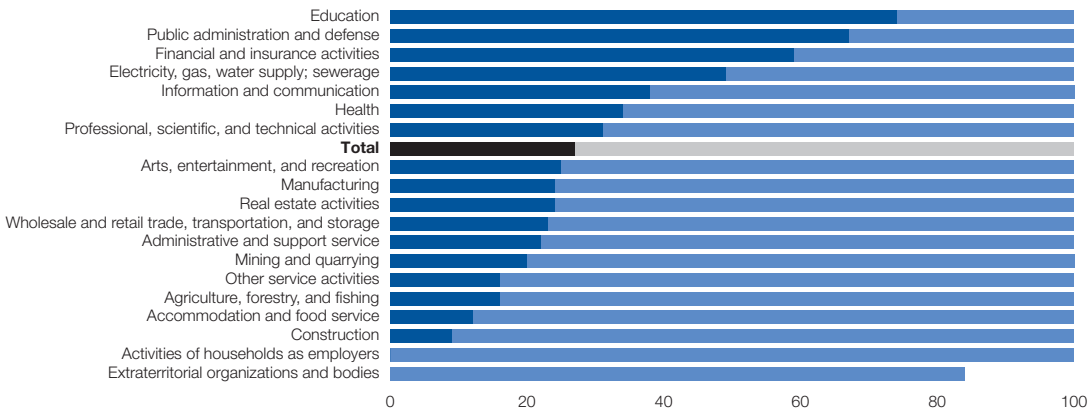
12b: Qatar



12c: Saudi Arabia



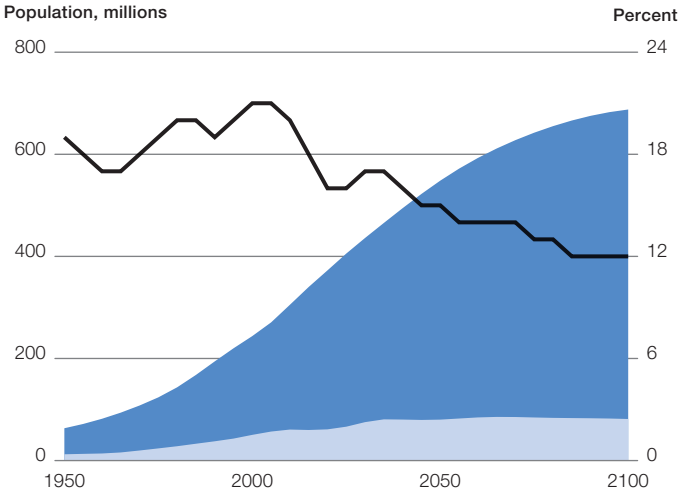
12d: Bahrain



Key: ■ Citizens ■ Non-citizens

Source: GCC-STAT 2017.

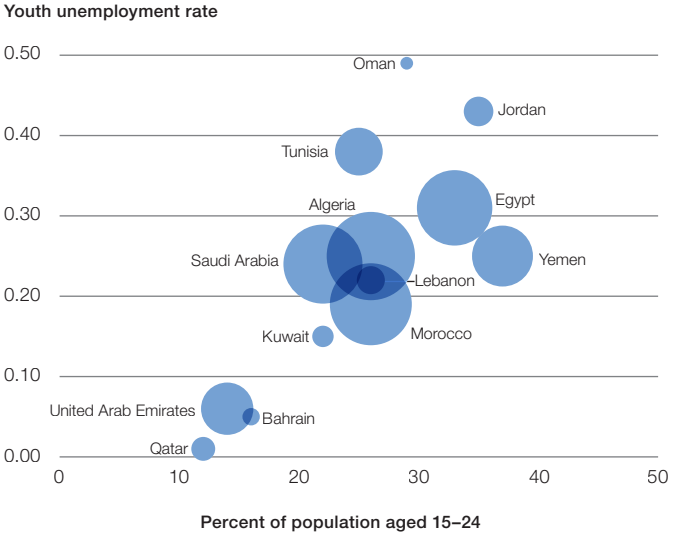
Figure 13: Population projections and age composition in the Arab world, 1950–2100



Key: Population aged 15–24 Rest of population
Percentage of population aged 15–24

Source: UN DESA Population Division, *World Population Prospects,* available at https://esa.un.org/unpd/wpp/.

Figure 14: Youth unemployment and working age population in Arab countries, multiple years



Source: Calculations based on International Labour Organization (ILO), ILOSTAT, available at http://www.ilo.org/global/statistics-and-databases/lang--en/index.htm.

Note: The youth unemployment figure for Oman is based on ILO model estimates (Key Indicators on the Labor Market). The size of each bubble is based on the total size of the working-age population of the country.

Box 2: 100 Arab Start-Ups Shaping the Fourth Industrial Revolution

Khaled Kteily, World Economic Forum

Being an entrepreneur in the Arab world, which has a regionally unique set of challenges and opportunities, is a category in and of itself. The culture in the region does not reward failure in the same way that it might be celebrated in Silicon Valley. Young Arabs are encouraged to become engineers, doctors, or lawyers—skills that are transferrable across borders and countries. Regional investment strategies do not encourage risk, while stability is a celebrated virtue in countries that have been wracked with geopolitical conflict. And when many countries have been reliant on oil for revenues, the safety nets that support their citizens also disincentivize risk-taking.

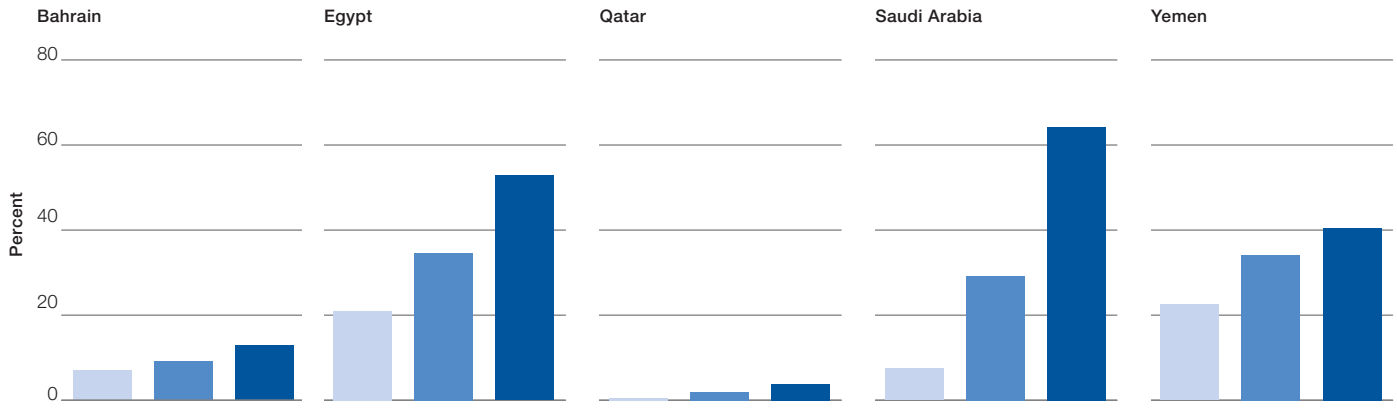
Despite all this, in the context of challenging geopolitics, Arab start-ups have found ways to grow and succeed. Dig deeper and you realize that many successful start-ups are providing local solutions to local problems: Syrian-based Mujeeb is a chatbot that understands Arabic. Dubai-based BitOasis provides access to cryptocurrencies for residents in the Arab world. Cairo-based Nafham provides online educational courses in Arabic. Indeed, the future lies here: regional solutions to regional challenges.

Certainly, as governments and businesses alike recognize the critical role entrepreneurs play in addressing revenue diversification, youth unemployment, and more, they will be more willing to create the space for entrepreneurs to flourish. For this reason, the World Economic Forum partnered with the International Finance Corporation to identify, support, and enable the best and brightest entrepreneurs of the Arab world to improve the state of their region through the 100 Arab Start-Ups Shaping the Fourth Industrial Revolution initiative.

During the World Economic Forum's meeting on the Middle East and North Africa in Jordan in May 2017, start-ups from each country met with their respective top government representatives: the Jordanian start-ups met with the King of Jordan, Egyptian start-ups with Egypt's Minister of International Investment and Cooperation, and so on. Ultimately, closer collaboration between these parties will help create the ecosystem necessary for entrepreneurship to thrive and generate a regional answer to what Arab entrepreneurship will be.

The success of this initiative has highlighted once more the critical need to continue supporting entrepreneurs and start-ups across the region and, indeed, across the world. The partnership between the World Economic Forum and the International Finance Corporation was extended to include Latin America and is now being considered for other regions in the world that are seeking to better promote innovation and entrepreneurship.

Figure 15: Youth unemployment by level of education in selected Arab countries, multiple years



Key: Basic Intermediate Advanced

Source: Calculations based on International Labour Organization (ILO), ILOSTAT, available at http://www.ilo.org/global/statistics-and-databases/lang--en/index.htm.

size of the youth cohort: in countries with younger populations the youth are relatively more unemployed. The most notable case is Jordan, where people aged 15–24 represent approximately one-third of the working age (15–64) population, but almost half of those who are actually participating in the labor force remain unemployed (Figure 14). Youth participation itself is low and generally cannot be attributed to enrollment in educational and training programs. This, along with the low participation of women across all ages, exacerbates the loss of talent in these countries (less than 20 percent of women participate in the workforce in Algeria, Jordan, and Yemen).

Although tackling this problem will require a number of measures and reforms for factors ranging from education and the labor market to entrepreneurship and access to credit, none is likely to succeed without **a shift in the cultural paradigm that places a higher emphasis on the role of youth in society, the importance of merit-based opportunities, and the value of work as a way to advance social and economic emancipation.** As explained in the previous section, resource-rich countries have long granted to their nationals gilded benefits and positions in the public sector, thus reducing the incentive for their youth to work toward their own professional careers. Youth are also discouraged by the widespread perception that connections (*wasta* in Arabic) are the best way to land to a good job. This is partially due to the nature of the economic system and the weight of state-owned enterprises (among the large firms) and family-owned business (among the smaller and informal businesses), but also to the limited role of formal labor intermediation as a solution to information asymmetries.

The lack of merit-based opportunities appears in the differences of youth unemployment rates by level of education, which also reflects the **mismatch between skills and fields of education (especially for advanced degrees) and the needs of the labor market.** There are no consistent data for all Arab countries, but available evidence shows that higher education does not turn into more job opportunities. Unemployment is as high as 60 percent in Saudi Arabia and 50 percent in Egypt among youth with advanced degrees (Figure 15). Although the level of unemployment varies across countries, more education is consistently associated with a higher incidence of jobless youth. In addition to the factors outlined above, which relate to the structure of the economic system and the nature of the labor market in many Arab countries, this association of education with joblessness could also be due to societal preferences that tend to place higher importance on fields of education that are not directly applicable in private-sector positions, with all the countries shown in Figure 15 having lower than Arab world average percentages of graduates in scientific and technical subjects (more on this in the following section).

Fostering a culture of entrepreneurship among the youth will be key to addressing many of the challenges above, not only through the creation of start-ups but also through increasing the appeal of existing private companies as valid career options for many young Arabs. Recent success stories of companies in the region are likely to have an impact in this regard: the Jordanian online service provider Maktoob was sold to Yahoo! for US$165 million in 2009; Talabat, a Kuwaiti online platform for food delivery, was sold to Rocket Internet for US$170 million in 2015; and Souq.com, an e-commerce website based in the UAE, was sold to Amazon in 2017 (the value of the operation has been estimated at US$650–700 million). A number of initiatives have been launched to support start-ups, including one led by the International Finance Corporation (IFC) and the World Economic Forum, described in Box 2 (on page 14).

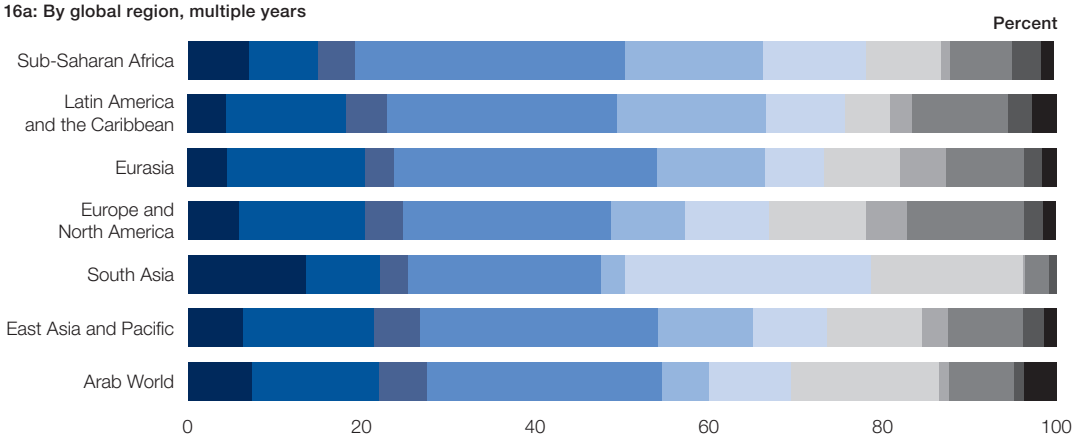
Mastering the Fourth Industrial Revolution and improving the innovation ecosystem

Diversifying the economy, developing the private sector, and creating opportunities for the youth will require increasing the innovation content of the non-oil sector and navigating through the Fourth Industrial Revolution. Creating a thriving innovation ecosystem is not a trivial task. While some Arab countries have already put in place long-term strategies and heavy investments, the entire region still has to fill the gap with the rest of the world when it comes to adopting and developing the most advanced technologies and the industries of the future.

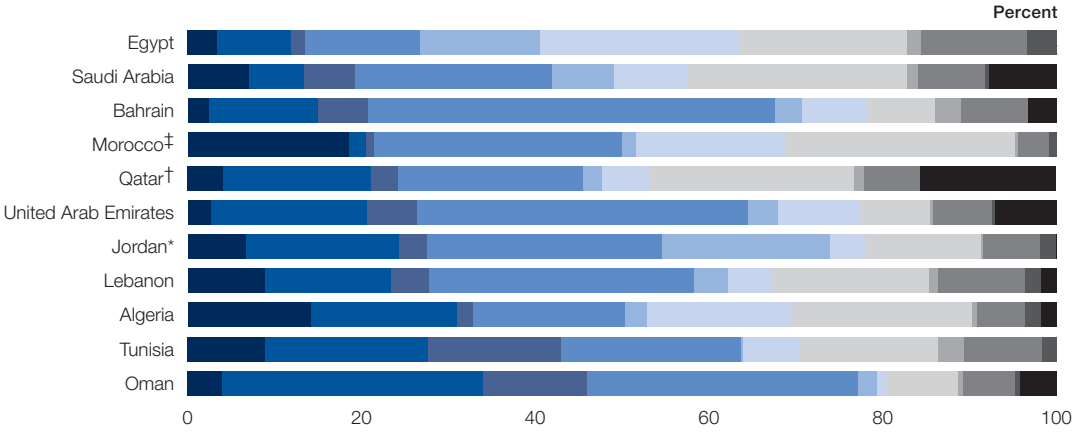
Availability of appropriate talent remains an issue. Enrollment in tertiary education still lags behind and places the

Figure 16: Composition of tertiary education students by field of study

16a: By global region, multiple years



16b: By Arab country, 2015



Key:

- Natural sciences, mathematics and statistics
- Engineering, manufacturing and construction
- Information and Communication Technologies
- Business administration and law
- Education
- Social sciences, journalism and information
- Arts and humanities
- Services
- Health and welfare
- Agriculture, forestry, fisheries and veterinary
- Unspecified

Source: Calculations based on UNESCO Institute for Statistics, UIS.Stat, available at http://data.uis.unesco.org/.

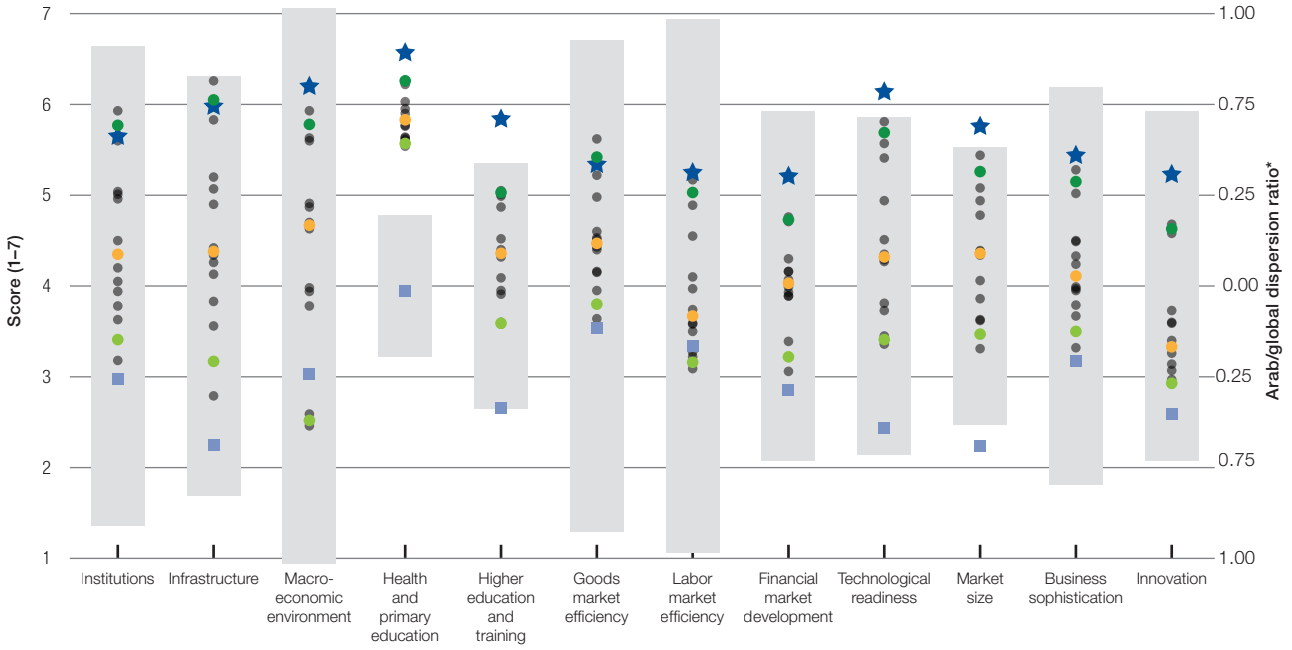
Note: For Figure 16b, the year of the data is 2015 with the following exceptions: * = 2011; † = 2012; ‡ = 1999.

Arab world among the worst regions in the world in this regard, after Sub-Saharan Africa and South Asia. Oman, Jordan, Saudi Arabia, and Bahrain all have enrollment rates above 40 percent, but the composition of students by field of education varies significantly among these countries, with the latter two having the lowest share of prospective graduates in technical and scientific subjects (Figure 16). At the other end of the spectrum, Oman and Tunisia have the highest, both above 40 percent. In a world that is changing fast and where it is hard to predict what jobs will be available and skills necessary in the future, having a diverse pool of graduates who are creative and think outside the box is becoming increasingly important. Within the Arab world, Morocco, Tunisia, and Egypt have the highest diversity of skills while Bahrain and the UAE, with a preponderance of students in business administration and law, have the least diversity.

Over the past 20 years, many Arab countries have also experienced a significant decrease in the enrollment rates of vocational education programs. A number of factors have contributed to this drop, including the social stigma associated with this form of education. More efforts need to be made to ensure that the private sector is involved in both designing and delivering vocational training programs. At the same time, authorities must start actively promoting vocational training, positioning it as a valuable alternative to the university track.

Investments for innovation will also require significant and more advanced sources of finance. As outlined in the previous sections, the financial sector has been among the hardest hit by the instability caused by changes in oil prices, but it is now recovering. Yet all Arab countries remain highly dependent on banks, with all other forms of financing (mutual

Figure 17: Distribution of Arab countries' performance across the 12 pillars of competitiveness



Key: ★ Global top 20 ● Arab top 2 ● Median ● Arab bottom 2 ■ Global bottom 20

Source: Calculations based on the results of the Global Competitiveness Index 2017–2018.

* The light gray bars represent the ratio between the dispersion of results among Arab countries and at the global level (right axis). A ratio equal to 1 indicates that the performance among Arab countries is as dispersed as that of the entire set of 137 countries covered by the Global Competitiveness Index.

funds, the insurance and equity markets, and the leasing industry) largely underdeveloped. Although the inflow of deposits to banks is generally solid, loans are highly concentrated and given to only a few actors. Furthermore, the financial sector has usually failed to provide sufficient resources to SMEs, contributing to a stagnating private-sector landscape and high average firm age. Regulations on bankruptcy and collateral do not grant sufficient legal protection to borrowers and lenders: countries in the Middle East and North Africa are on average the worst performers in terms of strength of legal rights for getting credit, according to the World Bank's Doing Business indicators.

With weak capital markets, start-ups have also historically suffered from a lack of financing. However, funding for start-ups is growing, especially in the GCC economies. Equity investment in new technology firms jumped from US$100 million in 2014 to US$1.7 billion in 2016 in the UAE.[16]

More and more, innovation passes through information technology connectivity and digitalization. Many Arab countries have achieved tremendous improvement in this area in recent years. For example, in just five years the share of people using the Internet in Algeria has more than tripled, to over 50 percent. Yet more than half of the Arab population is still not connected to the Internet, and especially the poorer and more rural areas still lag behind. Expanding the pool of users with homogenous preferences and cultural backgrounds will allow the generation of a critical mass and the network effects necessary for the success of many of the technologies and business models at the core of the Fourth Industrial Revolution.

Country analysis

The country analysis is based on the data used for the computation of the Global Competitiveness Index 2017–2018, published in September 2017. Updates to data sources (e.g., the IMF's World Economic Outlook) published after that date are not reflected in the numbers presented in this section.

The UAE, Qatar, and Saudi Arabia lead the Arab world ranking in nine, two, and one of the 12 competitiveness pillars respectively, reflecting the relatively better performance of resource-rich countries across all dimensions measured by the Global Competitiveness Index. The bars in Figure 17 show that across four of the twelve drivers of competitiveness the gap between the two best and two worst Arab countries is approximately as large as the gap between the best 20 and the worst 20 performers globally, signaling that the heterogeneity within the region is similar to the one observed across the entire globe: macroeconomic environment (102 percent), labor market efficiency (98 percent), goods market efficiency (90 percent), and institutions (88 percent). The labor market is also the area where the regional median is closest to the bottom of the global distribution, confirming the need for profound reforms in this area across most of the Arab world. Health and primary education levels are satisfactory in most countries in the region, while even regional leaders have a significant lag with respect to the global benchmark when it comes to higher education and training. In terms of innovation there are only two countries, Qatar and the UAE, that have so far made some progress in terms of closing the gap with the global benchmark.

The **United Arab Emirates (UAE)** (17th in the world) leads the Arab world in competitiveness. Increased diversification makes its economy more resilient and able to weather the double shock of lower oil and gas prices and reduced global trade, and to maintain a stable macroeconomic environment. The resilience of its fiscal policy will be further strengthened in the future because the UAE was, together with Saudi Arabia, among the early adopters of the new VAT agreed upon by GCC members, which was introduced in the country on January 1, 2018. After the slowdown in 2017, the IMF predicts GDP growth to pick up again this year to 3.4 percent, driven also by the good performance of the non-oil economy. To further increase its competitiveness, the UAE will have to speed up progress in spreading the latest digital technologies (36th) and upgrading education (36th). Over the past decade, the UAE has experienced significant improvement across all dimensions of competitiveness and closed the gap with the OECD average in all of them except for higher education and training and (to a small extent) health and primary education. In relative terms (i.e., with respect to the country's performance across all pillars), innovation, financial market development, and market size are weighing on the UAE's competitiveness, while the country benefits from strong institutions, good infrastructure, and a good level of health and primary education.

Qatar is the 2nd-most competitive economy in the Arab world, and 25th globally. The drop in oil and gas prices had a significant effect on the country's fiscal situation, which moved from a fiscal surplus of 10.3 percent (in 2015) to a deficit of 4.1 percent of GDP (2016), while public debt increased from 35.8 to 47.6 percent of GDP in the same years. Yet its macroeconomic environment remains solid at 20th globally and 1st in the region. Qatar's strengths lie in its solid infrastructure facilities and efficient goods markets. Going forward, the country will have to ensure better access to digital technologies for individuals and businesses, and further strengthen educational institutions. It is important to note that both survey and statistical data reflect the situation prior to the current tensions with neighboring countries. Since 2007, the country has improved its performance across all the pillars of the Index, with the exception of financial market development—which is now one of the factors of relative weakness of Qatar's competitiveness, together with the average level of innovation and the size of its market. On the other hand, top-quality infrastructure, a favorable macroeconomic environment, and good levels of health and primary education represent the country's main strengths.

Saudi Arabia ranks 30th in the world and 3rd in the region. Its macroeconomic environment has improved slightly since the 2015 oil price shock, but its financial market efficiency (56th) has suffered from slower credit growth and increased interest rates in 2016. The introduction of the VAT as of January 1, 2018, (together with the UAE, Saudi Arabia is the first country in the GCC to introduce the VAT) will contribute to further securing public finances and diversifying them from oil revenues. The country has stable institutions (26th), good-quality infrastructure (29th), and the largest market in the Arab world (15th globally). Saudi executives see restrictive labor regulations as their most problematic factor for doing business: the labor market is segmented among different population groups, and women remain largely excluded. Another concern is the lack of adequately educated workers: although tertiary enrollment is strong at 63 percent, more efforts are needed to advance the quality of education and align it with economic needs. Over the past 10 years, the country has made progress on the back of an increase in the size of its market (today this is one of its strengths in relative terms) and improvements in technological readiness and infrastructure. Its macroeconomic environment has deteriorated while its labor market efficiency stalled; together with innovation and financial market development, this has become one of its top three weaknesses.

Bahrain ranks 44th overall. The country presents a favorable business environment with a good institutional framework (23rd) and modern infrastructures (33rd). Its macroeconomic environment (108th, with a large fiscal deficit) is one of its main weaknesses, together with its small market size (90th globally and the smallest in the region), which is only partially balanced by its openness to international markets. Technological readiness is the area where the country has improved the most since 2007, closing the gap with respect to OECD countries. Innovation and higher education and training have also improved significantly and Bahrain has reduced its distance from the most advanced economies globally. On the other hand, the situation has deteriorated in terms of financial market development and macroeconomic environment, in line with most other countries in the region.

52nd globally, **Kuwait** suffers from a deterioration of its macroeconomic environment caused by low oil and gas prices. The fiscal balance went into deficit in 2016 (from a surplus of 1.2 percent of GDP to a deficit of 3.6 percent of GDP) with an increase in debt. In order to face the challenges posed by persistently low oil prices, Kuwait will have to increase its innovation capacity by investing in higher education and training and fostering a more inclusive and efficient labor market that allows it to make the best use of its human capital. Unfortunately, across most of these dimensions Kuwait has not improved significantly over the past decade, and in many cases the situation has worsened. In particular, the country's labor market efficiency dropped by more than one full point, making it one of the areas where it lags the most with respect to advanced economies, together with innovation, higher education and training, and technological readiness.

Oman ranks 62nd, punching above its weight in terms of institutions, infrastructure, and goods market efficiency. The government is passing substantial fiscal reforms to help the economy adjust to the new situation of low oil prices and preserve the sustainability of public finances. These reforms include a cut in fuel subsidies and other distortive fiscal measures, an increase in corporate tax, and the introduction of the GCC-wide VAT system in 2018 for a limited number of products. The country needs to continue efforts to upgrade its education and training systems and fundamentally reform its labor markets, whose efficiency has decreased over the past 10 years. Oman's performance in innovation and business sophistication has also deteriorated over the same period, making these three areas the three main weaknesses of the country.

At 65th place, **Jordan** continues to benefit from a fairly stable and efficient institutional system and relatively good infrastructure, innovation, and business sophistication. Over the past year, the government has worked to consolidate the country's fiscal situation and macroeconomic environment, which have been put under additional pressure by the large influx of Syrian refugees. These efforts have led to higher taxation and increased scrutiny of public spending by the private sector and

the public at large. From a long-term perspective, Jordan's performance has improved across most dimensions of competitiveness, particularly in technological readiness. Among the exceptions, labor market efficiency and financial market development are worth mentioning and today represent two of the main burdens on the country's competitiveness.

The best-performing country in North Africa, **Morocco** ranks 71st and this year reaches its highest score since the start of the series in 2007. The country can count on good health and primary education conditions, improved infrastructure, and a favorable macroeconomic environment supported by stable institutions. Over the past decade, Moroccan infrastructure has improved significantly, jumping from 71st in 2010 to 54th today. Advances have been spread across all modes of transport but were particularly large for ports (32nd this year, up 30 ranks over the same period) and roads (43rd, up 45 ranks). The availability of rail infrastructure will be further enhanced with the opening of the high-speed train connection between Tangier and Casablanca this year. Better infrastructure and a decrease in the average import tariff from 18.9 percent to 10.5 percent fostered Morocco's integration into international trade, which increased the overall level of efficiency in its goods market (58th, up 10 ranks since 2007). The key challenge for the country remains to improve its innovation environment (94th), its higher education and training system (101st), and the efficiency of its labor market (120th). These are the only three areas where the gap with the advanced economies has increased over the past decade rather than declining and, together with ICT and technological readiness (82nd, with slow progress), constitute the conundrum that Morocco needs to address to continue its path of growth and move into higher value-added and innovative sectors.

With the 4th largest market in the region (36th globally), **Algeria** enters the rankings at 86th place. Since 2015, improvements in many areas of competitiveness have been counterbalanced by a deterioration of its macroeconomic environment due to falling oil and gas prices. The government budget deficit was 11.6 percent of GDP in 2016, compared with a surplus of 0.1 percent three years before. Yet, at 71st globally, this remains one of the areas of relative strength of the country, together with health and primary education levels (71st). Among the other pillars, improvements have been faster in higher education and training, infrastructure, and technological readiness, but the latter two still show the largest gaps vis-à-vis developed countries. In 10 years, Algeria has achieved universal enrollment in secondary education and almost doubled enrollment in its tertiary system (36.9 percent in 2015). However, the quality of education still needs to be improved (105th) as well as the use of on-the-job training schemes (124th). In terms of transport infrastructure, progress over the past decade has been mainly in the railway sector (today at 49th). More Algerians are now connected to the Internet, but (at 98th globally) there has not been significant convergence with advanced economies in technological readiness. The country has not sufficiently addressed the inefficiencies of its labor market (133rd), which has deteriorated further in both absolute and relative terms. Diversifying away from natural resources into higher value-added activities will be key to ensuring sustainable opportunities in the long term. Focusing on innovation and better integration into the global economy will be instrumental in achieving this goal.

Ranking 95th globally, **Tunisia's** performance has stagnated over the past years, with no significant movement since the end of the political crisis in 2014. Improving the inefficiency of its labor market remains Tunisia's key priority for reform, an area where the country has further slipped in recent years and today ranks 135th globally. Its macroeconomic environment also remains challenging, with low gross national savings (13.1 percent) and increasing public deficit (5.7 percent of GDP) and debt (60.6 percent of GDP). The functioning of the country's markets is hampered by high tax rates (60.2 percent of business profits in 2016) as well as insufficient trade integration, restricted by both non-tariff barriers (119th) and customs procedures (122nd). The quality of institutions has been slowly improving, but inefficient government bureaucracy, corruption, and policy instability are still identified as the three most problematic factors by businesses in the country. Technological readiness is the area that has experienced the largest improvement since 2013, and Tunisia is the country with the most developed use of ICTs in North Africa (81st globally).

Egypt enters the rankings at 100th this year and approaches levels of competitiveness similar to those of 2009 and 2010. In past years, improvements have been particularly sharp in terms of financial market development (77th) and infrastructure (71st). In addition to the opening of the Suez Canal extension in 2015, a number of transport connections have been restored recently, contributing to the expansion in road and railway connectivity. Financial market conditions have benefitted from the flexible currency regime introduced at the end of 2016, while the banking sector weathered the change smoothly and is sufficiently sound (49th). The country will also benefit from its ambitious program of fiscal reforms, which included the introduction of the VAT in 2016 and the phasing out of many fuel and energy subsidies. However, its macroeconomic environment (132nd) suffered from high inflation in the period that immediately followed the stronger-than-expected depreciation of the Egyptian pound. Over the past decade, Egypt's performance vis-à-vis the advanced economies has increased or remained relatively stable in most dimensions of competitiveness, with the exceptions of infrastructure, financial market development, and market size. The country's macroeconomic environment experienced the largest deterioration in both absolute and relative terms, and today is the biggest relative weakness of the country, followed by innovation (109th) and labor market efficiency (134th).

Ranking 105th in terms of overall competitiveness, **Lebanon** is punching above its weight when it comes to business sophistication, technological readiness, and innovation, but it is still burdened by a poor macroeconomic environment and inefficient institutions and labor markets. The situation in neighboring Syria and the large influx of refugees has further drained economic resources and put the national health and education systems under pressure, with an increase in the number of transmittable diseases. ICT use has improved thanks to increased international Internet bandwidth and mobile broadband subscriptions. Deflation has eased, contributing to advance the country's macroeconomic context.

Conclusions

This chapter analyzes the evolution of Arab world competitiveness over the past decade and frames the region's current situation in the context of the global trends that will shape the future of the world's economy in the coming years, and the risks associated with them. The region experienced a converging trend with respect to advanced economies until 2011–2012. In

the following years, its gap with the OECD countries at first remained stable and then widened slightly with the recent decrease in oil prices. The improvement of transport and technological infrastructure was particularly sizeable thanks to heavy investments by both the public and the private sectors. The creation of thriving innovation ecosystems has been less successful, as a number of constraints have not been addressed: inadequate access to financing for innovative projects and SMEs, a lack of modernization of the legal frameworks, the low availability of trained workers, and the inefficient labor market.

In the coming years, the region will have to face the consequences of growing inequality, increasing polarization of societies, rising cyber-dependency, and changing climate. These could exacerbate risks already faced by the Arab countries, including those of persistent unemployment (especially among the youth), social instability, data fraud, cyberattacks, and water crises. The dependency on oil revenues and the public sector also increases the chances of fiscal crises, asset bubbles, and energy price shocks in some countries.

Against this backdrop, we identify four key challenges for the Arab world: (1) transitioning away from natural resources and diversifying the economy, (2) increasing the role of the private sector and diminishing the state's intervention in the markets, (3) ensuring opportunities for the youth and the workforce of the future, and (4) mastering the Fourth Industrial Revolution and improving the innovation ecosystem. Addressing the first two will be a necessary step toward finding solutions to the latter ones.

This chapter provides actionable insight for both governments and the private sector to step up to these challenges and work together on a new competitiveness agenda for the Arab countries, focusing on the need for productive and inclusive economies to ensure a prosperous and sustainable future for the region. The rest of the *Report* will further delve into the issues of diversification and entrepreneurship, directly linked to the first two challenges above.

Notes

1 To better capture this dynamic, we group the 12 Arab countries analyzed in this chapter as *resource-rich countries* (Algeria, Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates) and *resource-poor countries* (Egypt, Jordan, Lebanon, Morocco, and Tunisia). Although included in *The Global Competitiveness Report 2017–2018,* data for Yemen were not used in this chapter because the rapid deterioration of the situation on the ground might render inaccurate most of the data previously collected. In the absence of data for most *fragile and conflict-affected states* (e.g., Yemen, Syria, and Libya), this category has not been used in this chapter (which adopts a different approach from Chapters 1.2 and 1.3), and Lebanon has been included among the resource-poor countries.

2 The IMF's Stand-By-Arrangement is a program of financial aid to a member state in need of such aid as a result of a financial crisis. It stipulates that, in return, needed economic reforms will be made. More detailed information on the macroeconomic situation of each country can be found in the most recent IMF Article IV country reports (see IMF 2015, 2017b, 2017c, 2018).

3 For the purposes of this chapter, the OECD includes the following countries: Australia, Austria, Belgium, Canada, Chile, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Latvia, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, the Republic of Korea, the Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States. All of them were covered by the Global Competitiveness Index throughout the period of analysis.

4 World Bank Group 2016.

5 Fast economic and population growth, as well as the update in purchasing power parities (PPP) published in 2014 by the International Comparison Program (ICP) 2011, made market size the pillar with the second largest improvement (see World Bank 2015). The new PPP calculations meant that the estimates of real GDP for countries such as Egypt, Jordan, and Saudi Arabia were almost doubled, thus partially distorting the trend analysis of this pillar.

6 World Bank 2017.

7 As in most of the Arab world, market size has been significantly increased by the 2011 update in PPP and has become a relative strength of resource-poor countries (see World Bank 2015).

8 Formally:

$$Trend\ Impact\ Coefficient_{ct} = connection_{tr} \times concern_{cr}$$

where $connection_{tr}$ is the share of experts in the Global Risk Perception Survey that have identified a causal link between trend t and risk r, and $concern_{cr}$ is the percentage of times risk r was selected by businesses in country c among those of highest concern over the next decade, based on the Executive Opinion Survey.

Results should be interpreted keeping in mind that, once the causal link between trends and risks is established through the assessment of the respondents to the Global Risk Perception Survey, the connection between trends and countries is exclusively based on how worrisome those risks are in the perception of companies. These perceptions can be driven by a number of factors that go beyond the effective threat represented by those risks and the level of preparedness of the country. This approach also assumes that global trends are occurring with the same intensity in all countries. As in the case of an aging population, this assumption is unlikely to be equally valid for all trends.

9 IMF 2013.

10 World Economic Forum 2014.

11 World Economic Forum 2014.

12 For more information about Bahrain's Flexi Permit, see http://lmra.bh/portal/en/page/show/325.

13 2017 Executive Opinion Survey data for Oman were not available.

14 Al-Ghamdi 2017; Osborne 2018.

15 Data from the World Bank's *World Development Indicators,*available at https://data.worldbank.org/data-catalog/world-development-indicators.

16 CB Insights 2017.

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Appendix

Methodology and Computation of the Global Competitiveness Index 2017–2018

This appendix presents a short description of each pillar of the Global Competitiveness Index 2017–2018 (GCI) and of the application of the concept of stages of development to weight the Index. The GCI is the main source of data used in the first chapter of this publication and full results for the Arab countries are presented in the country profiles at the back of the *Report.* The appendix also presents the detailed structure of the GCI and explains how the Index is computed.

The twelve pillars of competitiveness

We define *competitiveness* as the *set of institutions, policies, and factors that determine the level of productivity of a country.* The level of productivity, in turn, sets the level of prosperity that can be reached by an economy. The productivity level also determines the rates of return obtained by investments in an economy, which in turn are the fundamental drivers of its growth rates. In other words, a more competitive economy is one that is likely to grow faster over time.

This open-endedness is captured within the GCI by including a weighted average of many different components, each measuring a different aspect of competitiveness. The components are grouped into 12 categories, the pillars of competitiveness:

1st pillar: Institutions

The institutional environment of a country depends on the efficiency and the behavior of both public and private stakeholders. The legal and administrative framework within which individuals, firms, and governments interact determines the quality of the public institutions of a country and has a strong bearing on competitiveness and growth. It influences investment decisions and the organization of production and plays a key role in the ways in which societies distribute the benefits and bear the costs of development strategies and policies. Good private institutions are also important for the sound and sustainable development of an economy. The 2007–08 global financial crisis, along with numerous corporate scandals, has highlighted the relevance of accounting and reporting standards and transparency for preventing fraud and mismanagement, ensuring good governance, and maintaining investor and consumer confidence.

2nd pillar: Infrastructure

Extensive and efficient infrastructure is critical for ensuring the effective functioning of the economy. Effective modes of transport—including high-quality roads, railroads, ports, and air transport—enable entrepreneurs to get their goods and services to market in a secure and timely manner and facilitate the movement of workers to the most suitable jobs. Economies also depend on electricity supplies that are free from interruptions and shortages so that businesses and factories can work unimpeded. Finally, a solid and extensive telecommunications network allows for a rapid and free flow of information, which increases overall economic efficiency by helping to ensure that businesses can communicate and decisions are made by economic actors taking into account all available relevant information.

3rd pillar: Macroeconomic environment

The stability of the macroeconomic environment is important for business and, therefore, is significant for the overall competitiveness of a country. Although it is certainly true that macroeconomic stability alone cannot increase the productivity of a nation, it is also recognized that macroeconomic disarray harms the economy, as we have seen in recent years, conspicuously in the European context. The government cannot provide services efficiently if it has to make high-interest payments on its past debts. Running fiscal deficits limits the government's future ability to react to business cycles. Firms cannot operate efficiently when inflation rates are out of hand. In sum, the economy cannot grow in a sustainable manner unless the macro environment is stable.

4th pillar: Health and primary education

A healthy workforce is vital to a country's competitiveness and productivity. Workers who are ill cannot function to their potential and will be less productive. Poor health leads to significant costs to business, as sick workers are often absent or operate at lower levels of efficiency. Investment in the provision of health services is thus critical for clear economic, as well as moral, considerations. In addition to health, this pillar takes into account the quantity and quality of the basic education received by the population, which is fundamental in today's economy. Basic education increases the efficiency of each individual worker.

5th pillar: Higher education and training

Quality higher education and training is crucial for economies that want to move up the value chain beyond simple production processes and products. In particular, today's globalizing economy requires countries to nurture pools of well-educated workers who are able to perform complex tasks and adapt rapidly to their changing environment and the evolving needs of the production system. This pillar measures secondary and tertiary enrollment rates as well as the quality of education as

evaluated by business leaders. The extent of staff training is also taken into consideration because of the importance of vocational and continuous on-the-job training—which is neglected in many economies—for ensuring a constant upgrading of workers' skills.

6th pillar: Goods market efficiency

Countries with efficient goods markets are well positioned to produce the right mix of products and services given their particular supply-and-demand conditions, as well as to ensure that these goods can be most effectively traded in the economy. Healthy market competition, both domestic and foreign, is important in driving market efficiency, and thus business productivity, by ensuring that the most efficient firms, producing goods demanded by the market, are those that thrive. Market efficiency also depends on demand conditions such as customer orientation and buyer sophistication. For cultural or historical reasons, customers may be more demanding in some countries than in others. This can create an important competitive advantage, as it forces companies to be more innovative and customer-oriented and thus imposes the discipline necessary for efficiency to be achieved in the market.

7th pillar: Labor market efficiency

The efficiency and flexibility of the labor market are critical for ensuring that workers are allocated to their most effective use in the economy and provided with incentives to give their best effort in their jobs. Labor markets must therefore have the flexibility to shift workers from one economic activity to another rapidly and at low cost, and to allow for wage fluctuations without much social disruption. Efficient labor markets must also ensure clear strong incentives for employees and promote meritocracy at the workplace, and they must provide equity in the business environment between women and men. Taken together these factors have a positive effect on worker performance and the attractiveness of the country for talent, two aspects of the labor market that are growing more important as talent shortages loom on the horizon.

8th pillar: Financial market development

An efficient financial sector allocates the resources saved by a nation's population, as well as those entering the economy from abroad, to the entrepreneurial or investment projects with the highest expected rates of return rather than to the politically connected. Business investment is critical to productivity. Therefore economies require sophisticated financial markets that can make capital available for private-sector investment from such sources as loans from a sound banking sector, well-regulated securities exchanges, venture capital, and other financial products. In order to fulfill all those functions, the banking sector needs to be trustworthy and transparent, and—as has been made so clear recently—financial markets need appropriate regulation to protect investors and other actors in the economy at large.

9th pillar: Technological readiness

The technological readiness pillar measures the agility with which an economy adopts existing technologies to enhance the productivity of its industries, with specific emphasis on its capacity to fully leverage information and communication technologies (ICTs) in daily activities and production processes for increased efficiency and enabling innovation for competitiveness. Whether the technology used has or has not been developed within national borders is irrelevant for its ability to enhance productivity. The central point is that the firms operating in the country need to have access to advanced products and blueprints and the ability to absorb and use them. Among the main sources of foreign technology, foreign direct investment (FDI) often plays a key role, especially for countries at a less advanced stage of technological development.

10th pillar: Market size

The size of the market affects productivity since large markets allow firms to exploit economies of scale. Traditionally, the markets available to firms have been constrained by national borders. In the era of globalization, international markets have become a substitute for domestic markets, especially for small countries. Thus exports can be thought of as a substitute for domestic demand in determining the size of the market for the firms of a country. By including both domestic and foreign markets in our measure of market size, we give credit to export-driven economies and geographic areas (such as the European Union) that are divided into many countries but have a single common market.

11th pillar: Business sophistication

Business sophistication concerns two elements that are intricately linked: the quality of a country's overall business networks and the quality of individual firms' operations and strategies. These factors are especially important for countries at an advanced stage of development when, to a large extent, the more basic sources of productivity improvements have been exhausted. The quality of a country's business networks and supporting industries, as measured by the quantity and quality of local suppliers and the extent of their interaction, is important for a variety of reasons. When companies and suppliers from a particular sector are interconnected in geographically proximate groups, called *clusters,* efficiency is heightened, greater opportunities for innovation in processes and products are created, and barriers to entry for new firms are reduced.

12th pillar: Innovation

The last pillar focuses on innovation. Innovation is particularly important for economies as they approach the frontiers of knowledge, and the possibility of generating more value by merely integrating and adapting exogenous technologies tends to disappear. In these economies, firms must design and develop cutting-edge products and processes to maintain a competitive edge and move toward even higher value-added activities. This progression requires an environment that is conducive to innovative activity and supported by both the public and the private sectors. In particular, it means sufficient investment in research and development (R&D), especially by the private sector; the presence of high-quality scientific research institutions that can generate the basic knowledge needed to build the new technologies; extensive collaboration in research and technological developments between universities and industry; and the protection of intellectual property.

The interrelation of the 12 pillars

Although we report the results of the 12 pillars of competitiveness separately, it is important to keep in mind that they are not independent: they tend to reinforce each other, and a weakness in one area often has a negative impact in others. The detailed structure and methodology used to compute the GCI are presented at the end of this appendix.

Table 1: Subindex weights and income thresholds for stages of development

	STAGE OF DEVELOPMENT				
	Stage 1: Factor-driven	Transition from stage 1 to stage 2	Stage 2: Efficiency-driven	Transition from stage 2 to stage 3	Stage 3: Innovation-driven
GDP per capita (US$) thresholds*	<2,000	2,000–2,999	3,000–8,999	9,000–17,000	>17,000
Weight for basic requirements	60%	40–60%	40%	20–40%	20%
Weight for efficiency enhancers	35%	35–50%	50%	50%	50%
Weight for innovation and sophistication factors	5%	5–10%	10%	10–30%	30%

Note: See individual country profiles for exact applied weights.
* For economies with a high dependency on mineral resources, GDP per capita is not the sole criterion for the determination of the stage of development. See text for details.

Table 2: Classification of Arab countries by each stage of development

Stage 1: Factor-driven (no economy)*	Transition from stage 1 to stage 2 (2 economies)†	Stage 2: Efficiency-driven (4 economies)	Transition from stage 2 to stage 3 (3 economies)†	Stage 3: Innovation-driven (3 economies)
	Algeria (58.2/36.4/5.5)	Egypt	Lebanon (34.2/50/15.8)	Bahrain
	Kuwait (49.9/42.6/7.5)	Jordan	Oman (27.2/50/22.8)	Qatar
		Morocco	Saudi Arabia (36.7/50/13.3)	United Arab Emirates
		Tunisia		

* Although included in the *Global Competitiveness Report 2017–2018*, data for Yemen were excluded from the analysis in this *Report* because of the evolving situation on the ground, which might render most of the data previously collected largely outdated. Because of this, there are no Arab countries classified as factor-driven (stage 1) economies in this *Report*.

† For economies in transition, the weights (%) applied to the Basic requirements subindex, Efficiency enhancers subindex, and the Innovation and sophistication factors subindex are reported in parentheses.

Stages of development and the weighted index

Although all of the pillars described above will matter to a certain extent for all economies, it is clear that they affect different economies in different ways.

In line with well-known economic theory of stages of development, the GCI assumes that, in the first stage, the economy is *factor-driven* and countries compete based on their factor endowments—primarily unskilled labor and natural resources.[a] Maintaining competitiveness at this stage of development hinges primarily on well-functioning public and private institutions (1st pillar), a well-developed infrastructure (2nd pillar), a stable macroeconomic environment (3rd pillar), and a healthy workforce that has received at least a basic education (4th pillar).

As a country becomes more competitive, productivity will increase and wages will rise with advancing development. Countries will then move into the *efficiency-driven* stage of development, when they must begin to develop more-efficient production processes and increase product quality because wages have risen and they cannot increase prices. At this point, competitiveness is increasingly driven by higher education and training (5th pillar), efficient goods markets (6th pillar), well-functioning labor markets (7th pillar), developed financial markets (8th pillar), the ability to harness the benefits of existing technologies (9th pillar), and a large domestic or foreign market (10th pillar).

Finally, as countries move into the *innovation-driven* stage, wages will have risen by so much that they are able to sustain those higher wages and the associated standard of living only if their businesses are able to compete using the most sophisticated production processes (11th pillar) and by innovating new ones (12th pillar).

The GCI takes the stages of development into account by attributing higher relative weights to those pillars that are more relevant for an economy given its particular stage of development. To implement this concept, the pillars are organized into three subindexes, each critical to a particular stage of development.

The *basic requirements subindex* groups those pillars most critical for countries in the factor-driven stage. The *efficiency enhancers subindex* includes those pillars critical for countries in the efficiency-driven stage. And the *innovation and sophistication factors subindex* includes the pillars critical to countries in the innovation-driven stage.

The weights attributed to each subindex in every stage of development are shown in Table 1.

Two criteria are used to allocate countries into stages of development. The first is the level of GDP per capita at market exchange rates. The thresholds used are also reported in Table 1. A second criterion is used to adjust for countries that, based on income, would have moved beyond stage 1, but where prosperity is based on the extraction of resources. This is measured by the share of exports of mineral goods in total exports (goods and services), and assumes that countries with more than 70 percent of their exports made up of mineral products (measured using a five-year average) are to a large extent factor driven.[b] Countries that are resource driven and significantly wealthier than economies at the technological

frontier are classified in the innovation-driven stage.[c] Any countries falling between two of the three stages are considered to be "in transition." For these countries, the weights change smoothly as a country develops, reflecting the smooth transition from one stage of development to another. The classification of countries into stages of development is shown in Table 2.

Structure and computation of the Index

The computation of the GCI is based on successive aggregations of scores from the indicator level (i.e., the most disaggregated level) all the way up to the overall GCI score. Unless noted otherwise, we use an arithmetic mean to aggregate individual indicators within a category.[d] For the higher aggregation levels, we use the percentage shown next to each category. This percentage represents the category's weight within its immediate parent category. Reported percentages are rounded to the nearest integer, but exact figures are used in the calculation of the GCI. For example, the score a country achieves in the 11th pillar accounts for 50 percent of this country's score in the *innovation and sophistication factors* subindex, irrespective of the country's stage of development. Similarly, the score achieved on the subpillar *transport infrastructure* accounts for 50 percent of the score of the infrastructure pillar.

Unlike the case for the lower levels of aggregation, the weight put on each of the three subindexes (*basic requirements*, *efficiency enhancers*, and *innovation and sophistication factors*) is not fixed. Instead, it depends on each country's stage of development, as discussed above.[e] For instance, in the case of Egypt—a country in the second stage of development—the score in the *basic requirements* subindex accounts for 40 percent of its overall GCI score, while it represents just 20 percent of the overall GCI score of Bahrain, a country in the third stage of development. For countries in transition between stages, the weighting applied to each subindex is reported in Table 2 above. For instance, in the case of Saudi Arabia, currently in transition from stage 2 to stage 3, the weight put on each subindex is 36.7 percent, 50 percent, and 13.3 percent, respectively.

Indicators that are not derived from the Executive Opinion Survey are identified by an asterisk (*) in the following list. The Technical Notes and Sources section in Part 2 (beginning on page 89) provides detailed information about each of these indicators. To make the aggregation possible, the indicators are converted to a 1-to-7 scale in order to align them with the Survey results. We apply a min-max transformation, which preserves the order of, and the relative distance between, country scores.[f]

Indicators that are followed by the designation "½" enter the GCI in two different pillars. In order to avoid double counting, we assign a half-weight to each instance.[g]

	Weight (%) within immediate parent category
BASIC REQUIREMENTS	**20–60%**[e]
1st pillar: Institutions	**25%**
A. Public institutions	**75%**
1. Property rights	20%
1.01 Property rights	
1.02 Intellectual property protection½	
2. Ethics and corruption	20%
1.03 Diversion of public funds	
1.04 Public trust in politicians	
1.05 Irregular payments and bribes	
3. Undue influence	20%
1.06 Judicial independence	
1.07 Favoritism in decisions of government officials	
4. Public-sector performance	20%
1.08 Wastefulness of government spending	
1.09 Burden of government regulation	
1.10 Efficiency of legal framework in settling disputes	
1.11 Efficiency of legal framework in challenging regulations	
1.12 Transparency of government policymaking	
5. Security	20%
1.13 Business costs of terrorism	
1.14 Business costs of crime and violence	
1.15 Organized crime	
1.16 Reliability of police services	
B. Private institutions	**25%**
1. Corporate ethics	50%
1.17 Ethical behavior of firms	
2. Accountability	50%
1.18 Strength of auditing and reporting standards	
1.19 Efficacy of corporate boards	
1.20 Protection of minority shareholders' interests	
1.21 Strength of investor protection*	
2nd pillar: Infrastructure	**25%**
A. Transport infrastructure	**50%**
2.01 Quality of overall infrastructure	
2.02 Quality of roads	
2.03 Quality of railroad infrastructure[h]	
2.04 Quality of port infrastructure	
2.05 Quality of air transport infrastructure	
2.06 Available airline seat kilometers*	
B. Electricity and telephony infrastructure	**50%**
2.07 Quality of electricity supply	
2.08 Mobile telephone subscriptions*½	
2.09 Fixed telephone lines*½	
3rd pillar: Macroeconomic environment	**25%**
3.01 Government budget balance*	
3.02 Gross national savings*	
3.03 Inflation*[i]	
3.04 Government debt*	
3.05 Country credit rating*	
4th pillar: Health and primary education	**25%**
A. Health	**50%**
4.01 Business impact of malaria[j]	
4.02 Malaria incidence*[j]	
4.03 Business impact of tuberculosis[j]	
4.04 Tuberculosis incidence*[j]	
4.05 Business impact of HIV/AIDS[j]	
4.06 HIV prevalence*[j]	

4.07 Infant mortality*
4.08 Life expectancy*

B. Primary education 50%
4.09 Quality of primary education
4.10 Primary education enrollment rate*

EFFICIENCY ENHANCERS ..... 35–50%[e]

5th pillar: Higher education and training 17%

A. Quantity of education 33%
5.01 Secondary education enrollment rate*
5.02 Tertiary education enrollment rate*

B. Quality of education 33%
5.03 Quality of the educational system
5.04 Quality of math and science education
5.05 Quality of management schools
5.06 Internet access in schools

C. On-the-job training 33%
5.07 Local availability of specialized research and training services
5.08 Extent of staff training

6th pillar: Goods market efficiency 17%

A. Competition 67%

1. Domestic competition ..... variable[k]
6.01 Intensity of local competition
6.02 Extent of market dominance
6.03 Effectiveness of anti-monopoly policy
6.04 Effect of taxation on incentives to invest
6.05 Total tax rate*
6.06 Number of procedures required to start a business*[l]
6.07 Time required to start a business*[l]
6.08 Agricultural policy costs

2. Foreign competition ..... variable[k]
6.09 Prevalence of trade barriers
6.10 Trade tariffs*
6.11 Prevalence of foreign ownership
6.12 Business impact of rules on FDI
6.13 Burden of customs procedures
6.14 Imports as a percentage of GDP*[m]

B. Quality of demand conditions 33%
6.15 Degree of customer orientation
6.16 Buyer sophistication

7th pillar: Labor market efficiency 17%

A. Flexibility 50%
7.01 Cooperation in labor-employer relations
7.02 Flexibility of wage determination
7.03 Hiring and firing practices
7.04 Redundancy costs*
7.05 Effect of taxation on incentives to work

B. Efficient use of talent 50%
7.06 Pay and productivity
7.07 Reliance on professional management[½]
7.08 Country capacity to retain talent
7.09 Country capacity to attract talent
7.10 Female participation in labor force*

8th pillar: Financial market development 17%

A. Efficiency 50%
8.01 Financial services meeting business needs
8.02 Affordability of financial services
8.03 Financing through local equity market
8.04 Ease of access to loans
8.05 Venture capital availability

B. Trustworthiness and confidence 50%
8.06 Soundness of banks
8.07 Regulation of securities exchanges
8.08 Legal rights index*

9th pillar: Technological readiness 17%

A. Technological adoption 50%
9.01 Availability of latest technologies
9.02 Firm-level technology absorption
9.03 FDI and technology transfer

B. ICT use 50%
9.04 Internet users*
9.05 Broadband Internet subscriptions*
9.06 Internet bandwidth*
9.07 Mobile broadband subscriptions*
2.08 Mobile telephone subscriptions*[½]
2.09 Fixed telephone lines*[½]

10th pillar: Market size 17%

A. Domestic market size 75%
10.01 Domestic market size index*[n]

B. Foreign market size 25%
10.02 Foreign market size index*[o]

INNOVATION AND SOPHISTICATION FACTORS ..... 5–30%[e]

11th pillar: Business sophistication 50%
11.01 Local supplier quantity
11.02 Local supplier quality
11.03 State of cluster development
11.04 Nature of competitive advantage
11.05 Value chain breadth
11.06 Control of international distribution
11.07 Production process sophistication
11.08 Extent of marketing
11.09 Willingness to delegate authority
7.07 Reliance on professional management[½]

12th pillar: R&D Innovation 50%
12.01 Capacity for innovation
12.02 Quality of scientific research institutions
12.03 Company spending on R&D
12.04 University-industry collaboration in R&D
12.05 Government procurement of advanced technology products
12.06 Availability of scientists and engineers
12.07 PCT patent applications*
1.02 Intellectual property protection[½]

Notes

a See Chapter 1.1 of *The Global Competitiveness Report 2007–2008* for a complete description of how we have adapted Michael Porter's theory for the present application. Although included in *The Global Competitiveness Report 2017–2018*, data for Yemen were excluded from the analysis in this *Report* because of the evolving situation on the ground, which might render most of the data previously collected largely outdated.

b In order to capture the resource intensity of the economy, we use as a proxy the exports of mineral products as a share of overall exports according to the sector classification developed by the International Trade Centre in their Trade Performance Index. In addition to crude oil and gas, this category also contains all metal ores and other minerals as well as petroleum products, liquefied gas, coal, and precious stones. The data used cover the years 2012 through 2016. Further information on these data can be found at http://www.intracen.org/itc/market-info-tools/trade-statistics/

All countries with more than 70 percent of their exports made up of mineral products are considered to be to some extent factor driven. The stage of development for these countries is adjusted downward smoothly depending on the exact primary export share. The higher the minerals export share, the stronger the adjustment and the closer the country will move to stage 1. For example, a country that exports 95 percent of mineral exports and that, based on the income criteria, would be in stage 3 will be in transition between stages 1 and 2. The income and primary exports criteria are weighted identically. Stages of development are dictated solely by income for countries that export less than 70 percent minerals. Countries that export only primary products would automatically fall into the factor-driven stage (stage 1).

c In practice, this applies to countries where the GDP per capita at current market prices has, for the past five years, been above an average of that of economies at the technology frontier. Countries at the technology frontier are the 10 countries with the highest number of Patent Cooperation Treaty patent applications per capita.

d Formally, for a category *i* composed of *K* indicators, we have:

$$category_i = \frac{\sum_{k=1}^{K} indicator_k}{K}$$

e As described above, the weights are as specified in Table 1 of this appendix. Refer to individual country profiles at the end of this *Report* for the exact weights used in the computation of each economy's GCI score.

f Formally, we have:

$$6 \times \left(\frac{\text{country score} - \text{sample minimum}}{\text{sample maximum} - \text{sample minimum}} \right) + 1$$

The *sample minimum* and *sample maximum* are, respectively, the lowest and highest country scores in the sample of economies covered by the GCI. In some instances, adjustments were made to account for extreme outliers. For those indicators for which a higher value indicates a worse outcome (e.g., disease incidence, government debt), the transformation formula takes the following form, thus ensuring that 1 and 7 still correspond to the worst and best possible outcomes, respectively:

$$-6 \times \left(\frac{\text{country score} - \text{sample minimum}}{\text{sample maximum} - \text{sample minimum}} \right) + 7$$

g For those categories that contain one or several half-weight indicators, country scores are computed as follows:

$$\frac{(\text{sum of scores on full-weight variables}) + \frac{1}{2} \times (\text{sum of scores on half-weight variables})}{(\text{count of full-weight variables}) + \frac{1}{2} \times (\text{count of half-weight variables})}$$

h "N/Appl." is used for economies where there is no regular train service or where the network covers only a negligible portion of the territory. Assessment of the existence of a network was conducted by the World Economic Forum based on various sources.

i In order to capture the idea that both high inflation and deflation are detrimental, inflation enters the model in a U-shaped manner as follows: for values of inflation between 0.5 and 2.9 percent, a country receives the highest possible score of 7. Outside this range, scores decrease linearly as they move away from these values.

j The impact of malaria, tuberculosis, and HIV/AIDS on competitiveness depends not only on their respective incidence rates but also on how costly they are for business. Therefore, in order to estimate the impact of each of the three diseases, we combine its incidence rate with the Survey question on its perceived cost to businesses. To combine these data we first take the ratio of each country's disease incidence rate relative to the highest incidence rate in the whole sample. The inverse of this ratio is then multiplied by each country's score on the related Survey question. This product is then normalized to a 1-to-7 scale. Note that countries with zero reported incidence receive a 7, regardless of their scores on the related Survey question. In the case of malaria, countries receive a 7 if the World Health Organization (WHO) has classified them as malaria-free countries or included them in the supplementary list of areas where malaria has never existed or has disappeared without specific measures.

k The *competition* subpillar is the weighted average of two components: *domestic competition* and *foreign competition*. In both components, the included indicators provide an indication of the extent to which competition is distorted. The relative importance of these distortions depends on the relative size of domestic versus foreign competition. This interaction between the domestic market and the foreign market is captured by the way we determine the weights of the two components. Domestic competition is the sum of consumption (C), investment (I), government spending (G), and exports (X), while foreign competition is equal to imports (M). Thus we assign a weight of (C + I + G + X)/(C + I + G + X + M) to *domestic competition* and a weight of M/(C + I + G + X + M) to *foreign competition*.

l Indicators 6.06 and 6.07 combine to form one single indicator.

m For indicator 6.14, imports as a percentage of GDP, we first apply a log-transformation and then a min-max transformation.

n The size of the domestic market is constructed by taking the natural log of the sum of the gross domestic product valued at purchased power parity (PPP) plus the total value (PPP estimates) of imports of goods and services, minus the total value (PPP estimates) of exports of goods and services. Data are then normalized on a 1-to-7 scale. PPP estimates of imports and exports are obtained by taking the product of exports as a percentage of GDP and GDP valued at PPP.

o The size of the foreign market is estimated as the natural log of the total value (PPP estimates) of exports of goods and services, normalized on a 1-to-7 scale. PPP estimates of exports are obtained by taking the product of exports as a percentage of GDP and GDP valued at PPP.

Chapter 1.2

An Arab World in Critical Need of Economic Diversification

FALEH M. F. E. ALRASHIDI, BARAK D. HOFFMAN, and **JEAN MICHEL N. MARCHAT,** World Bank

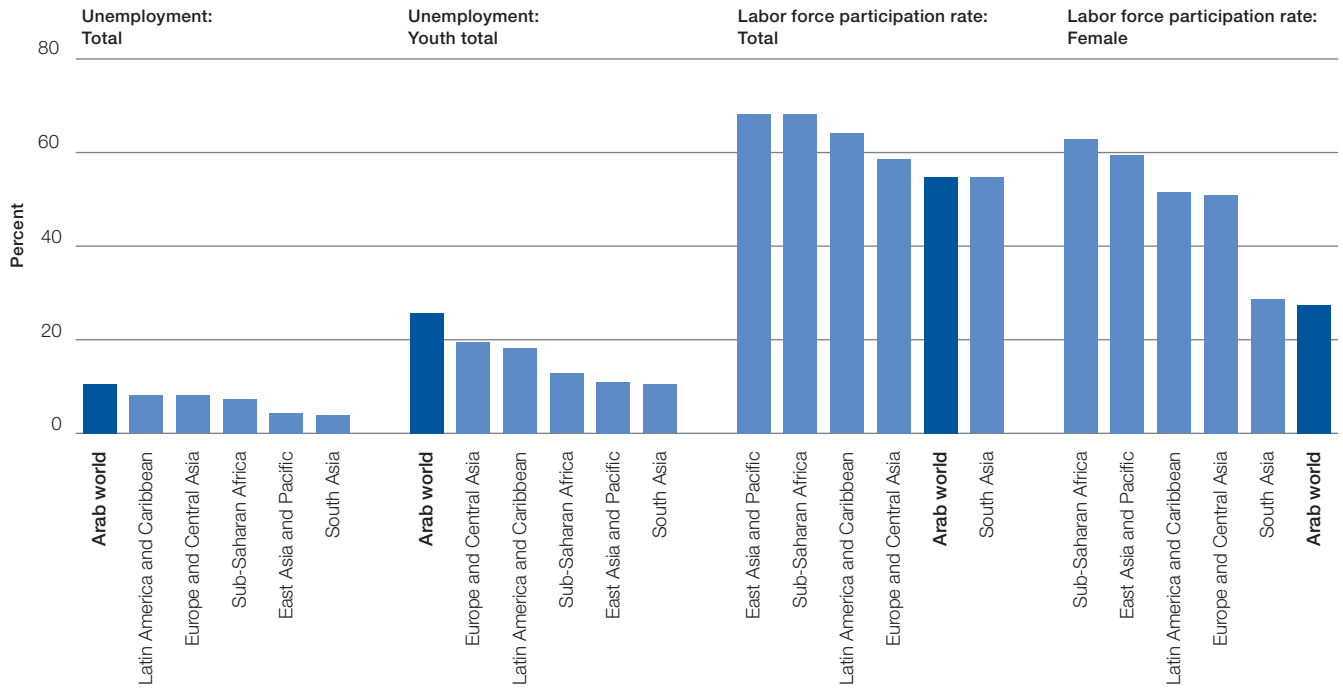
For years, countries in the Arab world have faced difficulties in diversifying their economies away from low productivity sectors and exports of fossil fuels toward production and exports of higher-value-added goods and services.[1] Although some countries—such as Jordan, Lebanon, Morocco, Egypt, and Tunisia—have been able to diversify their economies to some extent, most countries in the region have struggled.

There are several reasons why these countries would benefit from transforming their economies.

Most importantly, diversification creates jobs and raises growth rates.[2] More varied economies have more dynamic private sectors and are better able to move into activities with expanding global demand and to participate in global value chains.[3] Creating a more dynamic private sector is especially important since the region faces a major jobs challenge. The current working-age population in the Arab world is growing at about 5 million people per year, but the number of new jobs created is less than half that amount. As a result, unemployment is high and labor force participation is low compared with other regions. The Arab world has especially high rates of youth unemployment and low rates of female labor force participation (Figure 1). Under current policies, the jobs challenge is likely to grow for the foreseeable future. Projections suggest that the working-age population will grow by about 50 percent by 2040—from about 241 million in 2015 to 370 million by 2040.[4] To merely maintain current labor force participation and unemployment rates, the region would need to create about 58 million new jobs by 2040; it will need many more if the present situation is to be reversed.

Second, more diverse economies are less volatile.[5] Economies dominated by a small number of sectors are highly vulnerable to fluctuations in global demand for those products. Prices of natural resources, in particular, can be especially sensitive to global economic conditions. For many countries in

Figure 1: Select labor market outcomes, Arab world and other regions, 2016



Source: World Bank, *World Development Indicators,* January 25, 2018, derived from International Labour Organization data, available at https://data.worldbak.org/data-catalog/world-development-indicators.

Box 1: Measures of Diversification

There are several ways to measure diversification, including at the regional, country, sector, product, and firm level. This box discusses relevant country- and sector-level methods used in this chapter.

Internal diversification measures sector-level activity, including employment shares and value-added shares, in the agriculture, extractive industries, manufacturing, and service sectors. *Structural transformation* is the process of changing the composition of economic activity across sectors.[1]

External diversification measures the composition of a country's exports. The most straightforward measure of diversification at the country level is the number of exported goods. Export concentration can be measured either through a Herfindahl-Hirschman Index (HHI) score of exported products or a Trade Diversification Index (TDI) measuring country deviation in trade structures from global averages.[2] Countries with high values on the TDI, such as Iraq, have very idiosyncratic patterns of trade, typically exporting a very small number of products. Countries with low values, such as France, Germany, and the United States, export a large number of products.

More complex indexes of diversification exist, such as the index of Export Quality and the Economic Complexity Index (ECI).[3] These indexes attempt to capture not only the quantity of exported products, but their quality as well. The former measures product quality by estimating a series of equations to capture export prices in destination markets as well as consumer demand for those exports. The latter scales export diversification by the number of countries that export those products. Low values on the ECI represent a small number of exports and/or exports of common products (e.g., agriculture, natural resources). High values, by contrast, represent a large number of exports, including products exported by very few countries (e.g., complex goods). Currently countries that have ECI scores that are well above the average for their income cohort tend to cluster in Asia (in countries such as China, Malaysia, and Singapore), not in the Arab world.

Notes

1 Herrendorf et al. 2013.

2 An *HHI* is a sum of the square of export shares. Higher values represent more concentrated export structures. The diversification index takes values between 0 and 1. A value closer to 1 indicates greater divergence from the world pattern.

3 See Henn et al. 2013 and https://www.imf.org/external/np/res/dfidimf/diversification.htm for details about the Export Quality index; see http://atlas.media.mit.edu/en/resources/economic_complexity/ for details about the ECI.

the Arab world, including non-oil exporters, changes in incomes correlate strongly with changes in oil prices.[6] Volatility can also lead to large fluctuations in exchange rates, which tends to discourage investment in the tradable sector.

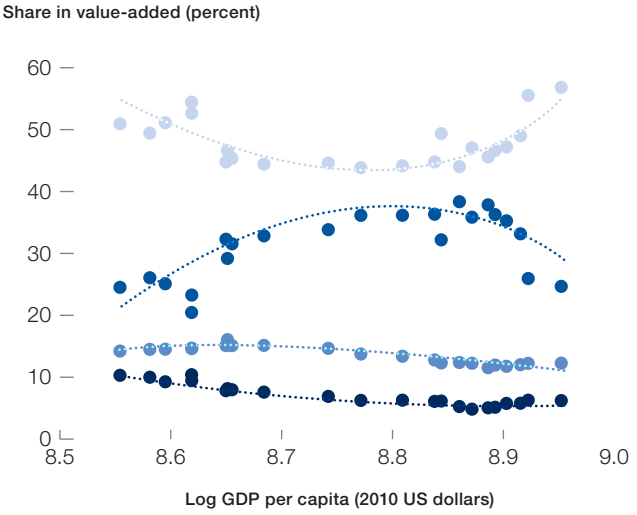
The third reason why countries in the Arab world need to diversify is because hitherto external support systems for the region's poorer economies—mainly foreign aid and migration to Gulf Cooperation Council (GCC) countries—are becoming increasingly less realistic options.[7] Real official development assistance per capita in recent years has fallen by about two-thirds from its height in the mid-1970s (Appendix Figure A.1). Likewise, GCC countries are now increasingly recruiting labor from South Asia, not the region. Migration within the Arab world and the concomitant remittances are consequently a less reliable source of employment and income than they have been in the past.

Creating more diverse economies poses significant challenges for many countries in the Arab world. Education systems are not yet providing the technical and vocational training required to support a dynamic private sector. Along the same lines, needed research and innovation ecosystems are lacking. In addition, the business environment in some countries, especially those affected by fragility, conflict, and violence (FCV), remains challenging. Many obstacles to creating more varied economies in the Arab world have political economy dimensions. For example, despite extensive reforms to encourage private-sector development over the past few decades, favoritism and trade barriers to protect certain sectors still stifle the development of competitive economies in large parts of the region. Likewise, high levels of political instability also deter private investment. This is an especially large challenge in the region's fragile countries.

There are reasons to be optimistic that the region can overcome challenges that have undermined the success of previous diversification efforts, however. Many countries that have been able to become more diverse over the past few decades—including resource-rich ones such as Chile, Indonesia, Malaysia, and Mexico—faced difficulties similar to those that many countries in the Arab world encounter today. Fragility, conflict, and a history of state control over large parts of the economy did not prevent these countries from implementing successful policies to create more varied economies and dynamic private sectors. Governments in the Arab world can learn from these experiences and tailor those lessons to their own needs and circumstances. In addition, several trends within the region, including significant business environment reforms in some countries, declining levels of oil revenues in others, and rising public pressure for greater economic opportunity suggest that governments may see diversification as a more urgent priority in the future than they have in the past. These trends provide several areas of opportunity to work with governments and the private sector in the Arab world to design and implement policies that encourage diversification.

This chapter provides an overview of diversification in the Arab world and explores options to improve the situation. It is a companion piece to the next chapter on entrepreneurship, which is an important element for diversification and job creation. The next section of this chapter reviews various indicators and trends of diversification in the region. The third section provides a few explanations for the observed trends. The final section provides

Figure 2: Sectoral shares in value-added, Arab world, 1995–2015



Source: World Bank, *World Development Indicators,* April 2018, available at https://data.worldbank.org/data-catalog/world-development-indicators.

Note: Dotted lines are second-order polynomial trends.

some recommendations for diversifying the Arab world's economies by types of countries that exist in the region. Throughout the chapter, when relevant, countries are grouped as *resource-rich countries, resource-poor countries,* and *countries affected by fragility, conflict, and violence (FCV).*[8]

Arab world economies are generally not very diverse

Economic diversification can be broadly defined as a change toward a more varied structure of production and trade. *Internal diversification,* also called *structural transformation,* refers to (1) implementing changes in sectors of production, such as a move toward industry and services and away from agriculture, which accompany economic growth; (2) increasing productivity and upgrading products within existing sectors through the greater use of technology and more efficient methods of production; or (3) creating new services inputs to increasing productivity in agriculture and industry.[9] *External diversification* is a broadening of the range of products and services a country exports, typically moving away from exports of primary goods to higher-value-added goods and services. It can also include broadening export markets.[10]

Diversification is a broad concept. There are many ways to quantify it, from simple measures such as the number of products and trading partners, to more sophisticated attempts to assess product sophistication (see Box 1 for definitions of concepts employed in this chapter). Data availability also varies and thus constrains which concept can be measured. Trends in diversification in the region across its main dimensions are reviewed below.[11]

Diversification trends

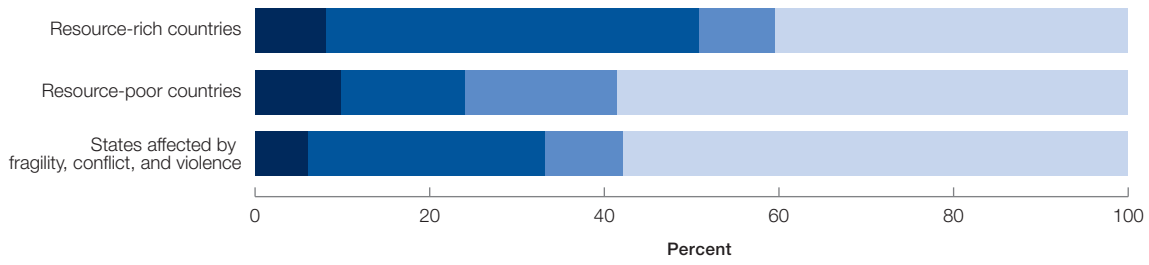
This section examines diversification in the region as well as through key groupings. After a brief look at the extent of structural transformation in the region, it focuses on external and trade-related diversification at the country and sector levels.

Internal diversification

Figure 2 shows trends in internal diversification. It plots the average log per capita GDP against GDP shares by sector at the regional level. The x-axis is average log real per capita GDP from 1995 to 2015. Over this period, increases in per capita GDP have been associated with a slight fall in agriculture and manufacturing as a share of GDP. Services have been growing as a share of GDP since 2005, while all other sectors have experienced some decline. Over the period, on average, agriculture amounts to about 7.2 percent of GDP, while manufacturing accounts for roughly 13.6 percent. Services and extractive industries are, by far, the largest sectors at the regional level, accounting on average for 47.7 and 31.6 percent of GDP over the period 1995–2015.

These broad regional trends, however, fail to show major differences across countries. Services make up the largest sector by far, in FCV-affected states and resource-poor countries (Figure 3). Extractives are the largest sector in resource-rich countries, followed by services. In countries impacted by FCV

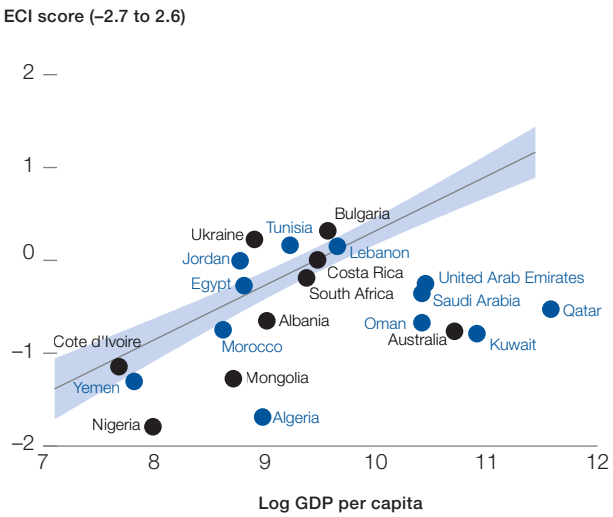
Figure 3: Structure of GDP by type of country, 2010–15 averages



Key: Agriculture Extractive industries Manufacturing Services

Source: World Bank, *World Development Indicators,* April 2018, available at https://data.worldbank.org/data-catalog/world-development-indicators.

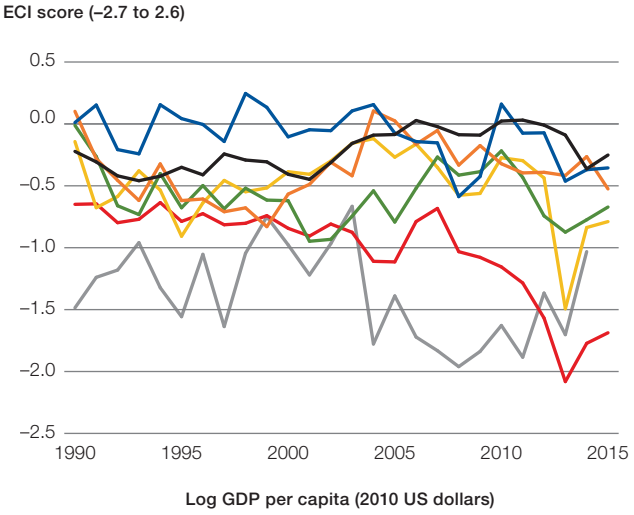
Figure 4: Economic complexity and per capita GDP, 2016



Sources: World Bank, *World Development Indicators,* January 2018, available at https://data.worldbank.org/data-catalog/world-development-indicators; MIT Observatory of Economic Complexity, Economic Complexity Index, available at https://atlas.media.mit.edu/en/.

Notes: The figure shows a 95 percent confidence interval. Arab world countries are highlighted. Recent ECI data for most states affected by fragility, conflict, and violence in the Arab world are lacking, hence these countries do not appear on this graph. ECI = Economic Complexity Index.

Figure 5: Diversification in resource-rich countries, 1990–2015



Key: Algeria, Kuwait, Mauritania, Oman, Qatar, Saudi Arabia, United Arab Emirates

Source: MIT Observatory of Economic Complexity, Economic Complexity Index, available at https://atlas.media.mit.edu/en/.

Note: ECI = Economic Complexity Index.

and resource-rich countries, manufacturing accounts for only about 9 percent of GDP. By contrast, manufacturing is the second-largest sector in resource-poor countries and accounts for approximately 17 percent of GDP. This is about the same percentage of manufacturing as seen in successful examples of diversification, such as Chile, Indonesia, Malaysia, and Mexico. Data constraints do not permit further consistent disaggregation on domestic production beyond the broad sector level. By contrast, as shown below, data on trade diversification allow an examination of subregional trends in much greater detail.

External diversification

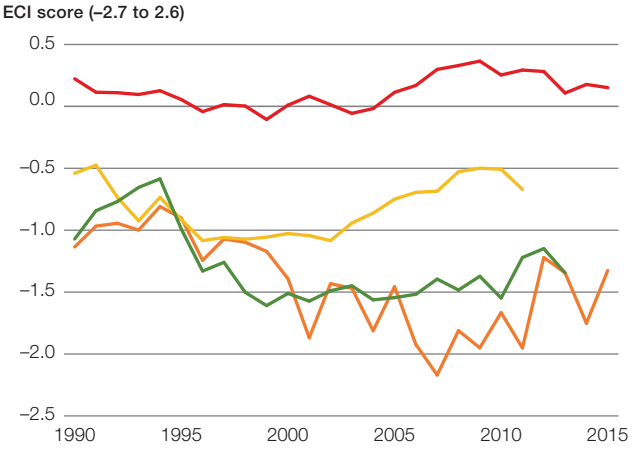
Overall, the Arab world's trends in external diversification have been sluggish for the past few decades. While different measures of diversification produce slightly dissimilar results, at the aggregate level all demonstrate the same approximate trend of little change in levels of diversification. The Arab world's performance has been much more like the stagnation that has occurred in much of Latin America over the past 40 years than the rising levels of diversification seen in many countries in East Asia over the same time period. In the 1970s, according to the Economic Complexity Index (ECI), for example, the Arab world showed levels of external diversification similar to those in East Asia. Performance on the ECI in these two regions has diverged substantially since then, coinciding with the rapid growth in exports of oil and gas from the Arab world.[12] In particular, since 1990, the level of external diversification has been falling steadily in the Arab world and rising rapidly in East Asia according to the ECI. Currently the Arab world has levels of external diversification comparable to those of Latin America and South Asia, while East Asia has levels of external diversification more comparable to Europe and Central Asia (Appendix Figure A.2).

Countries in the Arab world rank about one-half of a standard deviation lower on the ECI than other countries at a similar level of income (Figure 4). Yet this finding masks considerable diversity between groupings of countries. Although resource-rich countries in the region have particularly low levels of diversification for their level of income, they are comparable to those of other natural resource exporters, such as Australia, Azerbaijan, Kazakhstan, and Mongolia. Along the same lines, most resource-poor countries have levels of diversification similar to their middle-income peers, such as Costa Rica, South Africa, and Ukraine.

Patterns also differ within groupings, as shown by country levels of disaggregation. The trend for individual resource-rich countries on the ECI over the past 20 years is one of slight decline followed by recent improvements (Figure 5). Some have made more progress than others: the United Arab Emirates (UAE) made steady progress in becoming more diverse from the early 1990s to about 2010.

Among the countries affected by fragility or conflict in the Arab world, where complete ECI data on diversification are available (Lebanon, Sudan, Syria, and Yemen), Lebanon is by far the most diverse (Figure 6). Yemen and Sudan have become less so over the past two decades. Resource-poor countries are the most diverse economies as a group in the Arab world according to the ECI (Figure 7). Tunisia's economy has become substantially more diversified over the past 20 years and is now the most diverse among resource-poor countries in the region. Jordan made significant progress in becoming more diversified from about 2000 to about 2010, but has suffered a reversal in this trend over the past few years. Morocco has the lowest ECI score among the region's resource-poor countries over the past few decades.

Figure 6: Diversification in countries affected by fragility, conflict, and violence, 1990–2015

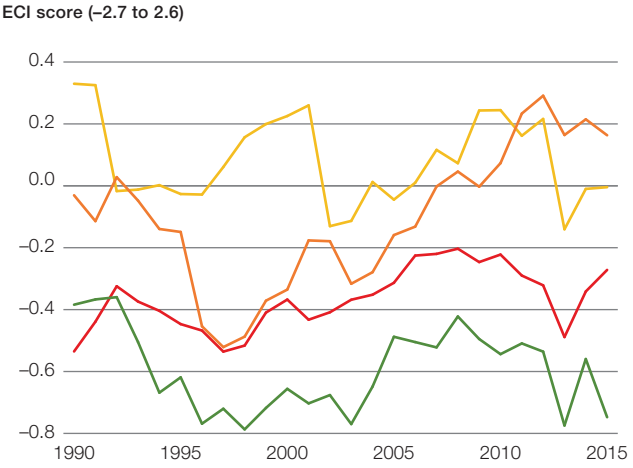


Key: Lebanon Sudan Syria Yemen

Source: MIT Observatory of Economic Complexity, Economic Complexity Index, available at https://atlas.media.mit.edu/en/.

Note: ECI = Economic Complexity Index.

Figure 7: Diversification in resource-poor countries, 1990–2015

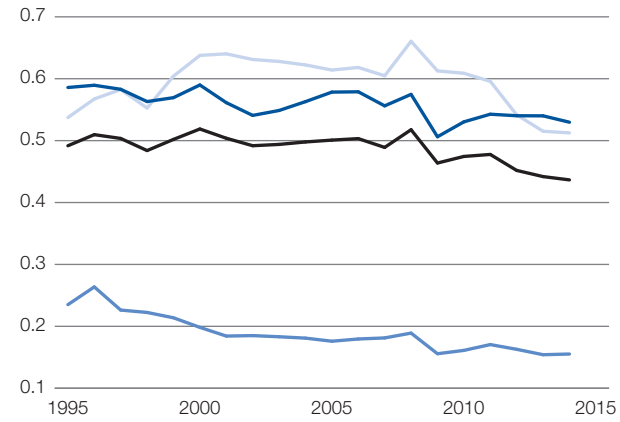


Key: Egypt Morocco Jordan Tunisia

Source: MIT Observatory of Economic Complexity, Economic Complexity Index, available at https://atlas.media.mit.edu/en/.

Note: ECI = Economic Complexity Index.

Figure 8: Export concentration in the Arab world, 1995–2014

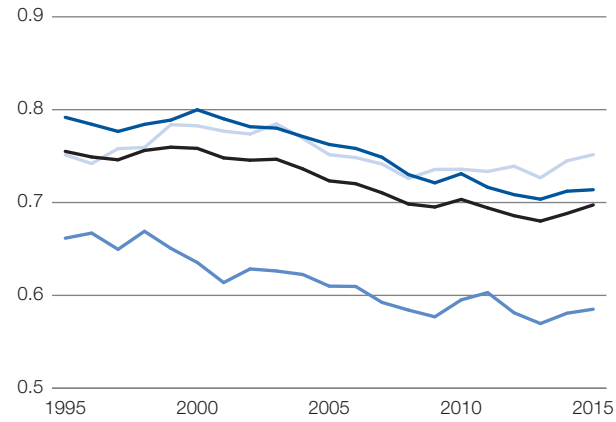


Key:
States affected by fragility, conflict, and violence
Resource-poor countries
Resource-rich countries
Arab world average

Source: UNCTADstat, available at http://unctadstat.unctad.org/EN/.

Note: A value closer to 1 indicates that a country's exports are highly concentrated on a few products; values closer to 0 reflect exports that are more homogeneously distributed.

Figure 9: Export diversification in the Arab world, 1995–2015



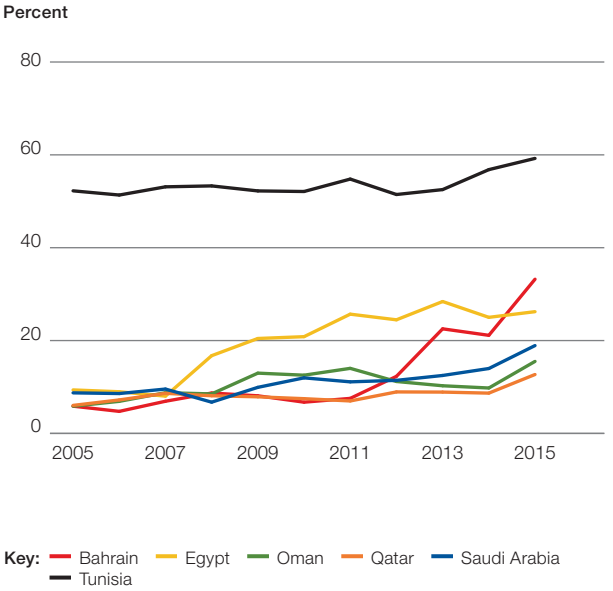
Key:
States affected by fragility, conflict, and violence
Resource-poor countries
Resource-rich countries
Arab world average

Source: UNCTADstat, available at http://unctadstat.unctad.org/EN/.

The Herfindahl-Hirschman Index (HHI) on export concentration shows steady but slow progress on external diversification for the Arab world overall (Figure 8). Consistent with trends in the ECI, FCV-affected states and resource-rich countries have much lower levels of diversification than resource-poor countries. Egypt, Lebanon, Tunisia, and the UAE have the lowest level of export concentration. Iraq has, by far, the highest level of export concentration, followed by Algeria, Kuwait, Libya, Qatar, and Yemen.

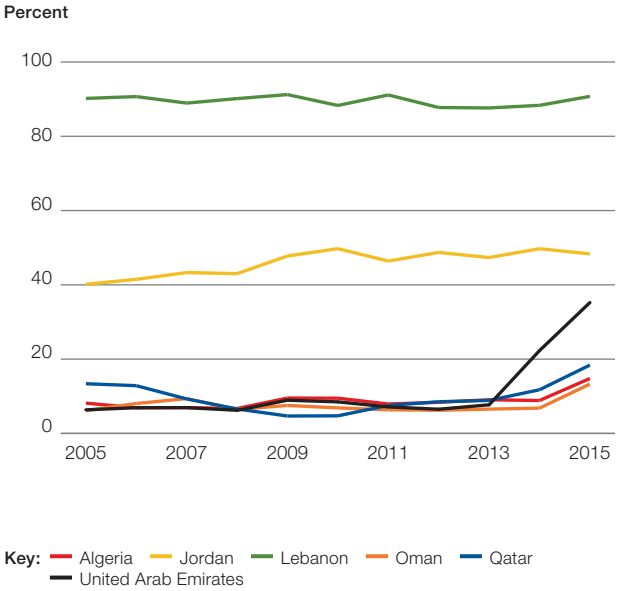
The Trade Diversification Index (TDI) also shows slow but steady convergence toward more diverse economies (Figure 9). As with the ECI and HHI, the TDI shows that resource-poor countries, led by Tunisia, have the most diversified exports compared to other countries in the region. Similarly, FCV-

Figure 10: Manufactured exports as a share of exports, 2005–15



Sources: World Bank, *World Development Indicators,* January 2018, available at https://data.worldbank.org/data-catalog/world-development-indicators; UNCTADstat, available at http://unctadstat.unctad.org/EN/.

Figure 11: Service exports as a share of total exports, 2005–15



Sources: World Bank, *World Development Indicators,* January 2018, available at https://data.worldbank.org/data-catalog/world-development-indicators; UNCTADstat, available at http://unctadstat.unctad.org/EN/.

affected states and resource-rich countries, with the exceptions of Lebanon and the UAE, respectively, have far lower levels of export diversification. Egypt, Tunisia, and the UAE have seen the most rapid progress on diversification according to the TDI. Iraq, Libya, and Qatar have seen deteriorating levels of diversification. All other countries have witnessed small, but steady, improvements in their TDI scores over the past two decades.

Sector-level diversification

Although oil and gas remain the region's dominant exports, data show that a few countries—such as Egypt, Lebanon, Tunisia, Morocco, and the UAE—have managed to initiate and sustain progress in export diversification. Some now have high levels of manufactured and service exports, while others have experienced rapid growth from low bases over the past decade (Figures 10 and 11).

Lebanon is mainly an exporter of services, while manufacturing dominates Tunisia's export sector. Jordan and Morocco are split relatively evenly across manufacturing and services. The UAE is also developing a comparatively balanced structure of exports between manufacturing and services, especially financial services. Export shares are also changing fairly rapidly among some countries. For example, manufactured exports are growing quickly in Egypt and Bahrain, as well as in Saudi Arabia to a lesser extent. Service export growth has also been very rapid in the UAE over the past decade.

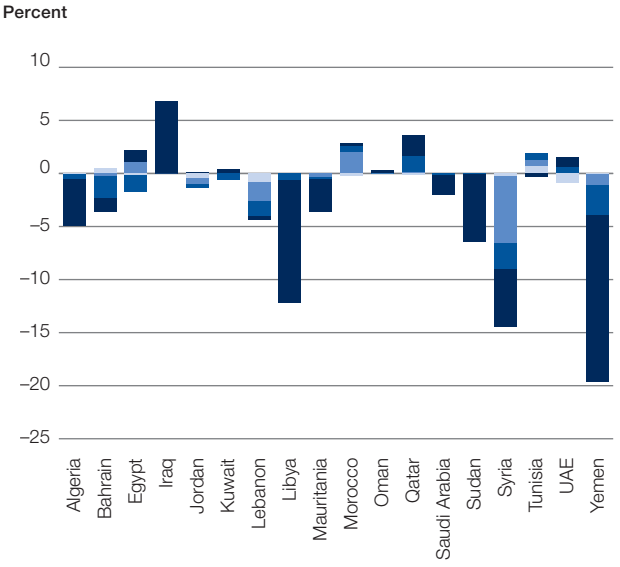
We can further disaggregate changes in export composition by level of skill and value-added (Figures 12 and 13). The World Bank's Measuring Export Competitiveness (MEC) database shows changes in rates of export growth by product type and level of skill.[13] The region's progress in exporting products that require medium or high skills to manufacture was unimpressive between 2006 and 2016. Morocco and Tunisia are the only countries that experienced more than nominal growth in export rates of either consumer or capital products as well as high and medium skill products. Iraq's export growth has been in primary exports, while Libya, Syria, and Yemen have experienced very large declines in this sector.

The MEC also contains data on product and trade partner diversification. The latter is called *extensive margin diversification* and the term for the former is *intensive margin diversification.* The Arab world has experienced the largest loss in intensive margin diversification since 2006 of any region. Diversification at the extensive margin, by contrast, remained largely unchanged. There are, however, significant differences across countries. For example, Oman and Yemen gained in extensive diversification, while Libya and Tunisia suffered losses in this area. Along the same lines, Algeria, Iraq, Kuwait, Oman, Saudi Arabia, and the UAE experienced losses in intensive diversification, while Syria and Lebanon, to a lesser extent, realized gains in this area.

Further disaggregation by subsector shows some areas of rapid export growth in certain products and countries (Figure 14). Across countries, growth rates have been more than 10 percent in several subsectors, including financial services, transport equipment, automotive products, and professional consulting services. Growth in chemical exports is rapid in Egypt, Morocco, Oman, and Saudi Arabia. Jordan, Qatar, and the UAE are increasing exports of commercial services. Growth rates of machinery and transport equipment in Morocco have also been high.

Overall, data show that diversification remains limited at the region's aggregate level. Resource-poor countries are the most diverse, with about the same level of diversification as other countries at a similar level of income. Economies in the Arab

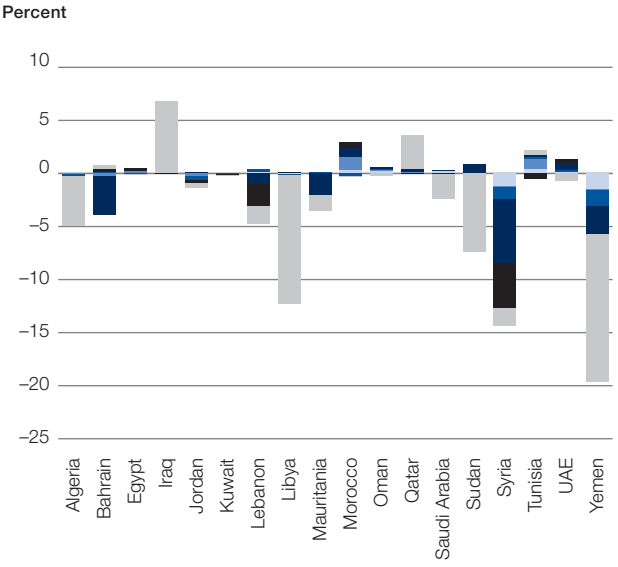
Figure 12: Export growth rates by product type, 2006–16



Source: World Bank, Measuring Export Competitiveness database, available at https://mec.worldbank.org/.

Note: UAE = United Arab Emirates.

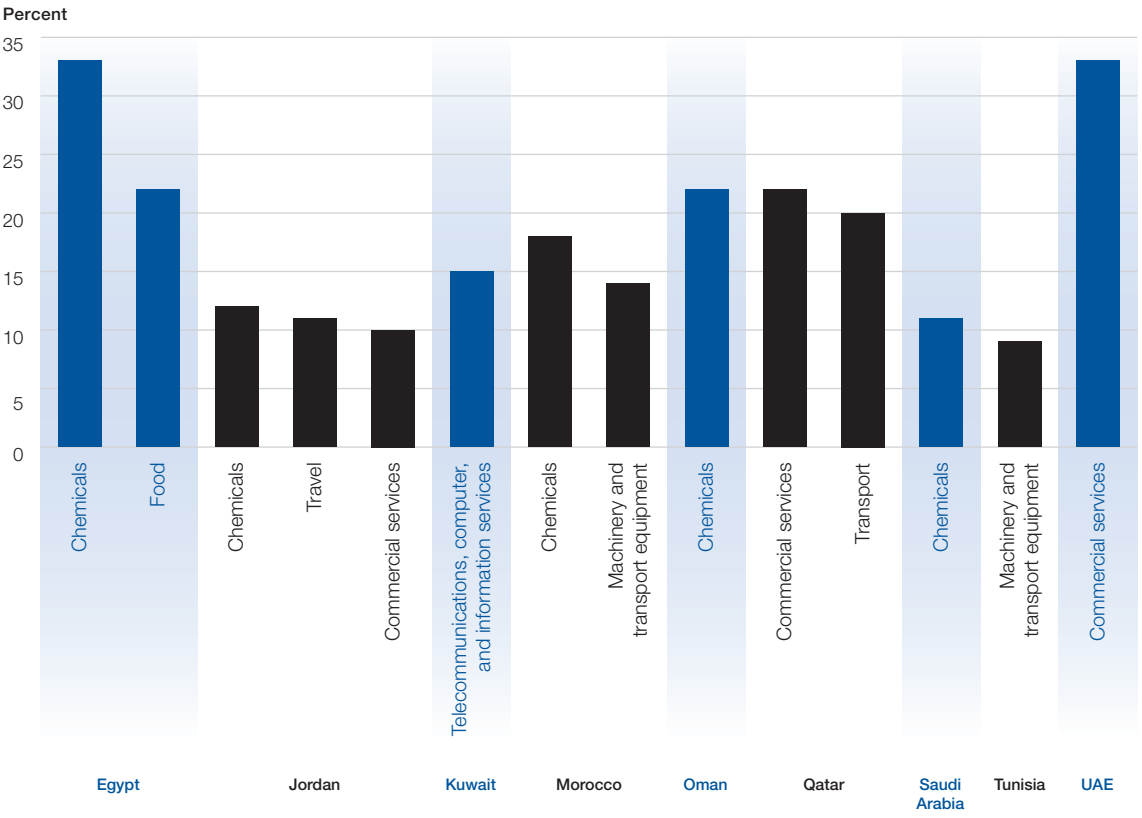
Figure 13: Export growth rates by skill level, 2006–16



Source: World Bank, Measuring Export Competitiveness database, available at https://mec.worldbank.org/.

Note: UAE = United Arab Emirates.

Figure 14: Growth rate in selected high-growth export sectors in the Arab world, 2006–16



Sources: Sources: World Bank, *World Development Indicators,* September 2017, available at https://data.worldbank.org/data-catalog/world-development-indicators; WTO International Trade Statistics, available at https://www.wto.org/english/res_e/statis_e/statis_e.htm.

Notes: Sectors are above the 80th percentile in median export values from 2006 to 2016. UAE = United Arab Emirates.

Table 1: Key recent studies on diversification

		Key findings on determinants of diversification	
Study	Coverage	Increase	Decrease
Agosin et al. 2012	Global, 79 countries, 1962–2000	Education and trade	None
Alaya 2012	Arab world, 12 countries, 1984–2009	Trade, exchange rate depreciation, domestic investment, democracy	None
Anand et al. 2012	Global, 152 countries, 1990–2008	Education, liberalization, information flows	Overvaluation
Gourdon 2009	Global, 127 countries ,1988–2006	Domestic credit, domestic investment, population	Distance to markets and tariffs
Henn et al. 2013	Global, 178 countries, 1962–2010	Education, institutions	None
IMF 2014	Global, 178 countries ,1962–2010	Education, institutions, financial market development, trade liberalization, economic integration	None
Parteka and Tamberi 2013	Global, 60 countries, 1985–2004	GDP, population, trade liberalization, Regional Trade Agreements	Distance to markets

world's FCV-affected states and resource-rich countries are far less diverse, by contrast, although the latter have levels of diversification that are similar to resource-rich countries in other regions. Greater disaggregation also shows that, over the 2006–16 period, in some countries double-digit growth rates occurred in several subsectors, such as financial services, transport equipment, automotive products, and professional consulting services. The next section discusses some of the key reasons why progress on greater diversification has been relatively slow in the region.

What explains limited diversification in the Arab world?

The data presented in the previous section show a current relatively low level of diversification in the Arab world. They also underline that slow improvements are occurring, although the situation differs widely across countries and sectors. A key reason for these results is the persistent reliance on oil and gas exports in many of these countries. On average, over 2005–15 oil and gas exports accounted for more than 70 percent of exports of merchandise in nine Arab world countries. Oil and gas are the main export for many comparatively stable countries, such as Qatar and the UAE, as well as some of its most unstable and poorly governed ones, such as Libya and Yemen. Reliance on these exports exposes these countries to macroeconomic volatility resulting from changes in global prices for these commodities and can undermine the competitiveness of the tradeable sector. However, this is far from the only cause of the current situation.

Determinants of diversification have received significant attention. As shown below, recent research suggests that competitive exchange rates, higher-quality institutions, high levels of human capital, and policies that encourage trade and investment are associated with higher levels of economic diversity (see Table 1 for findings and coverage of key studies).[14] In the Arab world, historical legacies of state-led development, institutions and the investment climate, the quality of education and innovation systems, trade policies, and financial sector performance are the key factors that impact the level of diversification.

A legacy of large state involvement

A key reason that many countries in the Arab world have struggled to diversify is that previous policies to encourage it have been poorly designed and/or implemented.[15] Many countries in the region have developed policies to promote diversification, typically with a strong state-led component. However, most countries did not effectively adjust these programs when they did not yield their intended economic results (see Box 2). One consequence is a public sector that remains large to this day. Over the 2010–12 period,[16] the central government wage bill expressed as a percentage of GDP was on average close to 8.1 percent in the Arab world, compared with 7.1 percent in Europe and Central Asia and 5.9 percent in Organisation for Economic Co-operation and Development (OECD) countries.

Partial implementation of economic reforms designed to reduce the scope of past state-led development strategies have also been impeding diversification in the Arab world. For example, state control over the financial sector in some countries hinders access to finance to the private sector, as discussed in greater detail later in the chapter. Moreover, energy subsidies in some resource-rich countries encourage continued reliance on energy-intensive sectors (see Appendix Table A.1). In addition, the capture of reforms designed to create more competitive and diverse economies have undermined these efforts and instead led to a high concentration of market power in many sectors.[17] It is not unusual for a small number of companies to dominate the private sector in developing countries. The role of chaebols, or large industrial conglomerates, in the Republic of Korea's economic development is a particularly notable example. Some have even argued that such concentration can be desirable under certain conditions because it assists in coordinating policy between the government and the private sector.[18] Highly concentrated market power becomes problematic when firms are able to use their economic influence to advance their individual interests to the detriment of aggregate outcomes, such as restrictions on competition.[19] The latter applies—to varying degrees—to each Arab world country type.

Box 2: State-Led Development and Economic Reform in the Arab World: A Long-Term Perspective

In the 1950s and 1960s, many countries in the region (like numerous others) adopted state-led economic development strategies, such as import substitution, to diversify their economies. State-led development was also seen as a mechanism that could ensure political support from the private sector. This allowed select key firms in the private sector to receive preferential treatment, such as restrictions on competition and subsidies from the state. Many governments also created expansive public sectors, in part to further secure their political base and to control the economy. As in Latin America, sub-Saharan Africa, and some parts of Asia, a growing global economy combined with external assistance led to rapid rates of growth in the 1960s and 1970s, even in countries with expansive public sectors and inefficient industries. Average per capita real GDP growth rates in the Arab world in the 1960s and 1970s were almost 5 percent, higher than in any other region during that period.[1]

The oil price spikes of the 1970s and recession in Organisation for Economic Co-operation and Development (OECD) countries in the early 1980s led to economic crises and structural adjustment in large parts of Latin America and sub-Saharan Africa. These reforms tended to include reducing government expenditure, privatizing state-owned enterprises, and implementing policies to create more dynamic and politically independent private sectors. Most countries in the Arab world were initially able to avoid these types of reforms because their economies benefited from the rise in oil prices.[2] Thus governments continued to maintain their large command over the economies throughout the 1970s and early 1980s, unlike their peers in most other regions.[3]

The reprieve was temporary. Real oil prices declined, dropping by 80 percent from their high in 1980 to their low in 1998. Levels of aid fell as well. In addition, Gulf Cooperation Council countries began to turn to South Asia instead of the Arab world as their main source of foreign labor. The result was stagnation and rising levels of unemployment in large parts of the region.[4] Per capita GDP growth rates plummeted from 5 percent in the 1960s and 1970s to contractions of about 1 percent per year in the 1980s before rebounding to a growth of about 2 percent per year, a rate that has remained steady since the early 1990s. By the early 1990s, youth unemployment rates were around 30 percent and have remained at that level since.

Still, in many countries of the region, the transformation to more market-led economies has not gone very far. One reason some governments in the Arab world are reluctant to implement reforms that would allow for a more independent private sector is their fear that such reforms might lead to political challenges. The Arab Spring has reinforced these concerns in some countries as well.[5]

Notes

1 Arezki and Nabli 2012; Benhassine 2009; Malik and Awadallah 2012; Nabli et al. 2006; Yousef 2004.

2 Arezki and Nabli 2012; Malik and Awadallah 2012; Yousef 2004.

3 Arezki and Nabli 2012; Malik and Awadallah 2012; Nabli et al. 2006; Yousef 2004.

4 Arezki and Nabli 2012; Kapiszewski 2006; Malik and Awadallah 2012; Yousef 2004.

5 Benhassine 2009; Malik and Awadallah 2012; Nabli et al. 2006.

Resource-rich countries

Most resource-rich countries in the Arab world have developed diversification strategies, but so far they have largely failed to implement them effectively.[20] For GCC countries in particular, a key problem is a social contract that provides generous social welfare programs; easy access to well-paid public-sector employment; and a reliance on migrants for labor-intensive jobs in return for political loyalty, protected spaces in the private sector, and a very large state presence in key sectors such as hydrocarbons, transport, and communications. The result is that large parts of the private sector, independent of ruling elites, face considerable difficulties in creating competitive businesses.[21]

The current social contract inhibits greater diversification in GCC countries through three channels.[22] First, *energy subsidies discourage diversification from hydrocarbons.* Resource-rich countries tend to have very low domestic energy prices. On average, energy subsidies amount to approximately 7 percent of GDP in GCC countries, for example. Such subsidies distort investment toward low-productivity, energy-intensive sectors and away from higher-value-added manufacturing and services. Second, *public-sector employment discourages investment in human capital.* GCC countries roughly have a 2 to 1 ratio of public- to private-sector employment, larger than other regions of the world. Furthermore, growth in public-sector job creation does not result from functional needs but is largely due to growth in the working-age population. Third, *segmented labor markets discourage investments to improve productivity.* GCC labor markets are segmented. On one side is a large public sector that employs nationals and provides them with generous salaries and benefits. On the other side is a foreign private sector, in which most of the workers have low-paid service sector positions. Two consequences are that firms face few incentives to invest in programs that would raise labor productivity and citizens do not demand these programs because they have relatively easy access to state employment.

One notable deviation from the aforementioned trends in resource-rich countries is the UAE's successful implementation of its diversification strategies. Its current Vision 2021 focuses on encouraging trade and investment, especially in high-value-added sectors; enhancing the international competitiveness of UAE firms in foreign markets; investing in education, innovation, and technology; and strengthening commercial ties with foreign markets.[23] Among the seven Emirates in the UAE, Dubai has implemented the most sophisticated diversification strategy,

based on a large element of government coordination in development activities; large public investments; openness to trade and investment, including attracting needed talent from abroad; targeting high-value-added service sectors; and undertaking strong efforts to promote Dubai as a desirable location for trade and investment. Dubai's effective execution of its diversification policy results from a competent government administration as well.[24]

States affected by fragility, conflict, and violence

Private-sector capture of policy reform in the Arab world's FCV-affected states is an impediment to diversification. For example, according to the World Bank,[25] a key constraint to diversification in Lebanon is that lack of regulation of conflicts of interest has concentrated market power into a handful of firms. Such conflicts of interest in the financial sector steer bank lending toward the public instead of the private sector and also distort government expenditures away from critical services and toward covering unnecessarily high levels of debt service payments.[26] Similarly, capture of economic policy reform in Syria has led to declines in productive capacity, reduced economic opportunity, and contributed to its political instability.[27]

Yemen presents an extreme example of how elite capture can stifle economic diversification. According to Hill et al., "By the time of the 2011 uprising, ownership of the 'commanding heights' of Yemen's economy were concentrated in the hands of a tiny elite. In early 2011, an estimated 10 families controlled more than 80 per cent of imports, manufacturing, processing, banking, the telecommunications and transport sectors."[28] For these reasons, it should not be surprising that only Haiti and Venezuela rate lower than Yemen on effectiveness of anti-monopoly policy and favoritism in decisions of government officials in the World Economic Forum's Executive Opinion Survey.[29]

Resource-poor countries

Private-sector capture of economic reform also is a barrier to diversification in the Arab world's resource-poor economies. In Egypt, poorly implemented government interventions and barriers to entry and competition under previous governments led to high levels of ownership concentration in substantial parts of the economy.[30] Recently the government has embarked on a significant program of business environment reforms that is lifting barriers to entry and competition and that is starting to improve the investment climate significantly. Saadi shows that politically connected firms in Morocco operate in numerous sectors and outperform their non-politically connected peers not because of higher levels of efficiency and productivity, but because of the privileges they enjoy as a result of their access, such as subsidies and barriers to competition.[31] Tunisia has presented a similar pattern for many years. Prior to the country's Revolution, the social network of President Ben Ali controlled about 250 companies, which accounted for about 20 percent of private-sector profits. These companies operated across a range of sectors, including telecommunications, air transport, real estate, and manufacturing, and they used their political influence to reduce competition in these sectors.[32]

Weaknesses in governance and the business environment

Institutional quality is a strong determinant of diversification. The previous section suggested that poorly designed state-led development policies and inadequate execution of market-oriented reforms have impeded diversification in the Arab world. This section undertakes a more thorough analysis of governance and the business environment in the region. Both affect firms' investment decisions, operations, choice of markets, products produced, productivity, and levels of employment.

Governance affects diversification through multiple direct and indirect channels. According to the International Monetary Fund (IMF), "institutional quality is found to be positively associated with the product quality, likely because sound institutional frameworks encourage investments needed for process and product upgrading."[33] Institutional frameworks can affect a broad range of factors that influence a country's level of diversification. The World Economic Forum's Global Competitiveness Index's measure of institutional quality, for example, correlates strongly with numerous factors that support diversification discussed in subsequent sections of this chapter, such as innovation, higher education and training, technological readiness, and financial market development.

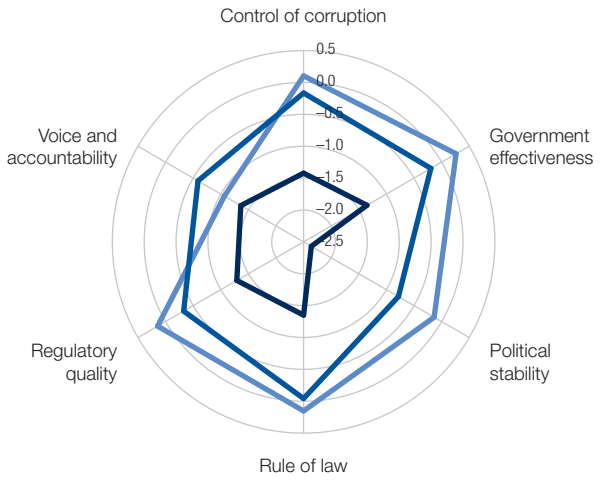
Disaggregating institutions into their constituent parts can help clarify the links between governance and diversification. The Worldwide Governance Indicators, for example, divide governance into six dimensions: government capacity, regulatory quality, extent of corruption, degree of adherence to the rule of law, political stability, and extent of citizen participation in government. Political instability and weak adherence to the rule of law are deterrents to diversification, and especially to innovation, because they adversely affect investment.[34] For example, businesses are unlikely to invest in developing new products or production processes if they are uncertain they will be able to benefit from them. Likewise, a poorly functioning legal system impedes technology transfer.[35] Regulatory quality also impacts investment.[36] For example, weak regulatory environments may limit the degree of competition between firms, lead to a risk-averse financial sector, and permit lax enforcement of product standards. Along the same lines, weak government capacity is likely to lead to poor quality infrastructure and education.[37] Where relevant, subsequent subsections of this chapter draw attention to these linkages.

The Arab world governance scores, as measured by the Worldwide Governance Indicators, are fair at best compared to other regions and show particular weaknesses in political stability and voice and accountability (Appendix Figure A.3).[38] Regulatory quality and control of corruption are below average as well, but to a lesser extent.[39] Government effectiveness and rule of law are relative strengths,[40] although they are at levels lower than in many other regions.

There is, however, a substantial amount of variation in institutional quality within the Arab world (Figure 15). Besides significant weakness in voice and accountability, governance is slightly better in resource-rich countries along the other five dimensions of the indicators. For example, countries such as Qatar and the UAE have relatively high scores in government effectiveness, political stability, and regulatory quality, respectively.

Among resource-poor countries, Jordan rates highest overall, especially in control of corruption and enforcing the rule of law. Egypt performs the worst of the four resource-poor countries. Unsurprisingly, FCV-affected states rate very poorly in institutional quality, having some of the lowest ratings on all six dimensions of the indicator.

Figure 15: Governance in the Arab world, Worldwide Governance Indicators, 2015

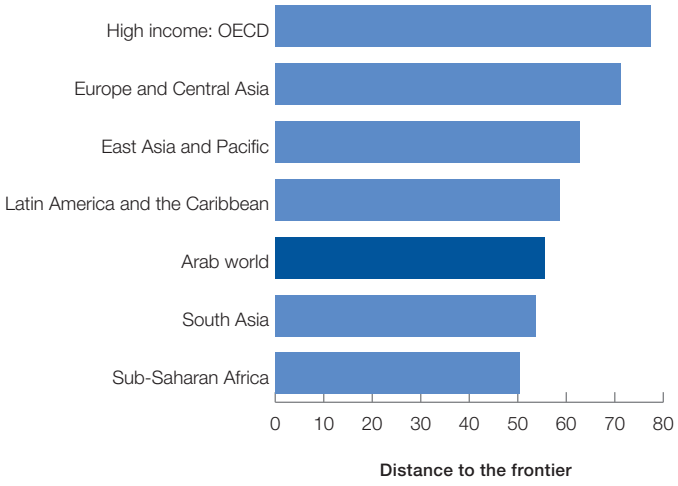


Key:
Resource-poor countries
Resource-rich countries
States affected by fragility, conflict, and violence

Source: World Bank, Worldwide Governance Indicators, available at https://datacatalog.worldbank.org/dataset/worldwide-governance-indicators.

Note: The standard normal units of the governance indicators range from around –2.5 to 2.5. For the methodology, see Kaufmann et al. 2011.

Figure 16: Average distance to the frontier per region, 2017



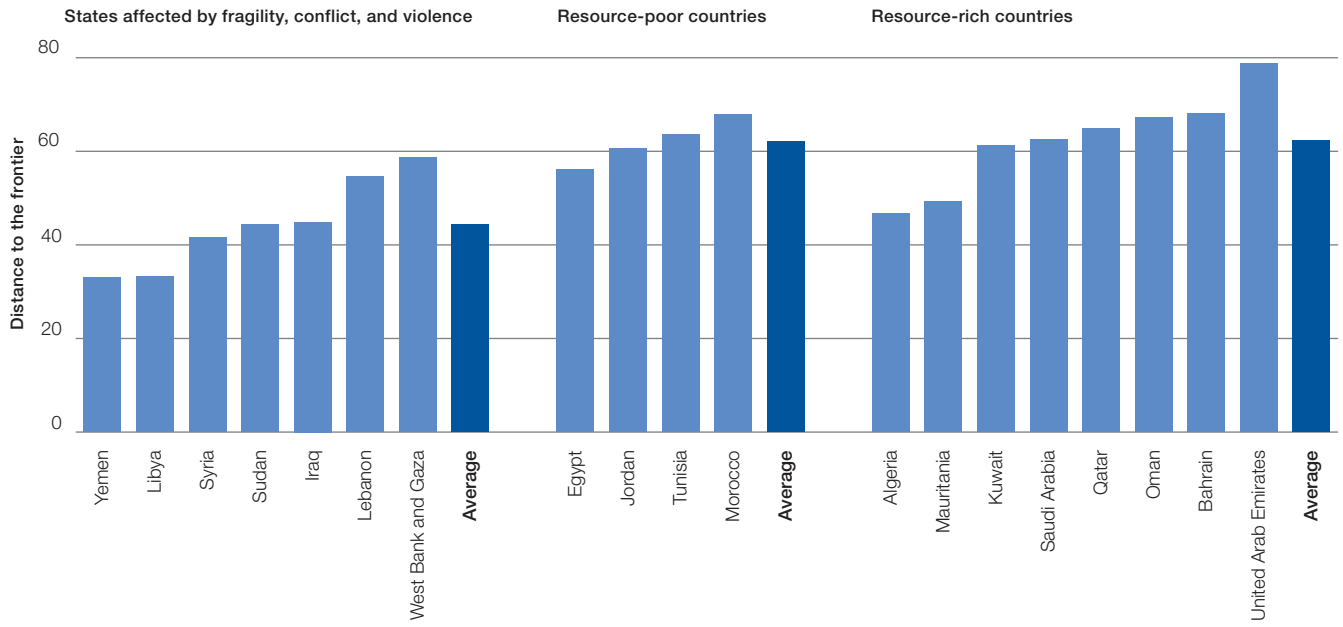
Source: World Bank's 2018 Doing Business indicators, available at http://www.doingbusiness.org/rankings.

Note: OECD = Organisation for Economic Co-operation and Development.

Data from the *Doing Business* reports allow a narrower focus on specific regulatory constraints to private-sector development and diversification. The World Bank's *Doing Business* reports present quantitative indicators on business regulations. At the aggregate level, the Arab world does not rate very well in a regional comparison, since only South Asia and sub-Saharan Africa have worse average distance-to-the-frontier (DTF) performance (Figure 16).[41] This result is primarily determined by the DTF of FCV-affected states because, on average, resource-poor countries and resource-rich ones have relatively good DTF scores (Figure 17).

Average performance on DTF scores varies by country and country type in the Arab world. FCV-affected states have low rankings; all except the West Bank and Gaza and Lebanon, (respectively ranked 114th and 133th out of 190 countries) rank between the 168th and 186th positions. Although country weaknesses vary, common ones for FCV-affected states include regulations related to getting credit, minority investor protection,

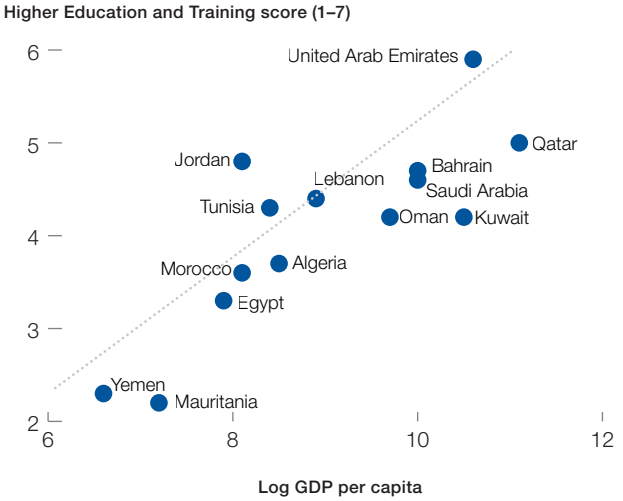
Figure 17: Distance to the frontier per grouping in the Arab world, 2017



Source: World Bank's 2018 Doing Business indicators, available at http://www.doingbusiness.org/rankings.

Note: OECD = Organisation for Economic Co-operation and Development.

Figure 18: Higher education and training vs income level in the Arab world, 2015



Sources: World Bank, *World Development Indicators,* available at https://data.worldbank.org/data-catalog/world-development-indicators; World Economic Forum Global Competitiveness Index database, available at www.wef.ch/gcr.

Note: The line shows the global best fit between education and income rather than the best fit line for the Arab world.

and insolvency regimes.[42] Resource-poor countries show significant variation as well, but possess common shortcomings in the legal framework for getting credit, minority investor protection, contract enforcement, and insolvency regimes. Resource-rich countries are slightly more homogeneous as a group (with the exception of Algeria and Mauritania) and have better overall DTF scores than other countries in the region, but still face obstacles in getting credit, minority investor protection, and insolvency regimes. A brighter regulatory spot is the region's relatively good performance on regulations to start a business. Yet, while most countries of the region, irrespective of their category, score reasonably well in this area, formal entrepreneurship remains low. For example, weaknesses in contract enforcement and difficulties in getting credit often deter business creation and expansion, which are common sources of diversification into new products. These issues are addressed in detail in the next chapter.

Weaknesses in education and innovation

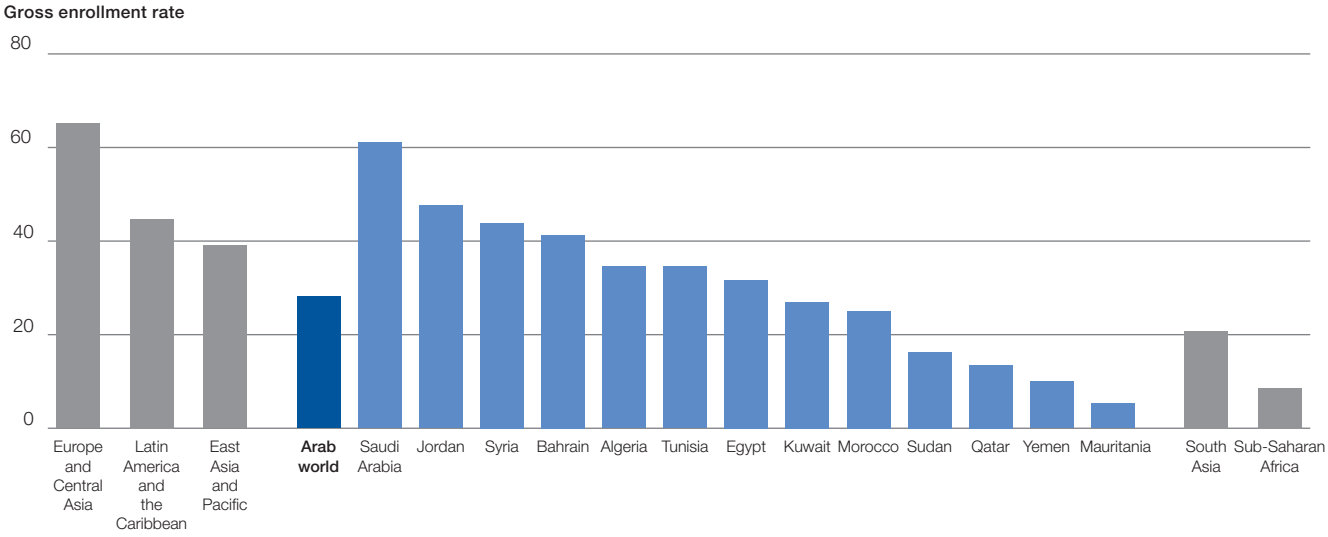
Education and innovation are crucial inputs into diversification. This section describes these links and assesses trends in education and innovation in the Arab world.

Education

Studies of diversification consistently find a strong link between levels of education and the extent of diversification.[43] Education promotes diversification through multiple channels, including by raising labor productivity, facilitating innovation, and enhancing a country's capacity to produce higher-value-added goods and services. Rapid technological change and intensifying global economic competition are making high levels of education increasingly necessary for diversification.[44]

The Higher education and training component of the Global Competitiveness Index,[45] which combines elements of access to education and quality of education, shows that countries in the Arab world on average rate one-half a standard deviation below the global average for their levels of income. As a result, their levels of education are usually lower than would be predicted based on their income levels (Figure 18). Deeper analysis shows that this discrepancy mainly reflects education outcomes, not access to education. The Arab world's school enrollment rates are close to the world average. More specifically, the region's gross tertiary enrollment rates are lower than those of Europe and Central Asia, Latin America and the Caribbean, and East Asia and Pacific, but higher than those of South Asia and sub-Saharan Africa (Figure 19). Country situations vary starkly, however. Saudi Arabia, Jordan, Syria (pre-conflict), and Bahrain exceed East Asia's average enrollment rates, while Yemen's is closer to sub-Saharan Africa's, the region with the lowest gross tertiary enrollment rates.

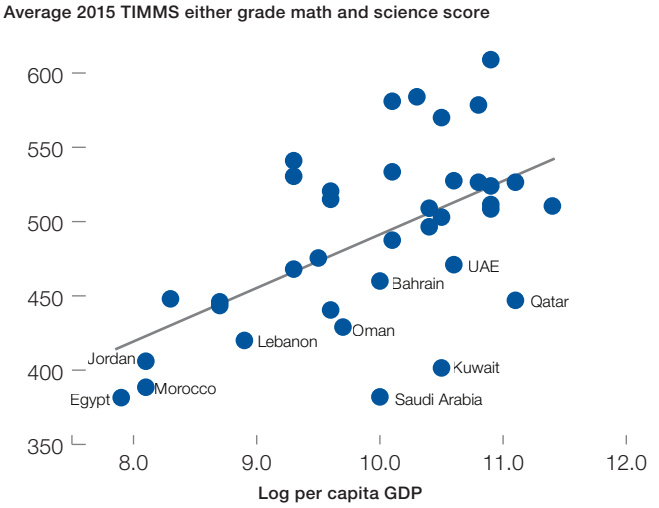
Figure 19: Tertiary school enrollment, by region and Arab world country, 2017



Source: Calcualtions based on World Bank, *World Development Indicators,* January 2018 update, available at at https://data.worldbank.org/data-catalog/world-development-indicators.

Note: No recent data are available for Oman, the UAE, Iraq, or Libya. For Jordan, Kuwait, and Yemen, the latest data available over 2011–14 are reported.

Figure 20: TIMSS score vs income level in the Arab world, 2015



Sources: Calculations based on World Bank, *World Development Indicators,* available at https://data.worldbank.org/data-catalog/world-development-indicators; and TIMSS database, available at https://timssandpirls.bc.edu/timss2015/international-database.

Notes: The line shows the global best fit between TIMSS score and income rather than the best fit line for the Arab world. UAE = United Arab Emirates.

As opposed to its often comparatively favorable enrollment rates, the Arab world's performance on educational outcomes is rather low. For example, among the 70 countries that are involved in the OECD's Program for International Student Assessment (PISA) study, the highest-ranked country for mathematics is the UAE at 47, while five of the twelve lowest-ranked countries are in the region (Algeria, Jordan, Lebanon, Qatar, and Tunisia).[46] Trends in International Mathematics and Science Study (TIMSS) results, which has a broader coverage for the region, show a similar pattern (Figure 20).[47] In 2015, countries in the Arab world scored on average 81 points, or 1.37 standard deviations, lower than other countries at similar levels of income in eighth grade math and science. Kuwait, Qatar, and Saudi Arabia scored particularly low given their level of income. In addition, the six lowest-ranked countries in the study are in the region.

Skills mismatches are also a problem.[48] World Bank Enterprise Surveys find that more firms in the Arab world contend that inadequate skills hinder firm growth and capacity to hire talent than in any other region, with only about one-third of new graduates possessing relevant skills for the employment they seek. Along the same lines, access to technology in schools is problematic. According to the World Economic Forum's Global Competitiveness Index, apart from Bahrain, Jordan, Qatar, and the UAE, countries in the Arab world rate well below average for access to the Internet in schools compared with others at their level of income.

Innovation

Innovation and absorption of new technologies are crucial for diversification. The former involves creating new products and processes (technological innovation) and new organizational and marketing methods (non-technological innovation). Technology transfer needed to raise productivity and for firms to produce new goods and services is particularly important for middle-income countries to avoid falling into the middle-income trap where wages rise faster than productivity.[49] Incentives for innovation and technology transfer are closely linked to the quality of a country's institutions and human capital. For example, firms are unlikely to invest in innovative activities if they are unable to secure benefits from them or they lack access to needed talent. Likewise, in the absence of effective legal and regulatory systems, firms may not be able to acquire new technologies. For example, existing empirical evidence shows that developing countries offering stronger intellectual property rights protection have easier access to new products, attract more foreign direct investment (FDI), and receive more technology transfer than peers at the same level of development with less strong intellectual property rights protection.[50]

On average, most countries in the Arab world have low levels of innovation for their level of income (with the exception of Jordan, Qatar, and, to a lesser extent, Morocco and the UAE). Firm-level data show that, on average, 33 to 37 percent of surveyed firms in the region engaged in the development of new products or process innovation, respectively. Such activities are particularly important for encouraging diversification in emerging markets.[51] Furthermore, very few firms export new products. In addition, around 13 percent of firms engage in R&D expenditures against a global average of 16 percent.[52] The region also has low levels of intellectual property rights payments, a proxy for technology transfer.[53]

Greater levels of global integration and rates of technological change are raising the importance of innovation and technology transfer in supporting diversification. In this environment, firms are rewarded more for designing new products and methods of production than for having low costs of production. To thrive in this environment requires countries to have high levels of capability, connectedness, and competitiveness.[54] As shown in Figure 21, countries in the Arab world, with the partial exceptions of Bahrain, Saudi Arabia, and the UAE, do not rate well along these three dimensions. Levels of connectedness are especially low.

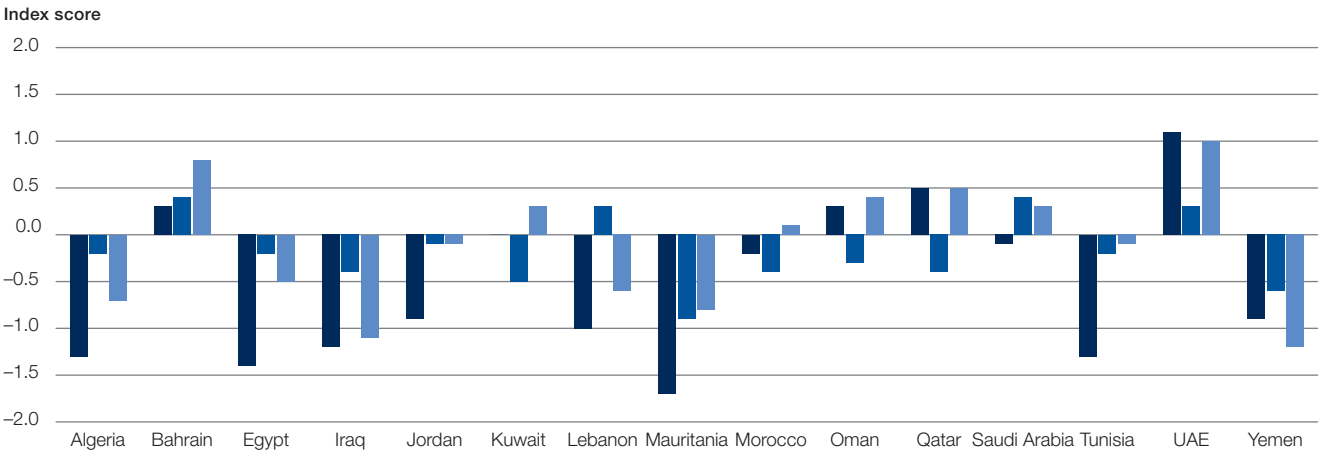
Trade regimes

An open trade policy is important for economic development and diversification. Existing studies document that improved access to imported inputs typically raises firm productivity,[55] expands firms' product scope,[56] and leads to higher rates of economic growth.[57] In turn, more productive firms are better able to compete on international markets and with imports. Similarly, Eaton and Kortum find that 25 percent of cross-country differences in productivity can be attributed to price differences for capital goods, and that about half of these price differences are caused by trade barriers.[58] Improved access to imported capital equipment is also usually associated with higher economic growth.[59]

The Arab world's trade structure is unique. Although its total exports as a share of GDP are the highest of any region in the world, fuel exports as a share of total exports are higher and manufactured exports are lower than any region other than sub-Saharan Africa (Table 2).

The region has also low levels of global value chain (GVC) participation.[60] For example, the region's GVC participation is below what is predicted by its level of income, proximity to markets, and volume of manufacturing.[61] The extent of GVC integration varies by country and stage of processing. Jordan, Lebanon, and Tunisia have the highest shares of backward

Figure 21: Connectivity, capability, and competitiveness in the Arab world, 2017



Key: ■ Connectivity ■ Capability ■ Competitiveness

Source: Hallward-Driemeier and Nayyar 2017.

Notes: The global median is 0 and the range is –1.8 to 3.7. UAE = United Arab Emirates.

Table 2: Export structure by region, 2014

Region	Manufactured exports/total exports	Fuel exports/total exports	Ratio of goods and services exports to GDP
East Asia and Pacific	79.0	7.3	32.2
Europe and Central Asia	70.5	13.0	41.5
Latin America and the Caribbean	46.5	13.3	19.9
Arab world	28.6	48.2	45.2
South Asia	64.9	17.6	21.6
Sub-Saharan Africa	23.9	49.7	28.3

Source: World Bank, *World Development Indicators*, available at https://data.worldbank.org/data-catalog/world-development-indicators.
Note: The last year for which data are available for most groupings is 2014.

linkages (the use of imported inputs in exported products) at around 30 percent of exports, followed by Morocco with about 20 percent. Egypt, Saudi Arabia, and the UAE have the lowest participation in backward linkages, at around 15 percent.[62] Apart from exports of natural resources, forward linkages (exports of products used for further processing) are low for the entire region.

The Arab world also has average effective tariffs rates (i.e., tariffs plus non-tariff barriers) that are higher than the average in East Asia, Europe and Central Asia, South Asia, and sub-Saharan Africa.[63] These high effective tariffs result primarily from non-tariff barriers such as regulatory policies. Since the early 1990s, most favored nation weighted average tariff rates have largely declined, dropping from close to 20 percent in 1992 down to about 6.1 percent in 2016. The Arab world's formal tariff rates are lower than those of Latin America, South Asia, and sub-Saharan Africa, but still higher than those of Europe and Central Asia or East Asia and Pacific (Appendix Figure A.7). Most of the reductions in formal tariff rates in the region are a result of countries ratifying multilateral trade agreements, such as World Trade Organization (WTO) membership, and preferential trade agreements with the European Union, the United States, and the Greater Arab Free Trade Area (GAFTA). Prior broader liberalization efforts, such as WTO membership, as well as high rates of growth and FDI inflows into the region, greatly facilitated enacting the latter. GAFTA, the most extensive regional integration agreement implemented to date, is broad in its coverage of products but shallow, since it has no enforcement or dispute resolution mechanism.[64]

Despite the fall in formal tariff rates, many non-tariff barriers remain in the Arab world. These include technical barriers to trade, such as phytosanitary regulations, complex rules of origin regulations, and import licenses. Non-tariff barriers are often justified to ensure consumer safety, food safety, and environmental safety. Yet evidence exists that countries also use non-tariff barriers as obstacles to trade in reaction to trade agreements that demand reductions in formal tariffs. Apart from the GCC countries, the region's markets remain protected, largely because of non-tariff barriers such as technical barriers to trade, quotas and prohibitions, import and export licenses, anti-dumping, and other anti-competitive measures.[65]

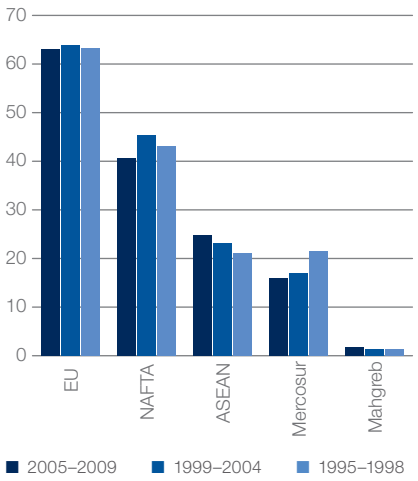
Trade integration is also weak. Regional trade agreements, for example, "have especially failed to expand regional trade. . . . Attempts at economic integration have been frustrated by internal rivalries, dependence on external powers, and the absence of a strong domestic constituency for integration."[66] Challenges to integration within Maghreb countries provide a good illustration of the problem (Box 3). Trade within the region is lower than standard trade models predict.[67]

Box 3: Regional Integration in the Maghreb

The Maghreb Arab Union, comprised of Algeria, Libya, Morocco, Mauritania, and Tunisia, is a subregion of the Arab world with a variety of economic structures. Libya's and Algeria's economies largely depend on natural resources, while Morocco's and Tunisia's are more diversified and have a significant manufacturing base. Mauritania is a low-income country where agriculture, natural resources, and fisheries dominate the economic structure. Integration into the world economy has improved through increased exports of goods and services, but regional trade within the Maghreb is still lagging (Figure A).

Intra-regional merchandise exports and imports have increased since the late 1990s, but this is still below the level reached by other regional groupings. On standard measures of intra-regional trade performance, although some improvements appeared during the 2000s, the Maghreb is still far from being truly integrated. Trade complementarity across countries remains low and intra-industry trade is lower than for other regional trade groupings.[1]

Figure A: Intra-regional merchandise trade: The Maghreb vs comparator groupings, 1995–2009



Source: World Bank 2011b.

Notes: ASEAN = Association of Southeast Asian Nations; EU = European Union; NAFTA = North American Free Trade Agreement. Full members of Mercosur (Mercado Comun del Sur) are Argentina, Brazil, Paraguay, and Uruguay, and Venezuela (suspended in 2016); Associate members are Bolivia, Chile, Peru, Colombia, Ecuador, and Suriname; Observer members are New Zealand and Mexico. Maghreb in this figure includes only Algeria, Libya, Morocco, and Tunisia.

Besides instability in some countries of the region and political disagreements among member countries, the regulatory framework in the Maghreb for trade and investment is not conducive to trade integration. Protection levels are still high on a comparative basis; non-tariff barriers are widespread; and although the web of existing intra-regional trade agreements is supposed to help in this matter, it has not yet met expectations. Country-specific restrictions remain in several areas, including repatriation and surrender requirements for exports, a domiciliation requirement for imports, and other non-tariff measures. The situation for foreign direct investment (FDI) is similar. Countries have put in place needed institutions and regulations to attract FDI, but non-negligible issues remain in areas such as sectoral entry regulations (including entry in the services sector) and restrictions on the transfer abroad of proceeds of liquidation and acquisition of real estate for FDI purposes.

Note

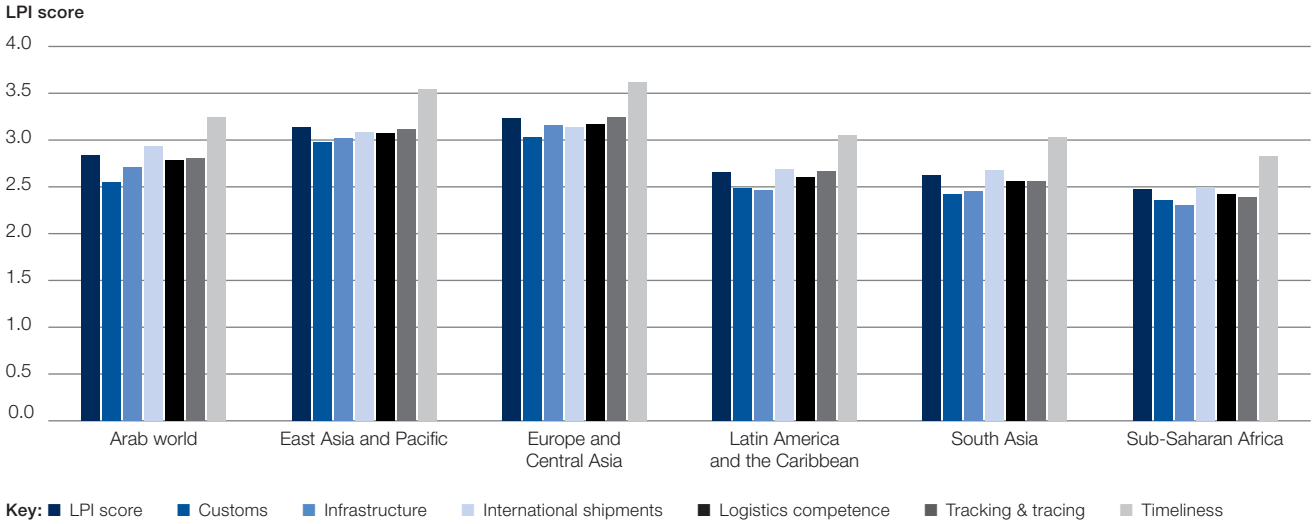
1 World Bank 2011b.

The GCC is a notable exception to this weak record on regional integration. GCC countries have made significant progress in the past in regional integration, including creating a common market and common external tariff, sharing a common power grid, and increasing levels of trade and foreign investment.[68] Trade within GCC countries grew quickly and quadrupled from 2003 to 2015. At about 19 percent of their total trade in 2014, intra-GCC trade was close to trade within the Association of Southeast Asian Nations (ASEAN) economic community.[69] Several factors accounted for greater progress in regional integration in the GCC than the rest of the region. First, the geography of the Arabian Peninsula is favorable for integration. Saudi Arabia, by far the GCC's largest economy and market, sits at the center of the GCC and borders all other GCC countries. This allows Saudi Arabia to serve as a natural focal point for efforts at GCC integration.[70] Second, business environment reforms within some GCC countries, along with their shared history, language, and culture, makes these countries attractive candidates for FDI from the region's large sovereign wealth funds.[71] However, recent tensions between member countries demonstrate that significant barriers to further integration remain and further analysis is needed.

Trade logistics quality also affects diversification.[72] Efficient trade logistics reduces trade costs, allows for more timely import of inputs, and lowers non-tariff barriers to exports. The Arab world's aggregate performance on the World Bank's Logistics Performance Index (LPI), a measure of the quality of trade logistics, is relatively good (Figure 22). The region performs better than Latin America and the Caribbean, South Asia, and sub-Saharan Africa, but less well than Europe and Central Asia or East Asia and Pacific. The relative weakness of the region is the efficiency of customs and border management (the Customs sub-indicator of the LPI). However, going beyond the regional aggregation, there is a huge divergence within the region. The UAE ranks the highest (and is 13th out of 160 countries). Bahrain, Oman, and Qatar also rank in the top third. By contrast, Syria was ranked last globally, while Iraq ranked 149th.

The Arab world's service sector has remained relatively protected as well. It has the highest level of restrictions on service trade compared with any other region according to the World Bank's Service Trade Restrictions Index (Figure 23).[73] The index covers five service sectors: telecommunications, finance, transportation, retail, and professional services. There is, however, a large amount of variation in the degree of openness

Figure 22: Arab world outcomes on the Logistics Performance Index, 2016



Key: LPI score | Customs | Infrastructure | International shipments | Logistics competence | Tracking & tracing | Timeliness

Source: World Bank, Logistics Performance Index 2016, available at https://lpi.worldbank.org/.

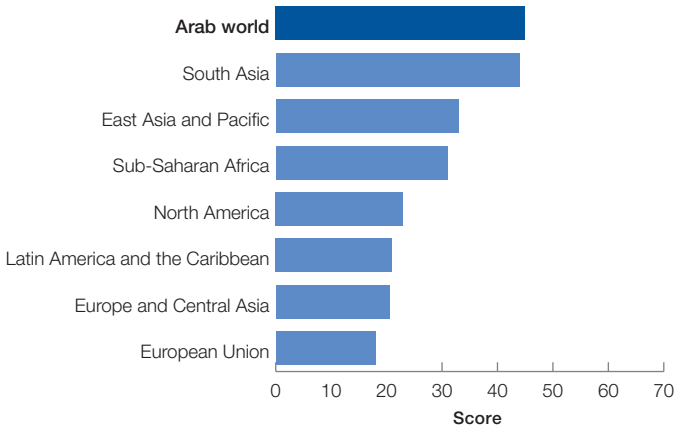
Notes: The LPI is derived from a survey of logistics professionals. It has six components: (1) the efficiency of customs and border management clearance ("Customs"); (2) the quality of trade and transport infrastructure ("Infrastructure"); (3) the ease of arranging competitively priced shipments ("Ease of arranging shipments"); (4) the competence and quality of logistics services—trucking, forwarding, and customs brokerage ("Quality of logistics services"); (5) the ability to track and trace consignments ("Tracking and tracing"); and (6) the frequency with which shipments reach consignees within scheduled or expected delivery times ("Timeliness"). Each component is rated on a scale of 1 (poor) to 5 (very good). LPI = Logistics Performance Index.

by country and subsector (Figure 24). Qatar has the most closed service sector, followed by Egypt, Kuwait, and Bahrain. Morocco, by contrast, has a relatively open service sector.

Professional services are the most restricted subsector, followed by transportation. The financial sector and retail are more open. There is also a substantial amount of within-country variation in service trade restrictions. For example, although the retail sectors are quite open in Algeria and Yemen, the transport sector in the former and the professional service sector in the latter are heavily protected. Along the same lines, while the telecommunications sector in Egypt and Lebanon is reasonably open, their professional services sectors are not. By contrast, the opposite exists in Qatar.

At the aggregate level, the Arab world does well in attracting FDI. Over the 2006–16 period, average net FDI inflows amounted to about 3.6 percent of GDP, below numbers observed in Europe and Central Asia (4.4 percent) but well above those observed for sub-Saharan Africa (2.7 percent), East Asia and Pacific (2.7 percent), and South Asia (1.9 percent). Resource-poor countries tend to attract investors in manufacturing and services while resource-rich ones tend to attract foreign capital in services and the extractive sector. FDI regulations vary greatly across countries, from a moderately closed regime such as Algeria's, where there are rules granting de facto minority ownership to foreign investors and rules establishing selected barriers to entry, to largely open regimes like Jordan.

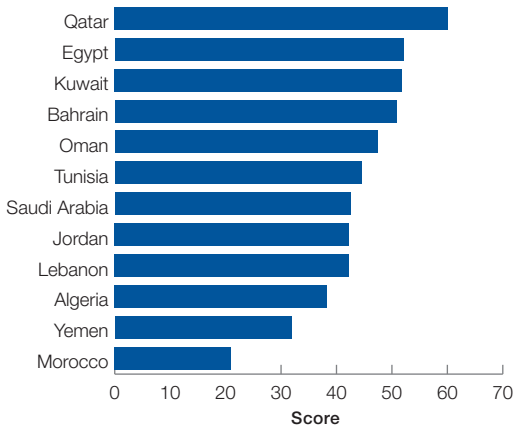
Figure 23: Service trade restrictions by region, 2012



Source: World Bank, Services Trade Restrictions Index, 2012, available at http://iresearch.worldbank.org/servicetrade/.

Note: Scale is 0 to 100; higher values are more restrictive.

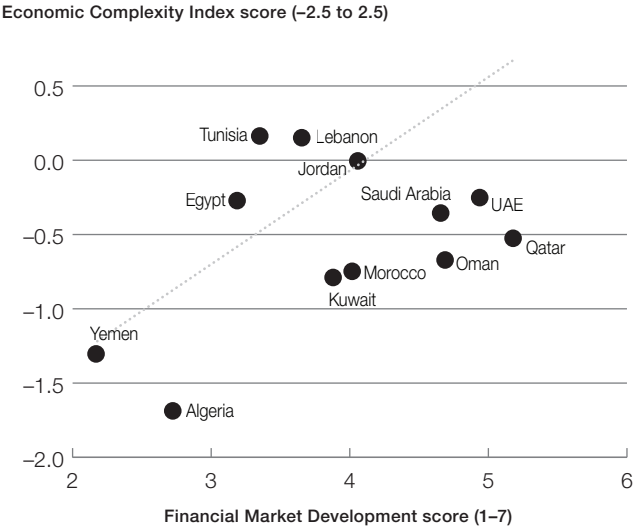
Figure 24: Service trade restrictions by country, 2012



Source: World Bank, Services Trade Restrictions Index, 2012, available at http://iresearch.worldbank.org/servicetrade/.

Note: Scale is 0 to 100; higher values are more restrictive.

Figure 25: Diversification and financial market development, 2015



Sources: MIT Observatory of Economic Complexity, Economic Complexity Index, available at https://atlas.media.mit.edu/en/; World Economic Forum, *Global Competitiveness Report 2017–2018,* available at www.wef.ch/gcr.

Notes: Dotted line is the best fit for all countries; correlation = 0.49.
UAE = United Arab Emirates.

The financial sector

Levels of economic diversification correlate strongly with the degree of financial sector development. This section presents an overview of the financial sector in the Arab world and focuses specific attention on access to finance for micro, small, and medium enterprises (MSMEs) and the use of financial institutions and services.

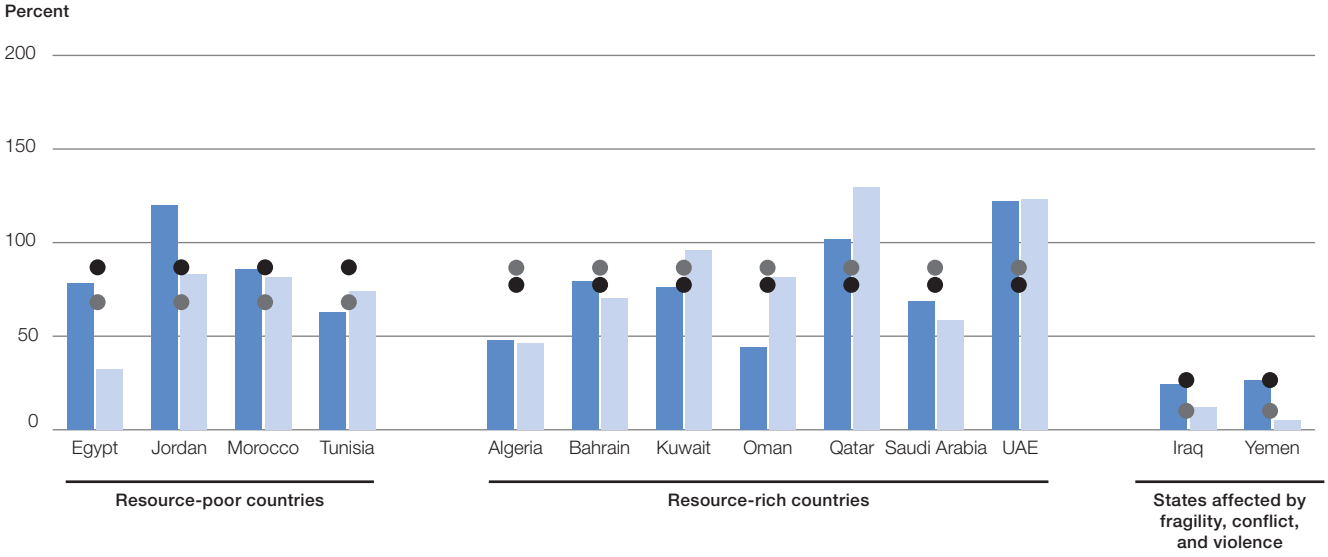
Financial sector development in the Arab world

The financial sector is a key sector for economic growth and diversification. The relationship between efficient financial intermediation and a dynamic, diverse, growing economy is well established. A competitive and well-regulated financial sector facilitates economic diversification through numerous channels, including encouraging capital accumulation, product innovation, adoption of new technologies, competition, and new firm creation, as well as allocating finance to productive firms that need it.[74] Wright, for example, demonstrates that the development of a comparatively sophisticated financial sector in the United States preceded and was necessary for its structural transformation from agriculture to industry.[75] Two studies by Haber document similar trends in Brazil and Mexico.[76] Figure 25 confirms a relatively strong correlation between financial sector development and economic diversification.[77]

Figure 25 suggests that many countries in the Arab world, especially its natural resources exporters, possess relatively developed financial sectors. Along the same lines, credit to the private sector as a percentage of GDP in the Arab world, a standard measure of financial sector development, compares favorably with other regions. Bank credit to GDP varies, averaging around 70 percent for resource-poor countries and 80 percent for resource-rich ones (Figure 26). Lending in Egypt, Algeria, and Saudi Arabia remains below subregional averages and is very low for the FCV-affected states that report this information, however.

Headline figures showing high levels of aggregate lending hide more problematic situations, however. First, in some countries the sector suffers from regulatory shortcomings, such as poor credit monitoring systems, weak contract enforcement mechanisms, and high collateral requirements.[78] Second, the region's banks have the highest rates of non-performing loans

Figure 26: Arab world banking sector development: Deposits and loans as share of GDP, 2016 or latest year available

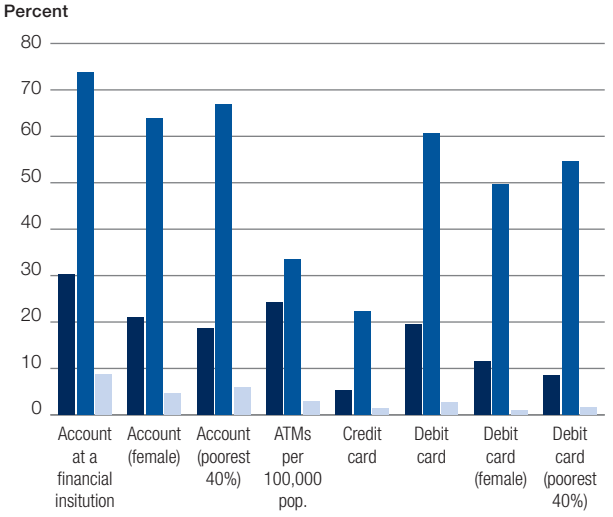


Key: Deposits Loans Loan average for the group Deposit average for the group

Sources: IMF Financial Access Survey (FAS) database, available at http://data.imf.org/FAS; St. Louis FRED database, available at https://fred.stlouisfed.org/.

Notes: Latest data available as of 2016, except Bahrain, Egypt, and Yemen, which use data from 2015. UAE = United Arab Emirates.

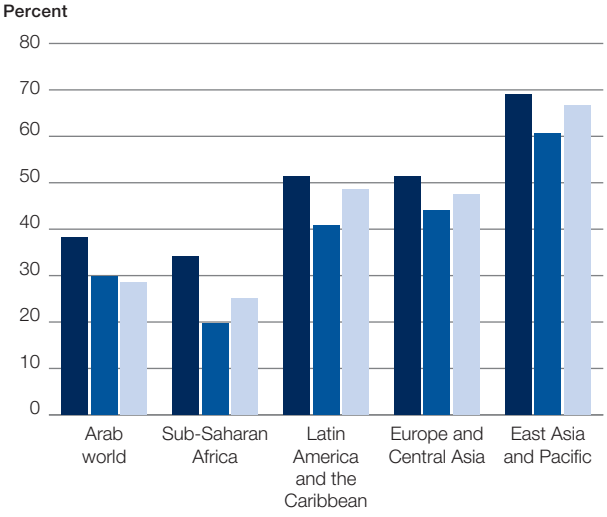
Figure 27: Financial access in the Arab world by country type, 2017



Key: Resource-poor countries Resource-rich countries States affected by fragility, conflict, and violence

Source: World Bank, Global Findex Database, available at https://globalfindex.worldbank.org/.

Figure 28: Financial access in the Arab world by region, 2014



Key: Adult (15+) Poorest 40% Female

Source: World Bank Global Findex Database.

(NPLs) of any region in the world. Underdeveloped regulatory systems are one reason. State-owned banks continuing to fund unviable projects are another cause of high NPLs. High levels of NPLs limit access to credit.[79] Third, the financial sector in most countries in the Arab world is not very competitive.[80] In particular, high barriers to entry allow for a small number of banks to account for a large share of the sector. For example, in Kuwait, Oman, and Qatar, the two largest banks control more than 50 percent of the country's total bank assets.[81] The cumulative result is that banks in the region tend to lend far more to large, well-known, or politically connected firms than to smaller or newer ones. By contrast, loans to MSMEs, many of which are more innovative or productive than more established firms, account for a smaller share of bank loans than they do in other regions (see below for more detail).[82] Such bifurcation results in less competition within the sector and impedes the development of new firms, products, and technologies.[83] This is one reason why the Arab world has a low rate of new business formation.

Micro, small, and medium enterprises

MSMEs,[84] which account for 80 to 90 percent of total businesses in most countries in the region, face a challenging environment in gaining access to credit in the Arab world. MSMEs generate 10 to 40 percent of all formal employment and close to two-thirds of total employment, including the informal sector in non-GCC Arab world countries.[85] MSMEs are a source of innovation and diversification. However, their potential is undermined by limited access to finance. For example, banks currently allocate only 2 percent of their loans to MSMEs in the GCC and 13 percent in the rest of the region.[86] Although only a small percentage of MSMEs receive bank loans, almost 45 percent of the loans are provided by state banks or governmental agencies, higher than in any other region. The region also has the highest percentage of MSMEs that are underserved by the financial sector.[87]

Some governments in the Arab world, through their central banks, are attempting to increase access to finance for MSMEs. For example, starting in 2016, the central bank of Egypt pushed banks to gradually raise their MSME financing to 20 percent of their total credit portfolio by 2019. Likewise, Morocco's central bank launched a new program in 2017 allowing it to provide advances to banks for up to one year in the amount equivalent to credit provided to MSMEs.[88] Banks can also obtain additional refinancing equal to the credit granted to MSMEs that operate in the industrial sector or export at least 40 percent of their sales. In addition, the central bank of Jordan launched a new US$100 million fund in 2017 to invest in start-up MSMEs, and it will add another US$70 million to guarantee the loans of these firms. In Lebanon, the central bank allows banks to invest 4 percent of their own funds in start-ups. The program resulted in US$400 million in new investments in 2016. These policies suggest that governments are increasingly recognizing that they need to improve the capacity of MSMEs to gain access to credit. The donor community is also allocating important resources in this area, either financially or through technical assistance (Box 4).

Access to financial institutions and services

Firms and people in Arab world countries also have low financial access, limited account ownership, low use of credit and debit cards, and low utilization of financial services on mobile accounts (Figures 27 and 28). Data from Global Findex further show that access to finance varies by country type in the Arab world (Figure 27).[89] For example, populations in resource-rich countries, resource-poor countries, and FCV-affected countries have rates of access to financial institutions of 74 percent, 30 percent, and 9 percent, respectively. Along the same lines, 22 percent, 5 percent, and 1 percent of people have credit cards and 61 percent, 19 percent, and 3 percent of people have debit cards respectively. In general, deposits and withdrawals are mainly made through bank tellers. The use of other channels

Box 4: Examples of World Bank Group Efforts to Assist Micro, Small, and Medium Enterprises with Access to Finance in the Arab World

Development partner support for increasing access to finance for micro, small, and medium enterprises (MSMEs) covers the availability of funds as well as activities aimed at improving the financial systems. Some examples are listed below.

The International Finance Corporation (IFC) and the World Bank provide significant support in this area. They are now implementing the *Cascade approach* to investment decision-making to encourage private-sector participation, while leveraging and preserving scarce public resources for critical public investments. If commercial finance is absent, these institutions will try to address market failures and utilize risk instruments to try to encourage private investment. Finally, if necessary, public and concessional financing will then be used. This approach applies to the MSME finance space as well as other lending activities. This de facto screening mechanism for the use of public funds, combined with the IFC's new *creating markets approach,* is expected to significantly improve access to finance for MSMEs in the Arab world.

The IFC is placing the power of markets at the center of its strategy for growth and impact. It works to create markets that give new opportunities to people in the region. For example, in Lebanon, the IFC successfully worked with the private sector to expand access to capital and provide training for women entrepreneurs in areas such as business management and leadership. In the same country, an IFC client bank, BLC Bank, supported the development of a producer of organic olive oil, tea, and spices. As a result of its successful development, the company recently acquired a French franchise of organic grocery stores to operate in and around Beirut in a major success financed by an IFC client bank.

such as automated teller machines (ATMs), bank agents, retail stores, and others is much less common. The use of alternative channels is highest for resource-rich countries and lowest in FCV-affected ones. Mobile banking also is not common. For example, Global Findex 2014 data show that only 0.5 to 1.1 percent of people had mobile accounts in Egypt, Jordan, Lebanon, and Tunisia, and 11 percent in the UAE. There were 24 live mobile money services in nine countries last year.[90]

Ways to accelerate the needed diversification of the Arab world

The diversification process is happening slowly in the Arab world, and in only a few countries. As seen earlier, historical legacies, institutions and the investment climate, education and innovation, trade policies, and financial sector development all play a role in explaining the current situation.

Fostering the diversification of the region's economies is critical for job creation and economic growth. To do so implies first recognizing that the old social contract based on public-sector jobs and widespread subsidies in exchange for limited opportunity needs to be replaced. A new paradigm needs to emerge with a focus less on public-sector involvement (either directly on markets or through laws and regulations) and more on private and financial sector development—including in the service sector—with emphasis on youth and women's employment, two categories facing significant hurdles in the labor markets in the region. Policies to be implemented should be designed with this new orientation in mind.

Although such a transition is desirable, are there reasons to believe the region can overcome the obstacles that have hindered past efforts to diversify the Arab world's economies? There are signs to support cautious optimism that this can occur. First, widespread social mobilization throughout the region over the past few years has made governments aware that they need to address public dissatisfaction with lack of economic opportunity. Second, declines in external assistance and falling oil reserves in some countries are forcing governments to prioritize spending, making generous subsidies, public employment, and support to state-owned enterprises increasingly less affordable. Third, some governments in the region are showing more concerted desires to develop their private sectors. For example, some GCC countries rate very well on competitiveness indicators, such as the World Bank's Doing Business indicators and the World Economic Forum's Global Competitiveness Index, because of concerted reform efforts. Likewise, governments in some resource-poor countries are making a considerable effort to design realistic strategies to improve the quality and quantity of their exports.

Combined, these trends suggest that opportunities to engage policymakers and the private sector on intensifying diversification efforts, with a focus on effective policy implementation, are growing. In addition, the examples of some countries that have successfully diversified over the past 50 years confirm diversification to be a realistic objective for the Arab world. In particular, countries such as Chile, India, Malaysia, and Mexico faced challenges similar to those in many Arab world countries today, including conflicts, weaknesses in the business environment, and high levels of social polarization, yet they still managed to diversify by applying specific policies, such as those shown in Box 5.

Over the years, a standard and familiar set of recommendations to encourage more rapid job creation, economic growth, and diversification has been developed. These recommendations typically include:

- Focus on increasing productivity through investment policy and incentives.
- Increase the quality of the labor force to foster productivity and raise labor force participation rates.

Box 5: Success Factors for Diversification Strategies in Various Countries

Successful diversification efforts often have been supported by policies built around the following:

- **Fostering macro and institutional reform:** Key areas include maintaining macroeconomic stability, creating a business environment conducive to developing export markets, and providing necessary education and infrastructure. In Mexico, for example, exchange rate devaluation and the North American Free Trade Agreement (NAFTA) were crucial for the development of its manufactured export sector. That sector required a range of reforms to open the economy to trade and foreign investment.
- **Investing in high-productivity industrial clusters:** The objective is to increase export sophistication by focusing on specific and more technologically sophisticated manufacturing clusters rather than labor-intensive manufacturing. The governments of Indonesia, Malaysia, and Mexico relied heavily on free trade zones to encourage investment in these areas. Some states in Mexico have developed investment strategies as well.
- **Developing horizontal and vertical linkages from existing industrial clusters:** The aim is to facilitate development of networks of local suppliers around existing export industries and undertake efforts to ensure efficiency of local suppliers. Malaysia has created these linkages from palm oil and rubber, while Mexico has created extensive linkages in automobiles.
- **Using foreign capital to promote technological transfer:** Examples include preferential trade agreements, economic integration, special economic zones, tax incentives, and reduction of non-tariff barriers. Free trade zones permitting high levels of foreign ownership have been crucial for technology transfer in Indonesia, Malaysia, and Mexico.
- **Using performance-based export and tax incentives, and using access to finance to facilitate risk taking by entrepreneurs, especially micro, small, and medium enterprises:** Moving into new sectors and markets requires firms to take new risks. These incentives help alleviate some of these risks. The efforts were particularly successful in Chile and Malaysia, in part because they employed robust systems of oversight and accountability.
- **Making investments in training to ensure the availability of high-skilled workers:** Creating new economic activities requires acquiring relevant skills as well as needed infrastructure and facilities. Malaysia and Mexico are good examples of such programs, especially the development of the aerospace industry in the latter. In addition, the Government of Morocco is attempting to reduce skills mismatch through pilot programs with the private sector, including public-private partnerships, to design or operate higher education and vocational programs at targeted educational institutions. Such training programs also emphasize soft skills such as communication, disseminate information on employment opportunities, and facilitate student internships.

Diversification strategies in Dubai and Morocco share a number of similarities with those in Chile, Indonesia, Malaysia, and Mexico, including reforms to the business environment, investment incentives, economic integration, and infrastructure development. Creating a favorable business climate, increasing openness to trade and investment, and ensuring needed skills and infrastructure has been crucial for the rapid development of high-value-added service sectors in Dubai, such as finance, information and communication technologies, and logistics. Likewise, Morocco has been able to attract substantial investment in the automobile sector through tax incentives, free trade zones, and ensuring needed infrastructure and skills.

Sources

Callen et al. 2014; Cherif and Hasanov 2014; Haddach et al. 2017.

- Improve the business environment in key regulatory areas, improve access to finance and financial inclusion, and support competition and innovation.

These are sensible recommendations, supported by data, some of which have been presented before. However, they lack prioritization and do not apply very well to fragile countries or countries where the vast majority of labor market entrants face no realistic alternative to self-employment or employment in microenterprises, yet many countries in the region fit into either or even both these categories. In addition, resource-rich countries also tend to have challenges to job creation that standard prescriptions may overlook.

It is therefore useful to look at possible ways forward in two steps: (1) the definition of a set of core policies that should be applied to all countries, and (2) additional policies more specifically designed, relevant, and feasible for specific types of countries—as reflected in groupings such as FCV-affected states, resource-poor countries, and resource-rich countries. The core policies are medium- to long-term policies in their effects, but are nonetheless critical for any diversification endeavor; the latter often have short- to medium-term impacts.

The core policies

The building blocks of any diversification and growth efforts, the core policies, rely on elements present (to a varying degree) in any diversified economy: human capital, innovation, and macroeconomic policies.

The first set of key policies, adjusted to country circumstances, revolves around *improving education* and *fostering innovation.* The former typically involves promoting access to education, increasing literacy, reducing the gender gap, and ensuring sustained government financing at appropriate levels. The focus should be on the quality of the education provided and on how to reduce skills mismatch between the needs of the productive sectors and the knowledge and skills of the young. This typically implies significant involvement of the private sector in the design and implementation of such policies, especially at the professional and vocational level.

Fostering innovation typically involves creating an enabling environment that includes a modern information and communication technologies (ICT) infrastructure providing an appropriate basis for the development of a digital economy, support for R&D, and strengthening linkages to global knowledge. The objective is to help develop an appropriate ecosystem and support the adoption of productivity-enhancing technologies that help to foster export diversification. Performance-based tax incentives can also be useful to support innovation. Countries that have been successful at fostering innovation tend to build tax systems that include low taxes, a regime of R&D tax incentives, an intellectual property/royalty payments tax regime, and incentives for capital investment. In addition, tax breaks can also be considered.

Second, these core policies should include *policies aimed at sound macroeconomic management*—including appropriate countercyclical fiscal policies to contain commodity cycles that destabilize traded sectors and policies to establish competitive exchange rates. Sound macroeconomic management would help reduce volatility and encourage investment in new tradable sectors. Policy shifts should be avoided as much as possible to establish the credibility of such policies and help economic agents making sound decisions.

Targeted policies: States affected by fragility, conflict, and violence

Given that FCV-affected states in the Arab world tend to have weak institutions, damaged infrastructure, and poor investment climates, these countries face steep challenges to economic diversification and job creation. Moreover, the end of the active conflicts will not inevitably lead to conditions conducive to diversification. Rather, available evidence from other regions suggests that relapsing into conflict is likely if economic conditions are poor, a situation that currently exists in many of the region's FCV-affected states. Ensuring these outcomes do not occur requires extensive and extended engagement with external actors to provide economic opportunities in conflict-affected areas and to rebuild damaged infrastructure needed to support productive economic activity. Yet private-sector development programs in these states often tend to be modest in scope and scale. As a result, they frequently fail to have a significant material impact since they often do not have a coherent focus on sustainability and/or applicability to local contexts.[91]

Furthermore, the usual recommendations to improve the business environment, increase the quality of education, or build government capacity alone are insufficient for these countries. First, FCV-affected states have weak capacity and policies may take a long time to be implemented. Yet they face immediate economic, political, and social challenges that need to be addressed right away to maintain stability in the short and medium term. Second, even if governments are serious about enacting reforms, the private sector may not respond until it is convinced the policies are effective and credible.[92] Although institutional reforms and projects to rebuild infrastructure are necessary to support economic diversification, they will take time. There are parallel processes that governments, the private sector, and donors can undertake to facilitate private-sector investment in FCV-affected states while governments work on longer-term reforms. For these to succeed, they must possess the following characteristics:[93]

- sufficient funding to create a sustainable impact,
- partnerships with local business people and/or stakeholders,
- creative approaches using local knowledge to support vulnerable populations,
- small or pilot projects to start, and
- sufficient time for capacity building.

The following programs—provided they have the above characteristics—have a good chance of success and will address key drivers of fragility:

- Active labor market programs might have an important role to play in FCV-affected states. Programs addressing inadequate skills, insufficient information about job opportunities, and mobility constraints can prove useful for quickly connecting people to jobs and restarting economic activity, leading to future diversification.
- Targeted policies that promote diverse economic activity, create jobs, and increase the quality of jobs are likely to be appropriate. Programs helping to address obstacles facing vulnerable groups (such as women at risk of being cut out of the labor market, ex-combatants and youth at risk of engaging in violence, or the displaced) and targeted interventions promoting investments and growth in certain subsectors, value chains, or lagging regions are particularly worth considering.

Efforts to develop and/or revive the productive sectors of an economy in FCV-affected states need not rely on the efforts of donors alone. Rather, private-sector investment, including FDI, can occur in FCV-affected states, even during conflict. Lebanon is an excellent example. Despite very high levels of political instability, it has sustained private-sector investment of about 23 percent of GDP and FDI of approximately 8 percent of GDP over the past decade. FDI has taken place in several sectors, including consumer retail, financial services, and food and beverages. Successful private-sector investment in FCV-affected states requires finding promising business opportunities given existing constraints and uncertainties. "De-risking and retaining investment, targeting investment promotion toward realistic investment opportunities, and

Box 6. Some Firm-Level Support Policies for Export Diversification

Policies aimed at improving firm's ability to become exporters and/or to export more include:

Supporting new or first-time exporters, which would require training or retraining, on a demand-driven basis, on issues related to access to export markets (including regional markets) and alleviating constraints linked to export finance. To do so, in the short run, may entail developing guarantee schemes,[1] matching grants,[2] or business plan competitions with a focus on exports. In the longer run, this would entail improving (among other things) the working of the financial sector by improving collateral regulations, credit information systems, and lending technologies such as mobile banking.

Supporting existing firms to access export markets, which would require first improving the working of existing export promotion institutions by streamlining them and increasing their focus on the service sector, ensuring that regional trade is part of their mandate, and making regular market research and information services available. Furthermore, to overcome asymmetries of information, registries could be developed (and existing ones updated) to include not only foreign suppliers but also, very importantly, regional suppliers. Support should also be provided to firms to help them comply with regulations in destination markets such as the testing and certification of products, consumer safety regulations, health regulations, and traceability of products.

Notes

1 For example, Tunisia's Preshipment Export Finance Guarantee successfully supported Tunisian micro, small, and medium enterprises (either newly established firms or enterprises with little experience in export markets) that had difficulties in obtaining pre-financing to fulfill export orders.

2 Results from the Tunisian FAMEX matching grant suggest that export promotion programs may have induced firms to diversify, although the effect does not seem to last; see Cadot et al. 2012.

optimally formalizing the economy to promote linkages between foreign and domestic investment are key elements of such a strategy."[94]

Targeted policies: Resource-poor countries

The region's resource-poor countries, Egypt, Jordan, Morocco, and Tunisia, have implemented reforms that have increased the dynamism of their private sectors. Exports of labor-intensive manufactured exports alone are unlikely to be sufficient to further diversify their economies because of technological change and competition from low-wage economies in East Asia. For example, China's level of income is similar to that of resource-poor countries in the Arab world, but China is much more competitive. Instead, opportunities for resource-poor countries to diversify will probably need to occur by increasing productivity and developing their service sectors.[95] Besides the core policies underlined earlier, this approach would imply the need to address the following policy areas:

- **Reform the business environment in key areas.** This should include encouraging the development of MSMEs and start-ups, notably in services, and ensuring through effective competition policy that dominant firms do not undermine market competition and do not derail changes. Policies aimed at reinforcing investor protection, enforcing contracts, and strengthening insolvency regimes should be implemented since these are three important weaknesses in their regulatory framework. Furthermore, policies that encourage risk-taking (such as tax incentives) and that facilitate technology transfer and FDI can be especially useful.
- **Enhance access to finance for MSMEs.** Firms in resource-poor countries tend to be very small. According to the World Bank's Enterprise Surveys, in the 2010s, the average firm in Egypt, Jordan, Morocco, and Tunisia had 14, 16, 20, and 20 employees respectively. MSMEs in these four countries experience much higher barriers to access to finance than the small number of large and well-connected firms (either public or private). Measures to increase bank competition, strengthen banks' capacity to assess credit risk, improve contract enforcement, and reduce government reliance on banks for financing can help to make credit more easily available to MSMEs.
- **Reduce firm-level export barriers.** Develop and use instruments—the depth and width of which depend on the fiscal position of each country and its governance abilities—aimed at improving firms' abilities to become exporters and/or to export more, whether they are confirmed exporters or firms trying to enter export markets (Box 6). This would naturally lead to increased export diversification.[96] A key constraint to access to export markets is often the lack of information, training,[97] and export finance.[98]
- **Develop infrastructure, reduce non-tariff barriers, and seek better regional integration.** Egypt and Jordan have relatively high effective tariff rates according to the World Bank's Overall Trade Restrictiveness Index, while infrastructure in Morocco and Tunisia are below average for the region. Regional integration and better use of trade opportunities with the European Union are especially important for developing the service sector of resource-poor countries. Besides expanding firms' capabilities (see the core policies described above), measures aimed at improving compliance with international regulations related to intellectual property rights, harmonizing and simplifying the taxation system, harmonizing and simplifying labor regulations, and improving government procurement regulations will help develop regional integration.[99]

- **Expand employment opportunities for women and youth.** Governments can change regulations to increase employment among these populations. For example, the government of Jordan instituted maternity leave benefits—which was not an employer liability—that raised women's employment by 31 percent.[100] This type of initiative could be replicated elsewhere in the region. Similarly, private sector–led programs helping youths to develop the soft skills most required by the labor market and to become successful entrepreneurs are important tools to foster youth employment, new economic activity, and ultimately diversification.

Targeted policies: Resource-rich countries

Resource-rich countries face distinct and significant challenges to diversification and job creation. Volatility induced by commodity price swings, for example, can deter investments in tradable sectors. In addition, production linkages with the rest of the economy are relatively limited and direct creation of employment in the resource sector is often minimal. Some stable resource-rich countries in the Arab world, notably Kuwait, Qatar, and the UAE, also face limited pressure to undertake reforms that will diversify their economies because they possess sufficient resources to maintain the status quo.[101] For these reasons, even in those resource-rich countries in the Arab world that rate well on the quality of their institutions and investment climate, such as Qatar and the UAE, obstacles to diversification remain. Although country specifics vary widely, existing research suggests particular types of policies that can be useful in supporting economic diversification.[102] They should include policies that:

- **Significantly reduce (as much as possible) restrictions on trade in services.** Many resource-rich countries in the Arab world would like to follow the example of Dubai: to diversify by creating high-value-added service sectors in areas such as finance, ICT, and transport. Restrictions on trade in services undermine these objectives.
- **Reduce energy subsidies** to remove bias toward energy-intensive activities and noncompetitive legacy activities.
- **Implement business environment reforms to produce a more competitive private sector.** This includes encouraging the development of MSMEs and start-ups, notably in the service sector, and ensuring through effective competition policy that dominant firms (whether state-owned enterprises or large well-connected private firms) do not undermine the development of the private sector. Policies aimed at reinforcing investor protection and insolvency regimes should be implemented because these are two important weaknesses in resource-rich countries' regulatory framework. Furthermore, policies that encourage risk taking, such as access to finance and tax incentives, and that attract FDI and facilitate technology transfer can be especially useful if they are properly designed and implemented.
- **Lower firm-level barriers to export.** Develop and use instruments aimed at improving firms' ability to become exporters and/or to export more, whether they already are exporters or are trying to enter export markets (see Box 6).
- **Improve access to finance for MSMEs.** The financial sector is well-developed in many resource-rich countries in the region. Nevertheless, MSMEs continue to face considerable barriers in access to finance. Regulatory reforms, strengthening the financial infrastructure, and creating more competitive banking sectors can assist in facilitating access to finance for MSMEs.
- **Make private-sector employment more desirable.** Many resource-rich countries in the Arab world make private-sector employment less desirable than public-sector employment by providing compensation packages to government employees that are not widely available in the private sector. Transforming these benefits into more broad-based social welfare programs can make private-sector employment more attractive. Similarly, limiting salary increases in the public sector and state-owned enterprises can help—over the medium term—to reduce compensation differentials.
- **Target vertical and/or sector-level policies to further develop linkages from the natural resources sectors to the rest of the economy.** These policies can include specific infrastructure investments, tax measures and incentives, mechanisms to promote technology upgrading, and measures to facilitate access to related markets.

Conclusions

This chapter has presented an overview of diversification in the Arab world, looked at trends in the region, and offered explanations for the observed outcomes. It has concluded with recommendations to create more diverse economies in the region, with an emphasis on policies tailored to specific country circumstances. Diversification in the Arab world is especially important for accelerating the region's sluggish rates of new job creation. Recent trends in the Arab world, including reforms to the business environment, rising levels of social demands, and declines in external assistance and revenues from exports of oil and gas provide some optimism that governments in the region may see diversification as a more urgent priority today than they have in the past.

Notes

1 In this chapter, the Arab world includes Algeria, Bahrain, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Qatar, Saudi Arabia, Sudan, Syria, Tunisia, the United Arab Emirates, the West Bank and Gaza, and Yemen. Three other countries from the Arab League—Comoros, Djibouti, and Somalia—are not included because of a lack of recent data.

2 Hesse 2008.

3 Abouchakra et al. 2008; Gelb 2010; IMF 2012; Rodrik 2005.

4 Population projections are based on data from the World Bank's *World Development Indicators,* available at https://data.worldbank.org/data-catalog/world-development-indicators.

5 Abouchakra et al. 2008; Gelb 2010; IMF 2012; Rodrik 2005.

6 The correlation between the log of real per capita income and real oil prices is 0.65 and the correlation between annual changes is 0.38 over the 1970–2015 period. Although countercyclical fiscal policy can mitigate these changes, more diverse economies typically have superior economic resilience.

7 Malik and Awadallah 2012; Yousef 2004.

8 Historically, economists—such as Arezki and Nabli (2012) and Cammet (2013)—typically classified the region's economies into categories such as *resource-rich, labor-importing countries; resource-rich, labor-abundant countries;* and *resource-poor countries.* It seems sensible to revise this typology to (1) *resource-rich countries* (e.g., Algeria; GCC countries including Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates; and Mauritania), (2) *resource-poor countries* (Egypt, Jordan, Morocco, and Tunisia); and (3) *states affected by fragility, conflict, and violence (FCV)* (Iraq, Lebanon, Libya, Sudan, Syria, the West Bank and Gaza, and Yemen). There are two reasons why this classification is useful for this chapter. First, four hitherto resource-rich and labor-abundant countries (Iraq, Libya, Syria, and Yemen) have become states affected by FCV over the past decade. Today they face very different challenges to diversification than Algeria, a non-FCV-affected state characterized as resource rich and labor abundant. Second, resource-rich FCV-affected states confront quite distinct obstacles to diversification from non-FCV-affected resource-rich countries in the region. This chapter places Algeria and Mauritania alongside other resource-rich countries for these reasons.

9 Crozet and Milet 2015.

10 World Bank 2017.

11 There is currently no consensus over the best method for aggregation, hence the use of several types of indicators in this chapter. Some criticize simple measures of diversification, such as the number of products exported, because they do not differentiate between high-value-added products and low-value-added ones. Alternatively, others criticize methods of determining value-added that more sophisticated indices employ. Source data can also be problematic, especially on goods and services produced for the domestic market. For example, the Economic Complexity Index (ECI) includes customs data on goods exports, which leaves aside services and domestic production, as well as non-tradable sectors. Lederman and Maloney (2012) underline that the explanatory power of this type of indicator on growth can be less than expected, as positive externalities of exporting higher productivity goods may decline over time based on rent dissipation on more mature markets and transportation costs. In practice, the design of a specific indicator is largely constrained by data availability.

12 Data on the rapid growth in exports of oil and are available at https://www.eia.gov/todayinenergy/detail.php?id=4710.

13 The MEC does not classify changes in export growth rates in Iraq, Libya, or Yemen by level of skill. See https://mec.worldbank.org/ for details about this database.

14 Agosin et al. 2012; Alaya 2012; Anand et al. 2012; Gourdon 2009; Henn et al. 2013; IMF 2014; OECD 2011; Parteka and Tamberi 2013; see Table 1 for findings and coverage of each study.

15 Callen et al. 2014.

16 These are the most recent data available; data are from the World Bank Size of the Public Sector Database available at http://www.worldbank.org/en/topic/governance/brief/size-of-the-public-sector-government-wage-bill-and-employment.

17 Benhassine 2009; Malik and Awadallah 2012; Nabli et al. 2006.

18 For example, see Amsden 1989.

19 Benhassine 2009; Yeung 2017.

20 Hvidt 2013.

21 Grey 2011; Hertog 2016; Hvidt 2013.

22 Hertog 2016.

23 For details about the UAE's Vision 2021, see https://www.vision2021.ae/en.

24 Hvidt 2009.

25 World Bank 2015.

26 Chaaban 2015.

27 Haddad 2011; Matar 2016.

28 Hill et al. 2013, p. 19–20.

29 See http://reports.weforum.org/global-competitiveness-index-2016-2017/the-executive-opinion-survey-the-voice-of-the-business-community/ for additional information on the Executive Opinion Survey.

30 Boone and Henry 2004; Chekir and Diwan 2014; Owen 2002.

31 Saadi 2016.

32 Freund et al. 2014.

33 IMF 2014, p. 43.

34 Alesina and Perotti 1996; Svensson 1998.

35 Saggi 2016.

36 Daude and Stein 2007.

37 Glewwe and Kremer 2006; Rajaram et al. 2014.

38 *Political stability and absence of violence/terrorism* measures perceptions of the likelihood of political instability and/or politically motivated violence, including terrorism. *Voice and accountability* reflects perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression and freedom of association.

39 *Regulatory quality* reflects perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. *Control of corruption* reflects perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests.

40 *Government effectiveness* reflects perceptions of the quality of public services; the quality of the civil service and the degree of its independence from political pressures; the quality of policy formulation and implementation; and the credibility of the government's commitment to such policies. *Rule of law* reflects perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence.

41 The *distance to the frontier (DTF) score* helps assess the absolute level of regulatory performance over time. It measures the distance of each economy to the "frontier," which represents the best performance observed on each of the indicators across all economies in the Doing Business sample since 2005. An economy's distance to the frontier is reflected on a scale from 0 to 100, where 0 represents the lowest performance and 100 represents the frontier.

42 See Appendix Figures A.4–A.6 for disaggregated country-level detail on Doing Business results.

43 Agosin et al. 2012; Anand et al. 2012; Hallward-Driemeier and Nayyar 2017; Henn et al. 2013; IMF 2014.

44 Hallward-Driemeier and Nayyar 2017.

45 The Higher education and training pillar of the Global Competitiveness Index has eight components: (1) secondary education enrollment rate; (2) tertiary education enrollment rate; (3) quality of the education system; (4) quality of math and science education; (5) quality of management schools; (6) Internet access in schools; (7) local availability of specialized training services; and (8) extent of staff training.

46 For more information about PISA, see https://nces.ed.gov/surveys/pisa/.

47 For more information about TIMSS, see https://nces.ed.gov/timss/.

48 World Bank 2013.

49 OECD 2012.

50 Saggi 2016.

51 World Bank 2016.

52 These data are the average for 2010–17, based on firm-level data from the World Bank's Enterprise Surveys, available at www.enterprisesurveys.org.

53 Hallward-Driemeier and Nayyar 2017.

54 According to Hallward-Driemeier and Nayyar (2017), capabilities, connectedness, and competitiveness encompass:

- *Ensuring competitiveness* through lowering unit labor costs, adopting new technologies to reduce costs of production, and creating flexible business models that can adapt to changes in global economic conditions.
- *Building capabilities* to strengthen firms' abilities to absorb new technologies.
- *Strengthening connectedness* through openness to trade in goods and services as well as adoption of new technologies.

55 Amin and Islam 2014; Amiti and Konings 2007.

56 Goldberg et al. 2008.

57 Estevadeordal and Taylor 2008.

58 Eaton and Kortum 2001.

59 Estevadeordal and Taylor 2008.

60 Trade in tasks, disaggregating production across firms and countries, is becoming increasingly common. Trade in tasks improves productivity because it allows firms to specialize in narrower elements of the production process (Grossman and Rossi-Hansberg 2006). The results are increasingly complex global production networks known as *global value chains (GVCs).* Integration with GVCs can have considerable benefits for host countries because it allows them to specialize in parts of the production processes. It can also contribute to technology transfer. See Hoekman 2016.

61 Hoekman 2016; Kowalski et al. 2015.

62 Hoekman 2016.

63 Malik and Awadallah 2012; Yousef 2004.

64 Peridy and Ghoneim 2008.

65 World Bank 2011a.

66 Malik and Awadallah 2012, p. 300.

67 Behar and Freund 2011.

68 Al-Mawali 2015; Hakiman 2015; Martini et al. 2016.

69 Martini et al. 2016.

70 Al-Mawali 2015; Martini et al. 2016.

71 Martini et al. 2016.

72 Hoekman 2016; World Bank 2017.

73 The World Bank's Service Trade Restrictiveness Index is available at http://iresearch.worldbank.org/servicetrade/.

74 Levine (2005) provides a comprehensive review of the causal links from financial sector development to economic growth. Also see Beck et al. 2000 and Levine 1997.

75 Wright 2002.

76 Haber 1991, 1997.

77 The index of financial sector development comes from the World Economic Forum. It has two components: *efficiency* and *confidence.* The former combines data on financial services meeting business needs, affordability of financial services, financing through local equity markets, ease of access to loans, and venture capital availability. The latter combines data on bank soundness, regulation of financial markets, and legal rights. See http://reports.weforum.org/global-competitiveness-index/appendix-a-methodology-and-computation-of-the-global-competitiveness-index-2016-2017/ for additional information on the construction of the index.

78 Anzoategui et al. 2010; Rocha et al. 2011.

79 Benhassine 2009; Rocha et al. 2011.

80 Al-Hassan et al. 2010; Anzoategui et al. 2010.

81 Al-Hassan et al. 2010.

82 Rocha et al. 2011.

83 Benhassine 2009.

84 Microenterprises employ 1 to 4 people, small enterprises employ 5 to 49 people, and medium enterprises employ between 50 and 250 people. See https://www.smefinanceforum.org/data-sites/ifc-enterprise-finance-gap for additional information.

85 Salem 2017.

86 Arabian Gazette 2017.

87 The *finance gap* is the difference between firm need for credit and its availability. See https://www.smefinanceforum.org/data-sites/ifc-enterprise-finance-gap for additional information on calculating these data.

88 Credit to MSMEs includes loans with a value below 50 million Dirhams (approximately US$5 million).

89 The latest data are from 2011 or 2014, depending on the country. Data are available at http://www.worldbank.org/en/programs/globalfindex.

90 GSMA 2017.

91 Examples of such programs include (1) short-term labor-intensive programs (such as Community-Driven Development, and Disarmament, Demobilization, and Reintegration) that focus on public works and repairing infrastructure; (2) skills development programs implemented without regard to market needs or potential opportunities; and (3) short-term public works programs combined with efforts to improve the national business climate and/or build government capacity. Short-term public works programs, for example, are unlikely on their own to lead to a thriving diversified private sector, higher employment, and ultimately diversification, since when the funding ends, local economic activity slumps.

92 Ragoussis and Shams 2018.

93 Liu and Harwit 2016.

94 Ragoussis and Shams 2018, p. 153.

95 Hallward-Driemeier and Nayyar 2017.

96 World Bank 2011b.

97 Cadot et al. 2012.

98 World Bank 2011b.

99 World Bank 201b.

100 IFC 2016.

101 Hvidt 2013.

102 Abouchakra et al. 2008; Callen et al. 2014; Hvidt 2013.

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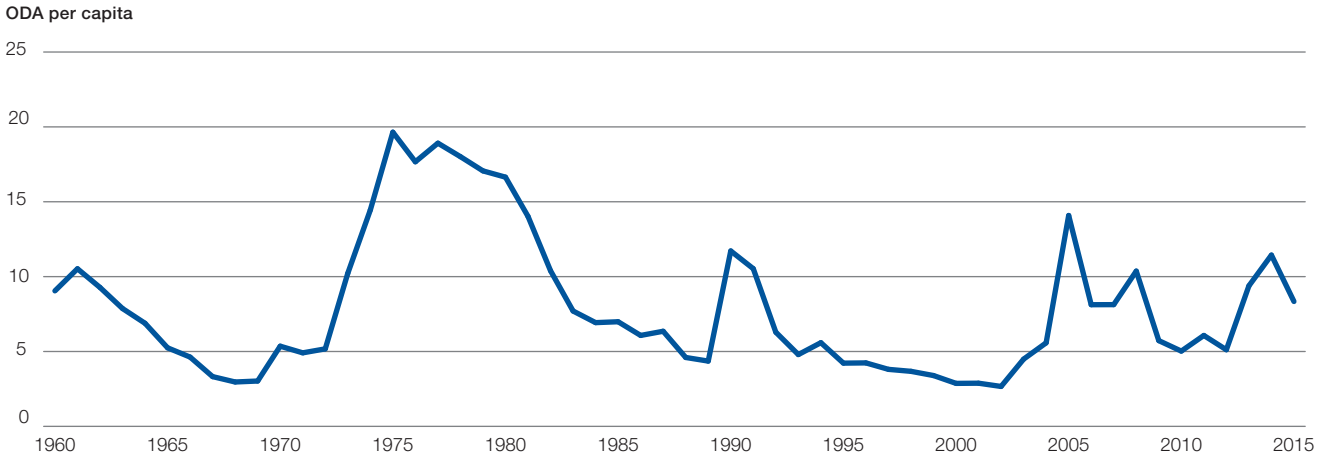
Appendix

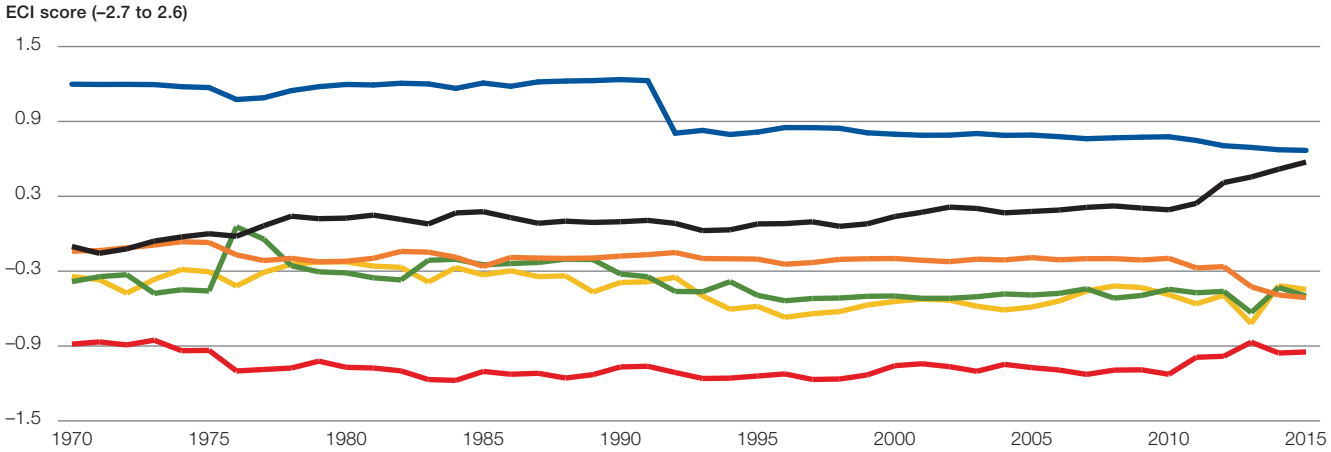
Supplemental table and figures

Figure A.1: Real per capita net ODA (US dollars), 1960–2015



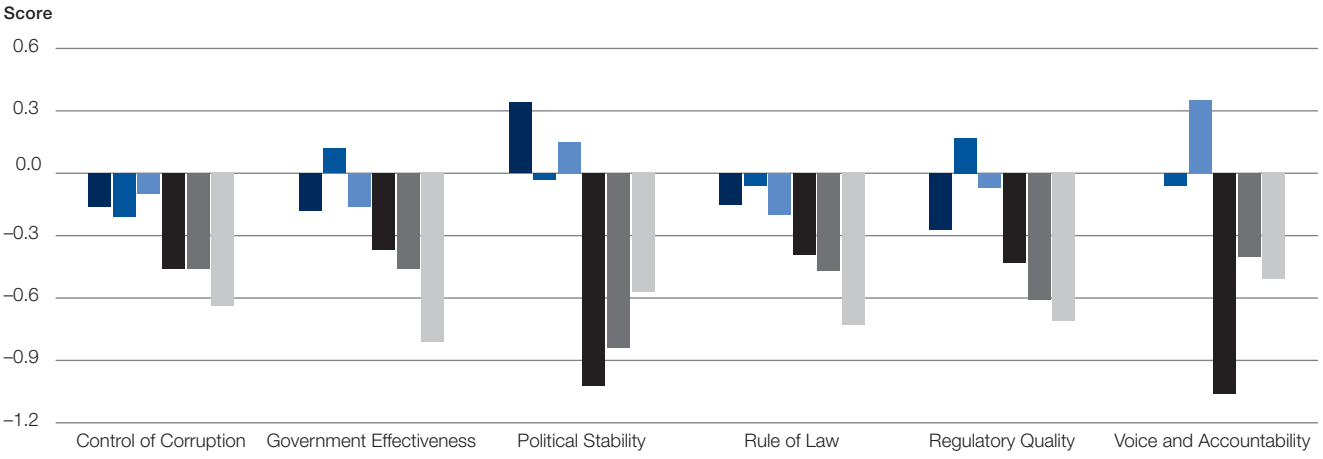
Source: World Bank, *World Development Indicators,* available at https://data.worldbank.org/data-catalog/world-development-indicators, January 25, 2018.
Note: ODA = official development assistance.

Figure A.2: Diversification by region, 1970–2015



Key: Arab world — Sub-Saharan Africa — South Asia — Latin America and the Caribbean — Europe and Central Asia — East Asia and Pacific
Source: MIT Observatory of Economic Complexity, Economic Complexity Index, available at https://atlas.media.mit.edu/en/.
Note: ECI = Economic Complexity Index.

Figure A.3: Governance Indicators by region, 2015

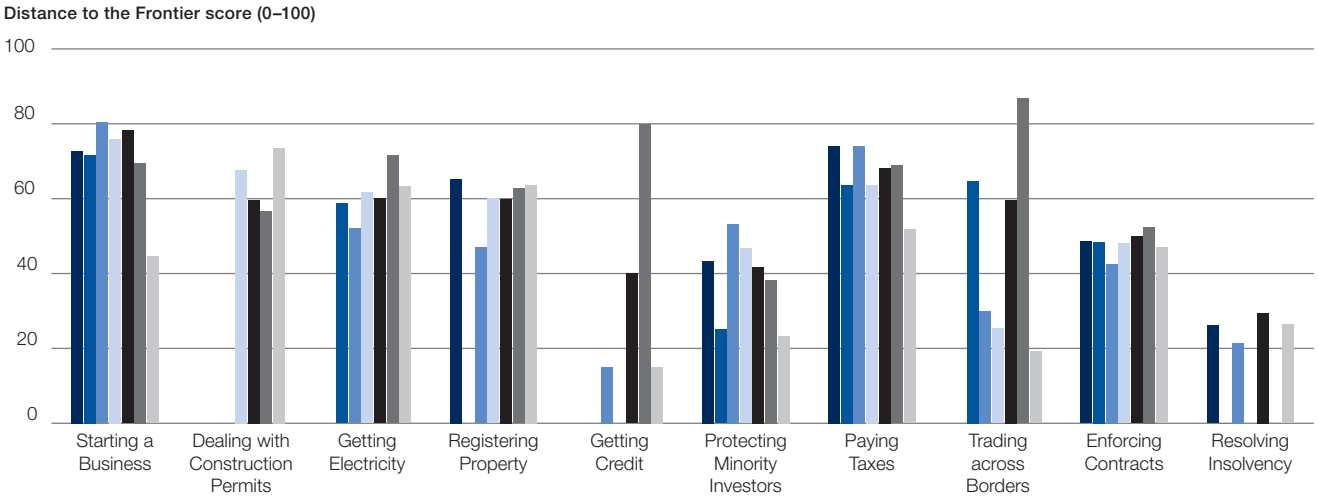


Key: East Asia and Pacific; Europe and Central Asia; Latin America and the Caribbean; Arab world; South Asia; Sub-Saharan Africa

Source: World Bank, *Worldwide Governance Indicators,* available at https://datacatalog.worldbank.org/dataset/worldwide-governance-indicators.

Note: The standard normal units of the governance indicator range from around –2.5 to 2.5.

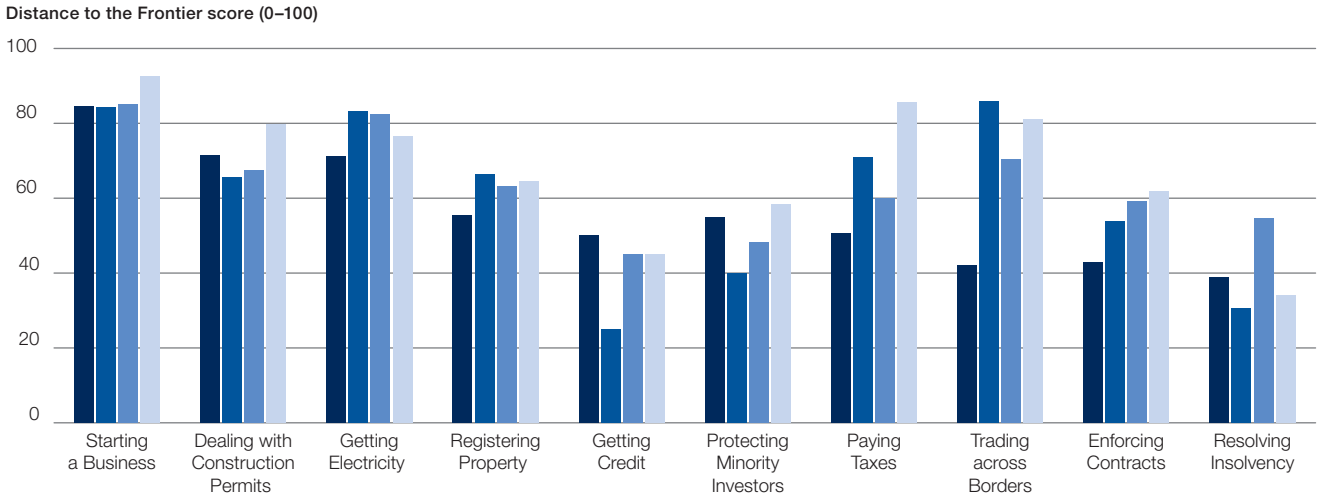
Figure A.4: Doing Business results for states affected by fragility, conflict, and violence in the Arab world, 2018 Distance to the Frontier



Key: Yemen; Libya; Syria; Iraq; Lebanon; West Bank and Gaza; Sudan

Source: World Bank, Doing Business indicators 2018, available at http://www.doingbusiness.org/rankings.

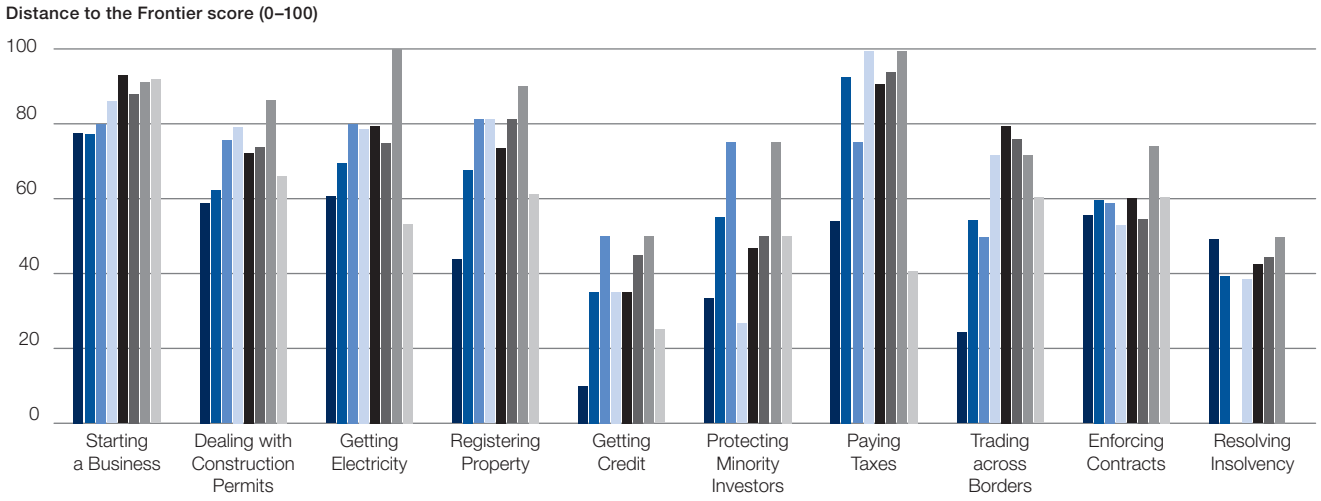
Figure A.5: Doing Business results for resource-poor countries in the Arab world, 2018 Distance to the Frontier



Key: Egypt Jordan Tunisia Morocco

Source: World Bank, Doing Business indicators 2018, available at http://www.doingbusiness.org/rankings.

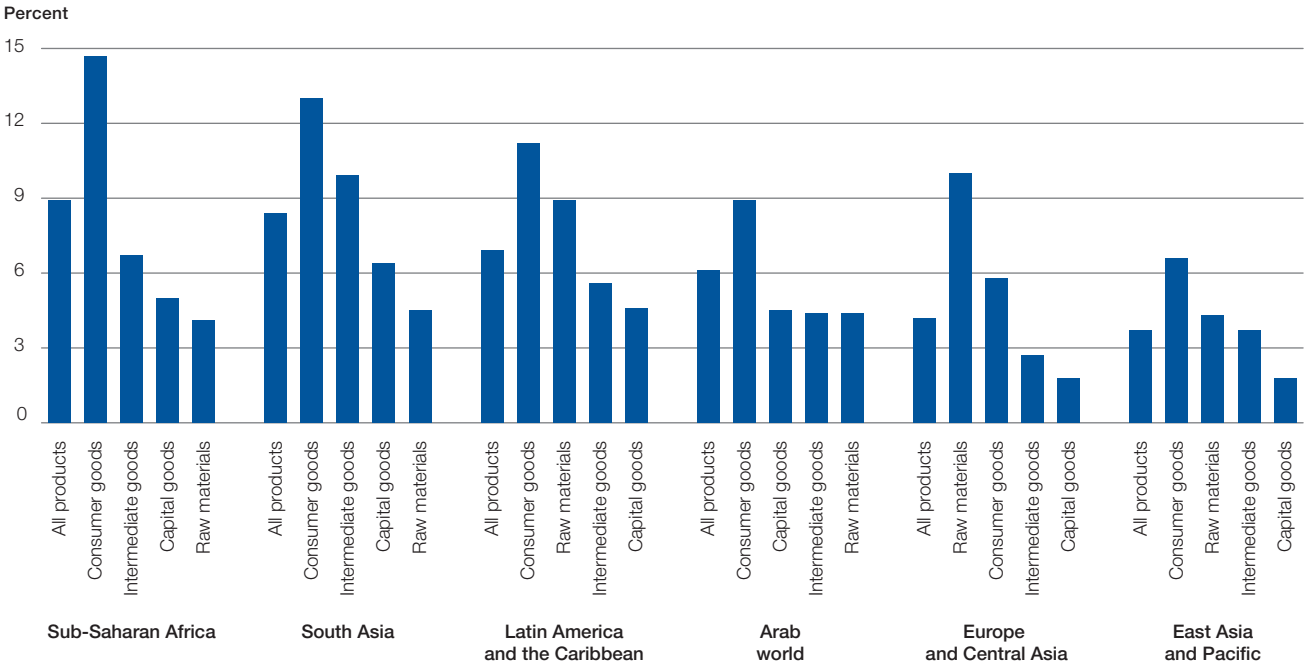
Figure A.6: Doing Business results for resource-rich countries in the Arab world, 2018 Distance to the Frontier



Key: Algeria Kuwait Saudi Arabia Qatar Oman Bahrain United Arab Emirates Mauritania

Source: World Bank, Doing Business indicators 2018, available at http://www.doingbusiness.org/rankings.

Figure A.7: MFN-weighted average by region and import type, 2016



Source: World Integrated Trade Solution, available at https://wits.worldbank.org.
Note: MFN = most favored nation.

Table A.1: Sectors with large state-owned enterprises/state presence in the Arab world

Country	Sectors
Algeria	Financial services, oil and gas, telecommunications, transport, utilities
Bahrain	Large sovereign wealth funds, financial services, metals, oil and gas, petrochemicals, telecommunications, transport
Egypt	Petrochemicals, financial services, telecommunications
Iraq	Agriculture, financial services, oil and gas, petrochemicals, transport, telecommunications,
Jordan	Agriculture, mining, telecommunications, utilities
Kuwait	Large sovereign wealth funds, cement, financial services, oil and gas, real estate, telecommunications, transport
Lebanon	Financial services, real estate, utilities
Libya	Large sovereign wealth funds, oil and gas, financial services
Mauritania	Agriculture, energy, manufacturing, mining, telecommunications, transport, utilities
Morocco	Energy, food processing, financial services, mining, telecommunications, transport, utilities
Oman	Large sovereign wealth funds, financial services, manufacturing, oil and gas, telecommunications, transport, utilities
Qatar	Large sovereign wealth funds, financial services, real estate, telecommunications, transport, utilities
Saudi Arabia	Large sovereign wealth funds, financial services, mining, petrochemicals, telecommunications, utilities
Sudan	Agriculture, financial services, media, manufacturing, oil and gas, transport
Syria	Food processing, oil and gas, financial services, telecommunications, transport
Tunisia	Energy, food processing, financial services, telecommunications, transport, utilities
United Arab Emirates	Large sovereign wealth funds, oil and gas, financial services, real estate, telecommunications, transport
Yemen	Agriculture, cement, oil and gas, electricity, construction, telecommunications, utilities

Source: Authors' compilation and estimates based on public sources.

Chapter 1.3

Entrepreneurship in the Arab World: Status, Challenges, and the Role of Government

ALI ABUKUMAIL, FALEH M. F. E. ALRASHIDI, and **KHALEDA ATTA,** World Bank

The Arab world faces a range of challenging economic conditions. These include more perennial issues such as the need for employment for the region's large youth population and the weak participation of women in the workforce, as well as others that have emerged or intensified since the Arab Spring such as political instability, conflict, and the large-scale displacement of people.[1] With traditional pathways to job creation such as manufacturing export-led growth and diversification not sufficiently materializing and given the need for inclusive approaches to respond to development challenges, Arab world policymakers are promoting entrepreneurship as a key strategy to create jobs, reap the benefits of the new (digital) economy, and diversify their economies.

Global experience shows that entrepreneurship stimulates job creation because most new jobs are created by young firms (three to five years of age), which contribute to higher sales and productivity.[2] How successful this stimulation is, however, varies since it builds on the maturity of the underlying ecosystems that support entrepreneurship. This is a critical matter that Arab world policymakers must take into account if they are to succeed at leveraging entrepreneurship to aid in responding to some of the region's core challenges, particularly the jobs challenge.

Setting the context for entrepreneurship and diversification

This chapter aims to summarize the latest trends affecting entrepreneurship across the Arab world. In addition, links between entrepreneurship and diversification are explored, and policy recommendations are presented at the end of the chapter to provide governments with options for addressing key issues facing entrepreneurship development in the region.

The analysis is based on publicly available data from internationally recognized expert sources,[3] as well as a recently conducted World Bank Group survey of leading Arab world entrepreneurs during the World Economic Forum on the Middle East and North Africa held in Jordan in May 2017. The survey covered 100 entrepreneurs, selected from Arab countries by a panel of World Economic Forum, International Finance Corporation (IFC), and private-sector representatives. Surveyed individuals represented entrepreneurs who have managed to successfully scale up their businesses. The survey revealed insights into the characteristics and traits of these entrepreneurs, the current landscape of challenges, support received along their journeys, and their perceived opportunities for future growth.

Defining and measuring entrepreneurship

Although often discussed and associated with the widely known concepts of innovation, risk, and initiative, there is no single globally accepted definition for the term *entrepreneurship.* A recent World Bank literature review of definitions (Box 1) shows that historically, and still today, researchers often use a wide range of terms, sometimes interchangeably, to describe entrepreneurship depending on the perspective from which the topic is being viewed.[4] This chapter defines an *entrepreneur* as a person or firm willing to take risks to create new economic opportunities and/or to introduce new products, services, or production processes to the market.[5]

Measuring entrepreneurship is also a challenge. Although some organizations globally track entrepreneurship-related indicators (e.g., the Global Entrepreneurship Index, the World Bank's Enterprise Surveys and Doing Business, the World Economic Forum's annual Executive Opinion Survey, etc.), research tends to be most consistent for Organisation for Economic and Co-operation and Development (OECD) members and other high-income countries, with varying levels of information available for developing countries, including many in the Arab world.

Links between economic diversification and entrepreneurship

Links between diversification and entrepreneurship can take many forms.

Economic complexity and entrepreneurship indexes

Research has shown that countries and regions characterized by higher entrepreneurial activity tend to have higher growth rates and greater job creation, the main pathways through which to grow the global middle class.[6] Entrepreneurial activity, in turn, is affected by the strength of the entrepreneurial ecosystem, which is a mix of attitude, resources, and infrastructure needed to support entrepreneurship.

There is a positive correlation between the Economic Complexity Index (ECI), which measures the relative knowledge intensity of 124 economies,[7] and the Global Entrepreneurship Index (GEI), which measures the health of the entrepreneurship ecosystems in 137 economies.[8] This correlation suggests that countries that have managed to diversify exports tend to also have stronger ecosystems and higher levels of entrepreneurial activities. Figure 1 shows that top-performing countries in the ECI ranking tend to also perform well in the GEI. Arab world countries follow the same trend, yet they lag in performance. The average ECI ranking for Arab world countries is 71.4; the average

Box 1: Definitions of Entrepreneurship

Entrepreneurship: The process of *starting* a business; using a manifest ability and willingness of individuals—on their own, in teams, within and outside existing organizations—to perceive and create new economic opportunities (new products, new production methods, new organizational schemes, and new product-market combinations) and to introduce their ideas to the market, in the face of uncertainty and other obstacles, by making decisions on location, form, and the use of resources and institutions.

Transformational/opportunity/growth entrepreneur: An entrepreneur who *aims* to create a large, vibrant business that grows far beyond the scope of an individual's subsistence needs and provide jobs and income for others.

Subsistence/necessity entrepreneur: A person who engages in entrepreneurial activity chiefly as a means of providing subsistence income to him- or herself. Subsistence entrepreneurs typically do not—and do not aspire to—grow the business to the point of creating employment opportunities for workers outside of their immediate family.

High-growth entrepreneur: A high-growth entrepreneur leads, founds, organizes, or runs a business that can be classified as *high-growth.*

Entrepreneurial firms: van Praag and Versloot, in a 2007 systematic review of the literature on the contributions of what they term *entrepreneurial firms,* defined these as enterprises with fewer than 100 employees that are younger than seven years old and are new entrants to a particular market.

High-growth/fast-growth business/ gazelle/high-impact firms: The United Kingdom and the OECD define *high-growth businesses* as firms with 10 or more employees that experience average annual growth in employment or turnover of 20 percent or more over three years. MIT economist David Birch introduced the term *gazelle* in the 1980s and defined it as a firm that has at least US$100,000 (roughly US$250,000 today) in annual revenues that sustains 20 percent annual revenue growth over a four-year period. Economist Zoltan Acs expands on the work of Birch to introduce employment growth as a further way to qualify the term *gazelle. High-impact firms* are gazelles (per the definition above) when they have an employment growth quantifier of two or more over a four-year period.

Sources: Olafsen and Cook 2016; van Praag and Versloot 2007; World Bank 2016a.

GEI ranking is 55.8. The United Arab Emirates (UAE), Jordan, and Tunisia are the top performers on the ECI. On the GEI, the top performers are Qatar, the UAE, and Oman.

Global value chain links to entrepreneurs: A pathway for diversification

For some countries, stronger links to global value chains (GVCs) are central mechanisms for achieving greater economic diversification and creating new opportunities for entrepreneurial small- and medium-sized enterprises (SMEs) to improve their productivity and growth. A recent World Bank publication states:

> [T]he ability of SMEs and firms in low-income countries to be successful in GVCs (to adopt new technologies swiftly, learn by doing, innovate, and optimize their production) depends more heavily on framework conditions and externalities from the operating environment. Public goods and externalities that matter are wide ranging: from world-class logistics and ICT [information and communication technology] connectivity, to open markets, to the business environment, to the educational and vocational system, to the existence of a well-functioning innovation infrastructure and efficient forms of financing.[9]

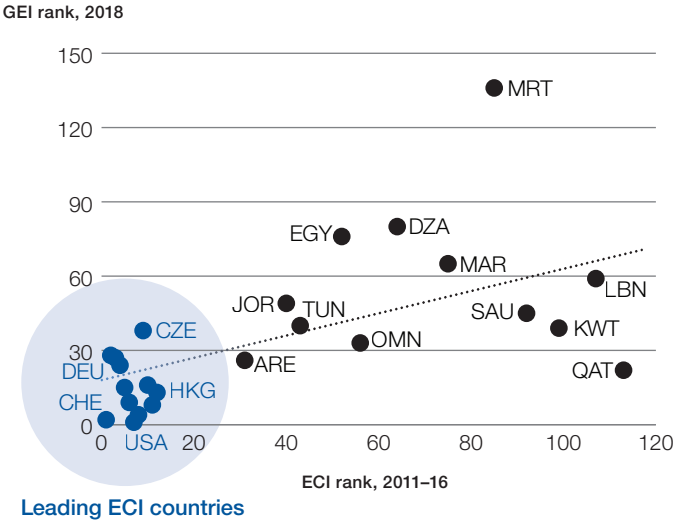
For Arab world countries, it is evident that not all of the above conditions exist. In addition, the same authors claim that when these conditions are not present:

> Entrepreneurs may opt for suboptimal strategies that do not foster productivity and economic growth. These strategies include seeking loans from friends and family instead of formal sources of capital; limiting investment in technology that would boost productivity and growth; not hiring talent that can help the business grow and thrive over the long term; failing to adopt tools for identifying new market opportunities; and not seeking opportunities for scaling their companies, but instead putting the firms on a below-potential growth path.[10]

As confirmed in latter sections, this phenomenon seems to prevail across Arab world countries and across countries of different income groups, but it is also one that concerted efforts from governments have the potential to improve.

Such challenges in the Arab world can seem even more daunting to tackle in the context of low levels of economic diversification. However, some national diversification strategies have managed to leverage foreign direct investment (FDI), innovation, and entrepreneurship policies for private sector–led growth through exports and greater participation in GVCs, as the chapter on diversification notes. Countries such as Ireland, Norway, and Malaysia, for example, have managed to diversify by widening the scope of their economic activities (industries and services) through focusing on innovation-driven strategies for increasing exports. This focus is supported by incentives and dedicated institutions to enhance domestic value-added through concerted support to SMEs and entrepreneurs. Human capital

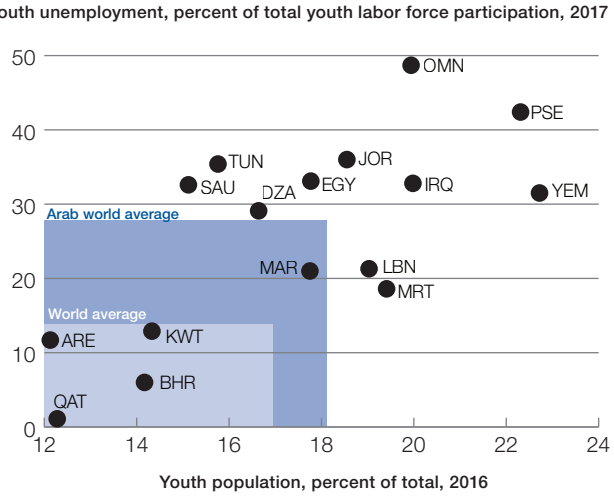
Figure 1: Correlation between diversification and entrepreneurship



Sources: MIT Observatory of Economic Complexity, Economic Complexity Index, available at https://atlas.media.mit.edu/en/; Global Entrepreneurship Index, available at https://thegedi.org/global-entrepreneurship-and-development-index/, available at https://thegedi.org/global-entrepreneurship-and-development-index/.

Notes: R^2 = 0.3666. This figure compares Arab world countries to the 12 top-ranked countries on the ECI. ECI = Economic Complexity Index; GEI = Global Entrepreneurship Index. The three-letter economy codes refer to the ISO Country Codes. These are: ARE = United Arab Emirates; CHE = Switzerland; CZE = Czech Republic; DEU = Germany; DZA = Algeria; EGY = Egypt; FRA = France; GBR = United Kingdom; HKG = Hong Kong SAR; IRL = Ireland; ISR = Israel; JOR = Jordan; KOR = Republic of Korea; KWT = Kuwait; LBN = Lebanon; MAR = Morocco; MRT = Mauritania; OMN = Oman; QAT = Qatar; SAU = Saudi Arabia; SGP = Singapore; SWE = Sweden; TUN = Tunisia; USA = United States.

Figure 2: The jobs challenge in the Arab world



Source: World Bank, *World Development Indicators,* available at https://data.worldbank.org/data-catalog/world-development-indicators, January 25, 2018.

Note: The three-letter economy codes refer to the ISO Country Codes. These are: ARE = United Arab Emirates; BHR = Bahrain; DZA = Algeria; EGY = Egypt; IRQ = Iraq; JOR = Jordan; KWT = Kuwait; LBN = Lebanon; MAR = Morocco; MRT = Mauritania; OMN = Oman; PSE = West Bank and Gaza; QAT = Qatar; SAU = Saudi Arabia; TUN = Tunisia; YEM = Yemen..

development, with special attention to skills needed by these upcoming industries, has also been a critical part of the success stories of similar countries such as the Republic of Korea and Finland.

World Bank research has shown that increasing entrepreneurial activities in the private sector, along with aiding domestic firms to grow large enough to participate in GVCs as suppliers, can spur economic growth and promote higher productivity while supporting the achievement of economic diversification goals. GVCs can help countries engage in economic upgrading or moving to higher-value-added tasks, both of which can support diversification. Furthermore, domestic firms with aspirations for global reach tend to have the most capacity to innovate and grow.[11] Global practices confirm such trends, where, for example, Korean conglomerates Hyundai, Samsung, LG, and Lotte have recently spearheaded growth and exports by providing supply opportunities and global links to local SMEs and entrepreneurs. In Finland, Nokia contributed to the country's economic boom in the late 1990s and most of the 2000s. In addition, some governments managed to attract FDI to integrate with GVCs (e.g., Ireland and Costa Rica), and have taken the opportunity to link these investments with local suppliers, which are mainly SMEs. These local suppliers in turn have helped these countries to enhance their labor skills and productivity; adopt new technologies; and, as a result, diversify their economies. All these lessons can be useful for the Arab world.

Tech start-ups also can create "new" jobs, as opposed to "old" jobs that are being replaced by technology.[12] However, the majority of new jobs come from traditional industries that have introduced technology into their processes as a result of competitive pressures from new business models generated by start-ups or innovation absorption from the start-up ecosystem. For example, many banks and retail companies are facing greater competitive pressures to develop mobile applications.

Leading firms in their respective industries are increasingly innovating approaches to tap into the power of entrepreneurship in introducing new business models and diversifying products. Such approaches tend to involve cooperation between large firms and professional accelerators to jointly run cohorts of start-ups and provide them with the financial resources, mentorship, and networking support needed to put forward new business models for their industries. As an early adopter of financial technologies (fintech), Barclays Bank in the United Kingdom partnered with TechStars in 2013 to produce a new generation of fintech businesses. Many other global and regional companies are following the same trend (see Box 2 for observations of this recent trend).

Box 2: Corporate Diversification through New Business Models

Large corporations often find it hard to innovate regardless of whether the innovation in question is in terms of products, services, or entire business models. They are better in executing their current business models than finding new ones, and nimble start-ups have been able to disrupt legacy industry by innovating fast and scaling up. But both corporations and start-ups stand to benefit from collaborations based on solving mutual needs. The corporations learn ways to adapt to market changes and find new business models and opportunities. For the start-ups, collaboration with corporations can be key to scaling their business and developing viable products and services.

Wamda, a regional catalyst for entrepreneurship development in the Arab world, has suggested *collaborative entrepreneurship,* which they define as a mutually beneficial engagement structure between large corporations and start-ups, as a recommended activity in the Arab world for developing the regional entrepreneurial ecosystem, supporting diversification, and addressing community needs.[1]

Globally, this trend toward a collaborative approach has been emerging since 2013. More and more collaboration between large corporations and start-ups is occurring in diverse ways. These collaborative relationships aim to foster innovation from the outside—for example, by growing and acquiring innovative start-ups or by promoting innovation. For instance, Google alone has acquired over 150 companies since 2008.

In the United States, Accenture Interactive, Marriott International, and 1776 launched the Travel Experience Incubator in 2017, a new program designed to discover and foster start-ups working on innovative technologies and solutions to improve the travel experience.[2] The incubator brings together the hospitality industry expertise of Marriott International and its official Travel Experience Incubator partner, Accenture Interactive, along with participating start-ups, to co-create unique and inventive new experiences for travelers.

In the United Kingdom, Barclays Bank and TechStars started a collaboration in 2013 to support innovative business models in financial technology (fintech).[3] This unique partnership brings two networks together into one accelerator program that offers entrepreneurs unprecedented access to industry experts as well as world-class mentors and investors. The program has graduated 100 start-ups since its inception.

In Egypt, the American University in Cairo (V Labs) engaged with Commercial International Bank (CIB) in July 2017 to run a 12-week acceleration program for fintech entrepreneurs. Since then, V-Labs and CIB have implemented several acceleration programs, which aimed to expand access to finance for the unserved or underserved and develop market-driven solutions for CIB.

In the UAE, Wamda started the TestBED collaborative program with Marriott in September 2017. TestBED provides start-ups with an invaluable opportunity to test their products/services for 10 weeks within an operating Marriott hotel in a major city in the Middle East or Africa. During this period, start-ups will be able to receive feedback from Marriott guests and associates to help develop their product.

Notes

1 Haddad et al. 2016.

2 Marriott 2017.

3 Barclays No date.

Sources: Olafsen and Cook 2016; van Praag and Versloot 2007; World Bank 2016a.

A context for entrepreneurship in the Arab world

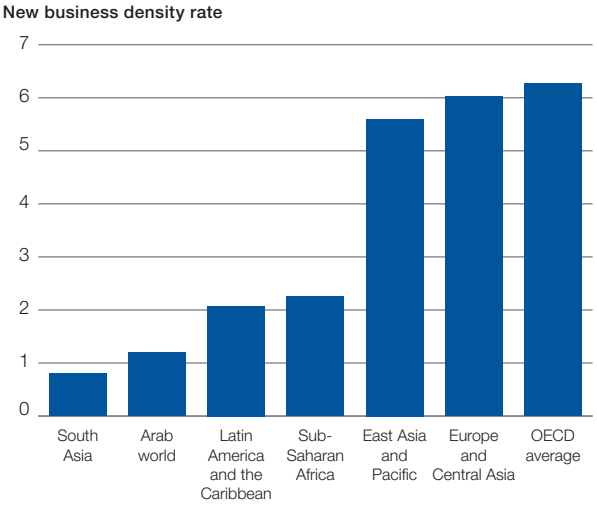
It is important to keep macroeconomic conditions in perspective when examining specific issues relating to entrepreneurship. The latest growth trends in the region show that economic performance varies widely across Arab countries. Even as economic growth in the region picked up in 2016, it slowed in 2017 and is expected to pick up subsequently in 2018 and 2019.[13] These trends are particularly worrying for the region's oil exporters—the growth rate in the Gulf Cooperation Council (GCC) countries was estimated to be under 1 percent in 2017 and is forecast to rise to 2.7 percent in 2019, while developing Arab world countries fare somewhat better,[14] with a 3.4 percent growth rate in 2017 that is projected to rise to 3.9 percent in 2019. Volatility in macroeconomic conditions makes it difficult for policymaking to take a stable, forward-looking approach to the multi-dimensional challenges facing the region.

As Figure 2 shows, youth unemployment is an especially pressing challenge in the region. Average youth unemployment in the Arab world is more than twice the world average; only a few of these countries have rates lower than the world average. Average youth unemployment in the region is 27 percent; in Oman and the West Bank and Gaza it exceeds 40 percent. The public sector remains the largest employer in many Arab countries, accounting for 60 to 80 percent of total formal employment in the GCC economies, Egypt, Iraq, Jordan, and Tunisia.[15]

Entrepreneurship can offer a key pathway for growth and employment in the Arab world. Through the establishment of new, small firms with the potential to grow into medium and sometimes large ones, entrepreneurs create jobs. SMEs are vital to national economies because they account for a high share of total employment and GDP. They are at the core of the business operations of many firms as suppliers, retailers, and customers. The IFC estimates that 7 in 10 formal jobs are provided by SMEs (9 in 10 in some low-income countries), and 4 out of 5 new formal jobs in emerging markets are created by SMEs, young businesses, and start-ups.[16] In the Arab world, SMEs represent 80 to 90 percent of all businesses in the formal sector.[17]

The rate of creation of new companies in the Arab world has been modestly growing over the decade 2006–16, but it still lags

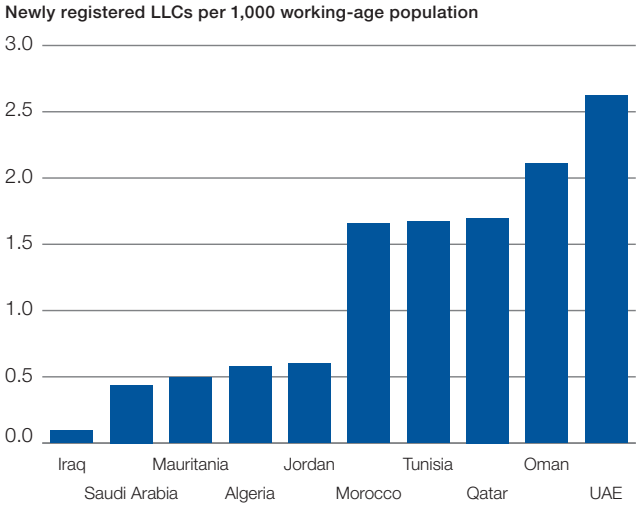
Figure 3: New business entry density by world region, 2009–16



Source: Doing Business Indicators 2018, available at http://www.doingbusiness.org/Custom-Query.

Notes: New business density rate measures the number of new businesses per 1,000 working-age population.

Figure 4: New business entry density by selected Arab world countries, 2013–16



Source: Doing Business Indicators 2018, available at http://www.doingbusiness.org/Custom-Query.

Note: LLCs = limited liability companies; UAE = United Arab Emirates.

far behind the global averages. According to the Doing Business database,[18] about 1.2 new limited liability companies (LLCs) were registered in the Arab world per 1,000 working-age population, compared with 6.3 new companies in the OECD countries, 6.0 in Europe and Central Asia, and 5.6 new companies in East Asia and Pacific. This formation rate puts the Arab world at the second lowest in the region after South Asia in terms of entry density (Figure 3). The rate increased significantly between 2006 and 2016 for some countries in the Arab world, such as Oman (from 0.5 to 2.1) and Morocco (from 0.9 to 1.7) (Figure 4).[19]

The Arab world also has the lowest established business activity rate (6.7 percent) compared to other regions,[20] and a high rate of business discontinuation (6.2 percent), according to the *Global Entrepreneurship Monitor (GEM) Report 2017*.[21] This indicates a sustainability rate for the Arab world's entrepreneurs lower than that of their peers in other regions. For every person exiting a business, there are only 1.7 people engaged in early-stage entrepreneurial activity, lower than the global average.

But there are some encouraging regional trends where the Arab world has seen exponential growth in start-up investment over the last decade. It took the region six years after Yahoo bought the Jordanian Maktoob for US$165 million in 2009 to have a second large acquisition with Talabat, which is a Kuwaiti online food delivery service that Rocket Internet bought for US$170 million in 2015. Shortly after that, in 2017, Amazon acquired the UAE-based Souq.com e-commerce portal for US$650 million.

MAGNiTT, a platform that tracks and reports entrepreneurship development in the Arab world, reported that regional start-ups attracted US$560 million in investment across 260 deals in 2017. This investment activity constitutes a 65 percent rise from 2016 (excluding two large outliers from the UAE, Careem and Souq.com), making 2017 "a record year" according to MAGNiTT.[22] The number of investment deals jumped from 124 deals in 2014 to 260 in 2017, and the investment value rose from US$53 million to US$410 million (again excluding Souq.com and Careem) in the same period.

A survey of leading entrepreneurs in the Arab world conducted for this chapter provides insights into their characteristics. Most of the entrepreneurs are educated and hold a college degree. They tend to work in small groups, possibly to complement each other (72 percent had two to three founders). In addition, most were experienced: close to 65 percent of them had between 3 and 10 years of experience, and more than half (58 percent) started their businesses when they were 30–39 years old. Most entrepreneurs had scaled up their operation over the last three years to include 11–50 employees, indicating a growing pattern in employment and a transformation from small to medium-sized businesses. The leading entrepreneurs tend to be export oriented; more than 68 percent of businesses are targeting regional markets, and 50 percent also targeted international markets. Despite their export orientation, 72 percent of the entrepreneurs intend to keep their headquarters in their respective countries if their businesses continue to grow.

An uneven playing field for entrepreneurs in the Arab world

The lack of a level playing field for the private sector is an important cause of weak entrepreneurial activity in the Arab world. This phenomenon has been recently highlighted and explained by a World Bank report providing evidence on the link between crony capitalism and the high barriers faced by most entrepreneurs.[23]

Firm dynamics and market structures in the Arab world tend to concentrate market power in a few leading firms, often resulting in artificial and unfair competitive advantage, while a large number of informal small firms use unproductive technologies to serve local market niches.[24] This situation is

consistent with the Schumpeterian prediction that large policy privileges lead to sectors with a few colluding, politically connected large firms, a large number of unproductive small firms, and a low productivity and job creation.[25]

Post-revolution analytical work conducted in Egypt and Tunisia has shed light on the relationship between business regulation and the business interests of former regimes.[26] The research has shown that connected firms tended to concentrate employment, output, and profits, especially in sectors subject to authorization and import or FDI restrictions. In Egypt, politically connected manufacturing firms are much more likely to operate in energy-intensive industries thanks to their privileged access to energy subsidies. In Tunisia, connected firms are protected by restrictions on FDI to operate in profitable services sectors.

Restrictions on competition operate in a number of policy dimensions. For example, burdensome business regulations are erecting barriers to entry. Along the same lines, a wide import tariff structure opens the door for cheating and underreporting. In addition, non-transparent allocation of monetary incentives, subsidies to the private sector, and unfair access to public procurement and public land are other policies that undermine private-sector development.

In the Arab world, the aforementioned privileges are pervasive and ubiquitous. Daily discretionary and arbitrary treatment are facilitated and fueled by the lack of transparency and accountability across almost all policy dimensions that affect the private sector. It is evident from global experience that when rules and regulations are not accessible or clear, when no grievance mechanism is in place, and when numerous human interactions are unnecessarily required, there is room for subjective interpretation and discretionary implementation with no obligation to justify decisions or to reverse them in case of complaint.

Complex trade structures also create opportunities to undermine competition. The wider the gap in tariff rates, the more incentive there will be to cheat and under-declare (in an extreme and illustrative case, flat tariffs would remove any incentives to cheat). Import restrictions and the existence of special regimes can lead to the same behavior. The obligation—de jure or de facto—to use a broker in customs transactions can create rents for a range of intermediaries and fuel corruption. The existence and enforcement of codes of conduct for customs and duties along with grievance and appeal mechanisms for the private sector to contest customs decisions are safeguards that reduce the space for discretionary and abusive behavior. In general, the dematerialization of transactions and electronic connections between administrative branches reduces human interactions and the room for rule interpretation, bargaining, and negotiation. This principle applies to customs and to several other types of interactions between firms and the public administration, such as tax collection and business licensing.

Lack of access to finance can also undermine competition. If regulations governing lending to related parties and politically exposed persons are not in place or not enforced, the financial system could be captured to the benefit of politicians and the connected business elite while crowding out lending to newcomers who have new business ideas and a competitive edge but not connections.

Public procurement can also create economic privileges. Lack of an open and transparent procurement system discourages SMEs from applying for public procurement opportunities, depriving them of an important source of income and growth. Although the existence of a strong and independent institution governing public procurement is important, it also must be free from involvement in core procurement operations to avoid any conflicts of interest. In terms of fair opportunity, procurement opportunities should be widely and transparently advertised to ensure equal opportunity of access to all bidders.

Recent analytical work has tried to move the debate on privilege, capture, and cronyism toward a more practical approach that focuses on concrete and specific policy designs that could limit such distortive opportunities.[27] In fact, policymakers can consider a menu with an array of policy entry points to start addressing the privilege issue with checklists to assess how privilege-proof a policy is. This checklist can cover a wide range of domains, from trade, public procurement, land allocation, and incentives policies to licensing regimes and access to finance regulations. Competition policies and other public accountability mechanisms may also be considered. Among these mechanisms are access to information laws, asset disclosures by politicians, and conflict-of-interest regulations. Finally, and upstream of these policy areas, consulting the private sector in an inclusive way for the design process of policies that affect businesses can improve the policymaking process and its outcomes.

Providing room for open competition and lowering barriers to entry will foster entrepreneurship. Such openness needs to be enforced by accountable public entities that are independent from political influence. These entities should have the power to create an open and level playing field so that new, more efficient, innovative firms can enter. The prosperity and social cohesion of the Arab world rests, in part, on the ability to transform its public administration to better deliver services to the private sector and citizens by reducing barriers to entry and providing an even implementation of rules and regulations in order to foster entrepreneurship.

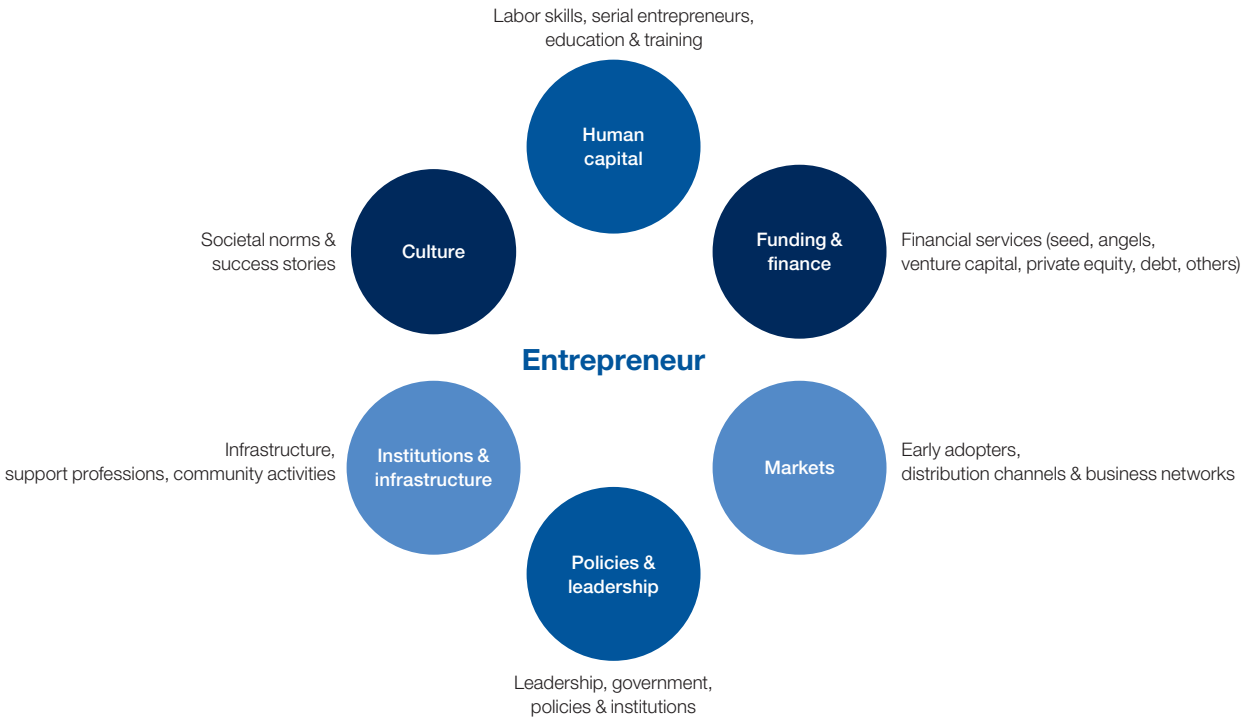
The entrepreneurship ecosystem

The key focus of an entrepreneurship ecosystem is the support of the practice of entrepreneurship through the process of designing, launching, and running a new business. This also encompasses pre-entrepreneurship activities, such as promoting entrepreneurship as a career choice and raising awareness of prerequisites for successful entrepreneurship ventures. Entrepreneurship ecosystems are hyper-local (usually city-based) and cultivated by stakeholders rather than designed by governments. They are also self-sustaining.

The ecosystem approach recognizes that entrepreneurship is a complex activity, and that the success or failure of entrepreneurs and their ventures is not dependent only on their own skills and aspirations. Rather it is highly dependent on the quality of the ecosystem in which they seek to form and grow. Although no ecosystem can be copied, growth can be supported or hindered by government interventions in various domains.

As Figure 5 illustrates, the ecosystem model, introduced by Babson College in 2010, is composed of mutually reinforcing components ranging from macro-level policies to firm-level management and technical skills. The model divides the entrepreneurship ecosystem into six domains: (1) quality human capital; (2) the availability of funding and finance; (3) venture-friendly markets for products; (4) enabling policies and

Figure 5: Entrepreneurship ecosystem model



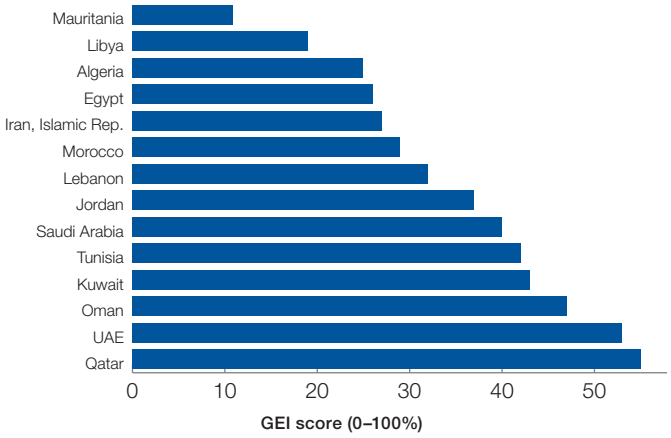
Source: The Babson College Entrepreneurship Ecosystem Project, available at http://entrepreneurial-revolution.com/.

leadership; (5) institutional and infrastructural supports; and (6) conducive culture.

Each of these components interacts with the larger social and economic paradigm to yield a dynamic ecosystem. It is increasingly recognized that successful entrepreneurship is very much helped by having an effective ecosystem. This includes a regulatory environment that does not overly hinder firm registration and growth, a variety of financing sources, a supportive business culture, networks and mentors to tap into, and a variety of knowledge resources on which firms can draw. A common idea is that all actors or nodes in the ecosystem—institutions and individuals—act, interact, and influence each other in an organic fashion.

Arab world entrepreneurship ecosystems are underdeveloped and require a concerted effort on behalf of policymakers to address the significant gaps that are otherwise hindering entrepreneurs from taking risks. The annual GEI measures both the quality of entrepreneurship and the extent and depth of the supporting entrepreneurial ecosystem across 14 components (scores range from 0 to 100 percent). The average score for Arab world countries is 39 percent, close to the score of Jordan and Hungary (Figure 6). The GCC countries of Qatar, the UAE, and Oman are the top GEI performers in the region; Tunisia is the top performer in North Africa; and Jordan is the top performer in Mashreq or the eastern Arab world.[28] According to the 2018 GEI,[29] components relevant to product innovation and risk capital are the strongest areas of the Arab world ecosystem, while technology absorption (29 percent), competition (29 percent), and risk acceptance (29 percent) are the lowest-ranked components (Figure 7).

Figure 6: Arab world country scores, GEI 2018



Source: The Global Entrepreneurship Index, available at https://thegedi.org/global-entrepreneurship-and-development-index/.

Note: GEI = Global Entrepreneurship Index; UAE = United Arab Emirates.

Box 3: Recent Entrepreneurship Policy Initiatives in the Arab World

The Arab world has seen several policy initiatives in recent years targeted toward improving the entrepreneurship ecosystem. Some of the more noteworthy are noted here.

Egypt: In 2017, the Egyptian cabinet approved the creation of a new small- and medium-sized enterprise (SME) agency under the Ministry of Trade and Industry. The new agency will have the mandate to formulate strategy, policies, and regulations related to financial services and entrepreneurship, as well as to provide non-financial services. In 2016 Egypt started drafting an insurance law that will cover areas such as micro-insurance and medical insurance.

Tunisia: In 2016 the Tunisian parliament approved a new investment law to reverse the decline in foreign direct investment (FDI) the country has experienced since the 2011 revolution. A new banking law was also adopted in 2017. The Tunisian Insurance Regulator is planning to reform the legal and regulatory framework for insurance to align with international norms. And the Tunisian Startup Act, newly passed in 2018, aims to transform Tunisia into a center for capturing international investors and markets in addition to Tunisian diaspora residing abroad.

Jordan: In 2016, Jordan launched a National Financial Inclusion strategy for 2018–20. It focuses on SME support, microfinance sector development, financial education, and consumer protection, as well as ways to support vulnerable groups including women and youth. In 2017, Jordan approved an economic plan to boost growth through local investments and public-private partnerships. The plan will target 19 sectors with 95 economic reforms, and support a new credit bureau and improved access to credit information.

Morocco: The Moroccan government started drafting a central bank law in 2016, which aims to align the regulation of banks and financial institutions with European best practices. This follows the adoption of a new banking law in 2015 that introduced new rules on governance, resolution of credit institutions, and the management of the deposit guarantee system. The country also made business incorporation and paying taxes easier by improving the online system for these services.

Lebanon: In 2018, the Investment Development Authority in Lebanon launched a new business support unit (BSU) to be located within its premises. The BSU will provide start-ups with market information and free legal and tax/accounting advice, as well as licensing support, to help them establish and grow their companies in Lebanon.

Saudi Arabia: Saudi Arabia released its Vision 2030 for national long-term economic growth in 2016. The plan aims to transform the state-led economy into a private sector–led structure. Some areas are already showing improvement. The establishment of the Saudi SME Authority in 2016 and the development of a national vision to "make entrepreneurs the key drivers of the Saudi economy by enabling them to thrive via further cooperation and partnership" are an important milestone in the Kingdom's efforts for entrepreneurship development. Minority investor protection has been strengthened by increased shareholder rights and more transparency overall. Contract enforcement was made easier through the introduction of an electronic case management system, for use by judges and lawyers.

Qatar: Qatar's new Commercial Companies Law of 2015 cancelled minimum capital requirements to establish limited liability companies (LLCs). The One Stop Shop for Businesses and Investors program was also established to expedite start-up procedures for investors and entrepreneurs. Qatar Development Bank (QDB) launched the Ta'heel initiative to help Qatari manufacturers bid on government projects. In addition, the country started providing consumer credit scores to banks, financial institutions, and borrowers, which has improved access to credit information.

United Arab Emirates (UAE): The UAE improved access to credit information by starting to provide consumer credit scores to the banks and financial institutions.

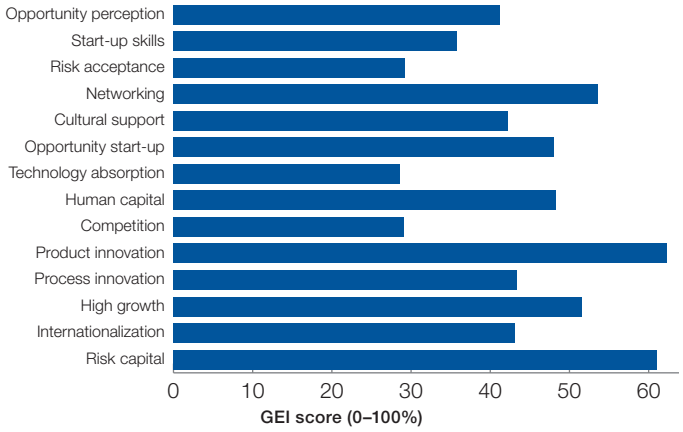
Kuwait: The Kuwaiti government has increased its focus on promoting entrepreneurship and the establishment of SMEs by Kuwaiti nationals. Kuwait has established a one-stop shop for business registration, reduced the number of days required to register property, and increased transparency around the land administration system.

Although the GCC outperforms the region in most of the components, Mashreq entrepreneurs appear to have better start-up skills and a slightly higher product innovation. Figure 8 shows the subregional averages in the Arab world across the 14 components.

Most large Arab world tech start-ups (e.g., Souq.com, Careem, Bayt, and Wadi) are based in the six GCC countries. However, the available talent pool goes beyond that of the GCC. For example, although the Souq.com front-end/sales team is based in Dubai, the growing 500-person engineering team is based in Jordan. In addition, there is a lot of back-office talent in countries such as Egypt, Jordan, Lebanon, and Morocco that help boost the growth of the leading tech start-ups. Reaching out beyond the GCC for talent is crucial, because building a team of skilled workers is one of the main challenges facing Arab world tech start-ups.

A considerable number of Arab world tech entrepreneurs decide to establish their headquarters in the GCC because the regulatory environment in their home countries does not support the development of new businesses (e.g., tax and business laws are subject to constant revisions and legal enforcement is subjective). For example, Dubai-based online bookseller Jamalon's founder Ala' Alsallal is from Jordan (where 65 of his 70 employees are based). More broadly, while approximately 40 percent of the founders of the Arab world's top 100 start-ups are from Lebanon and Jordan, only 16 percent of start-ups are headquartered there. Instead, the UAE hosts about 50 percent of the Arab world's top funded start-ups (and 42 percent of all Arab world tech start-ups), while only 1 percent of founders are themselves UAE citizens.[30]

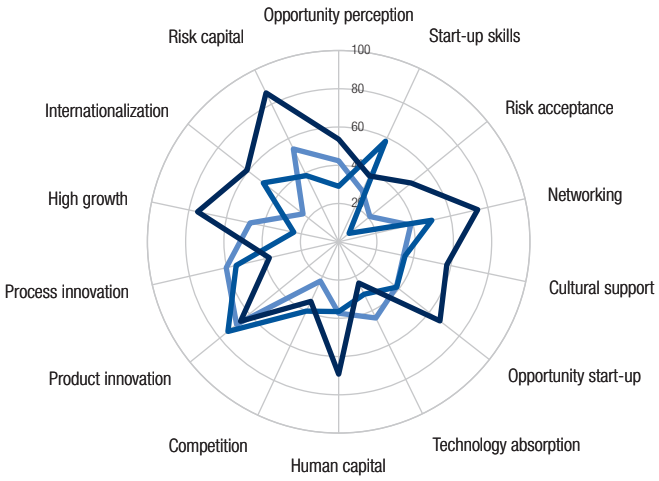
Figure 7: Arab world component average scores, GEI 2018



Source: The Global Entrepreneurship Index, available at https://thegedi.org/global-entrepreneurship-and-development-index/.

Note: GEI = Global Entrepreneurship Index.

Figure 8: Arab world scores by subregion, GEI 2018



Key: GCC Mashreq North Africa

Source: The Global Entrepreneurship Index, available at https://thegedi.org/global-entrepreneurship-and-development-index/.

Note: GCC = Gulf Cooperation Council countries; GEI = Global Entrepreneurship Index; Mashreq comprises Iraq, Jordan, Lebanon, Syria, and the West Bank and Gaza.

Enabling policies and leadership

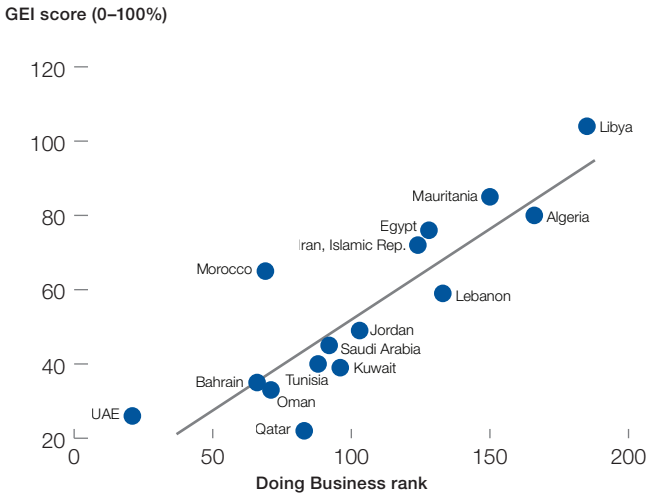
This section discusses opportunities and constraints for encouraging entrepreneurship by reviewing the overall business enabling environment from a private-sector perspective. Box 3 presents a summary of some of the more recent initiatives to support entrepreneurship across the Arab world. The analysis is based on several different data sources including the GEI, the World Bank's *Doing Business Report* and its Enterprise Surveys, and an independent survey of leading Arab world entrepreneurs conducted in May 2017 jointly with the World Bank and the World Economic Forum.

The overall quality of the business environment closely correlates with the strength of the entrepreneurial ecosystem in a country. For example, countries with better Doing Business rankings tend to also have better GEI rankings (Figure 9). More specifically, countries that have better legal and regulatory environments for doing business are also those that have better environments for promoting entrepreneurship. This provides a useful context for the issues that entrepreneurs raise from their individual country perspective.

The survey of leading entrepreneurs provides insights into key barriers to business development that firms across the region are facing. The most severe obstacles are access to finance (42 percent), an inadequately educated workforce (28 percent), business licensing and permits (27 percent), corruption (22 percent), and labor regulations (21 percent) (Figure 10).

In comparison, the World Bank's Enterprise Survey suggests that Arab world firms perceive political instability (30.3 percent), lack of access to finance (13.0 percent), and lack of access to reliable electricity (10.1 percent) as the major barriers to growth for Arab world businesses (excluding GCC countries) (Figure 11).[31] These perceptions directly correlate with the state of political unrest, conflict, and violence that has spread across the region since 2011.

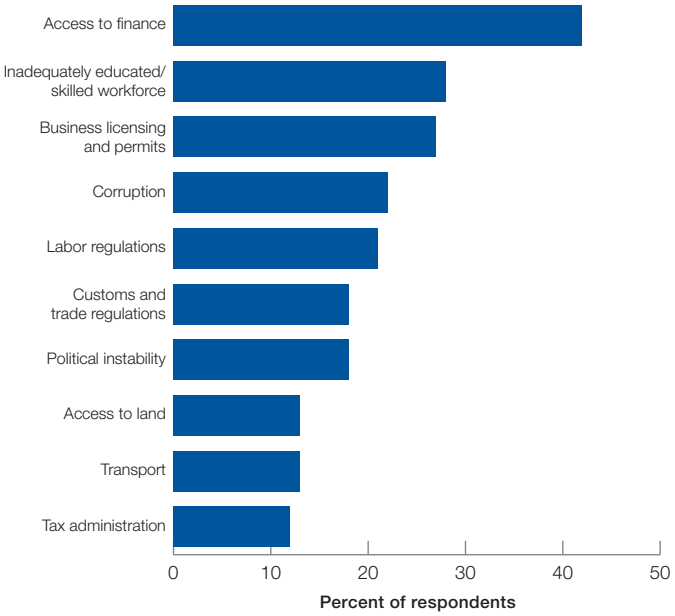
Figure 9: Correlation between the ease of doing business and global entrepreneurship in the Arab world, 2018



Sources: World Bank, Doing Business indicators 2018, available at http://www.doingbusiness.org/Custom-Query; Global Entrepreneurship Index, available at https://thegedi.org/global-entrepreneurship-and-development-index/.

Note: $R^2 = 0.6464$.

Figure 10: Most severe obstacles facing leading entrepreneurs in the Arab world, 2017



Source: World Bank Group survey of leading Arab world entrepreneurs, conducted at the World Economic Forum on the Middle East and North Africa, Dead Sea, Jordan, May 19–21, 2017.

Note: Data are from survey respondents' answers to the following question: "To what degree are the following elements obstacles to the current operations of the company?"

Finance

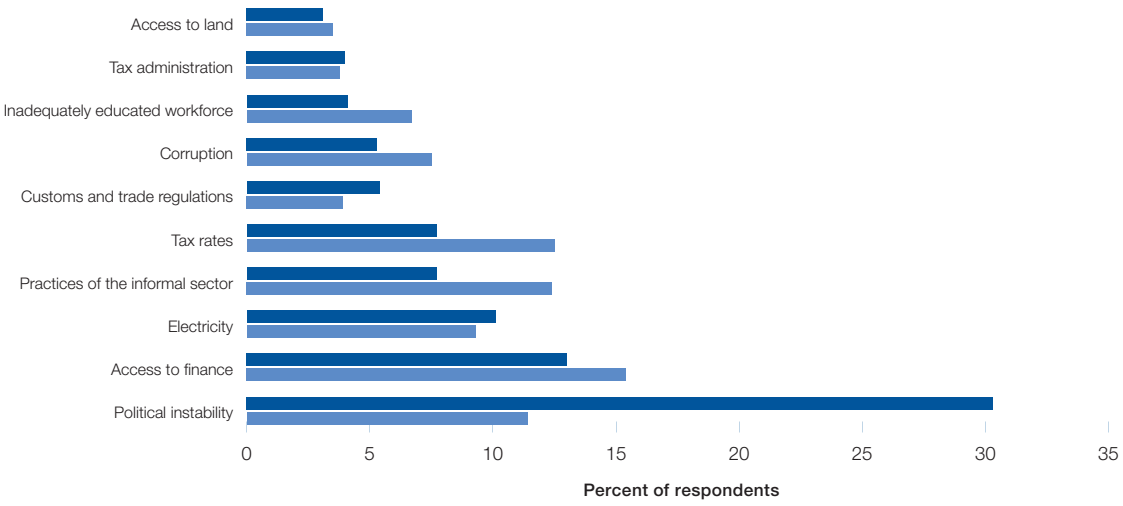
Financing is crucial for entrepreneurship. Different types of financing are needed based on the maturity of the firm (e.g., seed, venture capital, equity, credit are each needed at different stages). Provision of entrepreneurial capital is associated with a 20 to 25 percent higher likelihood of firm survival after four years and a 16 to 19 percent increase in the likelihood of eventually expanding to at least 75 employees.[32] In the Arab world entrepreneurs face numerous barriers concerned with access to finance and credit.

Doing Business 2018, which focuses on the legal and regulatory environment for conducting business, cites that getting credit is one of the most problematic issues in the Arab world, with a regional ranking of 112 (out of 190 economies), together with resolving insolvency (113) and trading across borders (123).[33] Doing Business's resolving insolvency indicator reviews the effect of the business environment on firms' willingness to take risks in business exit. For example, the absence of modern bankruptcy laws can result in unpaid bills, landing entrepreneurs in prison. In addition, when there is no legal framework for companies to restructure debt, the probability of SME default as well as financial loses in case of default both increase. This, in turn, increases banks' reluctance to invest in equity and lend money to SMEs in the first place.

Poor access to finance hinders business formation, survival, and growth in the region. In addition to low access to bank lending, start-ups and SMEs also have limited access to venture capital, an area where private equity and venture capital industry is underdeveloped in the Arab world. As Figure 12 shows, the ratio of venture capital investments to GDP in resource-poor Arab world countries is below 1 percent, which is very low compared to some European countries.

Arab world countries also need to strengthen their ecosystems and networks of accelerators, incubators, and business angels that provide strategic services to start-ups and medium, small, and micro-enterprises (MSMEs). These services, such as concept development, mentoring, market/product analysis, and market launch, are crucial for the takeoff and survival of small and young firms. Figure 13 presents a summary

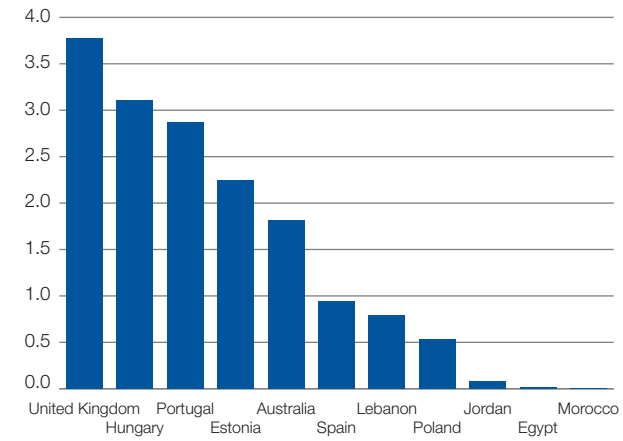
Figure 11: Most severe obstacles facing establishments in the Arab world compared to global averages, 2011–16



Key: Arab world average Global average

Source: World Bank Enterprise Surveys, 2011–16, available at http://www.enterprisesurveys.org/.

Figure 12: Seed venture capital investment rate as a share of GDP



Sources: OECD Entrepreneurship at a Glance 2017, available at http://www.oecd-ilibrary.org/employment/entrepreneurship-at-a-glance-2017_entrepreneur_aag-2017-en (2014 or most recent available data); World Bank's assessment of early stage investment finance in Arab world countries (approximate total industry investment per country as of 2014).

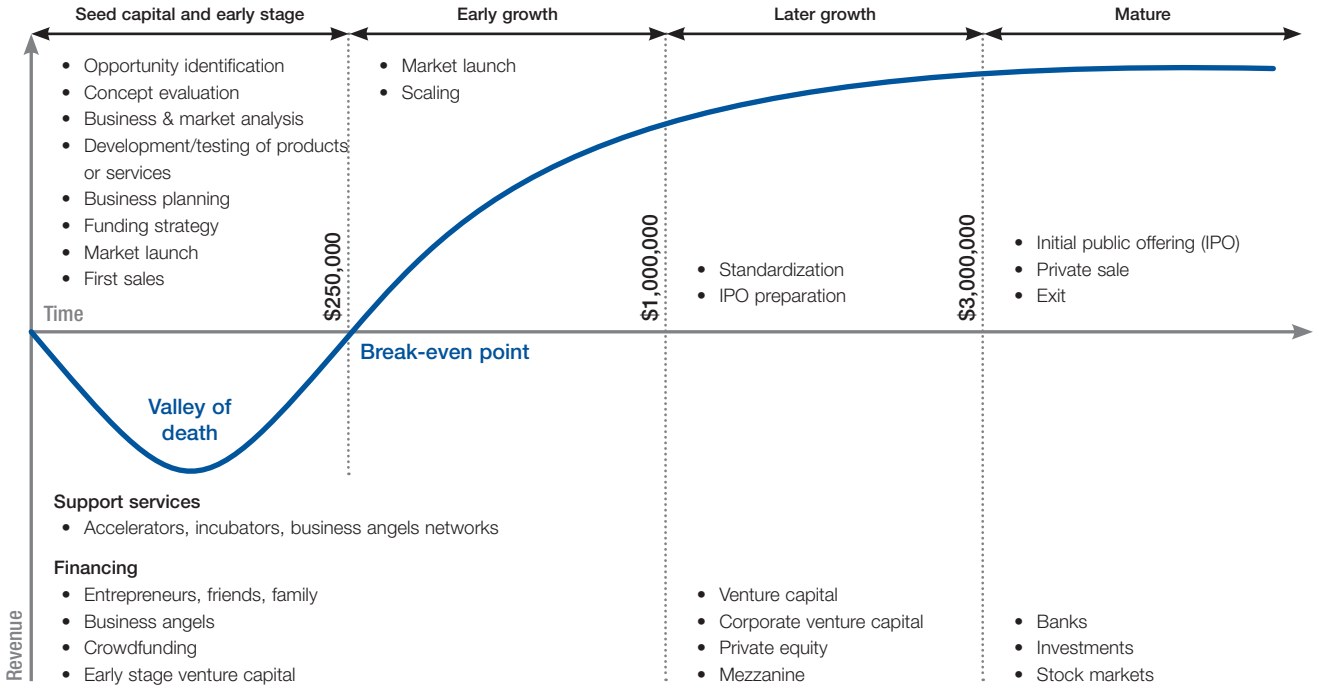
of the different types of support often provided across the various stages of growth. Indeed, these services prepare small companies to become viable for equity investments.

The World Bank Group survey of Arab entrepreneurs conducted for this report similarly shows that bank financing to start-ups is scarce. Most entrepreneurs (about 55 percent) had used personal savings or family/friends to fund their start-ups. Venture capital and private investors were the second-most important source of capital (44 percent), while funding from commercial banks had been used by only 1 percent. As shown in Figure 14, equity financing mainly targets seed and early stage businesses; although seed financing is the most easily accessible, fewer options are available as companies mature. Financing requirements above US$250,000 are often the least accessible for entrepreneurs. In growth businesses, venture capital funds provided 52 percent of growth capital, followed by 20 percent from private investors and business angels. Most of the surveyed entrepreneurs claimed to be interested in raising US$1 million or more in the coming years to further scale up their businesses, while about 70 percent wanted to grow and then exit or sell their businesses to larger companies.

Recent IMF research corroborates the above findings. The most recent regional IMF economic update reports that SME lending accounts for only 8 percent of total bank lending in the region; the share of total bank lending in middle-income countries is 18 percent.[34] According to some estimates, scaling up SMEs in the Arab world faces a finance gap of US$160–180 billion.[35] Public-sector lending continues to dominate the financial sector and personal networks remain the primary source of start-up finance in the region.

According to the *MENA Annual Venture* report, in 2017, 123 start-ups from 12 economies attracted US$475 million worth of investments in the region. The UAE saw most of these investments (84 percent), mainly because of large investments in Careem and Starz Play, followed by Saudi Arabia in terms of deal value and Egypt in terms of deal count. Most of these investments went into e-commerce, local services, financial services, and logistics.[36]

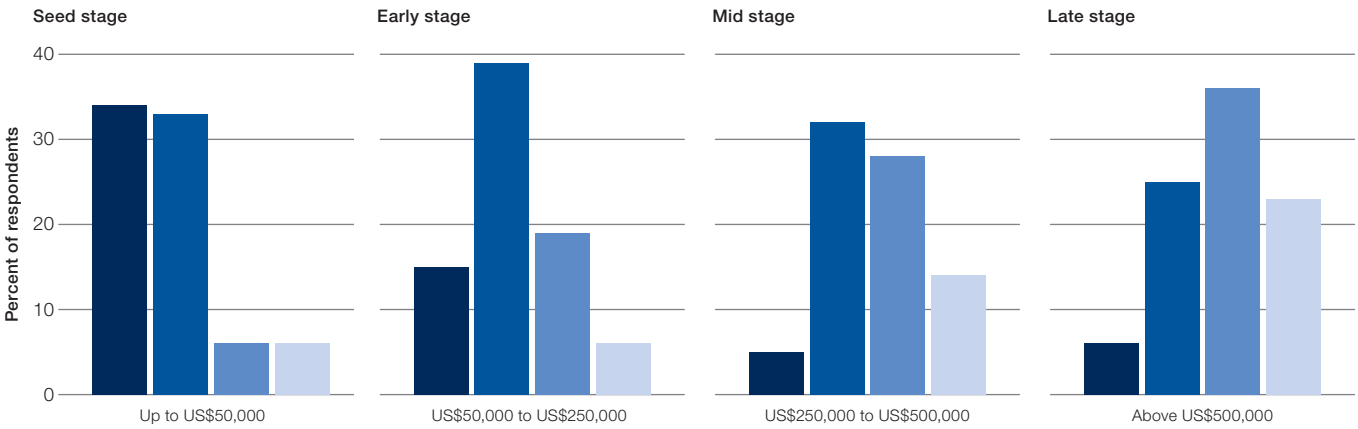
Figure 13: Funding options across growth stages



Source: Based on Iliev 2015, slide 23.

Note: Adapted to include investment size across growth stages in the Arab world.

Figure 14: Financing obstacles for entrepreneurs in the Arab world



Key: Very available and accessible; Somewhat available and accessible; Not available generally; Not available at all

Source: World Bank Group survey of leading Arab world entrepreneurs, conducted at the World Economic Forum on the Middle East and North Africa, Dead Sea, Jordan May 19 to 21, 2017.

Note: Data are from survey respondents' answers to the question "Is financing available and accessible to entrepereneurs in the country where you operate? Please specify according to the following stages: Very available and accessible; Somewhat available and accessible; Not available generally; Not available at all."

Initiatives to increase the amount of available seed capital to SMEs are occurring in the GCC countries and Lebanon. For example, the Saudi Arabia Public Investment Fund (Sovereign Wealth Fund) set up a 4 billion Saudi riyal fund (US$1 billion), which will act as a "Fund of Funds" and invest in venture capital and private equity funds targeting the SME sector. Qatar's Development Bank (QDB) provides seed capital for Qatari companies; Bahrain launched a US$100 million fund to invest in SMEs; and Oman launched the Oman Technology Fund (OTF) with US$200 million in start-up capital, to invest in Omani emerging technology enterprises and start-ups. In Lebanon, the central bank is implementing Circular 331, which aims to inject the potential of US$600 million into innovative firms.

Private equity investors and fund managers in the Arab world are mostly based in GCC countries, with 132 investors and 126 fund managers. In Lebanon, more than 13 funds were established after 2013. In 2015 there were 122 venture capital and 53 private equity investments in the region, with a total investment value of US$1.5 billion.[37] In 2016 the number of venture capital and private equity investments was up to 175 and 69 respectively, with total investment dropping to US$1.1 billion.[38] Since 2008, Arab world–based private equity funds have raised US$16 billion in total, while 44 percent of capital raised was for funds intended to buy out companies.[39] Last year, most private equity investments focused on transport, retail, finance, and information technology (IT and fintech) sectors. Most investments are directed to the UAE, Lebanon, and Saudi Arabia.[40] In addition, the five largest Arab world–based private equity funds spread their assets across Asian, Latin American, and emerging markets rather than focusing on the region.[41]

Crowdfunding generated a total financing of US$3.25 million in the Arab world in 2015 and 2016. About US$527,000, or 16 percent, of these funds went to female-led fundraising campaigns. The UAE and Bahrain are the only two countries in the GCC that allow and regulate crowdfunding. Bahrain created a legal framework for loan crowdfunding (both conventional and Sharia compliant) to help SMEs and start-ups while providing governance support for fintech businesses to protect their customers. The framework also allows crowdfunding on online platforms. The Dubai Financial Services Authority and Dubai SME also introduced new regulations to help SMEs and start-ups to raise funds by crowdfunding. In 2015 and 2016, 97 such fundraising campaigns were funded successfully. In other countries, crowdfunding platforms reportedly operate online, through other countries or off-shore centers.

Finally, diaspora engagement, which remains largely overlooked today, can be an important source of finance for Arab world entrepreneurs. More than 20 million, or 5 percent, of the Arab world's population live abroad, many as professionals. A recent World Bank survey of Arab world diaspora showed that in the region, diaspora feel strongly connected to their home country: 87 percent are willing to invest time in mentoring individuals in their country of origin, 85 percent believe that giving back to country of origin is important to them, and 68 percent are willing to invest capital and trade with their country of origin.[42] Arab governments do not systematically engage with their professional diaspora abroad and therefore are missing an opportunity to tap into extended finance networks that can provide seed financing and mentorship, in particular to high-growth entrepreneurs. Yet some initiatives aiming to connect entrepreneurs to diaspora networks are occurring. For example, a US$50 million Morocco Seed and Early Stage Equity Financing project that aims to mobilize private equity capital and increase venture capital offerings to SMEs with high growth potential will involve the Moroccan diaspora at all stages of the process.[43] Tunisian expatriates have also launched several initiatives related to entrepreneurship in Tunisia, such as the Impact initiative.[44] In Algeria, a network of high-profile researchers and executives in the healthcare sector has launched the Algerian American Foundation in the United States to provide training and technical assistance to emerging medical and research centers in Algeria.[45] Professional Lebanese associations such as LebNet

Table 1: Cultural indicators for entrepreneurship in the Arab world, 2017

Economy	Perceived capabilities* (%)	High-status successful entrepreneurship** (%)	Fear of failure† (%)	Media attention for entrepreneurship†† (%)
Algeria	56	84	33	47
Egypt	59	87	28	63
Iran	59	76	44	55
Jordan	57	84	44	70
Lebanon	77	79	22	65
Libya	59	84	n/a	48
Morocco	74	84	30	73
Qatar	61	87	35	77
Saudi Arabia	69	92	39	78
Syria	62	89	n/a	55
Tunisia	52	94	40	48
UAE	62	73	54	63
West Bank and Gaza	n/a	n/a	40	n/a
Yemen	64	97	n/a	96
Regional average	**62**	**85**	**37**	**64**
Bangladesh	24	100	72	49
Korea, Rep.	28	68	32	68
Singapore	21	63	39	79
United States	56	77	33	76

Sources: TCdata360, available at https://tcdata360.worldbank.org; The Global Entrepreneurship Monitor, available at http://gemconsortium.org/report/49984.

Notes: Data show the perceptions of respondents. * Percentage of the population age 18–64 who see good opportunities to start a firm in the area where they live. ** Percentage of the population age 18–64 who agree with the statement that in their country, successful entrepreneurs receive high status. † Percentage of the population age 18–24 perceiving good opportunities to start a business who indicate that fear of failure would prevent them from setting up a business. †† Percentage of the population age 18–24 who agree with the statement that in their country, stories about successful new business are often seen in the public media. No data are available for Bahrain, Iraq, Libya, or Oman. n/a = not available. Bangladesh, the Republic of Korea, Singapore, and the United States are included for comparison.

and Lebanese International Finance Executives are also solidifying the network abroad, financing their activities, and then turning to the home country for concrete projects.[46]

Culture

Fear of failure is a deterrent to entrepreneurship in the Arab world. While about 74 percent of leading Arab world entrepreneurs state that failures are not accepted in their societies, the *GEM Report 2017* suggested that the wider Arab community does not fear failure.[47] Although leading entrepreneurs' fear of failure might have motivated them to succeed, there is still a need to reduce such perceptions in the region to encourage more people to become entrepreneurs. Entrepreneurship is as much a social phenomenon as an economic one. The broader culture influences how entrepreneurship is perceived by potential entrepreneurs and their networks—a perception that in turn influences whether people take up entrepreneurship as a vocation. Fear of failure and the manner in which failure influences someone's social standing (e.g., the way that failure leads to social ostracizing) has a direct impact on the willingness of potential entrepreneurs to take the risk.

At the same time, successful entrepreneurs are very well regarded. As Table 1 shows, successful entrepreneurs are largely perceived to achieve high status (85 percent on average). The region also does well on perceived capabilities, where 62 percent of respondents believe they have the required skills and knowledge to start a business. There is a good media attention for successful entrepreneurs (64 percent of respondents).

Infrastructure and support

The Arab world has considerable room for growth in ICT infrastructure, since limited competition at international gateway and data operator levels, and pervasive regulatory constraints are limiting private-sector development in the Internet sector. The broadband Internet market in the Arab region has the highest degree of economic concentration of all regions in the world.

The use of the Internet by individuals in the region is around the world average (43.7 percent, compared to 44 percent globally),[48] thanks to the diffusion of mobile broadband and speed ranges that are around the global average (23.2 megabits per second [Mb/s] download average, compared to 23.75 Mb/s globally).[49] The region is among the fastest growth regions for data exchanges, even though it started from a very low base.[50] In 2015 the Arab world had 136 subscribers to mobile services (per 100 population), compared to the global average of 110, but the percentage of those subscribers who use a mobile connection to access the Internet is significantly lower—ranging from 30 percent in Iraq to 82 percent in Lebanon. Most mobile markets in the Arab region are, therefore, pre-paid voice markets and the transition to data poses challenges. More than 80 percent of the Arab population have a mobile broadband download speed below the global average, except for GCC countries (34.6 Mb/s) and Lebanon (33.9 Mb/s). Qatar and the UAE have among the fastest mobile broadband speeds in the world (59.8 Mb/s and 54.2 Mb/s respectively). About 47 percent of mobile users in the Arab world still use G2 technology, and only 8 percent use G4 technology (compared to 68 percent G4 technology users in the United States and 51 percent in Europe).[51]

The Arab world has 7.7 fixed broadband subscriptions per 100 people, significantly higher than South Asia (1.5), but lower than North America and Europe (both 32) and Latin America (11). Fixed broadband speed is an issue. The whole Arab region has a fixed broadband download speed that is lower than the global average (45.9 Mb/s).[52]

Internet use varies enormously by country within the Arab world. About 80 to 90 percent of GCC individuals use the Internet, while usage is lower in non-GCC Arab countries (for example, it is 25 percent in Yemen, 35 percent in Egypt, and 38 percent in Algeria). High-speed Internet is becoming more affordable in the Arab region. However, in countries such as Yemen, as well as in rural areas of most countries and among the poor, there are significant affordability issues. A mobile broadband subscription can cost as much as 20 percent of the estimated monthly income for someone in the poorest 40 percent of the population in Yemen.

The lack of access to reliable electricity in several countries negatively impacts entrepreneurial activity. Poor access to electricity was perceived as the key constraint to nine Arab economies according to World Bank Enterprise Surveys between 2011 and 2016.

Arab technology start-ups are also serial entrepreneurs, who provide new technology base layers for future start-ups and enable further growth. A few companies in the Arab region managed to attract strategic investors and became highly visible. Just as PayPal founders and employees spawned Tesla Motors, LinkedIn, SpaceX, YouTube, Yelp, and Palantir, so did Maktoob founders create Souq.com, which Amazon acquired recently. There is substantial growth potential in the technology sector in the Arab world, since only 8 percent of companies have an online presence (compared with 80 percent in the United States). The e-commerce market was only 3 percent of the region's total retail market in 2015, but this is quickly changing; it is expected to grow about 300 percent by 2020, from US$5.3 billion in 2015 to US$19 billion in 2020. Digital payment constraints need to be addressed for technology companies in this region to grow further. In terms of support, the survey of leading entrepreneurs in the Arab world showed that around 65 percent of those surveyed reported that they received mentorship and about 42 percent and 44 percent respectively had gone through incubation or acceleration and training.

Human capital

About two-thirds of the leading Arab entrepreneurs surveyed for this report suggested that the availability of talent is a very important determinant of success for their future operations. They perceive an inadequately educated workforce as the second-most severe obstacle facing their businesses, suggesting that talent is easiest to find outside the region and least accessible inside their own countries.

Research has shown that acquiring the right mix of skills, ideas, and talents is a challenge for entrepreneurs, especially in markets where the required skills are scarce or expensive. Ensuring that the right mix of skills is matched to an entrepreneurial venture requires reducing information asymmetry about skill sets and effective contracting mechanisms that guarantee the efficient allocation of skills and talent across firms.[53] For Arab world entrepreneurs, this challenge is exacerbated by rigid, inflexible labor markets bogged down by an overall lack of inclusion, given the high rates of youth unemployment and low levels of female participation in the labor force.[54] Entrepreneurship requires talent at all levels. This need for talent is evident throughout a new enterprise, from the entrepreneur her- or himself to the variety of skills required to populate the business from technical to managerial roles. Academic research indicates that entrepreneurs are not born but taught—and that at least some aspects of entrepreneurship can be taught successfully, even from a relatively early age.[55]

Although the extent of the impact of new technologies on occupation or work area cannot be precisely determined, it is becoming evident that the jobs of tomorrow will require new skills that help workers to adapt to a tech-led constantly changing world. These so-called *future-proof skills* will probably comprise a combination of technical and social skills centered on intelligence, creativity, social competence, and the ability to learn how to learn, as well as the ability to engage with and exploit artificial intelligence for solving tasks of varied complexity.

Arguably, technology start-ups come closest to the vision of the employer of the future, since they actively source labor with future-proof skills. The past two decades have witnessed the emergence of new market categories because of the disruption to traditional business models by start-ups across many sectors of the economy—including, but not limited to, transport, logistics, hospitality, transportation, services, and manufacturing. Tech start-ups' forward-thinking founders and versatile personnel are at the core of this transformation. The new tech jobs generated by start-ups are not only relevant to the founding team and those with high tech and business skills (such as engineers, MBAs, and so on). Rather, as start-ups grow and scale, they also need less-skilled workers to expand the activities initiated by the core group of founders and initial workers. Many of the skills required to expand the business—such as building a website, a basic database, and web or mobile app—do not require higher education degrees.[56]

Although educational attainment is rising in the Arab world, the quality of education, as measured by primary school proficiency tests, remains lower than in most other regions.[57] The education system in the region yields an inadequately trained workforce where graduates are unprepared for the job market and entrepreneurs are unable to find needed talent. Surveys show that aspiring entrepreneurs and those with advanced technological skills are mostly self-taught.[58] This points to a need for policies to promote education and skills development across the region. INJAZ Al-Arab, a pan-Arab non-profit organization, is an excellent example of the type of entrepreneurship education programs needed in the Arab world. Its work focuses on three areas: workforce readiness, financial literacy, and skills needed to start and run a business. About 3 million students in more than a dozen Arab world countries have participated in its programs.[59]

The Basic-school Entrepreneurial Education and Training Index measures the extent to which training in creating or managing SMEs is incorporated into the education and training system at the primary and secondary levels.[60] Some of the leading countries on this index include the Netherlands (3.28, on a scale of 1 to 9 where 9 is best), Estonia (2.76), Sweden (2.50), Indonesia (2.48), and Switzerland (2.45). The Arab world averages 1.86 (not far below the United States, at 1.96).

The Arab world on average also scores relatively low on the GCI's measures of capacity to attract talent and capacity to retain talent, about the same level as Bangladesh (roughly 3.5 on

Table 2: Country capacity to attract and retain talent: Arab world average vs selected countries (score)

	Morocco	UAE	Arab world average	Malaysia	United States
Country capacity to attract talent	3.4	6.1	3.4	5.1	5.8
Country capacity to retain talent	3.2	5.6	3.5	5.5	5.6

Source: World Economic Forum, Executive Opinion Survey 2017–2018.

Note: Data are from the following Executive Opinion Survey questions: Country capacity to attract talent: "Does your country attract talented people from abroad? [1 = not at all; 7 = attracts the best and brightest from around the world]; Country capacity to retain talent: Does your country retain talented people? [1 = the best and brightest leave to pursue opportunities in other countries; 7 = the best and brightest stay and pursue opportunities in the country]. Data are on a scale of 1 (the worst possible situation) to 7 (the best).

a scale of 1 to 7, where 7 is best) (Table 2). There are exceptions: the GCC countries such as the UAE, Qatar, and Bahrain all score in the 4–6 range for attracting and retaining talent.

Women's economic participation is very low in the Arab world as well. Although the economic benefits of women's economic participation are well documented,[61] local challenges abound. In the Arab world, as Table 3 shows, female labor force participation is lower than in any other region: less than 21 percent compared with 74 percent for men. Within the region, it ranges from 6 percent in Yemen to 58 percent in Qatar for women and 64 to 95 percent for men. Female unemployment rates are also at the highest levels in the Arab world: 18.75 percent, compared to 3.8 percent in East Asia and 10.48 percent in Latin America and the Caribbean.

The World Bank's *Women, Business, and the Law 2018* report, which covered 189 global economies, provided seven indicators to measure the participation of women in economic activities. The Arab world economies had the lowest average scores across all indicators, and appear to have the lowest scores among world regions in indicators measuring protecting women from violence (24 percent), going to court (41 percent), using property (43 percent), and accessing institutions (66 percent). Most OECD economies mandate equal remuneration for work of equal value, while only 25 percent or less of economies in the Arab world mandate equal remuneration. Gender-differentiated retirement ages are also highest in Arab economies (58 percent).[62]

Women, Business, and the Law further examines places where women's testimony does not carry the same evidentiary weight in court as men's. In 12 Arab world economies the law differentiates between the evidentiary value of women's and men's testimony. Of the 189 economies covered by *Women, Business, and the Law,* 130 economies have laws prohibiting sexual harassment in employment. In Arab economies, 70 percent of examined economies do not have legislation protecting women from sexual harassment at work.[63]

Gender inequality in the Arab world is also reflected in the realm of entrepreneurship (Figure 15). According to the World Bank Enterprise Survey data, less than 23 percent of enterprises in the Arab world have female participation in ownership, compared with almost 35 percent in the rest of the world.[64] Only 3.5 percent of firms have majority female ownership, more than four times below the world share of 14.5 percent; and less than 5 percent of firms have a female top manager, compared with the world share of almost 19 percent. Women's entrepreneurship, especially in Arab world, where unemployment among women is as high as 34 percent,[65] has significant growth potential.

However, there are some positive signs. More than 25 percent of start-ups in the Arab world are founded or led by women (compared to 17 percent in the United States).[66] According to the GEM *2017 Women's Entrepreneurship Report,*

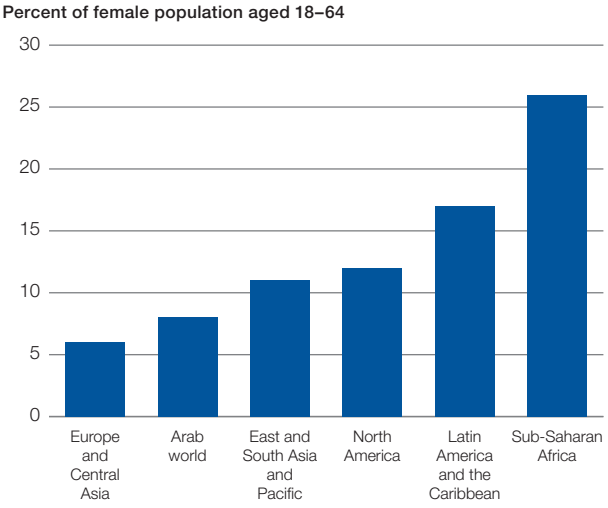
Table 3: Female labor force participation rate

Region	2007	2011	2017
World	51	50	49
Europe and Central Asia	49	50	51
East Asia and Pacific	64	62	69
Latin America and the Caribbean	52	52	52
South Asia	34	30	28
Sub-Saharan Africa	62	62	63
Arab world average	20	19	21

Source: ILO estimates as reported by the World Bank's *World Development Indicators,* available at https://data.worldbank.org/data-catalog/world-development-indicators.

Notes: Female labor force participation rate is the percent of the female population age 15 or older. Data are modeled on the ILO estimates. ILO = International Labour Organization.

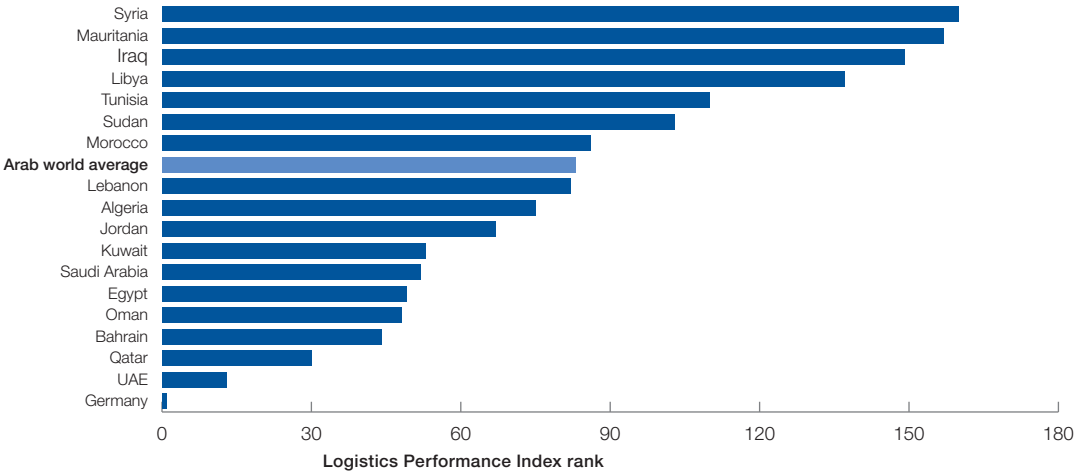
Figure 15: Regional averages for female total entrepreneurial activity, GEM 2015–16



Source: Global Entrepreneurship Monitor *Women's Entrepreneurship Report 2017.*

Note: GEM = Global Entrepreneurship Monitor.

Figure 16: Logistics Performance Index 2016 rank for the Arab world



Source: World Bank, Logistics Performance Index 2016, available at https://lpi.worldbank.org/.

Notes: Germany is included because it is the highest-ranked country in the index. UAE = United Arab Emirates.

women entrepreneurs have high innovation levels and are 60 percent more likely than men to report that their products and services are innovative.[67]

Markets and connectivity

Market access for entrepreneurs is a key signal of firms' ability to reach domestic, regional, and international markets, both physically (i.e., in terms of trade and logistics) and through unrestricted movement and access for individual entrepreneurs. Although governments often enable access through formal trade and investment agreements, informal business networks can also be crucial for transmitting and sharing knowledge and market intelligence.

In many traditionally hierarchical societies, it can be difficult to enter new networks without personal contacts. This barrier yields tremendous benefits to well-connected entrepreneurs but constrains (and may even discourage) aspiring ones who lack such connections. In this context, significant importance lies in developing networks and associations that can provide platforms for peer-to-peer contacts and provide opportunities to engage with the broader business community. Organizations and channels that facilitate these contacts are even more important for women entrepreneurs.

Similarly, the Arab world faces challenges in formal access to markets. For example, the World Bank's Logistics Performance Index (LPI) indicates that Arab world countries are "doing comparatively worse than their income level would indicate, due to lack of integration, political unrest, and security challenges."[68] In 2016 the average LPI ranking for the Arab world was 69, with the UAE (18) and GCC countries in general performing best; Iraq, Mauritania, and Syria rank last within the region (Figure 16).

Furthermore, in terms of border compliance (time to export, in hours), the Arab world averages 62.6 hours per container; this is about the same as the regional average for Latin America and the Caribbean (62.5), South Asia (59.4), and East Asia (55.9), but worse than Europe and Central Asia (28.0). Algeria is the slowest, at 118 hours. In terms of border compliance cost to export (in US dollars), the Arab world averages US$464, which is the highest in the world after Latin America and the Caribbean (US$526). Iraq is the most expensive, with $US1,118 in border compliance cost per container (Figure 17).

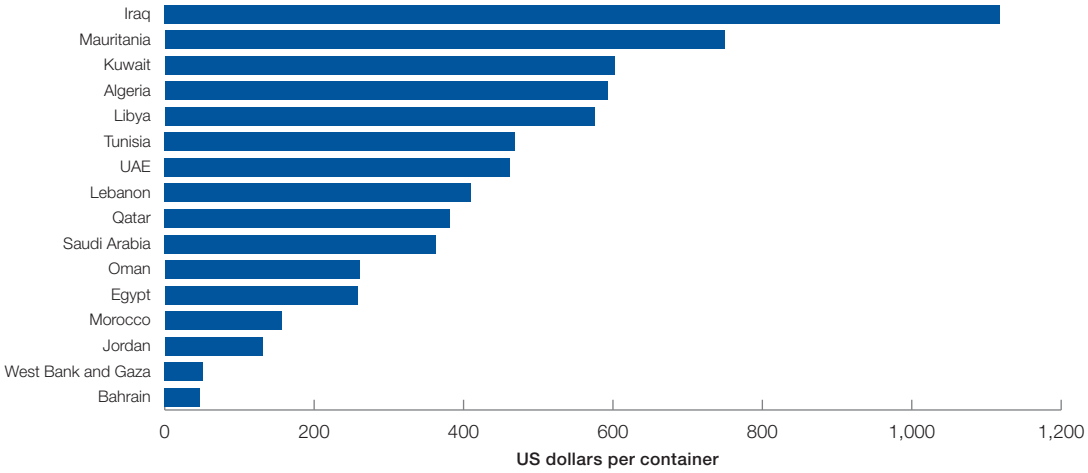
This contributes to the Arab world underperforming other regions on the Doing Business distance-to-frontier measure of trading across borders (Figure 18). It measures complexity to export and import goods by recording the time and cost associated with the logistical process of exporting and importing goods. The Arab world averages 121 out of 190 countries and, similar to its performance on the LPI, in the Doing Business measure of the distance to the frontier, the West Bank and Gaza, Jordan, and Morocco perform best, whereas Yemen, Algeria, and Iraq rank among the lowest in the Arab world.

In addition, the Arab world remains one of the most fragmented regions in terms of production, trade, and economic links. In spite of its population of about 350 million people who share a common language, culture, and rich trading civilization, the Arab world does not function as one economic market. Rather, regional markets are cut off from each other and from the rest of the world, and the region plays the role of bystander rather than an active participant in processes of globalization. [69]

Social entrepreneurship in the Arab world

Social entrepreneurship is an untapped potential in the Arab world that governments could catalyze to address many of the key challenges that the region faces today, including service delivery gaps, increasingly vulnerable social services, environmental degradation, and a restless younger generation. The growth in service demand often outstrips the government's financial and technical capacity to keep up or address these issues, and markets for them are often neither conducive to entrepreneurship nor profitable enough for traditional private-sector players. Social entrepreneurs can address these problems by developing business models that solve these challenges, such as by developing skills for low-income youth, providing jobs platforms for refugees, recovering and recycling waste, increasing access to last-mile health services, and improving smallholder productivity through ICT.[70]

Figure 17: Border compliance cost to export in the Arab world, 2017



Source: World Bank, Doing Business indicators 2018, available at http://www.doingbusiness.org/Custom-Query.
Notes: Germany is included because it is the highest-ranked country in the index. UAE = United Arab Emirates.

Figure 18: Doing business: Trading across borders, 2018

Source: World Bank, Doing Business indicators 2018, available at http://www.doingbusiness.org/Custom-Query.
Notes: Doing Business rank is shown in parentheses next to the country name. UAE = United Arab Emirates.

"Social enterprises could be private for-profit, non-profit and hybrid organizations with a social mission that use business approaches to achieve their objectives," according to researchers Triponel and Agapitova.[71] *Social enterprises* may encompass any activity and are found across different economic sectors—they may be suppliers (providing services/goods to last-mile markets) to the poor, or consumers (sourcing or employing from marginalized groups) helping improve their livelihood opportunities, or even both. Social entrepreneurs tend to be driven by values—they take the risk and innovate to bring solutions to their communities.

A recent study sponsored by the regional serial entrepreneur Fadi Ghandour found that a growing number of young social entrepreneurs took the initiative in recent years to invest in a career addressing social issues critical for their well-being in their communities.[72] The study suggests that key challenges facing social entrepreneurs are financing and regulations. Because of the lack of awareness about social entrepreneurship purpose and structures, entrepreneurs find it hard to attract investors who are mainly interested in financial returns. In many cases entrepreneurs face difficulties in dealing with governments when it comes to offering services that are generally offered by the public sector.

Given the positive externalities social enterprises can bring to the economy, Arab world governments would benefit from encouraging the growth of social entrepreneurship. Global experience indicates that a range of policy initiatives can be deployed.[73] On the regulatory side, recognition of social enterprises as a business type can help provide awareness, targeted assistance, and tax incentives that will ease an enterprise's growth. Public financing to support the growth of social enterprises and hence their social impact could also be provided through grants. For more advanced social enterprises, financing could be provided through public-private partnerships, social procurement preferences (by including the social impact of an enterprise as part of the selection criteria in addition to economic cost), or, as has been done more recently, social impact bonds (as is currently being developed in the West Bank and Gaza on job creation for youth). Governments can also provide legal frameworks and vehicles for impact investors and philanthropists that will incentivize them to invest in social entrepreneurs. The last few years have seen an increase in the number of nongovernmental organizations trying to address societal challenge that governments have not been able to resolve. However, because of the absence of impact investors, these initiatives have been funded mostly by donors. This is a less sustainable model, and it has not been able to introduce many social enterprises to the ecosystem.

Conclusions

No single factor can overcome the barriers to the development of entrepreneurship in the Arab world. Yet, unless those businesses that aspire to take risks and grow can succeed within their communities—regardless of their social or economic privilege—the Arab world's economies will not prosper to their full extent.

Ensuring open markets is necessary for the entry and growth of entrepreneurs. Open competition, social acceptance, availability of talents, financial and technical support, and access to regional markets together all provide an ecosystem conducive to aspiring entrepreneurs to start and grow. In addition, Arab world governments should provide a friendly and open business environment for entrepreneurs, with the goal of expanding the pipeline of start-ups and making it possible for them to grow and contribute to job creation and income generation. Institutional and regulatory frameworks and the provision of fair opportunity, transparency, and predictability are all critical dimensions that must be examined in order to evaluate how privilege-proof the policy areas affecting the private sector are. Additional dimensions that must be included to provide a welcoming ecosystem are access to information and the availability of grievance, complaint, and recourse mechanisms, as well as rules governing integrity and accountability.

Governments should seek to unlock bottlenecks along the entire growth cycle of entrepreneurs. Governments need to provide the many elements of an ecosystem conducive to entrepreneurs and also to offer aspiring entrepreneurs the right talents that would allow them to leverage the resources they need to unlock growth opportunities. In addition to ensuring that the ecosystem is well formed, governments should also unlock any obstructions and support the growth cycle of entrepreneurs from ideation to maturity.

Focus public efforts on places where the market failures exist. The rationale for public intervention in private markets is often justified by the presence of binding constraints on firms and how public intervention can alleviate those constraints. Some entrepreneurs may be limited by access to short-term credit or burdensome business start-up regimes; others with aspirations for growth may face constraints in the regulation of labor and product markets, access to longer-term risk capital, and overall macroeconomic stability.[74] Constraints that affect high-growth firms and innovation activities, in particular, tend to relate to weak components of the entrepreneurship ecosystem in the Arab world, which include competition, risk acceptance, and technology absorption.

Distinguish between transformational and subsistence entrepreneurship and target approaches accordingly. Kerr and others have identified the fundamental distinction between subsistence/necessity and transformational/opportunity entrepreneurs.[75] Yet many researchers note that the vast majority of entrepreneurship policies in developing countries have failed to make this distinction and have thus not targeted the right group of firms. Instead, much entrepreneurship policy is aimed at supporting broad-based entrepreneurship and firm start-up, which have few implications for employment growth, innovation, and structural transformation. Merely encouraging the creation of new start-ups will not transform stagnated economies.[76] In fact, in many developing countries, the financial infrastructure and accompanying policy environment is better equipped to provide micro financing to small, unproductive subsistence firms, which creates bottlenecks for transformational entrepreneurs and produces the unintended consequences of promoting unproductive entrepreneurship.[77]

Research has established that allocating entrepreneurial finance to small but promising firms is successful at both rationing finance and at helping firms to grow, but finding these firms is a challenge. It is evident that financing has an impact on firm growth and that the extension of entrepreneurial capital is associated with a higher likelihood of firm survival and an increase in the likelihood of expanding employees. Thus there is an argument to be made that governmental policy should be focused on freeing up private capital to reach potential high-growth entrepreneurs. Along the same lines, a forthcoming World Bank report on high-growth entrepreneurship in developing countries shows that high-growth firms create positive spillovers for other businesses, such as their suppliers and buyers, and in many instances are more productive, more innovative, integrated more tightly with global markets, and attract higher-quality workers and managers. However, high firm growth is found to be often episodic and short-lived, and in some cases can be an outcome of distortions or idiosyncratic demand shocks rather than indicative of intrinsically good performers. Therefore Arab policymakers should proceed cautiously with targeted support because there are no robust predictors of high firm growth despite years of research on business plan competitions and the socioeconomic traits of entrepreneurs.[78]

Most of the leading entrepreneurs in the Arab world surveyed for this report suggested that the key determinants of success for their business in the future are increased access to markets (68 percent), finance (66 percent), and talent (65 percent). In turn, they suggested that the top priorities on which their governments should focus are providing a friendly business environment (47 percent), robust

physical infrastructure (41 percent), market access programs (41 percent), access to finance (41 percent), and better education and training systems (35 percent).

Recommendations

Government policy can play an active role in establishing an ecosystem conducive to entrepreneurs, but it must take a holistic approach. Entrepreneurship is not bound by one country's geography. Regional entrepreneurial ecosystems are being made in the Arab world, and skilled professionals and start-ups should target these chains to grow organically. The Arab world ecosystem has been growing regionally to connect growing talents in each country to regional financing hubs, a process partially facilitated by policies conducive to entrepreneurs and hosted within a solid support infrastructure in a few Arab countries. Lagging countries should address entrepreneurship development by carefully assessing their ecosystems and addressing challenges across the domains of policy, human capital, access to market, financing, culture, and support infrastructure, noting that in some cases support may best be found from the region rather than locally and that entrepreneurs may pursue business models that place different parts of their business in different countries. Governments should remove mobility and labor restrictions on entrepreneurs to encourage further regional integration across the Arab world.

Support bottom-up ecosystem development, not top-down. Governments should also be careful when supporting their ecosystems not to try to control their development. Ecosystems develop organically through the strength and efforts of many different players, and building this strength and the capacity of the key components is much more important than top-down planning. Governments should engage entrepreneurs in the planning process and give them space to develop their own growth patterns, which could then be supported by governments. Furthermore, overseas investors, entrepreneurs, and diaspora support will be wary of ecosystems where government control is too prominent. Management training and technical assistance interventions have become a popular means of supporting entrepreneurs and promoting growth. Management consulting services have been shown to generate improvements in business performance and often governments or aid agencies will subsidize the purchase of such services.

Policies focused on reforms to the broader business environment remain a priority for creating an entrepreneur-friendly environment in the Arab world. Getting credit, resolving insolvency, trading across borders, and starting businesses are the key issues facing the creation and growth of entrepreneurs across the region. Furthermore, restrictive regulations and the heavy involvement of state-owned enterprises need to change to give entrepreneurs the space and opportunity to grow. Effective anti-trust regulations, limited state involvement in the economy, and openness to trade and investment help entrepreneurs grow.

Public procurement continues to dominate large parts of Arab world economies and could be leveraged as part of the solution to give more opportunities for entrepreneurs. GVCs also present opportunities for spurring entrepreneurship and growth while improving international market integration. Each strategy comes with its own challenges and opportunities, and ultimately countries need to gauge which strategy benefits them most in light of their own development interests. While public procurement practices would require legal and regulatory reforms coupled with technical support and government-to-consumer matching, integrating entrepreneurs into GVCs would require a review of national quality standards, laws, and related regulations, as well as an availability of skills and know-how. State-owned enterprises can be encouraged to engage actively in accelerating and investing in entrepreneurs to help address business challenges they face and put forward innovative business models for future product diversification. GVCs offer enhanced access to export markets, which can have a positive causal impact on profits and productivity. Therefore programs that aim to connect firms with foreign buyers and/or globally linked value chains can also promote high-growth entrepreneurs.

Investment in formal and informal education is necessary for building the skill set of tomorrow's entrepreneurs. The private sector rewards some types of skills (e.g., coding/programing, design, data analysis) that may need different teaching/training approaches than the usual Arab world approach. Entrepreneurship also generally requires some behavioral characteristics (e.g., innovation, risk tolerance, creativity) that are not strengths of the Arab world education systems. Government policies therefore need to better embed skills critical for entrepreneurship into the formal education system. Private training can also help address these gaps.

Boosting the entrepreneurial culture of creating and building value in the Arab world is key. Although global indicators suggest a growing acceptance for entrepreneurship as a desired career choice and the media pay reasonable attention to entrepreneurs across the Arab world, there is arguably only a thin history of creating and adding value as opposed to trading in the region. Governments can help accelerate this process by focusing more attention on successful entrepreneurs in the region. Governments can also do more to raise awareness about the benefits of entrepreneurship and to build entrepreneurial culture. Furthermore, entrepreneurship can contribute to the development of Arab world solutions to Arab world problems. Although several successful entrepreneurs have introduced business models and technology from elsewhere and applied them to Arab world countries, there is room for entrepreneurs to address Arab world–specific issues. For example, climate change, food security, and water scarcity are huge issues facing the Arab world; these all require, in part, local solutions.

With the lowest labor force participation globally, and with great difficulties in becoming entrepreneurial, women remain an enormous untapped potential in Arab world economies. Governments can do more to support a cultural transformation process to encourage more women-owned businesses by eliminating gender-biased legal and regulatory restrictions; they can also offer women-focused support programs for joining or starting entrepreneurial initiatives. Addressing the constraints women entrepreneurs encounter will help expand opportunities for them, especially impediments in specific sectors and business models (e.g., home-based businesses) that would favor their involvement. Improving soft skills and business confidence, which has proven strongly effective in other countries to boost women businesses, are also greatly needed here.

Social entrepreneurship is nascent in the Arab world, and governments need to become more aware of its

potential role or needs. The support of government would be key to allowing social entrepreneurs to play a greater role in developing their communities, particularly in countries affected by fragility, conflict, and violence. Social enterprises elsewhere are active in developing innovative ways to deliver effective and cheaper solutions to everyday problems, particularly where public-sector services are absent or inadequate and the market is too risky and not profitable enough for the private sector.

Angel investment networks have been growing in a few countries in the Arab world, but need to become more accessible to young entrepreneurs. Governments should support the development of angel investment in the Arab world to include private investments, bridge equity gaps, and improve the pipeline of investment-ready start-ups for venture capital and private equity funds. Growth of the Arab world angels would provide access to "smart" financing that is usually combined with mentorship and market-access connections. Creation and growth of Arab world angel investment groups could also attract increased investments from Arab communities in the diaspora. Crowdfunding also brings benefits to both the entrepreneurs and the ecosystem. Crowdfunding is more than just providing access to capital for start-ups. It also includes minimizing investment risks through easy-to-access platforms, building networks and long-term relations with investors, providing market validation for business ideas, and creating competition in business ideas to gain the market/investor's acceptance.

Government- and private sector–led entrepreneurship initiatives should engage systematically with their professional diaspora and business angels abroad to support entrepreneurs at home. International examples of such managed networks include Global Scot and Chile Global, which enlisted some 600 and 100 members, respectively. In the Arab world, Tunisia recently established the "ambassador" program, which is targeted toward diaspora professionals with managerial positions in the IT industry to promote Smart Tunisia abroad. Governments can also encourage diaspora contributions to competitive research and innovation in their home countries. The diaspora can help build the local innovation and research ecosystem. Notable examples include research excellence contests pioneered in Croatia in 2008, in Mexico in 2009, and in Russia in 2010 that provided matching funds to organizations in the home country that set up a joint project with diaspora members.[79]

This chapter has considered the many elements of successful entrepreneurship and their unique role in the Arab world. Successfully addressing the obstacles to growing entrepreneurship as a viable and sought-after approach to the world will boost Arab world economies and will be essential to seeing the region prosper.

Notes

1 For the purposes of this chapter, the Arab world includes the following 17 countries: Algeria, Bahrain, Egypt, Iraq, Jordan, Kuwait, Lebanon, Mauritania, Morocco, Oman, Qatar, Saudi Arabia, Sudan, Tunisia, the United Arab Emirates, the West Bank and Gaza, and Yemen. However, when other references are quoted throughout this chapter using data for Middle East & North Africa (MENA) as the framework for analysis, we follow the regional definition of the author.

2 Ayyagari et al. 2011.

3 Examples of the main data sources used for this chapter include the World Bank Group's Enterprise Survey and the *Doing Business Report,* the Global Entrepreneurship Development Institute, the Global Entrepreneurship Monitor, and Babson College's Entrepreneurship Ecosystem Platform.

4 Olafsen and Cook 2016.

5 This definition aligns with the Global Entrepreneurship Monitor definition of an *entrepreneur,* who is "a person with the vision to see an innovation and the ability to bring it to market." Acs et al. 2017, p. 2.

6 Carree and Thurik 2003.

7 The MIT Observatory of Economic Complexity's Economic Complexity Index is available at https://atlas.media.mit.edu/en/rankings/country/eci/.

8 The Global Entrepreneurship and Development Institute's GEI is available at http://thegedi.org/global-entrepreneurship-and-development-index/.

9 Cusolito et al. 2016, p. 19.

10 Cusolito et al. 2016, p. 19.

11 Cusolito et al. 2016, p. 19.

12 World Economic Forum 2016.

13 World Bank 2016b.

14 Developing MENA countries are Algeria, Iraq, Yemen, Egypt, Jordan, Lebanon, Morocco, Tunisia, and the West Bank and Gaza.

15 Momani 2017.

16 IFC 2016.

17 World Bank 2015b.

18 Authors' calculation, based on publicly available data on the Doing Business website from the period of 2006 to 2016.

19 World Bank *Doing Business Report*'s New business density (new registrations per 1,000 people ages 15-64), available at http://www.doingbusiness.org/data/exploretopics/entrepreneurship.

20 *Established business activity* is defined by GEM as the percentage of the adult population who are owners/managers of businesses that have been in operation for more than 42 months. These indicators reflect the level of sustainability of entrepreneurship.

21 Ismail et al. 2017.

22 Hariharan 2018.

23 Benhassine 2009.

24 Schiffbauer et al. 2015.

25 Aghion et al. 2001.

26 See Diwan et al. 2014 for work in Egypt; see Freund et al. 2014 for work in Tunisia.

27 Mahmood and Slimane 2018.

28 The Arab Mashreq countries are Iraq, Jordan, Lebanon, Syria, and the West Bank and Gaza.

29 The GEI includes 14 Arab world countries in the region: Algeria, Bahrain, Egypt, Islamic Republic of Iran, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Tunisia, and the United Arab Emirates.

30 Hariharan 2018.

31 Arab world countries covered by Enterprise Survey data are Egypt, Iraq, Jordan, Lebanon, Mauritania, Sudan, Tunisia, the West Bank and Gaza, and Yemen. More information about the Enterprise Surveys covering the Middle East and North Africa region is available at http://www.enterprisesurveys.org/.

32 Kerr et al. 2014.

33 World Bank 2018b.

34 IMF 2017.

35 Momani 2017.

36 MENAbytes. 2017.

37 Preqin 2017.

38 Deloitte 2016.

39 Preqin 2017.

40 Deloitte 2016.

41 Preqin 2017.

42 World Bank 2016b.

43 World Bank 2017b.

44 See https://medium.com/@akallel/the-next-wave-of-innovation-will-come-from-tunisia-here-is-why-c6892addd564 for additional information.

45 See http://algerianamericanfoundation.org/ for additional information.

46 See http://lebnet.us/ and http://www.lifelebanon.com/ for additional information.

47 Ismail et al. 2017.

48 World Bank 2015a.

49 See the Speedtest Global Index, May 2018, available at http://www.speedtest.net/global-index.

50 Data are from Internet World Stats, available at http://www.internetworldstats.com/stats5.htm and Global Internet Geography's TeleGeography, available at https://www2.telegeography.com/global-internet-geography.

51 GSMA 2018.

52 See the Speedtest Global Index, May 2018, available at http://www.speedtest.net/global-index.

53 Cusolito et al. 2016.

54 World Bank 2018c.

55 Henry et al. 2005; Peterman and Kennedy 2003.

56 Mulas 2016.

57 World Bank 2018c.

58 Wamda Research Lab 2015.

59 See http://www.injazalarab.org/ for additional information.

60 The World Bank's Basic-school E Entrepreneurial Education and Training Index is available at https://tcdata360.worldbank.org/indicators/nes.basic.train.entrp?country=BRA&indicator=3098&viz=line_chart&years=2007,2017.

61 Elborgh-Woytek et al. 2013.

62 World Bank 2018e.

63 World Bank 2018e.

64 World Bank Enterprise Survey data are available at http://www.enterprisesurveys.org/data/exploretopics/gender.

65 ILO data as reported by the World Bank's *World Development Indicators,* available at https://data.worldbank.org/indicator/SL.UEM.TOTL.FE.ZS?locations=ZQ&year_high_desc=false.

66 Schroeder 2017.

67 GEM 2017.

68 Aghion et al. 2001. The Logistics Performance Index (LPI) is the weighted average of the country scores on six dimensions: (1) Efficiency of the clearance process (i.e., speed, simplicity and predictability of formalities) by border control agencies, including customs; (2) Quality of trade and transport related infrastructure (e.g., ports, railroads, roads, information technology); (3) Ease of arranging competitively priced shipments; (4) Competence and quality of logistics services (e.g., transport operators, customs brokers); (5) Ability to track and trace consignments; and (6) Timeliness of shipments in reaching destination within the scheduled or expected delivery time. The scorecards demonstrate comparative performance—the dimensions show on a scale (lowest score to highest score) from 1 to 5 relevant to the possible comparison groups—of all countries (world), region and income groups.

69 Malik and Awadallah 2013.

70 Tinsley and Agapitova 2018a, 2018b.

71 Triponel and Agapitova 2016, p. 8.

72 Halabi et al. 2017.

73 Agapitova et al. 2017.

74 Schoar 2010.

75 Kerr et al. 2014.

76 Coad and Nightingale 2013; Moreno and Coad 2015; Shane 2009.

77 Shoar 2010.

78 World Bank 2018d forthcoming.

79 World Bank 2016b.

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Part 2

Country Profiles

How to Read the Country Profiles

The Country Profiles section presents a two-page profile for each of the 12 countries covered in *The Arab World Competitiveness Report 2018.*

Page 1

❶ Key Indicators

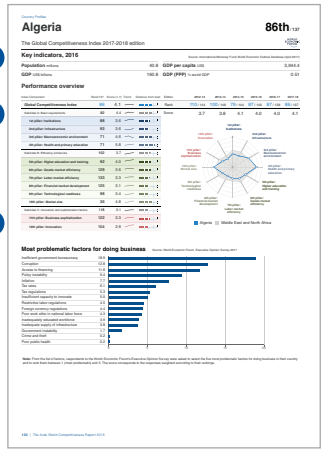
The first section presents a selection of key indicators for the economy under review. All data in this section are for 2016 and sourced from the April 2017 edition of the International Monetary Fund (IMF)'s *World Economic Outlook (WEO) Database*.

❷ Performance overview

This section details the economy's performance on the main components of the Global Competitiveness Index (GCI). The table on the upper left of this section shows the evolution in the economy's overall GCI rank and score since the 2012–2013 edition (or the earliest edition available). On the right-hand side, a chart shows the economy's performance in the 12 pillars of the GCI (blue line) measured against the region's average scores. See page ix of *The Global Competitiveness Report 2017–2018* for group composition.

❸ The most problematic factors for doing business

This chart summarizes those factors seen by business executives as the most problematic for doing business in their economy. The information is drawn from the World Economic Forum's Executive Opinion Survey (the Survey). From a list of 16 factors, respondents were asked to select the five most problematic and rank them from 1 (most problematic) to 5. The results were then tabulated and weighted according to the ranking assigned by respondents.



Page 2

❹ The Global Competitiveness Index in detail

This page details the country's performance on each of the indicators entering the composition of the GCI. Indicators are organized by pillar. For indicators entering the GCI in two different pillars, only the first instance is shown on this page. See the appendix of Chapter 1.1 for the detailed structure of the GCI and methodology.

Indicators derived from the Survey are always expressed as scores on a 1–7 scale, with 7 being the most desirable outcome. For those, units are omitted for the sake of readability. For indicators that are not derived from the Survey, the units are displayed next to the indicator name. A line depicts the evolution of this value since the 2013–2014 edition of the *Report* (or the earliest period available).

Online resources

Interactive profiles and sortable rankings with detailed meta information, as well as downloadable datasets, are available at http://wef.ch/awcr.

Technical Notes and Sources

The data in this *Report* represent the best available estimates from various national authorities, international agencies, and private sources at the time the *The Arab World Competitiveness Report 2018* was prepared. It is possible that some data will have been revised or updated by the sources after publication. The following notes provide sources for all the indicators listed in the Country Profiles. The title of each indicator appears on the first line, preceded by its number to allow for quick reference. The numbering is consistent with the one adopted in the appendix of Chapter 1.1. Below is a description of each indicator or, in the case of Executive Opinion Survey data, the full question and associated answers. If necessary, additional information is provided underneath.

In this year's edition, missing values and reported values older than 2007 have been estimated by the authors for the purpose of calculating the Global Competitiveness Index. Depending on data availability, these values have been imputed by using either a multivariate linear regression or income-regional group means. The multivariate linear regression method substitutes missing values by the predicted values obtained from estimating a regression. The dependent variable of the regression is the indicator hosting the missing value, and the regressors are other indicators showing a high degree of correlation and conceptually linked with the dependent variable. Imputation using the income-regional group mean method replaces missing values with the sample mean. This sample is determined by the region and the income group to which the economy of the missing value belongs. Table 1 at the end of this section reports the imputed values by indicator and economy, and the method used. Note that in the ranking tables available online at http://gcr.weforum.org, imputed values are *not* reported.

Pillar 1: Institutions

1.01 Property rights

In your country, to what extent are property rights, including financial assets, protected? [1 = not at all; 7 = to a great extent] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

1.02 Intellectual property protection

In your country, to what extent is intellectual property protected? [1 = not at all; 7 = to a great extent] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

1.03 Diversion of public funds

In your country, how common is illegal diversion of public funds to companies, individuals, or groups? [1 = very commonly occurs; 7 = never occurs] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

1.04 Public trust in politicians

In your country, how do you rate the ethical standards of politicians? [1 = extremely low; 7 = extremely high] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

1.05 Irregular payments and bribes

Average score across the five components of the following Executive Opinion Survey question: In your country, how common is it for firms to make undocumented extra payments or bribes connected with (a) imports and exports; (b) public utilities; (c) annual tax payments; (d) awarding of public contracts and licenses; (e) obtaining favorable judicial decisions? In each case, the answer ranges from 1 [very common] to 7 [never occurs] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

1.06 Judicial independence

In your country, how independent is the judicial system from influences of the government, individuals, or companies? [1 = not independent at all; 7 = entirely independent] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

1.07 Favoritism in decisions of government officials

In your country, to what extent do government officials show favoritism to well-connected firms and individuals when deciding upon policies and contracts? [1 = show favoritism to a great extent; 7 = do not show favoritism at all] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

1.08 Efficiency of government spending

In your country, how efficient is the government in spending public revenue? [1 = extremely inefficient; 7 = extremely efficient] | 2017

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

1.09 Burden of government regulation

In your country, how burdensome is it for companies to comply with public administration's requirements (e.g., permits, regulations, reporting)? [1 = extremely burdensome; 7 = not burdensome at all] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

1.10 Efficiency of legal framework in settling disputes

In your country, how efficient are the legal and judicial systems for companies in settling disputes? [1 = extremely inefficient; 7 = extremely efficient] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

1.11 Efficiency of legal framework in challenging regulations

In your country, how easy is it for private businesses to challenge government actions and/or regulations through the legal system? [1 = extremely difficult; 7 = extremely easy] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

1.12 Transparency of government policymaking

In your country, how easy is it for companies to obtain information about changes in government policies and regulations affecting their activities? [1 = extremely difficult; 7 = extremely easy] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

1.13 Business costs of terrorism

In your country, to what extent does the threat of terrorism impose costs on businesses? [1 = to a great extent— imposes huge costs; 7 = not at all— imposes no costs] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

1.14 Business costs of crime and violence

In your country, to what extent does the incidence of crime and violence impose costs on businesses? [1 = to a great extent—imposes huge costs; 7 = not at all—imposes no costs] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

1.15 Organized crime

In your country, to what extent does organized crime (mafia-oriented racketeering, extortion) impose costs on businesses? [1 = to a great extent—imposes huge costs; 7 = not at all—imposes no costs] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

1.16 Reliability of police services

In your country, to what extent can police services be relied upon to enforce law and order? [1 = not at all; 7 = to a great extent] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

1.17 Ethical behavior of firms

In your country, how do you rate the corporate ethics of companies (ethical behavior in interactions with public officials, politicians and other firms)? [1 = extremely poor—among the worst in the world; 7 = excellent—among the best in the world] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

1.18 Strength of auditing and reporting standards

In your country, how strong are financial auditing and reporting standards? [1 = extremely weak; 7 = extremely strong] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

1.19 Efficacy of corporate boards

In your country, to what extent is management accountable to investors and boards of directors? [1 = not at all; 7 = to a great extent] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

1.20 Protection of minority shareholders' interests

In your country, to what extent are the interests of minority shareholders protected by the legal system? [1 = not protected at all; 7 = fully protected] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

1.21 Strength of investor protection

Strength of Investor Protection Index on a 0–10 (best) scale | 2016

This variable is a combination of the Extent of disclosure index (transparency of transactions), the Extent of director liability index (liability for self-dealing), and the Ease of shareholder suit index (shareholders' ability to sue officers and directors for misconduct). For more details about the methodology employed and the assumptions made to compute this indicator, visit http://www.doingbusiness.org/methodologysurveys/.

Source: World Bank/International Finance Corporation, *Doing Business 2017: Equal Opportunity for All*

Pillar 2: Infrastructure

2.01 Quality of overall infrastructure

How do you assess the general state of infrastructure (e.g., transport, communications, and energy) in your country? [1 = extremely underdeveloped—among the worst in the world; 7 = extensive and efficient—among the best in the world] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

2.02 Quality of roads

In your country, what is the quality (extensiveness and condition) of road infrastructure? [1 = extremely poor—among the worst in the world; 7 = extremely good—among the best in the world] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

2.03 Quality of railroad infrastructure

In your country, what is the quality (extensiveness and condition) of the railroad system? [1 = extremely poor—among the worst in the world; 7 = extremely good—among the best in the world] | 2016–17 weighted average

N/Appl. is used for economies where there is no regular train service or where the network covers only a negligible portion of the territory. Assessment of the existence of a network was conducted by the World Economic Forum based on various sources.

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

2.04 Quality of port infrastructure

In your country, what is the quality (extensiveness and condition) of seaports (for landlocked countries, assess access to seaports)? [1 = extremely poor—among the worst in the world; 7 = extremely good—among the best in the world] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

2.05 Quality of air transport infrastructure

In your country, what is the quality (extensiveness and condition) of airports? [1 = extremely poor—among the worst in the world; 7 = extremely good—among the best in the world] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

2.06 Available airline seat kilometers

Airline seat kilometers (in millions) available on all flights (domestic and international service) originating in country per week (year average) | Monthly average for 2017

This indicator measures the total passenger-carrying capacity of all scheduled flights, including domestic flights, originating in a country. It is computed by multiplying the number of seats available on each flight by the flight distance in kilometers and summing the result across all scheduled flights in a week. The final value represents the weekly average for the year (Jan–Dec), taking into account flights scheduled beforehand by airline companies.

Source: International Air Transport Association, SRS Analyser

2.07 Quality of electricity supply

In your country, how reliable is the electricity supply (lack of interruptions and lack of voltage fluctuations)? [1 = extremely unreliable; 7 = extremely reliable] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

2.08 Mobile-cellular telephone subscriptions

Number of mobile-cellular telephone subscriptions per 100 population | 2016

Mobile-cellular telephone subscriptions refers to the number of subscriptions to a public mobile telephone service that provides access to the public switched telephone network (PSTN) using cellular technology. It includes both the number of postpaid subscriptions and the number of active prepaid accounts (i.e., that have been active during the past three months). It includes all mobile-cellular subscriptions that offer voice communications. It excludes subscriptions via data cards or USB modems, subscriptions to public mobile data services, and private trunked mobile radio, telepoint, radio paging, and telemetry services.

Source: International Telecommunication Union, *ITU World Telecommunication/ICT Indicators* (June 2017 edition)

2.09 Fixed-telephone lines

Number of fixed-telephone lines per 100 population | 2016

Fixed-telephone subscriptions refers to the sum of active analogue fixed-telephone lines, voice over IP (VoIP) subscriptions, fixed wireless local loop (WLL) subscriptions, ISDN voice-channel equivalents, and fixed-public payphones. It includes all accesses over fixed infrastructure supporting voice telephony using copper wire, voice services using Internet Protocol (IP) delivered over fixed (wired)-broadband infrastructure (e.g., DSL, fiber optic), and voice services provided over coaxial-cable television networks (cable modem). It also includes fixed wireless local loop (WLL) connections, which are defined as services provided by licensed fixed-line telephone operators that provide last-mile access to the subscriber using radio technology, when the call is then routed over a fixed-line telephone network (and not a mobile-cellular network). In the case of VoIP, it refers to subscriptions that offer the ability to place and receive calls at any time and do not require a computer. VoIP is also known as voice-over broadband (VoB), and includes subscriptions through fixed-wireless, DSL, cable, fiber optic, and other fixed-broadband platforms that provide fixed telephony using IP.

Source: International Telecommunication Union, *ITU World Telecommunication/ICT Indicators* (June 2017 edition)

Pillar 3: Macroeconomic environment

3.01 Government budget balance

General government budget balance as a percentage of GDP | 2016

General government budget balance is calculated as general government revenue minus total expenditure. This is a core Government Finance Statistics (GFS) balance that measures the extent to which the general government is either putting financial resources at the disposal of other sectors in the economy and nonresidents (net lending), or utilizing the financial resources generated by other sectors and nonresidents (net borrowing). This balance may be viewed as an indicator of the financial impact of general government activity on the rest of the economy and nonresidents. Revenue consists of taxes, social contributions, grants receivable, and other revenue. Revenue increases a government's net worth, which is the difference between its assets and liabilities. General government total expenditure consists of total expenses and the net acquisition of nonfinancial assets.

Source: International Monetary Fund, *World Economic Outlook Database* (April 2017 edition)

3.02 Gross national savings

Gross national savings as a percentage of GDP | 2016 or most recent year available

Gross national savings is expressed as a ratio of gross national savings in current local currency and GDP in current local currency. It corresponds to gross disposable income less final consumption expenditure after taking account of an adjustment for pension funds. For many countries, the estimates of national savings are built up from national accounts data on gross domestic investment and from balance of payments-based data on net foreign investment.

For this indicator, some values were imputed. See Table 1 at the end of this appendix for details.

Source: International Monetary Fund, *World Economic Outlook Database* (April 2017 edition)

3.03 Inflation

Annual percent change in consumer price index (year average) | 2016 or most recent year available

Source: International Monetary Fund, *World Economic Outlook Database* (April 2017 edition)

3.04 Government debt

Gross general government debt as a percentage of GDP | 2016 or most recent year available

Gross debt consists of all liabilities that require payment or payments of interest and/or principal by the debtor to the creditor at a date or dates in the future. This includes debt liabilities in the form of special drawing rights, currency and deposits, debt securities, loans, insurance, pensions and standardized guarantee schemes, and other accounts payable. Thus all liabilities in the *Government Finance Statistics Manual (GFSM) 2001* system are debt, except for equity and investment fund shares, financial derivatives, and employee stock options. For Australia, Belgium, Canada, Hong Kong SAR, Iceland, New Zealand, and Sweden, government debt coverage also includes insurance technical reserves, following the GFSM 2001 definition.

Source: International Monetary Fund, *World Economic Outlook Database* (April 2017 edition) and *Article IV Consultation Staff Reports*

3.05 Country credit rating

Institutional Investor's Country Credit Ratings™ assessing the probability of sovereign debt default on a 0–100 (lowest probability) scale | March 2016

Institutional Investor's Country Credit Ratings™ developed by Institutional Investor are based on information provided by senior economists and sovereign-debt analysts at leading global banks and money management and security firms. Twice a year, the respondents grade each country on a scale of 0 to 100, with 100 representing the least chance of default.

For this indicator, some values were imputed. See Table 1 at the end of this appendix for details

Source: Institutional Investor's "Country Credit Ratings" is a trademark of Institutional Investor, LLC. No further copying or transmission of this material is allowed without the express written permission of Institutional Investor publisher@institutionalinvestor.com. Copyright © Institutional Investor, LLC 2016

Pillar 4: Health and primary education

4.01 Malaria incidence

Estimated number of malaria cases per 100,000 population | 2015 or most recent year available

For economies that: (1) were declared free of malaria by the World Health Organization (WHO) (except in the case of Hong Kong SAR, for which malaria assessment is from the CDC); (2) are included in the WHO's supplementary list of areas where malaria has never existed or has disappeared without specific measures; or (3) are currently in the prevention of reintroduction phase as identified by the WHO, this indicator is excluded from the calculation of the GCI. In the Economy Profiles of these economies, the following abbreviations are used: *M.F.* for malaria-free economies; *P.R.* means the economy is in the prevention of reintroduction phase; and *S.L.* means the economy is on the WHO's supplementary list.

Sources: The World Health Organization, *World Malaria Report* 2012 and 2016 editions; United States Centers for Disease Control and Prevention (CDC), *Malaria Information and Prophylaxis information* (accessed July 29, 2017)

4.02 Business impact of malaria

How serious an impact do you consider malaria will have on your company in the next five years (e.g., death, disability, medical and funeral expenses, productivity and absenteeism, recruitment and training expenses, revenues)? [1 = a serious impact; 7 = no impact at all] | 2017

For economies that are considered free of malaria; that are included in the World Health Organization's supplementary list; or that are in the prevention of reintroduction phase (see indicator 4.01 above), this indicator is excluded from the calculation of the GCI. In the Economy Profiles of these economies, *N/Appl.* is used for this indicator.

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

4.03 Tuberculosis incidence

Estimated number of tuberculosis cases per 100,000 population | 2015 or most recent year available

Incidence of tuberculosis is the estimated number of new pulmonary, smear positive, and extra-pulmonary tuberculosis cases.

Sources: The World Bank, *World Development Indicators* (accessed June 8, 2017); national sources

4.04 Business impact of tuberculosis

How serious an impact do you consider tuberculosis will have on your company in the next five years (e.g., death, disability, medical and funeral expenses, productivity and absenteeism, recruitment and training expenses, revenues)? [1 = a serious impact; 7 = no impact at all] | 2017

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

4.05 HIV prevalence

HIV prevalence as a percentage of adults aged 15–49 years | 2016 or most recent year available

HIV prevalence refers to the percentage of people aged 15–49 who are infected with HIV at a particular point in time, no matter when infection occurred.

For this indicator, some values were imputed. See Table 1 at the end of this appendix for details

Sources: The World Bank, *World Development Indicators* (accessed July 27, 2017); UNAIDS, *UNAIDS Global Report 2012*; UNAIDS, *UNAIDS Gap Report 2014*; national sources

4.06 Business impact of HIV/AIDS

How serious an impact do you consider HIV/AIDS will have on your company in the next five years (e.g., death, disability, medical and funeral expenses, productivity and absenteeism, recruitment and training expenses, revenues)? [1 = a serious impact; 7 = no impact at all] | 2017

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

4.07 Infant mortality

Infant (children aged 0–12 months) mortality per 1,000 live births | 2015 or most recent year available

Infant mortality rate is the number of infants dying before reaching one year of age per 1,000 live births in a given year.

Sources: The World Bank, *World Development Indicators* (accessed June 8, 2017); national sources

4.08 Life expectancy

Life expectancy at birth (years) | 2015

Life expectancy at birth indicates the number of years a newborn infant would live if prevailing patterns of mortality at the time of its birth were to stay the same throughout its life.

Sources: The World Bank, *World Development Indicators* (accessed June 8, 2017); national sources

4.09 Quality of primary education

In your country, how do you assess the quality of primary education? [1 = extremely poor—among the worst in the world; 7 = excellent—among the best in the world] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

4.10 Primary education enrollment rate

Net primary education enrollment rate | 2015 or most recent year available

The reported value corresponds to the ratio of children of official primary school age (as defined by the national education system) who are enrolled in primary school. Primary education (ISCED level 1) provides children with basic reading, writing, and mathematics skills along with an elementary understanding of such subjects as history, geography, natural science, social science, art, and music.

For this indicator, some values were imputed. See Table 1 at the end of this appendix for details

Sources: UNESCO Institute for Statistics, *Data Centre* (accessed June 8, 2017); Organisation for Economic Co-operation and Development (OECD), *Education at a Glance 2016*; UNICEF; national sources

Pillar 5: Higher education and training

5.01 Secondary education enrollment rate

Gross secondary education enrollment rate | 2015 or most recent year available

The reported value corresponds to the ratio of total secondary enrollment, regardless of age, to the population of the age group that officially corresponds to the secondary education level. Secondary education (ISCED levels 2 and 3) completes the provision of basic education that began at the primary level, and aims to lay the foundations for lifelong learning and human development by offering more subject- or skills-oriented instruction using more specialized teachers.

For this indicator, some values were imputed. See Table 1 at the end of this appendix for details

Sources: UNESCO Institute for Statistics, *Data Centre* (accessed June 8, 2017); national sources

5.02 Tertiary education enrollment rate

Gross tertiary education enrollment rate | 2015 or most recent year available

The reported value corresponds to the ratio of total tertiary enrollment, regardless of age, to the population of the age group that officially corresponds to the tertiary education level. Tertiary education (ISCED levels 5 and 6), whether or not leading to an advanced research qualification, normally requires, as a minimum condition of admission, the successful completion of education at the secondary level.

For this indicator, some values were imputed. See Table 1 at the end of this Appendix for details

Sources: UNESCO Institute for Statistics, *Data Centre* (accessed June 8, 2017); national sources

5.03 Quality of the education system

In your country, how well does the education system meet the needs of a competitive economy? [1 = not well at all; 7 = extremely well] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

5.04 Quality of math and science education

In your country, how do you assess the quality of math and science education? [1 = extremely poor—among the worst in the world; 7 = excellent—among the best in the world] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

5.05 Quality of management schools

In your country, how do you assess the quality of business schools? [1 = extremely poor—among the worst in the world; 7 = excellent—among the best in the world] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

5.06 Internet access in schools

In your country, to what extent is the Internet used in schools for learning purposes? [1 = not at all; 7 = to a great extent] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

5.07 Local availability of specialized training services

In your country, how available are high-quality, professional training services? [1 = not available at all; 7 = widely available] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

5.08 Extent of staff training

In your country, to what extent do companies invest in training and employee development? [1 = not at all; 7 = to a great extent] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

Pillar 6: Goods market efficiency

6.01 Intensity of local competition

In your country, how intense is competition in the local markets? [1 = not intense at all; 7 = extremely intense] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

6.02 Extent of market dominance

In your country, how do you characterize corporate activity? [1 = dominated by a few business groups; 7 = spread among many firms] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

6.03 Effectiveness of anti-monopoly policy

In your country, how effective are anti-monopoly policies at ensuring fair competition? [1 = not effective at all; 7 = extremely effective] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

6.04 Effect of taxation on incentives to invest

In your country, to what extent do taxes reduce the incentive to invest? [1 = to a great extent; 7 = not at all] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

6.05 Total tax rate

This variable is a combination of profit tax (% of profits), labor tax and contribution (% of profits), and other taxes (% of profits) | 2016

The total tax rate measures the amount of taxes and mandatory contributions payable by a business in the second year of operation, expressed as a share of commercial profits. The total amount of taxes is the sum of five different types of taxes and contributions payable after accounting for deductions and exemptions: profit or corporate income tax, social contributions and labor taxes paid by the employer, property taxes, turnover taxes, and other small taxes. For more details about the methodology employed and the assumptions made to compute this indicator, visit http://www.doingbusiness.org/methodologysurveys/.

Source: World Bank/International Finance Corporation, *Doing Business 2017: Equal Opportunity for All*

6.06 Number of procedures required to start a business

Number of procedures required to start a business | 2016

For details about the methodology employed and the assumptions made to compute this indicator, visit http://www.doingbusiness.org/methodologysurveys/.

Source: World Bank/International Finance Corporation, *Doing Business 2017: Equal Opportunity for All*

6.07 Time required to start a business

Number of days required to start a business | 2016

For details about the methodology employed and the assumptions made to compute this indicator, visit http://www.doingbusiness.org/methodologysurveys/.

Source: World Bank/International Finance Corporation, *Doing Business 2017: Equal Opportunity for All*

6.08 Agricultural policy costs

In your country, how do you assess the agricultural policy? [1 = excessively burdensome for the economy; 7 = balances well the interests of taxpayers, consumers, and producers] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

6.09 Prevalence of non-tariff barriers

In your country, to what extent do non-tariff barriers (e.g., health and product standards, technical and labeling requirements, etc.) limit the ability of imported goods to compete in the domestic market? [1 = strongly limit; 7 = do not limit at all] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

6.10 Trade tariffs

Trade-weighted average tariff rate | 2016 or most recent year available

An *applied tariff* is a customs duty that is levied on imports of merchandise goods. This indicator is calculated as a weighted average of all the applied tariff rates, including preferential rates that a country applies to the rest of the world. The weights are the trade patterns of the importing country's reference group.

Sources: International Trade Centre; Trade Competitiveness Map Data

6.11 Prevalence of foreign ownership

In your country, how prevalent is foreign ownership of companies? [1 = extremely rare; 7 = extremely prevalent] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

6.12 Business impact of rules on FDI

In your country, how restrictive are rules and regulations on foreign direct investment (FDI)? [1 = extremely restrictive; 7 = not restrictive at all] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

6.13 Burden of customs procedures

In your country, how efficient are customs procedures (related to the entry and exit of merchandise)? [1 = extremely inefficient; 7 = extremely efficient] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

6.14 Imports as a percentage of GDP

Imports of goods and services as a percentage of gross domestic product | 2016 or most recent year available

Total imports is the sum of total imports of merchandise and commercial services.

Sources: World Trade Organization, *Online Statistics Database* (accessed June 6, 2017); International Monetary Fund, *World Economic Outlook Database* (April 2017 edition); national sources

6.15 Degree of customer orientation

In your country, how well do companies treat customers? [1 = poorly—mostly indifferent to customer satisfaction; 7 = extremely well—highly responsive to customers and seek customer retention] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

6.16 Buyer sophistication

In your country, on what basis do buyers make purchasing decisions? [1 = based solely on the lowest price; 7 = based on sophisticated performance attributes] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

Pillar 7: Labor market efficiency

7.01 Cooperation in labor-employer relations

In your country, how do you characterize labor-employer relations? [1 = generally confrontational; 7 = generally cooperative] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

7.02 Flexibility of wage determination

In your country, how are wages generally set? [1 = by a centralized bargaining process; 7 = by each individual company] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

7.03 Hiring and firing practices

In your country, to what extent do regulations allow flexible hiring and firing of workers? [1 = not at all; 7 = to a great extent] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

7.04 Redundancy costs

Redundancy costs in weeks of salary | 2016

This variable estimates the cost of advance notice requirements, severance payments, and penalties due when terminating a redundant worker, expressed in weekly wages. For more details about the methodology employed and the assumptions made to compute this indicator, visit http://www.doingbusiness.org/methodologysurveys/.

Sources: World Bank/International Finance Corporation, *Doing Business 2017: Equal Opportunity for All*; World Economic Forum's calculations

7.05 Effect of taxation on incentives to work

In your country, to what extent do taxes and social contributions reduce the incentive to work? [1 = to a great extent; 7 = not at all] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

7.06 Pay and productivity

In your country, to what extent is pay related to employee productivity? [1 = not at all; 7 = to a great extent] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

7.07 Reliance on professional management

In your country, who holds senior management positions in companies? [1 = usually relatives or friends without regard to merit; 7 = mostly professional managers chosen for merit and qualifications] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

7.08 Country capacity to retain talent

To what extent does your country retain talented people? [1 = not at all—the best and brightest leave to pursue opportunities abroad; 7 = to a great extent—the best and brightest stay and pursue opportunities in the country] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

7.09 Country capacity to attract talent

To what extent does your country attract talented people from abroad? [1 = not at all; 7 = to a great extent—the country attracts the best and brightest from around the world] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

7.10 Female participation in the labor force

Ratio of women to men in the labor force* | 2016

This measure is the percentage of women aged 15–64 participating in the labor force divided by the percentage of men aged 15–64 participating in the labor force.

Source: International Labour Organization, *Key Indicators of the Labour Markets, 9th Edition*.

Pillar 8: Financial market development

8.01 Availability of financial services

In your country, to what extent does the financial sector provide the products and services that meet the needs of businesses? [1 = not at all; 7 = to a great extent] | 2017

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

8.02 Affordability of financial services

In your country, to what extent does the cost of financial services (e.g. insurance, loans, trade finance) impede business activity? [1 = to a great extent; 7 = not at all] | 2017

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

8.03 Financing through local equity market

In your country, to what extent can companies raise money by issuing shares and/or bonds on the capital market? [1 = not at all; 7 = to a great extent] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

8.04 Ease of access to loans

In your country, how easy is it for businesses to obtain a bank loan? [1 = extremely difficult; 7 = extremely easy] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

8.05 Venture capital availability

In your country, how easy is it for start-up entrepreneurs with innovative but risky projects to obtain equity funding? [1 = extremely difficult; 7 = extremely easy] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

8.06 Soundness of banks

In your country, how do you assess the soundness of banks? [1 = extremely low—banks may require recapitalization; 7 = extremely high—banks are generally healthy with sound balance sheets] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

8.07 Regulation of securities exchanges

In your country, to what extent do regulators ensure the stability of the financial market? [1 = not at all; 7 = to a great extent] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

8.08 Legal rights index

Degree of legal protection of borrowers' and lenders' rights on a 0–12 (best) scale | 2016

This index measures the degree to which collateral and bankruptcy laws protect borrowers' and lenders' rights and thus facilitate lending. For more details about the methodology employed and the assumptions made to compute this indicator, visit http://www.doingbusiness.org/methodologysurveys/.

Source: World Bank/International Finance Corporation, *Doing Business 2017: Equal Opportunity for All*

Pillar 9: Technological readiness

9.01 Availability of latest technologies

In your country, to what extent are the latest technologies available? [1 = not at all; 7 = to a great extent] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

9.02 Firm-level technology absorption

In your country, to what extent do businesses adopt the latest technologies? [1 = not at all; 7 = to a great extent] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

9.03 FDI and technology transfer

To what extent does foreign direct investment (FDI) bring new technology into your country? [1 = not at all; 7 = to a great extent] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

9.04 Internet users

Percentage of individuals using the Internet | 2016

Individuals using the Internet refers to people who used the Internet from any location and for any purpose, irrespective of the device and network used, in the last three months. It can be via a computer (i.e., desktop computer, laptop computer or tablet, or similar handheld computer), mobile phone, games machine, digital TV, etc. Access can be via a fixed or mobile network.

Source: International Telecommunication Union, *ITU World Telecommunication/ICT Indicators* (June 2017 edition)

9.05 Fixed-broadband Internet subscriptions

Fixed-broadband Internet subscriptions per 100 population | 2016 or most recent year available

Fixed (wired)-broadband subscriptions refers to the number of subscriptions for high-speed access to the public Internet (a TCP/IP connection). *Highspeed access* is defined as downstream speeds equal to, or greater than, 256 kbit/s. Fixed (wired)-broadband includes cable modem, DSL, fiber, and other fixed (wired)-broadband technologies—such as Ethernet LAN, and broadband over powerline (BPL) communications. Subscriptions with access to data communications (including the Internet) via mobile-cellular networks are excluded.

Source: International Telecommunication Union, *ITU World Telecommunication/ICT Indicators* (June 2017 edition)

9.06 Internet bandwidth

International Internet bandwidth (kb/s) per Internet user | 2016

International Internet bandwidth refers to the total used capacity of international Internet bandwidth, in megabits per second (Mb/s). It is measured as the sum of used capacity of all Internet exchanges offering international bandwidth. If capacity is asymmetric, then the incoming capacity is used. *International Internet bandwidth (kb/s)* per Internet user is calculated by dividing the capacity in Mb/s by a thousand and dividing it by the total number of Internet users.

Source: International Telecommunication Union, *ITU World Telecommunication/ICT Indicators* (June 2017 edition)

9.07 Mobile-broadband subscriptions

Active mobile-broadband subscriptions per 100 population | 2016

Active mobile-broadband subscriptions refers to the sum of standard mobile-broadband subscriptions and dedicated mobile-broadband data subscriptions to the public Internet. It covers actual subscribers, not potential subscribers, even though the latter may have broadband-enabled handsets. *Standard mobile-broadband subscriptions* refers to active mobile-cellular subscriptions with advertised data speeds of 256 kb/s or greater that allow access to the greater Internet via HTTP and that have been used to set up an Internet data connection using Internet Protocol (IP) in the past three months. Standard SMS and MMS messaging do not count as an active Internet data connection, even if the messages are delivered via IP. *Dedicated mobile-broadband data subscriptions* refers to subscriptions to dedicated data services (over a mobile network) that allow access to the greater Internet and that are purchased separately from voice services, either as a standalone service (e.g., using a data card such as a USB modem/dongle) or as an add-on data package to voice services that requires an additional subscription. All dedicated mobile-broadband subscriptions with recurring subscription fees are included regardless of actual use. Prepaid mobile-broadband plans require use if there is no monthly subscription. This indicator could also include mobile WiMAX subscriptions.

Source: International Telecommunication Union, *ITU World Telecommunication/ICT Indicators* (June 2017 edition)

Pillar 10: Market size

10.01 Domestic market size index

Sum of gross domestic product plus value of imports of goods and services, minus value of exports of goods and services, normalized on a 1–7 (best) scale | 2016 or most recent year available

Source: World Economic Forum. For more details, refer to the appendix of Chapter 1.1 of this *Report*

10.02 Foreign market size index

Value of exports of goods and services, normalized on a 1–7 (best) scale | 2016 or most recent year available

Source: World Economic Forum. For more details, refer to the appendix of Chapter 1.1 of this *Report*

10.03 GDP (PPP)

Gross domestic product valued at purchasing power parity in billions of international dollars | 2016

Source: International Monetary Fund, *World Economic Outlook Database* (April 2017 edition)

10.04 Exports as a percentage of GDP

Exports of goods and services as a percentage of gross domestic product | 2016 or most recent year available

Total exports is the sum of total exports of merchandise and commercial services.

Sources: World Trade Organization, *Online Statistics Database* (accessed June 08, 2017); International Monetary Fund, *World Economic Outlook Database* (April 2017 edition); national sources

Pillar 11: Business sophistication

11.01 Local supplier quantity

In your country, how numerous are local suppliers? [1 = largely nonexistent; 7 = extremely numerous] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

11.02 Local supplier quality

In your country, how do you assess the quality of local suppliers? [1 = extremely poor quality; 7 = extremely high quality] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

11.03 State of cluster development

In your country, how widespread are well-developed and deep clusters (geographic concentrations of firms, suppliers, producers of related products and services, and specialized institutions in a particular field)? [1 = nonexistent; 7 = widespread in many fields] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

11.04 Nature of competitive advantage

On what is the competitive advantage of your country's companies in international markets based? [1 = primarily low-cost labor or natural resources; 7 = primarily unique products and processes] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

11.05 Value chain breadth

In your country, how broad is companies' presence in the value chain? [1 = narrow, primarily involved in individual steps of the value chain (e.g., resource extraction or production); 7 = broad, present across the entire value chain (e.g., including production, marketing, distribution, design, etc.)] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

11.06 Control of international distribution

In your country, to what extent do domestic companies control the international distribution of their products? [1 = not at all; 7 = to a great extent] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

11.07 Production process sophistication

In your country, how sophisticated are production processes? [1 = not at all—production uses labor-intensive processes; 7 = highly—production uses latest technologies] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

11.08 Extent of marketing

In your country, how successful are companies in using marketing to differentiate their products and services? [1 = not successful at all; 7 = extremely successful] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

11.09 Willingness to delegate authority

In your country, to what extent does senior management delegate authority to subordinates? [1 = not at all; 7 = to a great extent] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

Pillar 12: Innovation

12.01 Capacity for innovation

In your country, to what extent do companies have the capacity to innovate? [1 = not at all; 7 = to a great extent] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

12.02 Quality of scientific research institutions

In your country, how do you assess the quality of scientific research institutions? [1 = extremely poor—among the worst in the world; 7 = extremely good—among the best in the world] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

12.03 Company spending on R&D

In your country, to what extent do companies invest in research and development (R&D)? [1 = do not invest at all in R&D; 7 = invest heavily in R&D] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

12.04 University-industry collaboration in R&D

In your country, to what extent do business and universities collaborate on research and development (R&D)? [1 = do not collaborate at all; 7 = collaborate extensively] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

12.05 Government procurement of advanced technology products

In your country, to what extent do government purchasing decisions foster innovation? [1 = not at all; 7 = to a great extent] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

12.06 Availability of scientists and engineers

In your country, to what extent are scientists and engineers available? [1 = not available at all; 7 = widely available] | 2016–17 weighted average

Source: World Economic Forum, Executive Opinion Survey. For more details, refer to Appendix C of *The Global Competitiveness Report 2017–2018*

12.07 PCT patent applications

Number of applications filed under the Patent Cooperation Treaty (PCT) per million population | 2013–2014 average

This indicator measures the total count of applications filed under the Patent Cooperation Treaty (PCT), by priority date and inventor nationality, using fractional count if an application is filed by multiple inventors. The average count of applications filed in 2013 and 2014 is divided by population figures for 2014. For more details about the treatment of Hong Kong SAR and Taiwan (China), refer to the imputation methodology described at the beginning of this section.

For this indicator, some values were imputed. See Table 1 at the end of this appendix for details.

Sources: Organisation for Economic Co-operation and Development (OECD), *Patent Database*, (situation as of July 2017). For population data: International Monetary Fund,*World Economic Outlook Database* (April 2017 edition); World Economic Forum's calculations.

Table 1: Imputation methodology details and imputed values

Indicator	Imputaton method	Country	Imputed value
3.02 Gross national savings	Linear multivariate regression estimation. Regressors: government debt–to-GDP ratio; exports-to-GDP ratio; GDP valued at purchasing power parity; inflation rate; imports-to-GDP ratio	Liberia	5.33
3.05 Country credit rating	Linear multivariate regression estimation. Regressors: government debt–to-GDP ratio; GDP valued at purchasing power parity; inflation rate	Brunei Darussalam	52.73
4.05 HIV prevalence	Peer group mean. *Group* is defined as the combination or World Bank income group and IMF regional classification	Bosnia and Herzegovina Brunei Darussalam United Arab Emirates	2.00 0.27 0.27
4.10 Primary education enrollment rate	Linear multivariate regression estimation. Regressors: Mean years of schooling; GDP per capita (log)	Haiti Madagascar Slovak Republic	86.69 86.92 97.74
5.01 Secondary education enrollment rate	Linear multivariate regression estimation. Regressors: Mean years of schooling; GDP per capita (log)	Haiti Trinidad and Tobago United Arab Emirates	54.69 103.91 107.29
5.02 Tertiary education enrollment rate	Linear multivariate regression estimation. Regressors: Mean years of schooling; GDP per capita (log)	Haiti Nicaragua Sierra Leone	13.60 25.64 4.52
7.10 Female participation in the labor force	Peer group mean. *Group* is defined as the combination or World Bank income group and IMF regional classification	Seychelles	0.69
12.07 PCT patent applications	Linear univariate regression estimation. Regressor: IP 5 patent applications. The estimated number is then divided by total population.	Hong Kong SAR Taiwan (China)	60.31 460.13

Note: Although the imputation of values for indicators 3.02, 3.05, 4.10, 5.02, 7.10, and 12.07 do not affect any Arab countries, these are included in this table for completeness. See the affected Economy Profiles in *The Global Competitiveness Report 2017–2018*.

Index of Countries

Algeria

86th / 137

The Global Competitiveness Index 2017-2018 edition

Key indicators, 2016

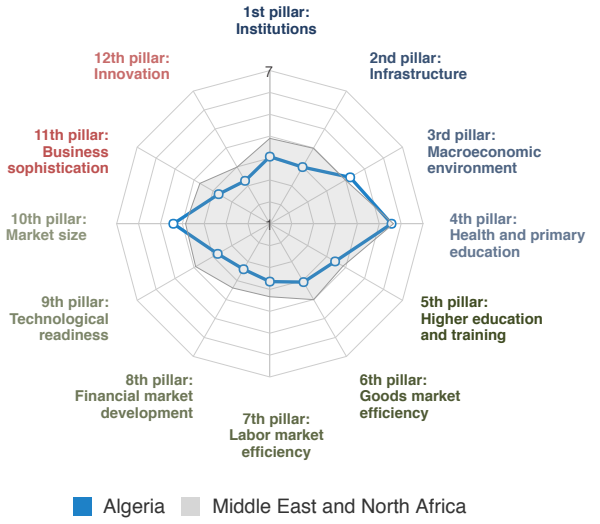
Source: International Monetary Fund; World Economic Outlook Database (April 2017)

Population millions	40.8	**GDP per capita** US$	3,944.4
GDP US$ billions	160.8	**GDP (PPP)** % world GDP	0.51

Performance overview

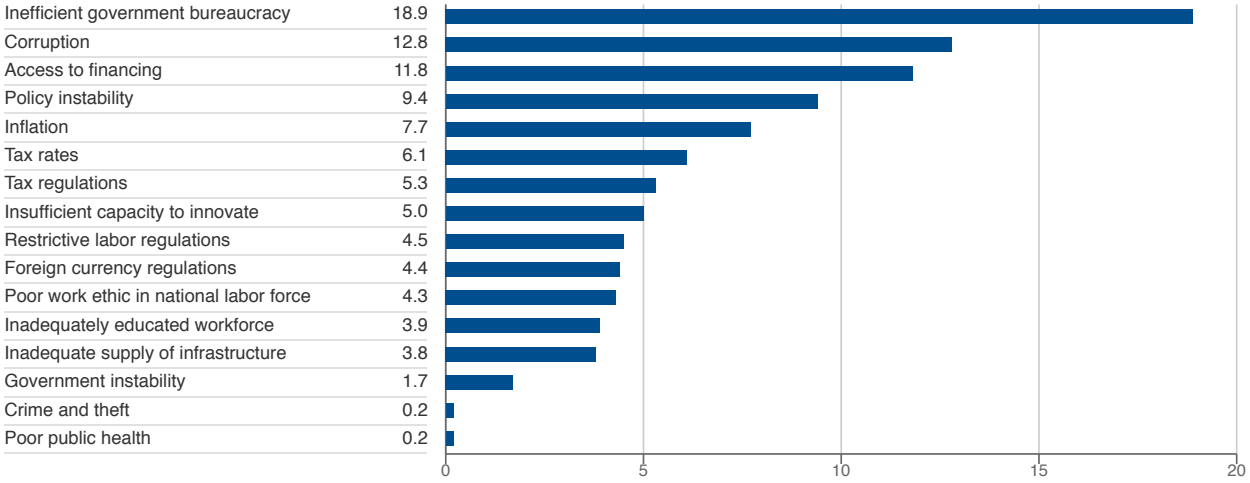
Index Component	Rank/137	Score (1-7)	Trend	Distance from best
Global Competitiveness Index	86	4.1		
Subindex A: Basic requirements	82	4.4		
1st pillar: Institutions	88	3.6		
2nd pillar: Infrastructure	93	3.6		
3rd pillar: Macroeconomic environment	71	4.6		
4th pillar: Health and primary education	71	5.8		
Subindex B: Efficiency enhancers	102	3.7		
5th pillar: Higher education and training	92	4.0		
6th pillar: Goods market efficiency	129	3.6		
7th pillar: Labor market efficiency	133	3.3		
8th pillar: Financial market development	125	3.1		
9th pillar: Technological readiness	98	3.4		
10th pillar: Market size	36	4.8		
Subindex C: Innovation and sophistication factors	118	3.1		
11th pillar: Business sophistication	122	3.3		
12th pillar: Innovation	104	2.9		

Edition	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Rank	110 / 144	100 / 148	79 / 144	87 / 140	87 / 138	86 / 137
Score	3.7	3.8	4.1	4.0	4.0	4.1



Most problematic factors for doing business

Source: World Economic Forum, Executive Opinion Survey 2017



Note: From the list of factors, respondents to the World Economic Forum's Executive Opinion Survey were asked to select the five most problematic factors for doing business in their country and to rank them between 1 (most problematic) and 5. The score corresponds to the responses weighted according to their rankings.

Algeria

The Global Competitiveness Index in detail

Index Component	Rank/137	Value	Trend
1st pillar: Institutions	88	3.6	
1.01 Property rights	101	3.8	
1.02 Intellectual property protection	92	3.7	
1.03 Diversion of public funds	83	3.2	
1.04 Public trust in politicians	80	2.8	
1.05 Irregular payments and bribes	92	3.4	
1.06 Judicial independence	91	3.5	
1.07 Favoritism in decisions of government officials	64	3.1	
1.08 Efficiency of government spending	75	3.1	
1.09 Burden of government regulation	84	3.2	
1.10 Efficiency of legal framework in settling disputes	55	3.8	
1.11 Efficiency of legal framework in challenging regulations	62	3.4	
1.12 Transparency of government policymaking	121	3.2	
1.13 Business costs of terrorism	71	5.1	
1.14 Business costs of crime and violence	48	5.0	
1.15 Organized crime	50	5.1	
1.16 Reliability of police services	56	4.7	
1.17 Ethical behavior of firms	103	3.4	
1.18 Strength of auditing and reporting standards	129	3.4	
1.19 Efficacy of corporate boards	135	3.3	
1.20 Protection of minority shareholders' interests	85	3.8	
1.21 Strength of investor protection 0-10 (best)	131	3.3	
2nd pillar: Infrastructure	93	3.6	
2.01 Quality of overall infrastructure	97	3.5	
2.02 Quality of roads	89	3.5	
2.03 Quality of railroad infrastructure	49	3.4	
2.04 Quality of port infrastructure	96	3.4	
2.05 Quality of air transport infrastructure	107	3.7	
2.06 Available airline seat kilometers millions/week	65	241.9	
2.07 Quality of electricity supply	93	4.2	
2.08 Mobile-cellular telephone subscriptions /100 pop.	70	117.0	
2.09 Fixed-telephone lines /100 pop.	86	8.2	
3rd pillar: Macroeconomic environment	71	4.6	
3.01 Government budget balance % GDP	127	-11.6	
3.02 Gross national savings % GDP	18	32.6	
3.03 Inflation annual % change	108	6.4	
3.04 Government debt % GDP	10	20.4	
3.05 Country credit rating 0-100 (best)	70	47.8	
4th pillar: Health and primary education	71	5.8	
4.01 Malaria incidence cases/100,000 pop.	15	0.0	
4.02 Business impact of malaria	3	6.0	
4.03 Tuberculosis incidence cases/100,000 pop.	85	75.0	
4.04 Business impact of tuberculosis	55	5.8	
4.05 HIV prevalence % adult pop.	1	<0.1	
4.06 Business impact of HIV/AIDS	44	5.9	
4.07 Infant mortality deaths/1,000 live births	92	21.9	
4.08 Life expectancy years	62	75.0	
4.09 Quality of primary education	95	3.4	
4.10 Primary education enrollment rate net %	51	97.1	
5th pillar: Higher education and training	92	4.0	
5.01 Secondary education enrollment rate gross %	47	99.9	
5.02 Tertiary education enrollment rate gross %	74	36.9	
5.03 Quality of the education system	97	3.2	
5.04 Quality of math and science education	92	3.6	
5.05 Quality of management schools	112	3.6	
5.06 Internet access in schools	114	3.3	
5.07 Local availability of specialized training services	119	3.6	
5.08 Extent of staff training	129	3.2	

Index Component	Rank/137	Value	Trend
6th pillar: Goods market efficiency	129	3.6	
6.01 Intensity of local competition	131	4.1	
6.02 Extent of market dominance	65	3.7	
6.03 Effectiveness of anti-monopoly policy	104	3.2	
6.04 Effect of taxation on incentives to invest	90	3.4	
6.05 Total tax rate % profits	131	65.6	
6.06 No. of procedures to start a business	125	12	
6.07 Time to start a business days	98	20.0	
6.08 Agricultural policy costs	110	3.3	
6.09 Prevalence of non-tariff barriers	103	4.0	
6.10 Trade tariffs % duty	127	14.0	
6.11 Prevalence of foreign ownership	125	3.3	
6.12 Business impact of rules on FDI	133	3.1	
6.13 Burden of customs procedures	110	3.4	
6.14 Imports % GDP	90	35.5	
6.15 Degree of customer orientation	123	3.8	
6.16 Buyer sophistication	92	3.1	
7th pillar: Labor market efficiency	133	3.3	
7.01 Cooperation in labor-employer relations	107	3.9	
7.02 Flexibility of wage determination	94	4.6	
7.03 Hiring and firing practices	104	3.3	
7.04 Redundancy costs weeks of salary	74	17.3	
7.05 Effect of taxation on incentives to work	85	3.7	
7.06 Pay and productivity	116	3.3	
7.07 Reliance on professional management	132	2.9	
7.08 Country capacity to retain talent	123	2.5	
7.09 Country capacity to attract talent	127	2.0	
7.10 Female participation in the labor force ratio to men	134	0.24	
8th pillar: Financial market development	125	3.1	
8.01 Availability of financial services	126	3.3	
8.02 Affordability of financial services	91	3.5	
8.03 Financing through local equity market	113	2.7	
8.04 Ease of access to loans	111	3.2	
8.05 Venture capital availability	78	2.8	
8.06 Soundness of banks	115	3.7	
8.07 Regulation of securities exchanges	120	3.4	
8.08 Legal rights index 0-10 (best)	106	2	
9th pillar: Technological readiness	98	3.4	
9.01 Availability of latest technologies	119	3.8	
9.02 Firm-level technology absorption	121	3.8	
9.03 FDI and technology transfer	114	3.7	
9.04 Internet users % pop.	90	42.9	
9.05 Fixed-broadband Internet subscriptions /100 pop.	80	6.9	
9.06 Internet bandwidth kb/s/user	81	40.0	
9.07 Mobile-broadband subscriptions /100 pop.	87	46.8	
10th pillar: Market size	36	4.8	
10.01 Domestic market size index	32	4.7	
10.02 Foreign market size index	48	5.0	
10.03 GDP (PPP) PPP $ billions	34	612.5	
10.04 Exports % GDP	105	20.1	
11th pillar: Business sophistication	122	3.3	
11.01 Local supplier quantity	109	4.0	
11.02 Local supplier quality	124	3.5	
11.03 State of cluster development	107	3.1	
11.04 Nature of competitive advantage	105	2.9	
11.05 Value chain breadth	85	3.6	
11.06 Control of international distribution	125	2.9	
11.07 Production process sophistication	100	3.3	
11.08 Extent of marketing	128	3.7	
11.09 Willingness to delegate authority	132	3.1	
12th pillar: Innovation	104	2.9	
12.01 Capacity for innovation	111	3.6	
12.02 Quality of scientific research institutions	99	3.3	
12.03 Company spending on R&D	104	2.9	
12.04 University-industry collaboration in R&D	125	2.6	
12.05 Gov't procurement of advanced technology products	94	3.0	
12.06 Availability of scientists and engineers	83	3.7	
12.07 PCT patents applications/million pop.	95	0.2	

Note: Values are on a 1-to-7 scale unless indicated otherwise. Trend lines depict evolution in values since the 2012-2013 edition (or earliest edition available). For detailed definitions, sources, and periods, consult the interactive Economy Profiles and Rankings at http://gcr.weforum.org/

Bahrain

44th / 137

The Global Competitiveness Index 2017-2018 edition

Key indicators, 2016

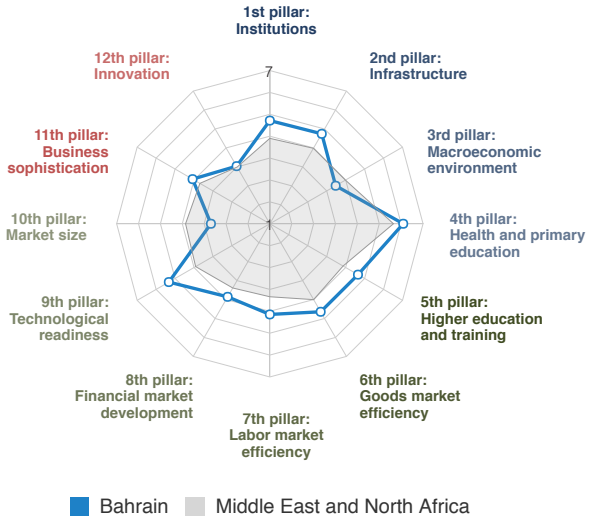
Source: International Monetary Fund; World Economic Outlook Database (April 2017)

Population millions	1.3	**GDP per capita** US$	24,182.9
GDP US$ billions	31.9	**GDP (PPP)** % world GDP	0.06

Performance overview

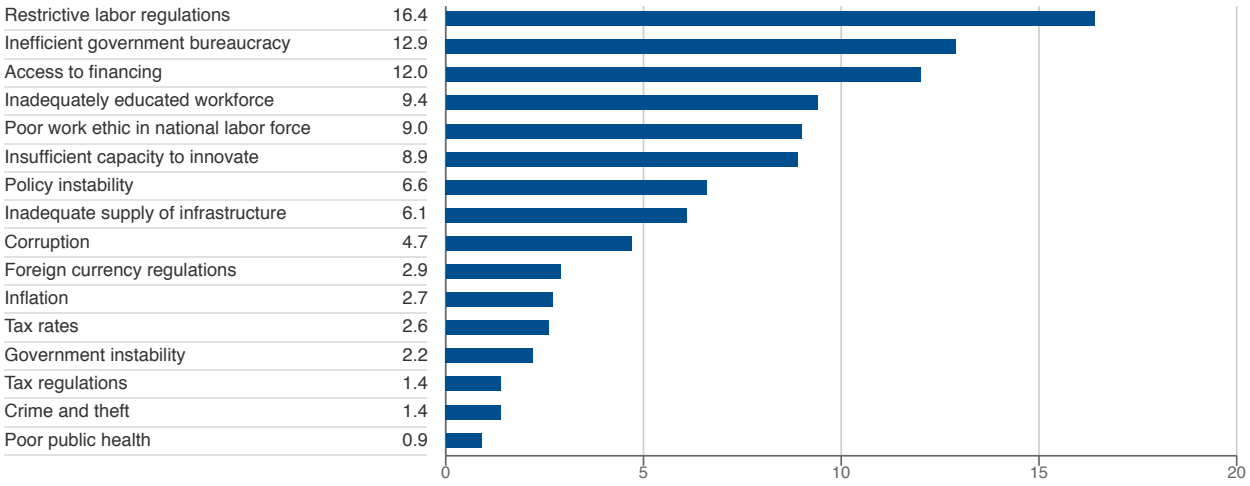
Index Component	Rank/137	Score (1-7)	Trend	Distance from best
Global Competitiveness Index	44	4.5		
Subindex A: Basic requirements	40	5.1		
1st pillar: Institutions	23	5.0		
2nd pillar: Infrastructure	33	5.1		
3rd pillar: Macroeconomic environment	108	4.0		
4th pillar: Health and primary education	37	6.2		
Subindex B: Efficiency enhancers	36	4.6		
5th pillar: Higher education and training	39	5.0		
6th pillar: Goods market efficiency	23	5.0		
7th pillar: Labor market efficiency	37	4.6		
8th pillar: Financial market development	46	4.3		
9th pillar: Technological readiness	31	5.6		
10th pillar: Market size	90	3.3		
Subindex C: Innovation and sophistication factors	43	4.0		
11th pillar: Business sophistication	36	4.5		
12th pillar: Innovation	45	3.6		

Edition	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Rank	35 / 144	43 / 148	44 / 144	39 / 140	48 / 138	44 / 137
Score	4.6	4.5	4.5	4.5	4.5	4.5



Most problematic factors for doing business

Source: World Economic Forum, Executive Opinion Survey 2016



Note: From the list of factors, respondents to the World Economic Forum's Executive Opinion Survey were asked to select the five most problematic factors for doing business in their country and to rank them between 1 (most problematic) and 5. The score corresponds to the responses weighted according to their rankings.

Bahrain

The Global Competitiveness Index in detail

Index Component	Rank/137	Value	Trend
1st pillar: Institutions	23	5.0	
1.01 Property rights	26	5.5	
1.02 Intellectual property protection	29	5.0	
1.03 Diversion of public funds	22	5.2	
1.04 Public trust in politicians	24	4.5	
1.05 Irregular payments and bribes	25	5.6	
1.06 Judicial independence	32	5.1	
1.07 Favoritism in decisions of government officials	25	4.3	
1.08 Efficiency of government spending	22	4.3	
1.09 Burden of government regulation	13	4.7	
1.10 Efficiency of legal framework in settling disputes	21	4.8	
1.11 Efficiency of legal framework in challenging regulations	15	4.7	
1.12 Transparency of government policymaking	26	4.9	
1.13 Business costs of terrorism	90	4.8	
1.14 Business costs of crime and violence	22	5.4	
1.15 Organized crime	17	5.8	
1.16 Reliability of police services	30	5.7	
1.17 Ethical behavior of firms	24	5.1	
1.18 Strength of auditing and reporting standards	29	5.4	
1.19 Efficacy of corporate boards	37	5.2	
1.20 Protection of minority shareholders' interests	23	5.1	
1.21 Strength of investor protection 0-10 (best)	90	5.0	
2nd pillar: Infrastructure	33	5.1	
2.01 Quality of overall infrastructure	25	5.2	
2.02 Quality of roads	25	5.1	
2.03 Quality of railroad infrastructure	n/a	not assessed	
2.04 Quality of port infrastructure	30	5.1	
2.05 Quality of air transport infrastructure	49	4.9	
2.06 Available airline seat kilometers millions/week	71	184.8	
2.07 Quality of electricity supply	31	6.2	
2.08 Mobile-cellular telephone subscriptions /100 pop.	2	216.9	
2.09 Fixed-telephone lines /100 pop.	48	20.8	
3rd pillar: Macroeconomic environment	108	4.0	
3.01 Government budget balance % GDP	135	-17.7	
3.02 Gross national savings % GDP	67	21.1	
3.03 Inflation annual % change	1	2.8	
3.04 Government debt % GDP	113	82.1	
3.05 Country credit rating 0-100 (best)	66	53.3	
4th pillar: Health and primary education	37	6.2	
4.01 Malaria incidence cases/100,000 pop.	n/a	s.l.	
4.02 Business impact of malaria	n/a	6.2	
4.03 Tuberculosis incidence cases/100,000 pop.	43	18.0	
4.04 Business impact of tuberculosis	51	5.9	
4.05 HIV prevalence % adult pop.	1	<0.1	
4.06 Business impact of HIV/AIDS	45	5.9	
4.07 Infant mortality deaths/1,000 live births	38	5.3	
4.08 Life expectancy years	48	76.8	
4.09 Quality of primary education	34	4.7	
4.10 Primary education enrollment rate net %	57	96.4	
5th pillar: Higher education and training	39	5.0	
5.01 Secondary education enrollment rate gross %	40	102.1	
5.02 Tertiary education enrollment rate gross %	68	43.3	
5.03 Quality of the education system	24	4.6	
5.04 Quality of math and science education	31	4.8	
5.05 Quality of management schools	34	4.9	
5.06 Internet access in schools	36	5.0	
5.07 Local availability of specialized training services	36	5.0	
5.08 Extent of staff training	28	4.7	

Index Component	Rank/137	Value	Trend
6th pillar: Goods market efficiency	23	5.0	
6.01 Intensity of local competition	62	5.2	
6.02 Extent of market dominance	35	4.2	
6.03 Effectiveness of anti-monopoly policy	25	4.6	
6.04 Effect of taxation on incentives to invest	2	6.1	
6.05 Total tax rate % profits	4	13.5	
6.06 No. of procedures to start a business	70	7	
6.07 Time to start a business days	57	9.3	
6.08 Agricultural policy costs	29	4.4	
6.09 Prevalence of non-tariff barriers	19	5.0	
6.10 Trade tariffs % duty	54	4.0	
6.11 Prevalence of foreign ownership	18	5.5	
6.12 Business impact of rules on FDI	18	5.5	
6.13 Burden of customs procedures	24	5.2	
6.14 Imports % GDP	95	32.7	
6.15 Degree of customer orientation	38	5.1	
6.16 Buyer sophistication	40	3.8	
7th pillar: Labor market efficiency	37	4.6	
7.01 Cooperation in labor-employer relations	23	5.2	
7.02 Flexibility of wage determination	21	5.6	
7.03 Hiring and firing practices	29	4.4	
7.04 Redundancy costs weeks of salary	16	6.7	
7.05 Effect of taxation on incentives to work	7	5.3	
7.06 Pay and productivity	24	4.7	
7.07 Reliance on professional management	35	4.8	
7.08 Country capacity to retain talent	31	4.4	
7.09 Country capacity to attract talent	22	4.6	
7.10 Female participation in the labor force ratio to men	120	0.47	
8th pillar: Financial market development	46	4.3	
8.01 Availability of financial services	24	5.1	
8.02 Affordability of financial services	25	4.8	
8.03 Financing through local equity market	51	4.0	
8.04 Ease of access to loans	22	4.7	
8.05 Venture capital availability	23	3.8	
8.06 Soundness of banks	46	5.4	
8.07 Regulation of securities exchanges	23	5.5	
8.08 Legal rights index 0-10 (best)	127	1	
9th pillar: Technological readiness	31	5.6	
9.01 Availability of latest technologies	34	5.6	
9.02 Firm-level technology absorption	34	5.1	
9.03 FDI and technology transfer	36	4.9	
9.04 Internet users % pop.	2	98.0	
9.05 Fixed-broadband Internet subscriptions /100 pop.	53	16.8	
9.06 Internet bandwidth kb/s/user	40	112.8	
9.07 Mobile-broadband subscriptions /100 pop.	1	162.1	
10th pillar: Market size	90	3.3	
10.01 Domestic market size index	92	3.0	
10.02 Foreign market size index	79	4.2	
10.03 GDP (PPP) PPP $ billions	86	66.9	
10.04 Exports % GDP	37	47.4	
11th pillar: Business sophistication	36	4.5	
11.01 Local supplier quantity	58	4.6	
11.02 Local supplier quality	45	4.6	
11.03 State of cluster development	25	4.6	
11.04 Nature of competitive advantage	49	4.0	
11.05 Value chain breadth	41	4.3	
11.06 Control of international distribution	34	4.3	
11.07 Production process sophistication	38	4.5	
11.08 Extent of marketing	41	4.7	
11.09 Willingness to delegate authority	39	4.7	
12th pillar: Innovation	45	3.6	
12.01 Capacity for innovation	67	4.1	
12.02 Quality of scientific research institutions	73	3.7	
12.03 Company spending on R&D	56	3.4	
12.04 University-industry collaboration in R&D	45	3.7	
12.05 Gov't procurement of advanced technology products	22	4.0	
12.06 Availability of scientists and engineers	45	4.4	
12.07 PCT patents applications/million pop.	54	2.9	

Note: Values are on a 1-to-7 scale unless indicated otherwise. Trend lines depict evolution in values since the 2012-2013 edition (or earliest edition available). For detailed definitions, sources, and periods, consult the interactive Economy Profiles and Rankings at http://gcr.weforum.org/

Egypt

100th / 137

The Global Competitiveness Index 2017-2018 edition

Key indicators, 2016

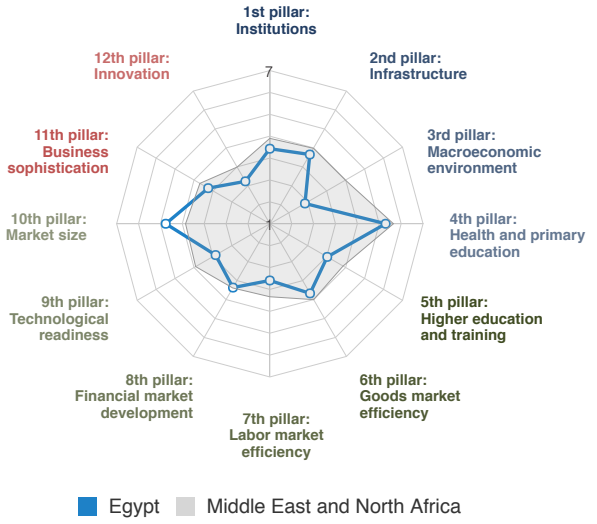
Source: International Monetary Fund; World Economic Outlook Database (April 2017)

Population millions	90.2	**GDP per capita** US$	3,684.6
GDP US$ billions	332.3	**GDP (PPP)** % world GDP	0.95

Performance overview

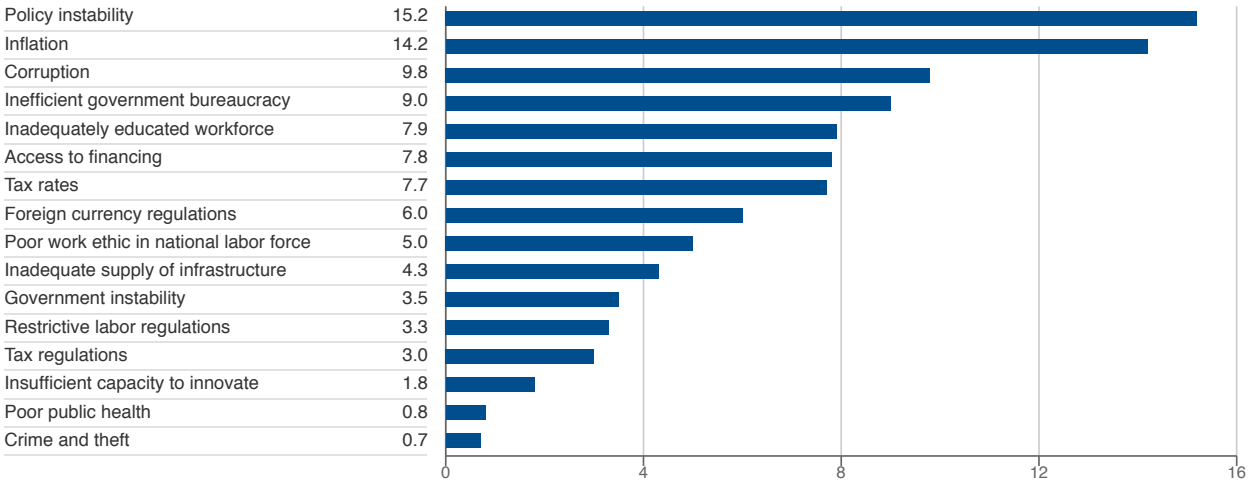
Index Component	Rank/137	Score (1-7)	Trend	Distance from best
Global Competitiveness Index	100	3.9		
Subindex A: Basic requirements	106	4.0		
1st pillar: Institutions	64	3.9		
2nd pillar: Infrastructure	71	4.1		
3rd pillar: Macroeconomic environment	132	2.6		
4th pillar: Health and primary education	87	5.5		
Subindex B: Efficiency enhancers	87	3.9		
5th pillar: Higher education and training	100	3.6		
6th pillar: Goods market efficiency	90	4.1		
7th pillar: Labor market efficiency	134	3.2		
8th pillar: Financial market development	77	3.9		
9th pillar: Technological readiness	94	3.5		
10th pillar: Market size	25	5.1		
Subindex C: Innovation and sophistication factors	101	3.4		
11th pillar: Business sophistication	84	3.8		
12th pillar: Innovation	109	2.9		

Edition	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Rank	107 / 144	118 / 148	119 / 144	116 / 140	115 / 138	100 / 137
Score	3.7	3.6	3.6	3.7	3.7	3.9



Most problematic factors for doing business

Source: World Economic Forum, Executive Opinion Survey 2017



Note: From the list of factors, respondents to the World Economic Forum's Executive Opinion Survey were asked to select the five most problematic factors for doing business in their country and to rank them between 1 (most problematic) and 5. The score corresponds to the responses weighted according to their rankings.

The Global Competitiveness Index in detail

Egypt

Index Component	Rank/137	Value	Trend
1st pillar: Institutions	64	3.9	
1.01 Property rights	94	3.9	
1.02 Intellectual property protection	132	3.0	
1.03 Diversion of public funds	52	4.0	
1.04 Public trust in politicians	67	3.0	
1.05 Irregular payments and bribes	57	4.2	
1.06 Judicial independence	31	5.1	
1.07 Favoritism in decisions of government officials	48	3.5	
1.08 Efficiency of government spending	63	3.3	
1.09 Burden of government regulation	87	3.2	
1.10 Efficiency of legal framework in settling disputes	77	3.5	
1.11 Efficiency of legal framework in challenging regulations	61	3.4	
1.12 Transparency of government policymaking	129	3.0	
1.13 Business costs of terrorism	104	4.5	
1.14 Business costs of crime and violence	79	4.4	
1.15 Organized crime	60	5.0	
1.16 Reliability of police services	50	4.8	
1.17 Ethical behavior of firms	69	3.8	
1.18 Strength of auditing and reporting standards	82	4.4	
1.19 Efficacy of corporate boards	107	4.4	
1.20 Protection of minority shareholders' interests	64	4.1	
1.21 Strength of investor protection 0-10 (best)	95	4.8	
2nd pillar: Infrastructure	71	4.1	
2.01 Quality of overall infrastructure	73	4.0	
2.02 Quality of roads	75	3.9	
2.03 Quality of railroad infrastructure	50	3.3	
2.04 Quality of port infrastructure	41	4.7	
2.05 Quality of air transport infrastructure	42	5.1	
2.06 Available airline seat kilometers millions/week	41	648.2	
2.07 Quality of electricity supply	63	5.0	
2.08 Mobile-cellular telephone subscriptions /100 pop.	77	113.7	
2.09 Fixed-telephone lines /100 pop.	90	7.1	
3rd pillar: Macroeconomic environment	132	2.6	
3.01 Government budget balance % GDP	128	-12.0	
3.02 Gross national savings % GDP	122	9.4	
3.03 Inflation annual % change	124	10.2	
3.04 Government debt % GDP	121	97.1	
3.05 Country credit rating 0-100 (best)	93	32.1	
4th pillar: Health and primary education	87	5.5	
4.01 Malaria incidence cases/100,000 pop.	1	0.0	
4.02 Business impact of malaria	n/a	6.6	
4.03 Tuberculosis incidence cases/100,000 pop.	38	15.0	
4.04 Business impact of tuberculosis	25	6.5	
4.05 HIV prevalence % adult pop.	1	<0.1	
4.06 Business impact of HIV/AIDS	16	6.6	
4.07 Infant mortality deaths/1,000 live births	90	20.3	
4.08 Life expectancy years	91	71.3	
4.09 Quality of primary education	133	2.4	
4.10 Primary education enrollment rate net %	33	98.0	
5th pillar: Higher education and training	100	3.6	
5.01 Secondary education enrollment rate gross %	84	86.1	
5.02 Tertiary education enrollment rate gross %	76	36.2	
5.03 Quality of the education system	130	2.5	
5.04 Quality of math and science education	122	2.8	
5.05 Quality of management schools	124	3.2	
5.06 Internet access in schools	119	3.2	
5.07 Local availability of specialized training services	135	2.8	
5.08 Extent of staff training	116	3.4	

Index Component	Rank/137	Value	Trend
6th pillar: Goods market efficiency	90	4.1	
6.01 Intensity of local competition	88	4.8	
6.02 Extent of market dominance	51	3.9	
6.03 Effectiveness of anti-monopoly policy	115	3.1	
6.04 Effect of taxation on incentives to invest	63	3.7	
6.05 Total tax rate % profits	92	43.5	
6.06 No. of procedures to start a business	18	4	
6.07 Time to start a business days	35	6.5	
6.08 Agricultural policy costs	88	3.5	
6.09 Prevalence of non-tariff barriers	85	4.2	
6.10 Trade tariffs % duty	131	14.9	
6.11 Prevalence of foreign ownership	116	3.7	
6.12 Business impact of rules on FDI	126	3.4	
6.13 Burden of customs procedures	81	3.9	
6.14 Imports % GDP	120	21.6	
6.15 Degree of customer orientation	72	4.6	
6.16 Buyer sophistication	91	3.1	
7th pillar: Labor market efficiency	134	3.2	
7.01 Cooperation in labor-employer relations	104	4.0	
7.02 Flexibility of wage determination	98	4.5	
7.03 Hiring and firing practices	70	3.7	
7.04 Redundancy costs weeks of salary	129	36.8	
7.05 Effect of taxation on incentives to work	55	4.1	
7.06 Pay and productivity	107	3.4	
7.07 Reliance on professional management	92	3.9	
7.08 Country capacity to retain talent	103	2.9	
7.09 Country capacity to attract talent	116	2.4	
7.10 Female participation in the labor force ratio to men	131	0.31	
8th pillar: Financial market development	77	3.9	
8.01 Availability of financial services	73	4.2	
8.02 Affordability of financial services	85	3.6	
8.03 Financing through local equity market	41	4.3	
8.04 Ease of access to loans	66	3.9	
8.05 Venture capital availability	74	2.8	
8.06 Soundness of banks	49	5.4	
8.07 Regulation of securities exchanges	50	4.7	
8.08 Legal rights index 0-10 (best)	106	2	
9th pillar: Technological readiness	94	3.5	
9.01 Availability of latest technologies	91	4.3	
9.02 Firm-level technology absorption	100	4.1	
9.03 FDI and technology transfer	75	4.3	
9.04 Internet users % pop.	93	39.2	
9.05 Fixed-broadband Internet subscriptions /100 pop.	88	5.2	
9.06 Internet bandwidth kb/s/user	100	17.2	
9.07 Mobile-broadband subscriptions /100 pop.	77	52.6	
10th pillar: Market size	25	5.1	
10.01 Domestic market size index	19	5.1	
10.02 Foreign market size index	45	5.0	
10.03 GDP (PPP) PPP $ billions	21	1,132.4	
10.04 Exports % GDP	128	11.9	
11th pillar: Business sophistication	84	3.8	
11.01 Local supplier quantity	85	4.3	
11.02 Local supplier quality	95	4.0	
11.03 State of cluster development	56	3.9	
11.04 Nature of competitive advantage	95	3.1	
11.05 Value chain breadth	56	3.9	
11.06 Control of international distribution	92	3.3	
11.07 Production process sophistication	70	3.8	
11.08 Extent of marketing	104	4.1	
11.09 Willingness to delegate authority	118	3.7	
12th pillar: Innovation	109	2.9	
12.01 Capacity for innovation	123	3.4	
12.02 Quality of scientific research institutions	121	2.8	
12.03 Company spending on R&D	103	2.9	
12.04 University-industry collaboration in R&D	117	2.8	
12.05 Gov't procurement of advanced technology products	61	3.4	
12.06 Availability of scientists and engineers	55	4.1	
12.07 PCT patents applications/million pop.	73	0.9	

Note: Values are on a 1-to-7 scale unless indicated otherwise. Trend lines depict evolution in values since the 2012-2013 edition (or earliest edition available). For detailed definitions, sources, and periods, consult the interactive Economy Profiles and Rankings at http://gcr.weforum.org/

Jordan

65th / 137

The Global Competitiveness Index 2017-2018 edition

Key indicators, 2016

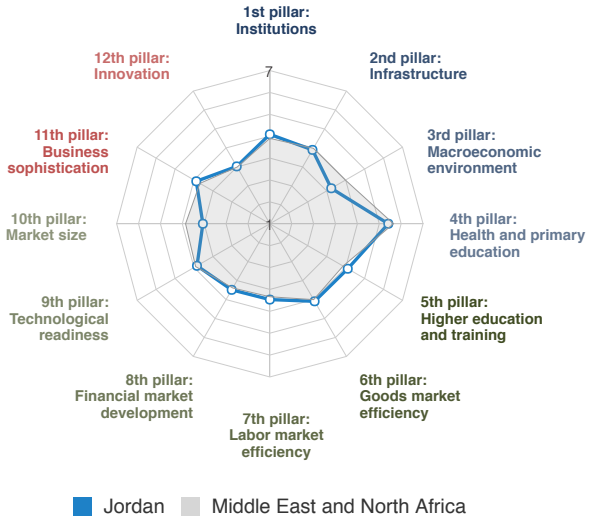
Source: International Monetary Fund; World Economic Outlook Database (April 2017)

Population millions	7.0	**GDP per capita** US$	5,554.0
GDP US$ billions	38.7	**GDP (PPP)** % world GDP	0.07

Performance overview

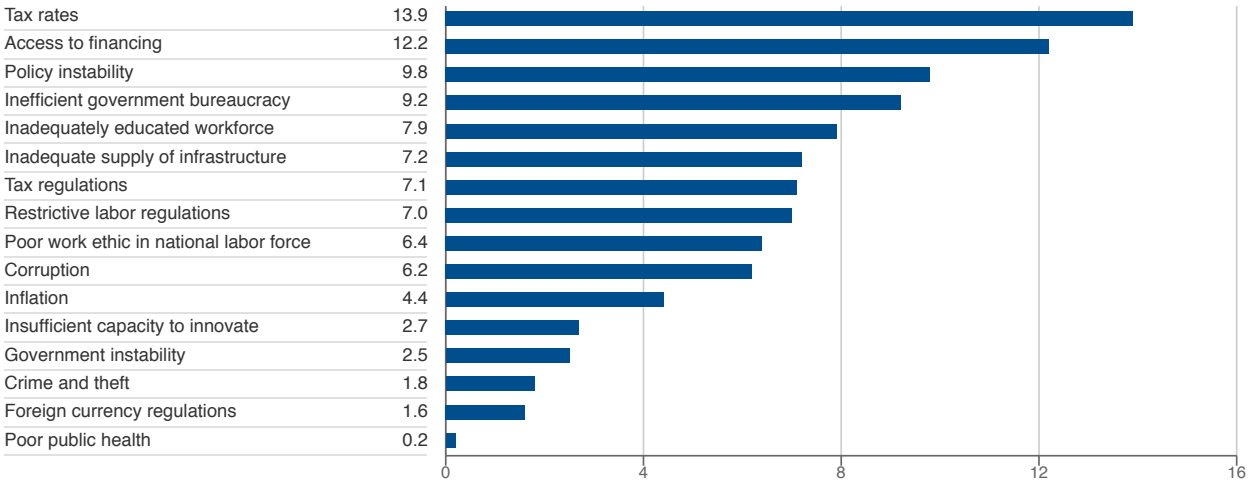
Index Component	Rank/137	Score (1-7)	Trend	Distance from best
Global Competitiveness Index	65	4.3		
Subindex A: Basic requirements	73	4.6		
1st pillar: Institutions	36	4.5		
2nd pillar: Infrastructure	58	4.3		
3rd pillar: Macroeconomic environment	115	3.8		
4th pillar: Health and primary education	80	5.6		
Subindex B: Efficiency enhancers	67	4.2		
5th pillar: Higher education and training	63	4.5		
6th pillar: Goods market efficiency	51	4.5		
7th pillar: Labor market efficiency	90	4.0		
8th pillar: Financial market development	70	4.0		
9th pillar: Technological readiness	67	4.3		
10th pillar: Market size	76	3.6		
Subindex C: Innovation and sophistication factors	45	4.0		
11th pillar: Business sophistication	48	4.3		
12th pillar: Innovation	46	3.6		

Edition	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Rank	64 / 144	68 / 148	64 / 144	64 / 140	63 / 138	65 / 137
Score	4.2	4.2	4.3	4.2	4.3	4.3



Most problematic factors for doing business

Source: World Economic Forum, Executive Opinion Survey 2017



Note: From the list of factors, respondents to the World Economic Forum's Executive Opinion Survey were asked to select the five most problematic factors for doing business in their country and to rank them between 1 (most problematic) and 5. The score corresponds to the responses weighted according to their rankings.

The Global Competitiveness Index in detail

Jordan

Index Component	Rank/137	Value	Trend
1st pillar: Institutions	36	4.5	
1.01 Property rights	38	4.9	
1.02 Intellectual property protection	40	4.7	
1.03 Diversion of public funds	25	5.0	
1.04 Public trust in politicians	40	3.7	
1.05 Irregular payments and bribes	42	4.7	
1.06 Judicial independence	33	5.0	
1.07 Favoritism in decisions of government officials	42	3.7	
1.08 Efficiency of government spending	56	3.4	
1.09 Burden of government regulation	61	3.5	
1.10 Efficiency of legal framework in settling disputes	38	4.4	
1.11 Efficiency of legal framework in challenging regulations	47	3.7	
1.12 Transparency of government policymaking	76	3.9	
1.13 Business costs of terrorism	105	4.5	
1.14 Business costs of crime and violence	55	4.9	
1.15 Organized crime	41	5.4	
1.16 Reliability of police services	21	5.9	
1.17 Ethical behavior of firms	32	4.7	
1.18 Strength of auditing and reporting standards	57	4.8	
1.19 Efficacy of corporate boards	104	4.4	
1.20 Protection of minority shareholders' interests	44	4.4	
1.21 Strength of investor protection 0-10 (best)	126	3.5	
2nd pillar: Infrastructure	58	4.3	
2.01 Quality of overall infrastructure	63	4.2	
2.02 Quality of roads	68	4.1	
2.03 Quality of railroad infrastructure	81	2.2	
2.04 Quality of port infrastructure	51	4.5	
2.05 Quality of air transport infrastructure	33	5.4	
2.06 Available airline seat kilometers millions/week	68	206.9	
2.07 Quality of electricity supply	43	5.7	
2.08 Mobile-cellular telephone subscriptions /100 pop.	4	196.3	
2.09 Fixed-telephone lines /100 pop.	102	4.6	
3rd pillar: Macroeconomic environment	115	3.8	
3.01 Government budget balance % GDP	80	-3.4	
3.02 Gross national savings % GDP	120	10.4	
3.03 Inflation annual % change	81	-0.8	
3.04 Government debt % GDP	119	95.0	
3.05 Country credit rating 0-100 (best)	76	41.2	
4th pillar: Health and primary education	80	5.6	
4.01 Malaria incidence cases/100,000 pop.	n/a	s.l.	
4.02 Business impact of malaria	n/a	6.0	
4.03 Tuberculosis incidence cases/100,000 pop.	18	7.0	
4.04 Business impact of tuberculosis	52	5.9	
4.05 HIV prevalence % adult pop.	1	<0.1	
4.06 Business impact of HIV/AIDS	46	5.9	
4.07 Infant mortality deaths/1,000 live births	81	15.4	
4.08 Life expectancy years	78	74.2	
4.09 Quality of primary education	60	4.1	
4.10 Primary education enrollment rate net %	107	89.2	
5th pillar: Higher education and training	63	4.5	
5.01 Secondary education enrollment rate gross %	87	82.4	
5.02 Tertiary education enrollment rate gross %	64	44.9	
5.03 Quality of the education system	43	4.2	
5.04 Quality of math and science education	62	4.3	
5.05 Quality of management schools	58	4.3	
5.06 Internet access in schools	59	4.4	
5.07 Local availability of specialized training services	57	4.5	
5.08 Extent of staff training	57	4.1	

Index Component	Rank/137	Value	Trend
6th pillar: Goods market efficiency	51	4.5	
6.01 Intensity of local competition	26	5.5	
6.02 Extent of market dominance	45	4.0	
6.03 Effectiveness of anti-monopoly policy	47	4.0	
6.04 Effect of taxation on incentives to invest	105	3.1	
6.05 Total tax rate % profits	29	27.6	
6.06 No. of procedures to start a business	70	7	
6.07 Time to start a business days	76	12.5	
6.08 Agricultural policy costs	55	3.9	
6.09 Prevalence of non-tariff barriers	108	3.9	
6.10 Trade tariffs % duty	90	7.5	
6.11 Prevalence of foreign ownership	82	4.4	
6.12 Business impact of rules on FDI	81	4.3	
6.13 Burden of customs procedures	38	4.8	
6.14 Imports % GDP	33	60.8	
6.15 Degree of customer orientation	49	4.9	
6.16 Buyer sophistication	68	3.4	
7th pillar: Labor market efficiency	90	4.0	
7.01 Cooperation in labor-employer relations	38	4.8	
7.02 Flexibility of wage determination	43	5.3	
7.03 Hiring and firing practices	43	4.1	
7.04 Redundancy costs weeks of salary	11	4.3	
7.05 Effect of taxation on incentives to work	93	3.6	
7.06 Pay and productivity	53	4.2	
7.07 Reliance on professional management	84	4.0	
7.08 Country capacity to retain talent	67	3.4	
7.09 Country capacity to attract talent	78	3.2	
7.10 Female participation in the labor force ratio to men	135	0.23	
8th pillar: Financial market development	70	4.0	
8.01 Availability of financial services	37	4.7	
8.02 Affordability of financial services	53	4.0	
8.03 Financing through local equity market	43	4.2	
8.04 Ease of access to loans	28	4.7	
8.05 Venture capital availability	29	3.6	
8.06 Soundness of banks	33	5.6	
8.07 Regulation of securities exchanges	49	4.7	
8.08 Legal rights index 0-10 (best)	136	0	
9th pillar: Technological readiness	67	4.3	
9.01 Availability of latest technologies	38	5.4	
9.02 Firm-level technology absorption	43	4.9	
9.03 FDI and technology transfer	56	4.5	
9.04 Internet users % pop.	61	62.3	
9.05 Fixed-broadband Internet subscriptions /100 pop.	85	5.8	
9.06 Internet bandwidth kb/s/user	113	8.2	
9.07 Mobile-broadband subscriptions /100 pop.	12	118.8	
10th pillar: Market size	76	3.6	
10.01 Domestic market size index	75	3.4	
10.02 Foreign market size index	81	4.2	
10.03 GDP (PPP) PPP $ billions	78	85.6	
10.04 Exports % GDP	66	35.0	
11th pillar: Business sophistication	48	4.3	
11.01 Local supplier quantity	24	4.9	
11.02 Local supplier quality	59	4.4	
11.03 State of cluster development	30	4.4	
11.04 Nature of competitive advantage	35	4.3	
11.05 Value chain breadth	45	4.2	
11.06 Control of international distribution	52	3.8	
11.07 Production process sophistication	43	4.4	
11.08 Extent of marketing	56	4.6	
11.09 Willingness to delegate authority	92	4.0	
12th pillar: Innovation	46	3.6	
12.01 Capacity for innovation	60	4.2	
12.02 Quality of scientific research institutions	58	3.9	
12.03 Company spending on R&D	64	3.4	
12.04 University-industry collaboration in R&D	64	3.5	
12.05 Gov't procurement of advanced technology products	53	3.5	
12.06 Availability of scientists and engineers	13	5.1	
12.07 PCT patents applications/million pop.	78	0.5	

Note: Values are on a 1-to-7 scale unless indicated otherwise. Trend lines depict evolution in values since the 2012-2013 edition (or earliest edition available). For detailed definitions, sources, and periods, consult the interactive Economy Profiles and Rankings at http://gcr.weforum.org/

Kuwait

52nd / 137

The Global Competitiveness Index 2017-2018 edition

Key indicators, 2016

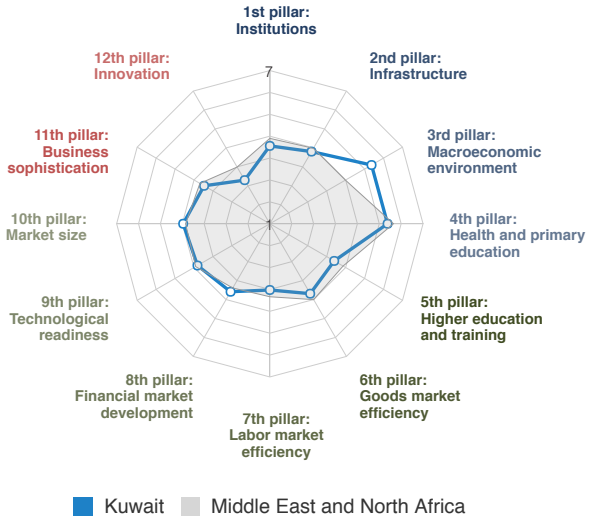
Source: International Monetary Fund; World Economic Outlook Database (April 2017)

Population millions	4.2	**GDP per capita** US$	26,004.7
GDP US$ billions	109.9	**GDP (PPP)** % world GDP	0.25

Performance overview

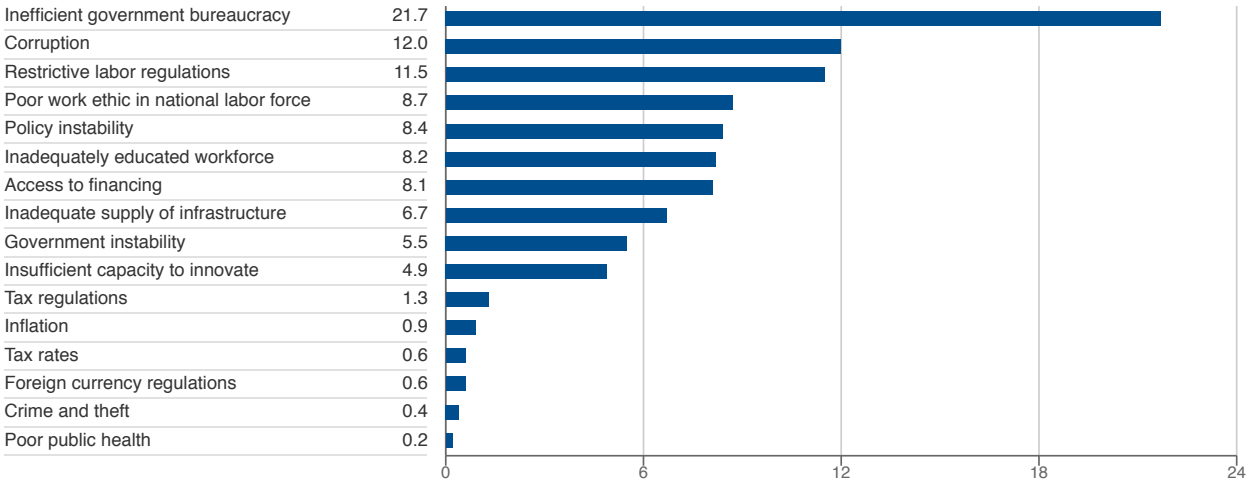
Index Component	Rank/137	Score (1-7)	Trend	Distance from best
Global Competitiveness Index	52	4.4		
Subindex A: Basic requirements	50	4.9		
1st pillar: Institutions	57	4.0		
2nd pillar: Infrastructure	64	4.3		
3rd pillar: Macroeconomic environment	30	5.6		
4th pillar: Health and primary education	83	5.6		
Subindex B: Efficiency enhancers	73	4.1		
5th pillar: Higher education and training	95	3.9		
6th pillar: Goods market efficiency	89	4.2		
7th pillar: Labor market efficiency	119	3.6		
8th pillar: Financial market development	62	4.1		
9th pillar: Technological readiness	68	4.3		
10th pillar: Market size	50	4.4		
Subindex C: Innovation and sophistication factors	86	3.5		
11th pillar: Business sophistication	70	4.0		
12th pillar: Innovation	103	3.0		

Edition	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Rank	37 / 144	36 / 148	40 / 144	34 / 140	38 / 138	52 / 137
Score	4.6	4.6	4.5	4.6	4.5	4.4



Most problematic factors for doing business

Source: World Economic Forum, Executive Opinion Survey 2017



Note: From the list of factors, respondents to the World Economic Forum's Executive Opinion Survey were asked to select the five most problematic factors for doing business in their country and to rank them between 1 (most problematic) and 5. The score corresponds to the responses weighted according to their rankings.

The Global Competitiveness Index in detail

Kuwait

Index Component	Rank/137	Value	Trend
1st pillar: Institutions	57	4.0	
1.01 Property rights	49	4.6	
1.02 Intellectual property protection	80	3.9	
1.03 Diversion of public funds	54	4.0	
1.04 Public trust in politicians	68	3.0	
1.05 Irregular payments and bribes	70	3.9	
1.06 Judicial independence	44	4.6	
1.07 Favoritism in decisions of government officials	78	2.9	
1.08 Efficiency of government spending	59	3.4	
1.09 Burden of government regulation	90	3.2	
1.10 Efficiency of legal framework in settling disputes	47	4.1	
1.11 Efficiency of legal framework in challenging regulations	43	3.8	
1.12 Transparency of government policymaking	104	3.5	
1.13 Business costs of terrorism	84	4.9	
1.14 Business costs of crime and violence	46	5.0	
1.15 Organized crime	52	5.1	
1.16 Reliability of police services	46	5.0	
1.17 Ethical behavior of firms	67	3.8	
1.18 Strength of auditing and reporting standards	80	4.4	
1.19 Efficacy of corporate boards	128	4.0	
1.20 Protection of minority shareholders' interests	76	3.9	
1.21 Strength of investor protection 0-10 (best)	74	5.5	
2nd pillar: Infrastructure	64	4.3	
2.01 Quality of overall infrastructure	69	4.1	
2.02 Quality of roads	63	4.1	
2.03 Quality of railroad infrastructure	n/a	not assessed	
2.04 Quality of port infrastructure	78	3.8	
2.05 Quality of air transport infrastructure	117	3.2	
2.06 Available airline seat kilometers millions/week	56	339.4	
2.07 Quality of electricity supply	49	5.5	
2.08 Mobile-cellular telephone subscriptions /100 pop.	24	146.6	
2.09 Fixed-telephone lines /100 pop.	80	11.0	
3rd pillar: Macroeconomic environment	30	5.6	
3.01 Government budget balance % GDP	83	-3.6	
3.02 Gross national savings % GDP	28	28.8	
3.03 Inflation annual % change	52	3.2	
3.04 Government debt % GDP	7	18.6	
3.05 Country credit rating 0-100 (best)	27	74.0	
4th pillar: Health and primary education	83	5.6	
4.01 Malaria incidence cases/100,000 pop.	n/a	s.l.	
4.02 Business impact of malaria	n/a	5.9	
4.03 Tuberculosis incidence cases/100,000 pop.	51	22.0	
4.04 Business impact of tuberculosis	49	6.0	
4.05 HIV prevalence % adult pop.	1	<0.1	
4.06 Business impact of HIV/AIDS	43	5.9	
4.07 Infant mortality deaths/1,000 live births	49	7.3	
4.08 Life expectancy years	70	74.7	
4.09 Quality of primary education	104	3.1	
4.10 Primary education enrollment rate net %	92	92.9	
5th pillar: Higher education and training	95	3.9	
5.01 Secondary education enrollment rate gross %	64	95.0	
5.02 Tertiary education enrollment rate gross %	87	27.0	
5.03 Quality of the education system	89	3.3	
5.04 Quality of math and science education	106	3.2	
5.05 Quality of management schools	111	3.6	
5.06 Internet access in schools	88	3.8	
5.07 Local availability of specialized training services	121	3.6	
5.08 Extent of staff training	86	3.7	

Index Component	Rank/137	Value	Trend
6th pillar: Goods market efficiency	89	4.2	
6.01 Intensity of local competition	89	4.8	
6.02 Extent of market dominance	96	3.4	
6.03 Effectiveness of anti-monopoly policy	108	3.2	
6.04 Effect of taxation on incentives to invest	10	5.2	
6.05 Total tax rate % profits	3	13.0	
6.06 No. of procedures to start a business	125	12	
6.07 Time to start a business days	129	61.4	
6.08 Agricultural policy costs	105	3.3	
6.09 Prevalence of non-tariff barriers	86	4.2	
6.10 Trade tariffs % duty	55	4.0	
6.11 Prevalence of foreign ownership	136	2.7	
6.12 Business impact of rules on FDI	132	3.1	
6.13 Burden of customs procedures	103	3.6	
6.14 Imports % GDP	50	51.8	
6.15 Degree of customer orientation	94	4.3	
6.16 Buyer sophistication	42	3.8	
7th pillar: Labor market efficiency	119	3.6	
7.01 Cooperation in labor-employer relations	54	4.5	
7.02 Flexibility of wage determination	72	4.8	
7.03 Hiring and firing practices	62	3.8	
7.04 Redundancy costs weeks of salary	118	28.1	
7.05 Effect of taxation on incentives to work	40	4.3	
7.06 Pay and productivity	113	3.3	
7.07 Reliance on professional management	122	3.4	
7.08 Country capacity to retain talent	86	3.2	
7.09 Country capacity to attract talent	89	3.0	
7.10 Female participation in the labor force ratio to men	115	0.58	
8th pillar: Financial market development	62	4.1	
8.01 Availability of financial services	40	4.6	
8.02 Affordability of financial services	40	4.3	
8.03 Financing through local equity market	49	4.0	
8.04 Ease of access to loans	38	4.4	
8.05 Venture capital availability	30	3.6	
8.06 Soundness of banks	36	5.5	
8.07 Regulation of securities exchanges	62	4.5	
8.08 Legal rights index 0-10 (best)	106	2	
9th pillar: Technological readiness	68	4.3	
9.01 Availability of latest technologies	55	4.9	
9.02 Firm-level technology absorption	70	4.4	
9.03 FDI and technology transfer	121	3.5	
9.04 Internet users % pop.	33	78.4	
9.05 Fixed-broadband Internet subscriptions /100 pop.	100	2.8	
9.06 Internet bandwidth kb/s/user	57	69.5	
9.07 Mobile-broadband subscriptions /100 pop.	58	66.8	
10th pillar: Market size	50	4.4	
10.01 Domestic market size index	49	4.2	
10.02 Foreign market size index	43	5.1	
10.03 GDP (PPP) PPP $ billions	52	303.7	
10.04 Exports % GDP	39	46.4	
11th pillar: Business sophistication	70	4.0	
11.01 Local supplier quantity	65	4.6	
11.02 Local supplier quality	85	4.1	
11.03 State of cluster development	47	4.1	
11.04 Nature of competitive advantage	52	3.9	
11.05 Value chain breadth	66	3.8	
11.06 Control of international distribution	56	3.8	
11.07 Production process sophistication	68	3.8	
11.08 Extent of marketing	88	4.2	
11.09 Willingness to delegate authority	107	3.8	
12th pillar: Innovation	103	3.0	
12.01 Capacity for innovation	102	3.7	
12.02 Quality of scientific research institutions	97	3.3	
12.03 Company spending on R&D	116	2.8	
12.04 University-industry collaboration in R&D	108	2.9	
12.05 Gov't procurement of advanced technology products	84	3.1	
12.06 Availability of scientists and engineers	98	3.5	
12.07 PCT patents applications/million pop.	85	0.3	

Note: Values are on a 1-to-7 scale unless indicated otherwise. Trend lines depict evolution in values since the 2012-2013 edition (or earliest edition available). For detailed definitions, sources, and periods, consult the interactive Economy Profiles and Rankings at http://gcr.weforum.org/

Lebanon

105th / 137

The Global Competitiveness Index 2017-2018 edition

Key indicators, 2016

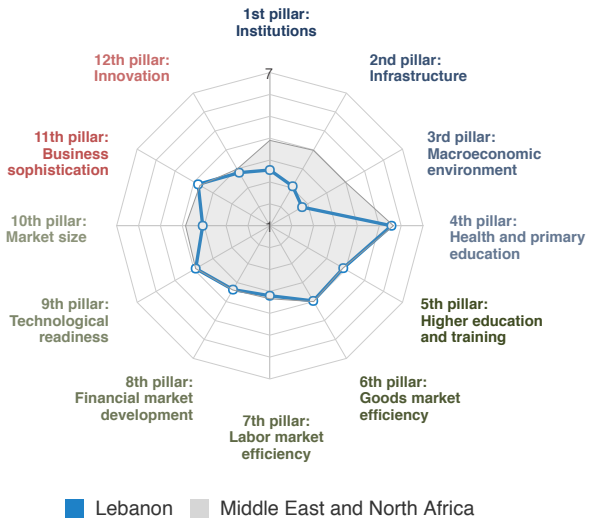
Source: International Monetary Fund; World Economic Outlook Database (April 2017)

Population millions	4.6	**GDP per capita** US$	11,308.9
GDP US$ billions	52.0	**GDP (PPP)** % world GDP	0.07

Performance overview

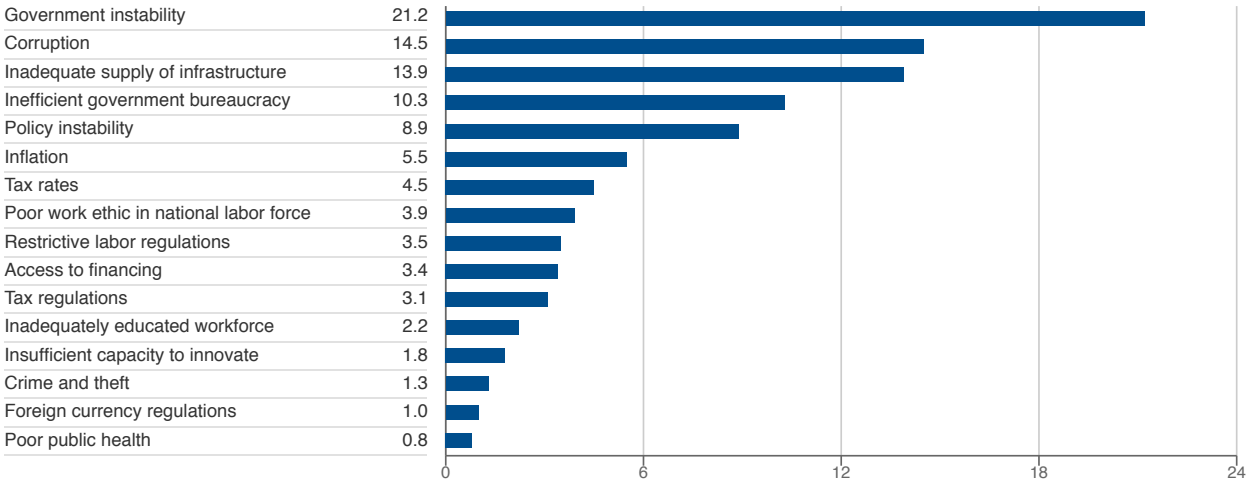
Index Component	Rank/137	Score (1-7)	Trend	Distance from best
Global Competitiveness Index	105	3.8		
Subindex A: Basic requirements	119	3.5		
1st pillar: Institutions	124	3.2		
2nd pillar: Infrastructure	113	2.8		
3rd pillar: Macroeconomic environment	133	2.5		
4th pillar: Health and primary education	72	5.8		
Subindex B: Efficiency enhancers	76	4.1		
5th pillar: Higher education and training	74	4.3		
6th pillar: Goods market efficiency	61	4.4		
7th pillar: Labor market efficiency	109	3.7		
8th pillar: Financial market development	76	3.9		
9th pillar: Technological readiness	64	4.4		
10th pillar: Market size	75	3.6		
Subindex C: Innovation and sophistication factors	52	3.8		
11th pillar: Business sophistication	52	4.2		
12th pillar: Innovation	58	3.4		

Edition	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Rank	91 / 144	103 / 148	113 / 144	101 / 140	101 / 138	105 / 137
Score	3.9	3.8	3.7	3.8	3.8	3.8



Most problematic factors for doing business

Source: World Economic Forum, Executive Opinion Survey 2017



Note: From the list of factors, respondents to the World Economic Forum's Executive Opinion Survey were asked to select the five most problematic factors for doing business in their country and to rank them between 1 (most problematic) and 5. The score corresponds to the responses weighted according to their rankings.

The Global Competitiveness Index in detail

Lebanon

Index Component	Rank/137	Value	Trend
1st pillar: Institutions	124	3.2	
1.01 Property rights	77	4.2	
1.02 Intellectual property protection	120	3.2	
1.03 Diversion of public funds	98	2.9	
1.04 Public trust in politicians	128	1.7	
1.05 Irregular payments and bribes	121	2.8	
1.06 Judicial independence	105	3.1	
1.07 Favoritism in decisions of government officials	126	2.0	
1.08 Efficiency of government spending	130	1.8	
1.09 Burden of government regulation	109	2.9	
1.10 Efficiency of legal framework in settling disputes	105	3.0	
1.11 Efficiency of legal framework in challenging regulations	120	2.5	
1.12 Transparency of government policymaking	124	3.1	
1.13 Business costs of terrorism	131	3.1	
1.14 Business costs of crime and violence	109	3.7	
1.15 Organized crime	109	4.0	
1.16 Reliability of police services	109	3.5	
1.17 Ethical behavior of firms	104	3.4	
1.18 Strength of auditing and reporting standards	79	4.4	
1.19 Efficacy of corporate boards	111	4.3	
1.20 Protection of minority shareholders' interests	97	3.7	
1.21 Strength of investor protection 0-10 (best)	116	4.0	
2nd pillar: Infrastructure	113	2.8	
2.01 Quality of overall infrastructure	130	2.3	
2.02 Quality of roads	121	2.7	
2.03 Quality of railroad infrastructure	n/a	not assessed	
2.04 Quality of port infrastructure	91	3.5	
2.05 Quality of air transport infrastructure	100	3.8	
2.06 Available airline seat kilometers millions/week	70	187.5	
2.07 Quality of electricity supply	134	1.7	
2.08 Mobile-cellular telephone subscriptions /100 pop.	104	96.4	
2.09 Fixed-telephone lines /100 pop.	46	21.0	
3rd pillar: Macroeconomic environment	133	2.5	
3.01 Government budget balance % GDP	122	-8.1	
3.02 Gross national savings % GDP	129	6.3	
3.03 Inflation annual % change	84	-0.8	
3.04 Government debt % GDP	135	143.4	
3.05 Country credit rating 0-100 (best)	99	29.4	
4th pillar: Health and primary education	72	5.8	
4.01 Malaria incidence cases/100,000 pop.	n/a	s.l.	
4.02 Business impact of malaria	n/a	5.6	
4.03 Tuberculosis incidence cases/100,000 pop.	36	13.0	
4.04 Business impact of tuberculosis	65	5.5	
4.05 HIV prevalence % adult pop.	1	<0.1	
4.06 Business impact of HIV/AIDS	60	5.5	
4.07 Infant mortality deaths/1,000 live births	48	7.1	
4.08 Life expectancy years	32	79.6	
4.09 Quality of primary education	15	5.4	
4.10 Primary education enrollment rate net %	122	81.8	
5th pillar: Higher education and training	74	4.3	
5.01 Secondary education enrollment rate gross %	107	61.2	
5.02 Tertiary education enrollment rate gross %	73	38.5	
5.03 Quality of the education system	18	5.0	
5.04 Quality of math and science education	4	5.8	
5.05 Quality of management schools	9	5.7	
5.06 Internet access in schools	78	4.0	
5.07 Local availability of specialized training services	41	4.8	
5.08 Extent of staff training	73	3.8	

Index Component	Rank/137	Value	Trend
6th pillar: Goods market efficiency	61	4.4	
6.01 Intensity of local competition	17	5.7	
6.02 Extent of market dominance	63	3.8	
6.03 Effectiveness of anti-monopoly policy	120	3.0	
6.04 Effect of taxation on incentives to invest	51	3.9	
6.05 Total tax rate % profits	38	30.3	
6.06 No. of procedures to start a business	91	8	
6.07 Time to start a business days	85	15.0	
6.08 Agricultural policy costs	129	2.9	
6.09 Prevalence of non-tariff barriers	96	4.1	
6.10 Trade tariffs % duty	69	4.9	
6.11 Prevalence of foreign ownership	114	3.8	
6.12 Business impact of rules on FDI	88	4.3	
6.13 Burden of customs procedures	119	3.2	
6.14 Imports % GDP	27	63.6	
6.15 Degree of customer orientation	54	4.9	
6.16 Buyer sophistication	48	3.7	
7th pillar: Labor market efficiency	109	3.7	
7.01 Cooperation in labor-employer relations	83	4.2	
7.02 Flexibility of wage determination	65	5.0	
7.03 Hiring and firing practices	50	4.0	
7.04 Redundancy costs weeks of salary	63	15.1	
7.05 Effect of taxation on incentives to work	44	4.3	
7.06 Pay and productivity	59	4.1	
7.07 Reliance on professional management	96	3.8	
7.08 Country capacity to retain talent	105	2.9	
7.09 Country capacity to attract talent	105	2.6	
7.10 Female participation in the labor force ratio to men	128	0.35	
8th pillar: Financial market development	76	3.9	
8.01 Availability of financial services	48	4.5	
8.02 Affordability of financial services	71	3.8	
8.03 Financing through local equity market	100	3.0	
8.04 Ease of access to loans	36	4.4	
8.05 Venture capital availability	32	3.5	
8.06 Soundness of banks	45	5.4	
8.07 Regulation of securities exchanges	66	4.4	
8.08 Legal rights index 0-10 (best)	106	2	
9th pillar: Technological readiness	64	4.4	
9.01 Availability of latest technologies	108	4.1	
9.02 Firm-level technology absorption	86	4.3	
9.03 FDI and technology transfer	122	3.4	
9.04 Internet users % pop.	40	76.1	
9.05 Fixed-broadband Internet subscriptions /100 pop.	35	25.6	
9.06 Internet bandwidth kb/s/user	69	55.1	
9.07 Mobile-broadband subscriptions /100 pop.	57	67.2	
10th pillar: Market size	75	3.6	
10.01 Domestic market size index	76	3.4	
10.02 Foreign market size index	77	4.3	
10.03 GDP (PPP) PPP $ billions	79	85.2	
10.04 Exports % GDP	59	38.4	
11th pillar: Business sophistication	52	4.2	
11.01 Local supplier quantity	27	4.9	
11.02 Local supplier quality	62	4.4	
11.03 State of cluster development	61	3.8	
11.04 Nature of competitive advantage	42	4.1	
11.05 Value chain breadth	43	4.2	
11.06 Control of international distribution	42	4.1	
11.07 Production process sophistication	55	4.0	
11.08 Extent of marketing	31	4.9	
11.09 Willingness to delegate authority	99	3.9	
12th pillar: Innovation	58	3.4	
12.01 Capacity for innovation	41	4.5	
12.02 Quality of scientific research institutions	81	3.6	
12.03 Company spending on R&D	75	3.2	
12.04 University-industry collaboration in R&D	48	3.6	
12.05 Gov't procurement of advanced technology products	114	2.8	
12.06 Availability of scientists and engineers	15	5.0	
12.07 PCT patents applications/million pop.	59	2.4	

Note: Values are on a 1-to-7 scale unless indicated otherwise. Trend lines depict evolution in values since the 2012-2013 edition (or earliest edition available). For detailed definitions, sources, and periods, consult the interactive Economy Profiles and Rankings at http://gcr.weforum.org/

Morocco

71st / 137

The Global Competitiveness Index 2017-2018 edition

Key indicators, 2016

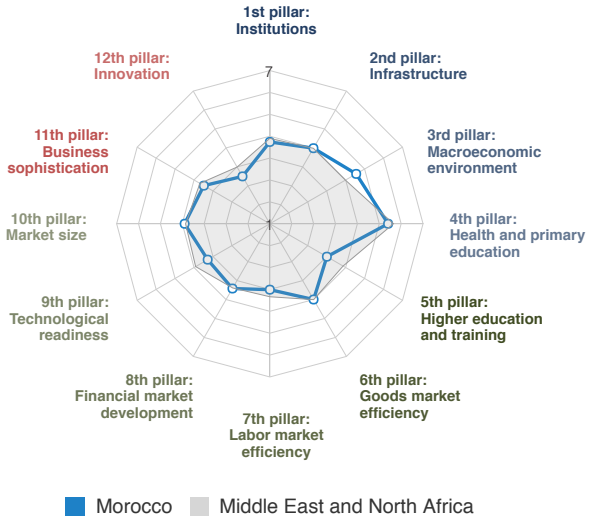
Source: International Monetary Fund; World Economic Outlook Database (April 2017)

Population millions	33.8	**GDP per capita** US$	3,063.1
GDP US$ billions	103.6	**GDP (PPP)** % world GDP	0.24

Performance overview

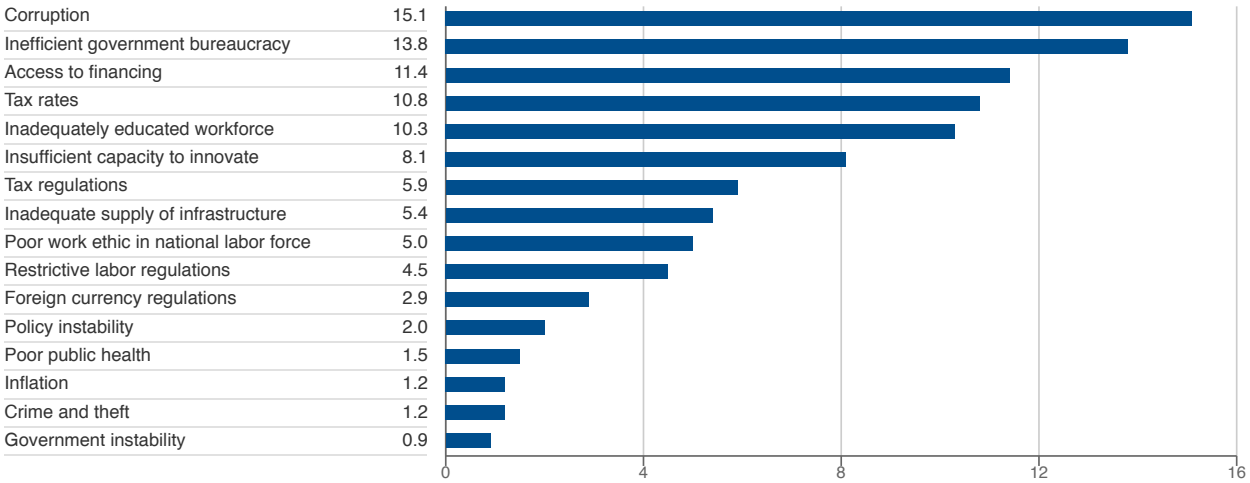
Index Component	Rank/137	Score (1-7)	Trend	Distance from best
Global Competitiveness Index	71	4.2		
Subindex A: Basic requirements	57	4.8		
1st pillar: Institutions	49	4.2		
2nd pillar: Infrastructure	54	4.4		
3rd pillar: Macroeconomic environment	55	4.9		
4th pillar: Health and primary education	81	5.6		
Subindex B: Efficiency enhancers	85	3.9		
5th pillar: Higher education and training	101	3.6		
6th pillar: Goods market efficiency	58	4.4		
7th pillar: Labor market efficiency	120	3.6		
8th pillar: Financial market development	72	3.9		
9th pillar: Technological readiness	82	3.8		
10th pillar: Market size	53	4.3		
Subindex C: Innovation and sophistication factors	74	3.6		
11th pillar: Business sophistication	69	4.0		
12th pillar: Innovation	94	3.1		

Edition	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Rank	70 / 144	77 / 148	72 / 144	72 / 140	70 / 138	71 / 137
Score	4.1	4.1	4.2	4.2	4.2	4.2



Most problematic factors for doing business

Source: World Economic Forum, Executive Opinion Survey 2017



Note: From the list of factors, respondents to the World Economic Forum's Executive Opinion Survey were asked to select the five most problematic factors for doing business in their country and to rank them between 1 (most problematic) and 5. The score corresponds to the responses weighted according to their rankings.

The Global Competitiveness Index in detail

Morocco

Index Component	Rank/137	Value	Trend
1st pillar: Institutions	49	4.2	
1.01 Property rights	44	4.7	
1.02 Intellectual property protection	53	4.4	
1.03 Diversion of public funds	49	4.0	
1.04 Public trust in politicians	53	3.4	
1.05 Irregular payments and bribes	78	3.7	
1.06 Judicial independence	75	3.8	
1.07 Favoritism in decisions of government officials	50	3.4	
1.08 Efficiency of government spending	52	3.6	
1.09 Burden of government regulation	39	3.8	
1.10 Efficiency of legal framework in settling disputes	67	3.6	
1.11 Efficiency of legal framework in challenging regulations	57	3.5	
1.12 Transparency of government policymaking	49	4.4	
1.13 Business costs of terrorism	56	5.3	
1.14 Business costs of crime and violence	36	5.2	
1.15 Organized crime	37	5.4	
1.16 Reliability of police services	34	5.6	
1.17 Ethical behavior of firms	71	3.8	
1.18 Strength of auditing and reporting standards	55	4.8	
1.19 Efficacy of corporate boards	58	5.0	
1.20 Protection of minority shareholders' interests	41	4.5	
1.21 Strength of investor protection 0-10 (best)	79	5.3	
2nd pillar: Infrastructure	54	4.4	
2.01 Quality of overall infrastructure	42	4.7	
2.02 Quality of roads	43	4.5	
2.03 Quality of railroad infrastructure	38	3.9	
2.04 Quality of port infrastructure	32	5.0	
2.05 Quality of air transport infrastructure	54	4.8	
2.06 Available airline seat kilometers millions/week	48	535.0	
2.07 Quality of electricity supply	46	5.6	
2.08 Mobile-cellular telephone subscriptions /100 pop.	60	120.7	
2.09 Fixed-telephone lines /100 pop.	95	6.0	
3rd pillar: Macroeconomic environment	55	4.9	
3.01 Government budget balance % GDP	91	-4.2	
3.02 Gross national savings % GDP	35	27.3	
3.03 Inflation annual % change	1	1.6	
3.04 Government debt % GDP	96	64.7	
3.05 Country credit rating 0-100 (best)	69	51.7	
4th pillar: Health and primary education	81	5.6	
4.01 Malaria incidence cases/100,000 pop.	n/a	m.f.	
4.02 Business impact of malaria	n/a	5.9	
4.03 Tuberculosis incidence cases/100,000 pop.	94	107.0	
4.04 Business impact of tuberculosis	58	5.7	
4.05 HIV prevalence % adult pop.	1	0.1	
4.06 Business impact of HIV/AIDS	49	5.8	
4.07 Infant mortality deaths/1,000 live births	95	23.7	
4.08 Life expectancy years	77	74.3	
4.09 Quality of primary education	119	2.8	
4.10 Primary education enrollment rate net %	26	98.4	
5th pillar: Higher education and training	101	3.6	
5.01 Secondary education enrollment rate gross %	100	69.1	
5.02 Tertiary education enrollment rate gross %	85	28.1	
5.03 Quality of the education system	120	2.7	
5.04 Quality of math and science education	80	3.8	
5.05 Quality of management schools	86	4.0	
5.06 Internet access in schools	111	3.4	
5.07 Local availability of specialized training services	86	4.1	
5.08 Extent of staff training	117	3.4	

Index Component	Rank/137	Value	Trend
6th pillar: Goods market efficiency	58	4.4	
6.01 Intensity of local competition	64	5.2	
6.02 Extent of market dominance	50	3.9	
6.03 Effectiveness of anti-monopoly policy	74	3.6	
6.04 Effect of taxation on incentives to invest	44	4.0	
6.05 Total tax rate % profits	109	49.3	
6.06 No. of procedures to start a business	18	4	
6.07 Time to start a business days	58	9.5	
6.08 Agricultural policy costs	16	4.7	
6.09 Prevalence of non-tariff barriers	107	3.9	
6.10 Trade tariffs % duty	106	10.5	
6.11 Prevalence of foreign ownership	44	4.9	
6.12 Business impact of rules on FDI	35	5.1	
6.13 Burden of customs procedures	55	4.5	
6.14 Imports % GDP	60	47.2	
6.15 Degree of customer orientation	78	4.5	
6.16 Buyer sophistication	82	3.2	
7th pillar: Labor market efficiency	120	3.6	
7.01 Cooperation in labor-employer relations	115	3.8	
7.02 Flexibility of wage determination	36	5.4	
7.03 Hiring and firing practices	109	3.3	
7.04 Redundancy costs weeks of salary	88	20.7	
7.05 Effect of taxation on incentives to work	52	4.2	
7.06 Pay and productivity	96	3.6	
7.07 Reliance on professional management	79	4.0	
7.08 Country capacity to retain talent	90	3.2	
7.09 Country capacity to attract talent	69	3.3	
7.10 Female participation in the labor force ratio to men	130	0.34	
8th pillar: Financial market development	72	3.9	
8.01 Availability of financial services	87	4.0	
8.02 Affordability of financial services	76	3.7	
8.03 Financing through local equity market	45	4.2	
8.04 Ease of access to loans	77	3.8	
8.05 Venture capital availability	90	2.6	
8.06 Soundness of banks	48	5.4	
8.07 Regulation of securities exchanges	33	5.2	
8.08 Legal rights index 0-10 (best)	106	2	
9th pillar: Technological readiness	82	3.8	
9.01 Availability of latest technologies	50	5.1	
9.02 Firm-level technology absorption	62	4.5	
9.03 FDI and technology transfer	52	4.6	
9.04 Internet users % pop.	71	58.3	
9.05 Fixed-broadband Internet subscriptions /100 pop.	93	3.7	
9.06 Internet bandwidth kb/s/user	89	25.7	
9.07 Mobile-broadband subscriptions /100 pop.	91	46.0	
10th pillar: Market size	53	4.3	
10.01 Domestic market size index	51	4.2	
10.02 Foreign market size index	52	4.9	
10.03 GDP (PPP) PPP $ billions	56	281.8	
10.04 Exports % GDP	64	36.1	
11th pillar: Business sophistication	69	4.0	
11.01 Local supplier quantity	31	4.8	
11.02 Local supplier quality	68	4.3	
11.03 State of cluster development	60	3.8	
11.04 Nature of competitive advantage	87	3.2	
11.05 Value chain breadth	58	3.9	
11.06 Control of international distribution	71	3.6	
11.07 Production process sophistication	76	3.7	
11.08 Extent of marketing	66	4.5	
11.09 Willingness to delegate authority	98	3.9	
12th pillar: Innovation	94	3.1	
12.01 Capacity for innovation	83	3.9	
12.02 Quality of scientific research institutions	111	3.0	
12.03 Company spending on R&D	93	3.0	
12.04 University-industry collaboration in R&D	105	3.0	
12.05 Gov't procurement of advanced technology products	75	3.3	
12.06 Availability of scientists and engineers	60	4.1	
12.07 PCT patents applications/million pop.	64	1.7	

Note: Values are on a 1-to-7 scale unless indicated otherwise. Trend lines depict evolution in values since the 2012-2013 edition (or earliest edition available). For detailed definitions, sources, and periods, consult the interactive Economy Profiles and Rankings at http://gcr.weforum.org/

Oman

62nd / 137

The Global Competitiveness Index 2017-2018 edition

Key indicators, 2016

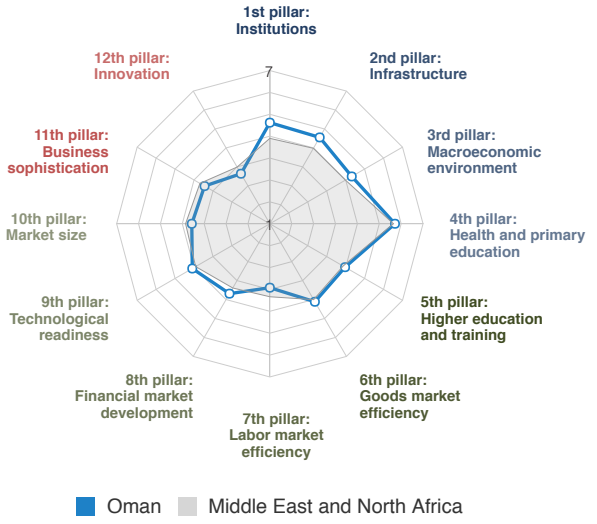
Source: International Monetary Fund; World Economic Outlook Database (April 2017)

Population millions	4.0	**GDP per capita** US$	15,964.0
GDP US$ billions	63.2	**GDP (PPP)** % world GDP	0.15

Performance overview

Index Component	Rank/137	Score (1-7)	Trend	Distance from best
Global Competitiveness Index	62	4.3		
Subindex A: Basic requirements	38	5.1		
1st pillar: Institutions	28	5.0		
2nd pillar: Infrastructure	36	4.9		
3rd pillar: Macroeconomic environment	66	4.7		
4th pillar: Health and primary education	63	5.9		
Subindex B: Efficiency enhancers	66	4.2		
5th pillar: Higher education and training	71	4.4		
6th pillar: Goods market efficiency	47	4.5		
7th pillar: Labor market efficiency	122	3.5		
8th pillar: Financial market development	54	4.2		
9th pillar: Technological readiness	59	4.5		
10th pillar: Market size	62	4.1		
Subindex C: Innovation and sophistication factors	70	3.6		
11th pillar: Business sophistication	72	4.0		
12th pillar: Innovation	76	3.3		

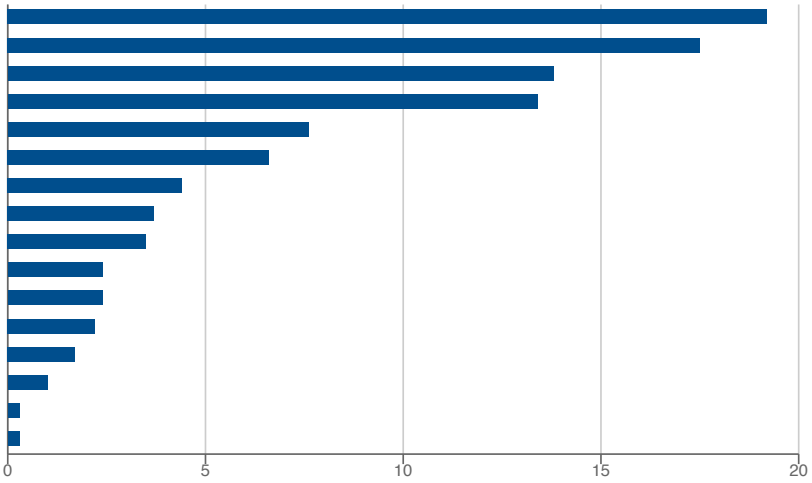
Edition	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Rank	32 / 144	33 / 148	46 / 144	62 / 140	66 / 138	62 / 137
Score	4.7	4.6	4.5	4.2	4.3	4.3



Most problematic factors for doing business

Source: World Economic Forum, Executive Opinion Survey 2016

Restrictive labor regulations	19.2
Inadequately educated workforce	17.5
Access to financing	13.8
Inefficient government bureaucracy	13.4
Insufficient capacity to innovate	7.6
Poor work ethic in national labor force	6.6
Inadequate supply of infrastructure	4.4
Foreign currency regulations	3.7
Tax rates	3.5
Inflation	2.4
Corruption	2.4
Tax regulations	2.2
Policy instability	1.7
Government instability	1.0
Poor public health	0.3
Crime and theft	0.3



Note: From the list of factors, respondents to the World Economic Forum's Executive Opinion Survey were asked to select the five most problematic factors for doing business in their country and to rank them between 1 (most problematic) and 5. The score corresponds to the responses weighted according to their rankings.

Oman

The Global Competitiveness Index in detail

Index Component	Rank/137	Value	Trend
1st pillar: Institutions	28	5.0	
1.01 Property rights	27	5.4	
1.02 Intellectual property protection	35	4.8	
1.03 Diversion of public funds	30	4.8	
1.04 Public trust in politicians	19	4.7	
1.05 Irregular payments and bribes	33	5.2	
1.06 Judicial independence	42	4.7	
1.07 Favoritism in decisions of government officials	35	3.9	
1.08 Efficiency of government spending	10	5.1	
1.09 Burden of government regulation	46	3.7	
1.10 Efficiency of legal framework in settling disputes	27	4.6	
1.11 Efficiency of legal framework in challenging regulations	32	4.1	
1.12 Transparency of government policymaking	37	4.6	
1.13 Business costs of terrorism	11	6.1	
1.14 Business costs of crime and violence	5	6.3	
1.15 Organized crime	3	6.6	
1.16 Reliability of police services	11	6.3	
1.17 Ethical behavior of firms	31	4.7	
1.18 Strength of auditing and reporting standards	40	5.2	
1.19 Efficacy of corporate boards	41	5.1	
1.20 Protection of minority shareholders' interests	26	5.0	
1.21 Strength of investor protection 0-10 (best)	99	4.7	
2nd pillar: Infrastructure	36	4.9	
2.01 Quality of overall infrastructure	32	4.9	
2.02 Quality of roads	14	5.5	
2.03 Quality of railroad infrastructure	n/a	not assessed	
2.04 Quality of port infrastructure	48	4.6	
2.05 Quality of air transport infrastructure	56	4.7	
2.06 Available airline seat kilometers millions/week	54	397.0	
2.07 Quality of electricity supply	28	6.2	
2.08 Mobile-cellular telephone subscriptions /100 pop.	13	159.2	
2.09 Fixed-telephone lines /100 pop.	82	9.8	
3rd pillar: Macroeconomic environment	66	4.7	
3.01 Government budget balance % GDP	136	-20.6	
3.02 Gross national savings % GDP	57	22.5	
3.03 Inflation annual % change	1	1.1	
3.04 Government debt % GDP	34	34.3	
3.05 Country credit rating 0-100 (best)	41	67.0	
4th pillar: Health and primary education	63	5.9	
4.01 Malaria incidence cases/100,000 pop.	1	0.0	
4.02 Business impact of malaria	n/a	6.0	
4.03 Tuberculosis incidence cases/100,000 pop.	26	8.4	
4.04 Business impact of tuberculosis	54	5.8	
4.05 HIV prevalence % adult pop.	1	0.1	
4.06 Business impact of HIV/AIDS	54	5.7	
4.07 Infant mortality deaths/1,000 live births	59	9.9	
4.08 Life expectancy years	42	77.3	
4.09 Quality of primary education	78	3.9	
4.10 Primary education enrollment rate net %	77	94.5	
5th pillar: Higher education and training	71	4.4	
5.01 Secondary education enrollment rate gross %	32	104.2	
5.02 Tertiary education enrollment rate gross %	57	50.5	
5.03 Quality of the education system	75	3.6	
5.04 Quality of math and science education	84	3.7	
5.05 Quality of management schools	116	3.5	
5.06 Internet access in schools	79	4.0	
5.07 Local availability of specialized training services	113	3.7	
5.08 Extent of staff training	48	4.2	

Index Component	Rank/137	Value	Trend
6th pillar: Goods market efficiency	47	4.5	
6.01 Intensity of local competition	113	4.6	
6.02 Extent of market dominance	111	3.2	
6.03 Effectiveness of anti-monopoly policy	66	3.7	
6.04 Effect of taxation on incentives to invest	9	5.2	
6.05 Total tax rate % profits	21	23.9	
6.06 No. of procedures to start a business	18	4	
6.07 Time to start a business days	34	6.3	
6.08 Agricultural policy costs	24	4.4	
6.09 Prevalence of non-tariff barriers	40	4.6	
6.10 Trade tariffs % duty	61	4.2	
6.11 Prevalence of foreign ownership	98	4.2	
6.12 Business impact of rules on FDI	100	4.1	
6.13 Burden of customs procedures	50	4.5	
6.14 Imports % GDP	61	47.0	
6.15 Degree of customer orientation	88	4.4	
6.16 Buyer sophistication	74	3.3	
7th pillar: Labor market efficiency	122	3.5	
7.01 Cooperation in labor-employer relations	52	4.5	
7.02 Flexibility of wage determination	56	5.0	
7.03 Hiring and firing practices	121	3.1	
7.04 Redundancy costs weeks of salary	136	not possible	
7.05 Effect of taxation on incentives to work	6	5.3	
7.06 Pay and productivity	73	3.8	
7.07 Reliance on professional management	60	4.5	
7.08 Country capacity to retain talent	36	4.2	
7.09 Country capacity to attract talent	29	4.3	
7.10 Female participation in the labor force ratio to men	126	0.36	
8th pillar: Financial market development	54	4.2	
8.01 Availability of financial services	41	4.6	
8.02 Affordability of financial services	32	4.5	
8.03 Financing through local equity market	35	4.4	
8.04 Ease of access to loans	24	4.7	
8.05 Venture capital availability	34	3.5	
8.06 Soundness of banks	51	5.3	
8.07 Regulation of securities exchanges	35	5.2	
8.08 Legal rights index 0-10 (best)	127	1	
9th pillar: Technological readiness	59	4.5	
9.01 Availability of latest technologies	61	4.9	
9.02 Firm-level technology absorption	52	4.7	
9.03 FDI and technology transfer	87	4.1	
9.04 Internet users % pop.	53	69.8	
9.05 Fixed-broadband Internet subscriptions /100 pop.	83	6.2	
9.06 Internet bandwidth kb/s/user	63	66.1	
9.07 Mobile-broadband subscriptions /100 pop.	28	91.3	
10th pillar: Market size	62	4.1	
10.01 Domestic market size index	62	3.8	
10.02 Foreign market size index	62	4.7	
10.03 GDP (PPP) PPP $ billions	61	184.8	
10.04 Exports % GDP	53	41.2	
11th pillar: Business sophistication	72	4.0	
11.01 Local supplier quantity	116	3.9	
11.02 Local supplier quality	87	4.1	
11.03 State of cluster development	72	3.7	
11.04 Nature of competitive advantage	66	3.6	
11.05 Value chain breadth	69	3.8	
11.06 Control of international distribution	51	3.9	
11.07 Production process sophistication	57	4.0	
11.08 Extent of marketing	102	4.1	
11.09 Willingness to delegate authority	76	4.2	
12th pillar: Innovation	76	3.3	
12.01 Capacity for innovation	92	3.8	
12.02 Quality of scientific research institutions	104	3.2	
12.03 Company spending on R&D	106	2.9	
12.04 University-industry collaboration in R&D	51	3.6	
12.05 Gov't procurement of advanced technology products	38	3.7	
12.06 Availability of scientists and engineers	75	3.8	
12.07 PCT patents applications/million pop.	82	0.4	

Note: Values are on a 1-to-7 scale unless indicated otherwise. Trend lines depict evolution in values since the 2012-2013 edition (or earliest edition available). For detailed definitions, sources, and periods, consult the interactive Economy Profiles and Rankings at http://gcr.weforum.org/

Qatar

25th / 137

The Global Competitiveness Index 2017-2018 edition

Key indicators, 2016

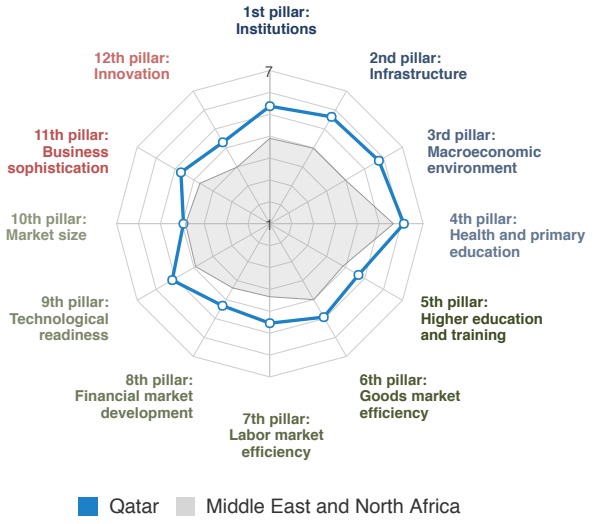
Source: International Monetary Fund; World Economic Outlook Database (April 2017)

Population millions	2.6	**GDP per capita** US$	60,786.7
GDP US$ billions	156.7	**GDP (PPP)** % world GDP	0.28

Performance overview

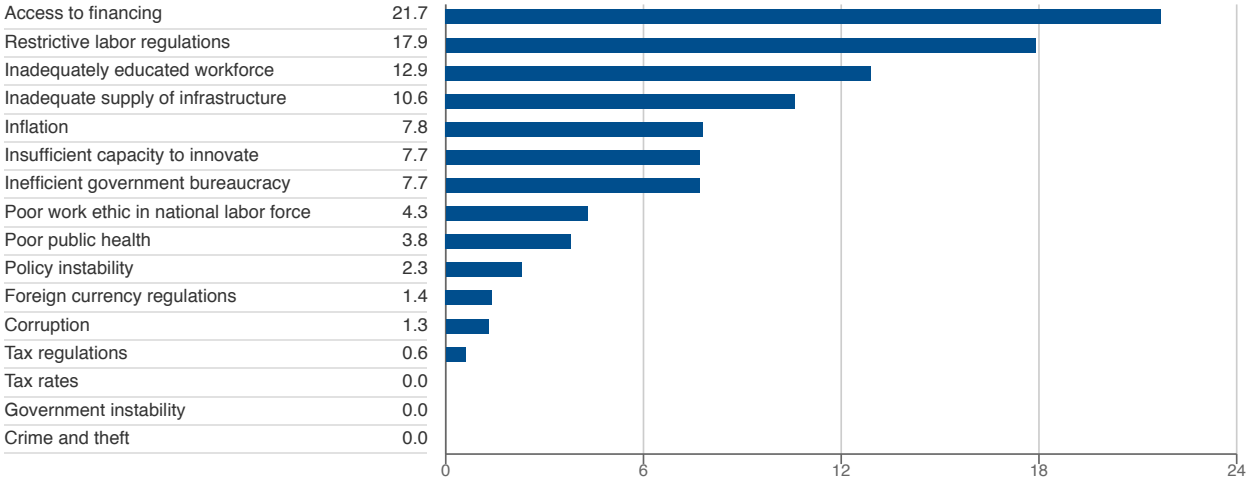
Index Component	Rank/137	Score (1-7)	Trend	Distance from best
Global Competitiveness Index	25	5.1		
Subindex A: Basic requirements	12	5.9		
1st pillar: Institutions	10	5.6		
2nd pillar: Infrastructure	13	5.8		
3rd pillar: Macroeconomic environment	20	5.9		
4th pillar: Health and primary education	34	6.2		
Subindex B: Efficiency enhancers	25	4.9		
5th pillar: Higher education and training	37	5.0		
6th pillar: Goods market efficiency	15	5.2		
7th pillar: Labor market efficiency	19	4.9		
8th pillar: Financial market development	25	4.7		
9th pillar: Technological readiness	34	5.4		
10th pillar: Market size	51	4.4		
Subindex C: Innovation and sophistication factors	22	4.9		
11th pillar: Business sophistication	22	5.0		
12th pillar: Innovation	21	4.7		

Edition	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Rank	11 / 144	13 / 148	16 / 144	14 / 140	18 / 138	25 / 137
Score	5.4	5.2	5.2	5.3	5.2	5.1



Most problematic factors for doing business

Source: World Economic Forum, Executive Opinion Survey 2017



Note: From the list of factors, respondents to the World Economic Forum's Executive Opinion Survey were asked to select the five most problematic factors for doing business in their country and to rank them between 1 (most problematic) and 5. The score corresponds to the responses weighted according to their rankings.

The Global Competitiveness Index in detail

Qatar

Index Component	Rank/137	Value	Trend
1st pillar: Institutions	10	5.6	
1.01 Property rights	21	5.6	
1.02 Intellectual property protection	22	5.7	
1.03 Diversion of public funds	5	6.1	
1.04 Public trust in politicians	4	5.9	
1.05 Irregular payments and bribes	11	6.3	
1.06 Judicial independence	27	5.3	
1.07 Favoritism in decisions of government officials	5	5.5	
1.08 Efficiency of government spending	4	5.8	
1.09 Burden of government regulation	11	4.7	
1.10 Efficiency of legal framework in settling disputes	10	5.5	
1.11 Efficiency of legal framework in challenging regulations	5	5.2	
1.12 Transparency of government policymaking	15	5.5	
1.13 Business costs of terrorism	12	6.1	
1.14 Business costs of crime and violence	1	6.4	
1.15 Organized crime	6	6.4	
1.16 Reliability of police services	9	6.3	
1.17 Ethical behavior of firms	17	5.4	
1.18 Strength of auditing and reporting standards	22	5.7	
1.19 Efficacy of corporate boards	26	5.6	
1.20 Protection of minority shareholders' interests	6	5.6	
1.21 Strength of investor protection 0-10 (best)	136	2.7	
2nd pillar: Infrastructure	13	5.8	
2.01 Quality of overall infrastructure	22	5.2	
2.02 Quality of roads	17	5.5	
2.03 Quality of railroad infrastructure	n/a	not assessed	
2.04 Quality of port infrastructure	12	5.6	
2.05 Quality of air transport infrastructure	6	6.3	
2.06 Available airline seat kilometers millions/week	25	1,868.0	
2.07 Quality of electricity supply	20	6.5	
2.08 Mobile-cellular telephone subscriptions /100 pop.	22	147.1	
2.09 Fixed-telephone lines /100 pop.	54	19.3	
3rd pillar: Macroeconomic environment	20	5.9	
3.01 Government budget balance % GDP	90	-4.1	
3.02 Gross national savings % GDP	4	44.0	
3.03 Inflation annual % change	1	2.7	
3.04 Government debt % GDP	66	47.6	
3.05 Country credit rating 0-100 (best)	25	76.7	
4th pillar: Health and primary education	34	6.2	
4.01 Malaria incidence cases/100,000 pop.	n/a	s.l.	
4.02 Business impact of malaria	n/a	6.4	
4.03 Tuberculosis incidence cases/100,000 pop.	60	34.0	
4.04 Business impact of tuberculosis	39	6.2	
4.05 HIV prevalence % adult pop.	1	<0.1	
4.06 Business impact of HIV/AIDS	28	6.3	
4.07 Infant mortality deaths/1,000 live births	45	6.8	
4.08 Life expectancy years	36	78.8	
4.09 Quality of primary education	10	5.6	
4.10 Primary education enrollment rate net %	96	92.1	
5th pillar: Higher education and training	37	5.0	
5.01 Secondary education enrollment rate gross %	73	91.2	
5.02 Tertiary education enrollment rate gross %	105	14.5	
5.03 Quality of the education system	5	5.6	
5.04 Quality of math and science education	6	5.6	
5.05 Quality of management schools	7	5.8	
5.06 Internet access in schools	19	5.6	
5.07 Local availability of specialized training services	22	5.4	
5.08 Extent of staff training	14	5.2	

Index Component	Rank/137	Value	Trend
6th pillar: Goods market efficiency	15	5.2	
6.01 Intensity of local competition	21	5.6	
6.02 Extent of market dominance	14	4.8	
6.03 Effectiveness of anti-monopoly policy	24	4.7	
6.04 Effect of taxation on incentives to invest	4	5.9	
6.05 Total tax rate % profits	2	11.3	
6.06 No. of procedures to start a business	91	8	
6.07 Time to start a business days	52	8.7	
6.08 Agricultural policy costs	25	4.4	
6.09 Prevalence of non-tariff barriers	8	5.3	
6.10 Trade tariffs % duty	56	4.0	
6.11 Prevalence of foreign ownership	86	4.3	
6.12 Business impact of rules on FDI	61	4.7	
6.13 Burden of customs procedures	26	5.1	
6.14 Imports % GDP	82	39.3	
6.15 Degree of customer orientation	26	5.5	
6.16 Buyer sophistication	11	4.7	
7th pillar: Labor market efficiency	19	4.9	
7.01 Cooperation in labor-employer relations	16	5.4	
7.02 Flexibility of wage determination	11	5.9	
7.03 Hiring and firing practices	9	5.1	
7.04 Redundancy costs weeks of salary	101	23.2	
7.05 Effect of taxation on incentives to work	2	6.2	
7.06 Pay and productivity	8	5.2	
7.07 Reliance on professional management	23	5.4	
7.08 Country capacity to retain talent	9	5.2	
7.09 Country capacity to attract talent	7	5.5	
7.10 Female participation in the labor force ratio to men	116	0.57	
8th pillar: Financial market development	25	4.7	
8.01 Availability of financial services	29	5.0	
8.02 Affordability of financial services	18	5.0	
8.03 Financing through local equity market	12	5.2	
8.04 Ease of access to loans	7	5.3	
8.05 Venture capital availability	5	4.7	
8.06 Soundness of banks	23	5.7	
8.07 Regulation of securities exchanges	9	5.9	
8.08 Legal rights index 0-10 (best)	127	1	
9th pillar: Technological readiness	34	5.4	
9.01 Availability of latest technologies	22	5.9	
9.02 Firm-level technology absorption	18	5.4	
9.03 FDI and technology transfer	24	5.1	
9.04 Internet users % pop.	7	94.3	
9.05 Fixed-broadband Internet subscriptions /100 pop.	68	10.8	
9.06 Internet bandwidth kb/s/user	50	86.9	
9.07 Mobile-broadband subscriptions /100 pop.	7	129.2	
10th pillar: Market size	51	4.4	
10.01 Domestic market size index	52	4.1	
10.02 Foreign market size index	41	5.1	
10.03 GDP (PPP) PPP $ billions	50	329.2	
10.04 Exports % GDP	41	46.0	
11th pillar: Business sophistication	22	5.0	
11.01 Local supplier quantity	57	4.6	
11.02 Local supplier quality	39	4.9	
11.03 State of cluster development	9	5.2	
11.04 Nature of competitive advantage	27	4.6	
11.05 Value chain breadth	18	5.2	
11.06 Control of international distribution	19	4.9	
11.07 Production process sophistication	22	5.3	
11.08 Extent of marketing	24	5.1	
11.09 Willingness to delegate authority	21	5.3	
12th pillar: Innovation	21	4.7	
12.01 Capacity for innovation	34	4.8	
12.02 Quality of scientific research institutions	20	5.3	
12.03 Company spending on R&D	13	5.1	
12.04 University-industry collaboration in R&D	12	5.1	
12.05 Gov't procurement of advanced technology products	3	5.1	
12.06 Availability of scientists and engineers	5	5.4	
12.07 PCT patents applications/million pop.	34	13.9	

Note: Values are on a 1-to-7 scale unless indicated otherwise. Trend lines depict evolution in values since the 2012-2013 edition (or earliest edition available). For detailed definitions, sources, and periods, consult the interactive Economy Profiles and Rankings at http://gcr.weforum.org/

Saudi Arabia

30th / 137

The Global Competitiveness Index 2017-2018 edition

Key indicators, 2016

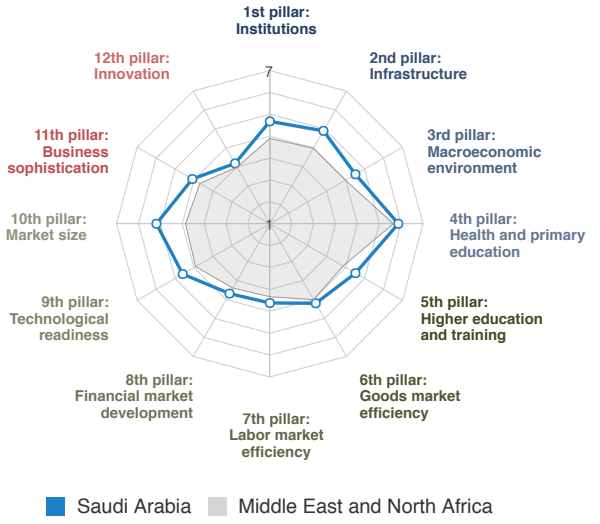
Source: International Monetary Fund; World Economic Outlook Database (April 2017)

Population millions	31.7	**GDP per capita** US$	20,150.1
GDP US$ billions	639.6	**GDP (PPP)** % world GDP	1.46

Performance overview

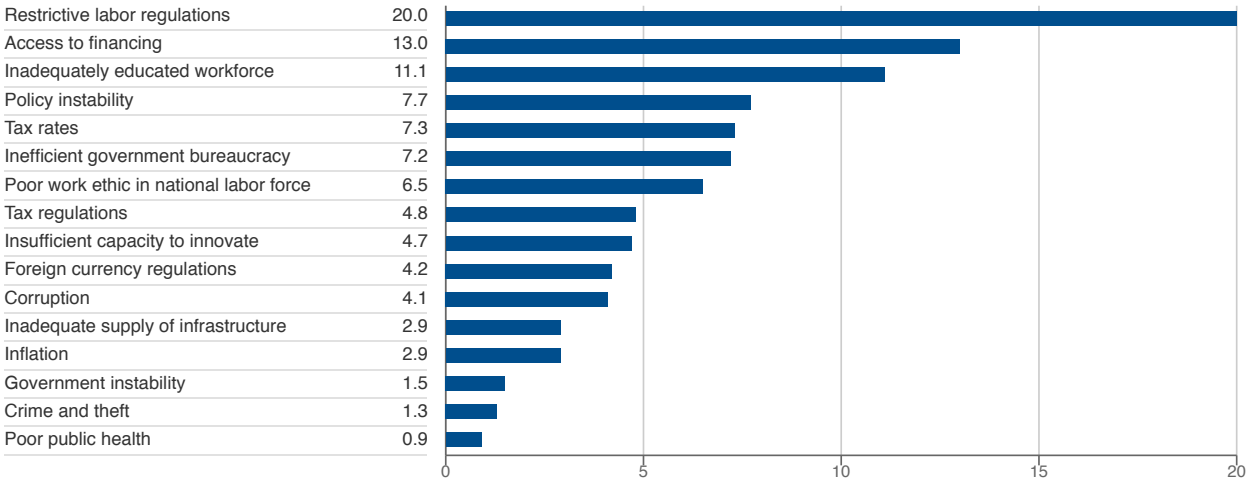
Index Component	Rank/137	Score (1-7)	Trend	Distance from best
Global Competitiveness Index	30	4.8		
Subindex A: Basic requirements	32	5.3		
1st pillar: Institutions	26	5.0		
2nd pillar: Infrastructure	29	5.2		
3rd pillar: Macroeconomic environment	58	4.9		
4th pillar: Health and primary education	51	6.0		
Subindex B: Efficiency enhancers	33	4.7		
5th pillar: Higher education and training	43	4.9		
6th pillar: Goods market efficiency	42	4.6		
7th pillar: Labor market efficiency	80	4.1		
8th pillar: Financial market development	56	4.2		
9th pillar: Technological readiness	44	4.9		
10th pillar: Market size	15	5.4		
Subindex C: Innovation and sophistication factors	40	4.1		
11th pillar: Business sophistication	34	4.5		
12th pillar: Innovation	40	3.7		

Edition	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Rank	18 / 144	20 / 148	24 / 144	25 / 140	29 / 138	30 / 137
Score	5.2	5.1	5.1	5.1	4.8	4.8



Most problematic factors for doing business

Source: World Economic Forum, Executive Opinion Survey 2017



Note: From the list of factors, respondents to the World Economic Forum's Executive Opinion Survey were asked to select the five most problematic factors for doing business in their country and to rank them between 1 (most problematic) and 5. The score corresponds to the responses weighted according to their rankings.

Saudi Arabia

The Global Competitiveness Index in detail

Index Component	Rank/137	Value	Trend
1st pillar: Institutions	26	5.0	
1.01 Property rights	35	5.1	
1.02 Intellectual property protection	34	4.8	
1.03 Diversion of public funds	20	5.3	
1.04 Public trust in politicians	12	5.2	
1.05 Irregular payments and bribes	31	5.3	
1.06 Judicial independence	30	5.2	
1.07 Favoritism in decisions of government officials	19	4.5	
1.08 Efficiency of government spending	7	5.3	
1.09 Burden of government regulation	24	4.1	
1.10 Efficiency of legal framework in settling disputes	22	4.8	
1.11 Efficiency of legal framework in challenging regulations	33	4.0	
1.12 Transparency of government policymaking	48	4.4	
1.13 Business costs of terrorism	58	5.3	
1.14 Business costs of crime and violence	21	5.4	
1.15 Organized crime	21	5.7	
1.16 Reliability of police services	23	5.9	
1.17 Ethical behavior of firms	25	5.0	
1.18 Strength of auditing and reporting standards	41	5.1	
1.19 Efficacy of corporate boards	62	4.9	
1.20 Protection of minority shareholders' interests	33	4.8	
1.21 Strength of investor protection 0-10 (best)	61	5.8	
2nd pillar: Infrastructure	29	5.2	
2.01 Quality of overall infrastructure	30	4.9	
2.02 Quality of roads	34	4.8	
2.03 Quality of railroad infrastructure	53	3.3	
2.04 Quality of port infrastructure	42	4.7	
2.05 Quality of air transport infrastructure	46	4.9	
2.06 Available airline seat kilometers millions/week	24	1,983.9	
2.07 Quality of electricity supply	30	6.2	
2.08 Mobile-cellular telephone subscriptions /100 pop.	15	157.6	
2.09 Fixed-telephone lines /100 pop.	76	12.0	
3rd pillar: Macroeconomic environment	58	4.9	
3.01 Government budget balance % GDP	133	-16.9	
3.02 Gross national savings % GDP	42	26.4	
3.03 Inflation annual % change	62	3.5	
3.04 Government debt % GDP	4	12.4	
3.05 Country credit rating 0-100 (best)	33	71.5	
4th pillar: Health and primary education	51	6.0	
4.01 Malaria incidence cases/100,000 pop.	18	0.3	
4.02 Business impact of malaria	6	5.8	
4.03 Tuberculosis incidence cases/100,000 pop.	34	12.0	
4.04 Business impact of tuberculosis	57	5.7	
4.05 HIV prevalence % adult pop.	1	<0.1	
4.06 Business impact of HIV/AIDS	56	5.6	
4.07 Infant mortality deaths/1,000 live births	68	12.5	
4.08 Life expectancy years	73	74.5	
4.09 Quality of primary education	63	4.1	
4.10 Primary education enrollment rate net %	42	97.6	
5th pillar: Higher education and training	43	4.9	
5.01 Secondary education enrollment rate gross %	22	108.3	
5.02 Tertiary education enrollment rate gross %	40	63.1	
5.03 Quality of the education system	41	4.3	
5.04 Quality of math and science education	63	4.2	
5.05 Quality of management schools	52	4.4	
5.06 Internet access in schools	57	4.4	
5.07 Local availability of specialized training services	67	4.3	
5.08 Extent of staff training	63	4.0	

Index Component	Rank/137	Value	Trend
6th pillar: Goods market efficiency	42	4.6	
6.01 Intensity of local competition	41	5.4	
6.02 Extent of market dominance	29	4.3	
6.03 Effectiveness of anti-monopoly policy	37	4.3	
6.04 Effect of taxation on incentives to invest	32	4.3	
6.05 Total tax rate % profits	6	15.7	
6.06 No. of procedures to start a business	131	13	
6.07 Time to start a business days	90	16.2	
6.08 Agricultural policy costs	32	4.3	
6.09 Prevalence of non-tariff barriers	55	4.5	
6.10 Trade tariffs % duty	60	4.1	
6.11 Prevalence of foreign ownership	109	3.9	
6.12 Business impact of rules on FDI	119	3.7	
6.13 Burden of customs procedures	37	4.8	
6.14 Imports % GDP	104	29.8	
6.15 Degree of customer orientation	66	4.6	
6.16 Buyer sophistication	30	4.0	
7th pillar: Labor market efficiency	80	4.1	
7.01 Cooperation in labor-employer relations	45	4.7	
7.02 Flexibility of wage determination	29	5.4	
7.03 Hiring and firing practices	37	4.2	
7.04 Redundancy costs weeks of salary	102	23.7	
7.05 Effect of taxation on incentives to work	30	4.5	
7.06 Pay and productivity	35	4.5	
7.07 Reliance on professional management	52	4.5	
7.08 Country capacity to retain talent	27	4.5	
7.09 Country capacity to attract talent	24	4.5	
7.10 Female participation in the labor force ratio to men	133	0.26	
8th pillar: Financial market development	56	4.2	
8.01 Availability of financial services	52	4.4	
8.02 Affordability of financial services	42	4.2	
8.03 Financing through local equity market	37	4.3	
8.04 Ease of access to loans	64	3.9	
8.05 Venture capital availability	31	3.5	
8.06 Soundness of banks	39	5.5	
8.07 Regulation of securities exchanges	34	5.2	
8.08 Legal rights index 0-10 (best)	106	2	
9th pillar: Technological readiness	44	4.9	
9.01 Availability of latest technologies	40	5.4	
9.02 Firm-level technology absorption	32	5.1	
9.03 FDI and technology transfer	39	4.8	
9.04 Internet users % pop.	45	73.8	
9.05 Fixed-broadband Internet subscriptions /100 pop.	67	10.8	
9.06 Internet bandwidth kb/s/user	55	78.2	
9.07 Mobile-broadband subscriptions /100 pop.	43	78.5	
10th pillar: Market size	15	5.4	
10.01 Domestic market size index	15	5.3	
10.02 Foreign market size index	24	5.8	
10.03 GDP (PPP) PPP $ billions	15	1,750.9	
10.04 Exports % GDP	85	29.7	
11th pillar: Business sophistication	34	4.5	
11.01 Local supplier quantity	29	4.9	
11.02 Local supplier quality	64	4.4	
11.03 State of cluster development	22	4.7	
11.04 Nature of competitive advantage	39	4.2	
11.05 Value chain breadth	37	4.3	
11.06 Control of international distribution	32	4.3	
11.07 Production process sophistication	34	4.6	
11.08 Extent of marketing	55	4.6	
11.09 Willingness to delegate authority	48	4.5	
12th pillar: Innovation	40	3.7	
12.01 Capacity for innovation	64	4.2	
12.02 Quality of scientific research institutions	54	4.0	
12.03 Company spending on R&D	45	3.6	
12.04 University-industry collaboration in R&D	46	3.7	
12.05 Gov't procurement of advanced technology products	15	4.2	
12.06 Availability of scientists and engineers	34	4.6	
12.07 PCT patents applications/million pop.	44	8.9	

Note: Values are on a 1-to-7 scale unless indicated otherwise. Trend lines depict evolution in values since the 2012-2013 edition (or earliest edition available). For detailed definitions, sources, and periods, consult the interactive Economy Profiles and Rankings at http://gcr.weforum.org/

Tunisia

95th / 137

The Global Competitiveness Index 2017-2018 edition

Key indicators, 2016

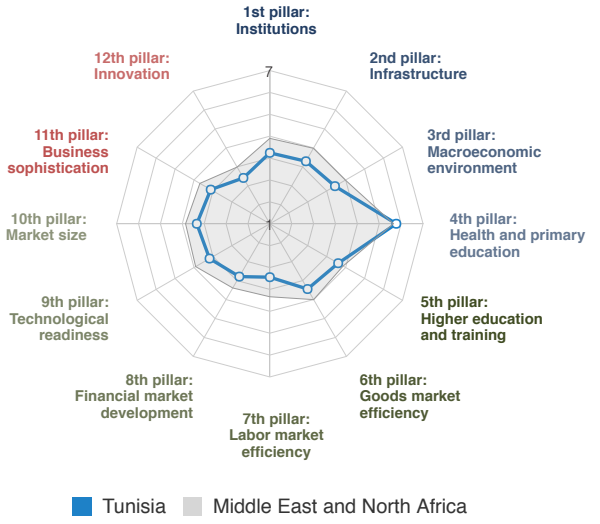
Source: International Monetary Fund; World Economic Outlook Database (April 2017)

Population millions	11.2	**GDP per capita** US$	3,730.4
GDP US$ billions	41.9	**GDP (PPP)** % world GDP	0.11

Performance overview

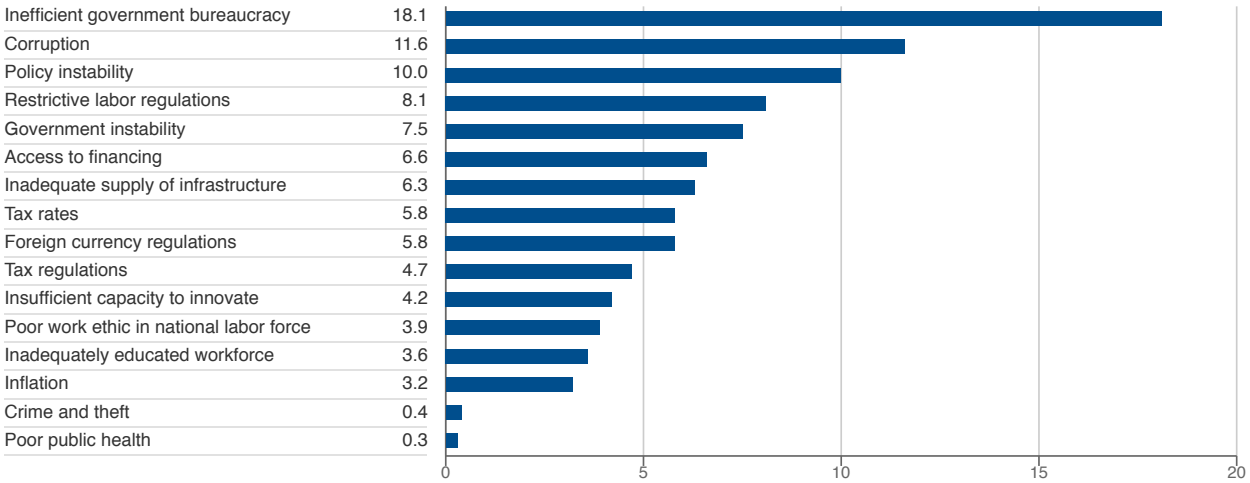
Index Component	Rank/137	Score (1-7)	Trend	Distance from best
Global Competitiveness Index	95	3.9		
Subindex A: Basic requirements	84	4.4		
1st pillar: Institutions	80	3.8		
2nd pillar: Infrastructure	82	3.8		
3rd pillar: Macroeconomic environment	109	3.9		
4th pillar: Health and primary education	58	6.0		
Subindex B: Efficiency enhancers	99	3.7		
5th pillar: Higher education and training	82	4.1		
6th pillar: Goods market efficiency	112	4.0		
7th pillar: Labor market efficiency	135	3.1		
8th pillar: Financial market development	110	3.4		
9th pillar: Technological readiness	85	3.7		
10th pillar: Market size	69	3.9		
Subindex C: Innovation and sophistication factors	97	3.4		
11th pillar: Business sophistication	98	3.7		
12th pillar: Innovation	99	3.1		

Edition	2013-14	2014-15	2015-16	2016-17	2017-18
Rank	83 / 148	87 / 144	92 / 140	95 / 138	95 / 137
Score	4.1	4.0	3.9	3.9	3.9



Most problematic factors for doing business

Source: World Economic Forum, Executive Opinion Survey 2017



Note: From the list of factors, respondents to the World Economic Forum's Executive Opinion Survey were asked to select the five most problematic factors for doing business in their country and to rank them between 1 (most problematic) and 5. The score corresponds to the responses weighted according to their rankings.

Tunisia

The Global Competitiveness Index in detail

Index Component	Rank/137	Value	Trend
1st pillar: Institutions	80	3.8	
1.01 Property rights	58	4.5	
1.02 Intellectual property protection	78	3.9	
1.03 Diversion of public funds	44	4.1	
1.04 Public trust in politicians	75	2.9	
1.05 Irregular payments and bribes	88	3.5	
1.06 Judicial independence	70	3.8	
1.07 Favoritism in decisions of government officials	55	3.3	
1.08 Efficiency of government spending	71	3.2	
1.09 Burden of government regulation	103	3.0	
1.10 Efficiency of legal framework in settling disputes	69	3.6	
1.11 Efficiency of legal framework in challenging regulations	65	3.4	
1.12 Transparency of government policymaking	79	3.9	
1.13 Business costs of terrorism	128	3.2	
1.14 Business costs of crime and violence	89	4.2	
1.15 Organized crime	93	4.3	
1.16 Reliability of police services	73	4.3	
1.17 Ethical behavior of firms	96	3.5	
1.18 Strength of auditing and reporting standards	89	4.3	
1.19 Efficacy of corporate boards	100	4.5	
1.20 Protection of minority shareholders' interests	50	4.3	
1.21 Strength of investor protection 0-10 (best)	99	4.7	
2nd pillar: Infrastructure	82	3.8	
2.01 Quality of overall infrastructure	86	3.7	
2.02 Quality of roads	84	3.7	
2.03 Quality of railroad infrastructure	67	2.8	
2.04 Quality of port infrastructure	101	3.3	
2.05 Quality of air transport infrastructure	98	3.9	
2.06 Available airline seat kilometers millions/week	76	150.3	
2.07 Quality of electricity supply	60	5.1	
2.08 Mobile-cellular telephone subscriptions /100 pop.	50	125.8	
2.09 Fixed-telephone lines /100 pop.	84	8.6	
3rd pillar: Macroeconomic environment	109	3.9	
3.01 Government budget balance % GDP	107	-5.7	
3.02 Gross national savings % GDP	109	13.1	
3.03 Inflation annual % change	69	3.7	
3.04 Government debt % GDP	87	60.6	
3.05 Country credit rating 0-100 (best)	74	42.2	
4th pillar: Health and primary education	58	6.0	
4.01 Malaria incidence cases/100,000 pop.	n/a	s.l.	
4.02 Business impact of malaria	n/a	6.4	
4.03 Tuberculosis incidence cases/100,000 pop.	61	37.0	
4.04 Business impact of tuberculosis	36	6.2	
4.05 HIV prevalence % adult pop.	1	<0.1	
4.06 Business impact of HIV/AIDS	30	6.2	
4.07 Infant mortality deaths/1,000 live births	67	12.1	
4.08 Life expectancy years	63	75.0	
4.09 Quality of primary education	83	3.7	
4.10 Primary education enrollment rate net %	24	98.6	
5th pillar: Higher education and training	82	4.1	
5.01 Secondary education enrollment rate gross %	81	88.2	
5.02 Tertiary education enrollment rate gross %	79	34.6	
5.03 Quality of the education system	103	3.1	
5.04 Quality of math and science education	44	4.6	
5.05 Quality of management schools	83	4.0	
5.06 Internet access in schools	106	3.5	
5.07 Local availability of specialized training services	110	3.8	
5.08 Extent of staff training	106	3.5	

Index Component	Rank/137	Value	Trend
6th pillar: Goods market efficiency	112	4.0	
6.01 Intensity of local competition	79	5.0	
6.02 Extent of market dominance	97	3.4	
6.03 Effectiveness of anti-monopoly policy	93	3.4	
6.04 Effect of taxation on incentives to invest	61	3.7	
6.05 Total tax rate % profits	123	60.2	
6.06 No. of procedures to start a business	104	9	
6.07 Time to start a business days	68	11.0	
6.08 Agricultural policy costs	101	3.4	
6.09 Prevalence of non-tariff barriers	119	3.8	
6.10 Trade tariffs % duty	113	11.1	
6.11 Prevalence of foreign ownership	101	4.1	
6.12 Business impact of rules on FDI	75	4.5	
6.13 Burden of customs procedures	122	3.1	
6.14 Imports % GDP	46	52.9	
6.15 Degree of customer orientation	93	4.3	
6.16 Buyer sophistication	102	2.9	
7th pillar: Labor market efficiency	135	3.1	
7.01 Cooperation in labor-employer relations	123	3.7	
7.02 Flexibility of wage determination	128	3.7	
7.03 Hiring and firing practices	130	2.7	
7.04 Redundancy costs weeks of salary	92	21.6	
7.05 Effect of taxation on incentives to work	87	3.7	
7.06 Pay and productivity	126	3.1	
7.07 Reliance on professional management	88	3.9	
7.08 Country capacity to retain talent	111	2.7	
7.09 Country capacity to attract talent	119	2.3	
7.10 Female participation in the labor force ratio to men	125	0.36	
8th pillar: Financial market development	110	3.4	
8.01 Availability of financial services	106	3.7	
8.02 Affordability of financial services	103	3.3	
8.03 Financing through local equity market	57	3.8	
8.04 Ease of access to loans	104	3.4	
8.05 Venture capital availability	100	2.5	
8.06 Soundness of banks	117	3.7	
8.07 Regulation of securities exchanges	76	4.2	
8.08 Legal rights index 0-10 (best)	95	3	
9th pillar: Technological readiness	85	3.7	
9.01 Availability of latest technologies	76	4.6	
9.02 Firm-level technology absorption	111	4.0	
9.03 FDI and technology transfer	85	4.2	
9.04 Internet users % pop.	83	50.9	
9.05 Fixed-broadband Internet subscriptions /100 pop.	86	5.6	
9.06 Internet bandwidth kb/s/user	86	31.2	
9.07 Mobile-broadband subscriptions /100 pop.	64	63.0	
10th pillar: Market size	69	3.9	
10.01 Domestic market size index	70	3.6	
10.02 Foreign market size index	68	4.5	
10.03 GDP (PPP) PPP $ billions	72	130.6	
10.04 Exports % GDP	57	39.5	
11th pillar: Business sophistication	98	3.7	
11.01 Local supplier quantity	38	4.8	
11.02 Local supplier quality	83	4.1	
11.03 State of cluster development	117	3.0	
11.04 Nature of competitive advantage	120	2.6	
11.05 Value chain breadth	78	3.7	
11.06 Control of international distribution	79	3.5	
11.07 Production process sophistication	91	3.4	
11.08 Extent of marketing	84	4.2	
11.09 Willingness to delegate authority	122	3.6	
12th pillar: Innovation	99	3.1	
12.01 Capacity for innovation	93	3.8	
12.02 Quality of scientific research institutions	96	3.3	
12.03 Company spending on R&D	100	2.9	
12.04 University-industry collaboration in R&D	106	3.0	
12.05 Gov't procurement of advanced technology products	122	2.6	
12.06 Availability of scientists and engineers	43	4.4	
12.07 PCT patents applications/million pop.	71	1.0	

Note: Values are on a 1-to-7 scale unless indicated otherwise. Trend lines depict evolution in values since the 2012-2013 edition (or earliest edition available). For detailed definitions, sources, and periods, consult the interactive Economy Profiles and Rankings at http://gcr.weforum.org/

United Arab Emirates

17th / 137

The Global Competitiveness Index 2017-2018 edition

Key indicators, 2016

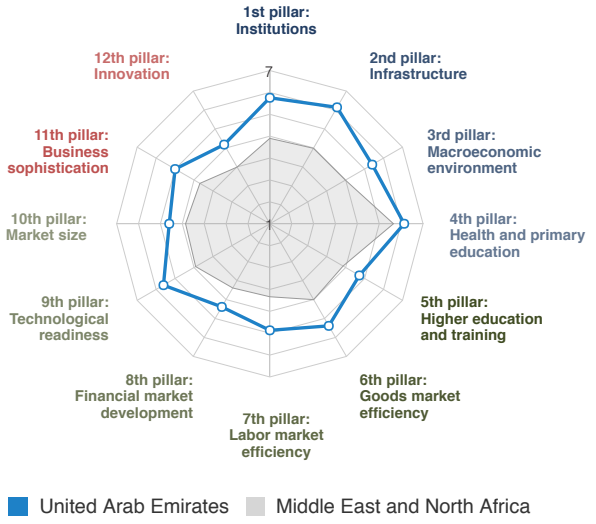
Source: International Monetary Fund; World Economic Outlook Database (April 2017)

Population millions	9.9	**GDP per capita** US$	37,677.9
GDP US$ billions	371.4	**GDP (PPP)** % world GDP	0.56

Performance overview

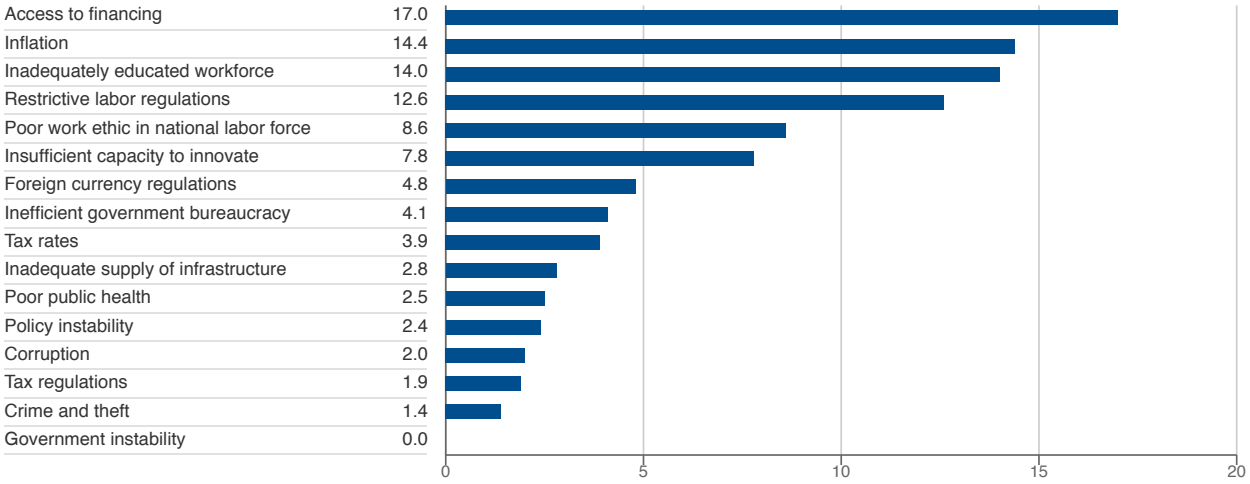
Index Component	Rank/137	Score (1-7)	Trend	Distance from best
Global Competitiveness Index	17	5.3		
Subindex A: Basic requirements	7	6.0		
1st pillar: Institutions	5	5.9		
2nd pillar: Infrastructure	5	6.3		
3rd pillar: Macroeconomic environment	28	5.6		
4th pillar: Health and primary education	33	6.3		
Subindex B: Efficiency enhancers	17	5.2		
5th pillar: Higher education and training	36	5.0		
6th pillar: Goods market efficiency	3	5.6		
7th pillar: Labor market efficiency	11	5.2		
8th pillar: Financial market development	24	4.8		
9th pillar: Technological readiness	24	5.8		
10th pillar: Market size	29	4.9		
Subindex C: Innovation and sophistication factors	20	4.9		
11th pillar: Business sophistication	13	5.3		
12th pillar: Innovation	25	4.6		

Edition	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Rank	24 / 144	19 / 148	12 / 144	17 / 140	16 / 138	17 / 137
Score	5.1	5.1	5.3	5.2	5.3	5.3



Most problematic factors for doing business

Source: World Economic Forum, Executive Opinion Survey 2017



Note: From the list of factors, respondents to the World Economic Forum's Executive Opinion Survey were asked to select the five most problematic factors for doing business in their country and to rank them between 1 (most problematic) and 5. The score corresponds to the responses weighted according to their rankings.

The Global Competitiveness Index in detail

United Arab Emirates

Index Component	Rank/137	Value	Trend
1st pillar: Institutions	5	5.9	
1.01 Property rights	14	5.9	
1.02 Intellectual property protection	21	5.7	
1.03 Diversion of public funds	3	6.2	
1.04 Public trust in politicians	2	6.3	
1.05 Irregular payments and bribes	6	6.4	
1.06 Judicial independence	16	5.8	
1.07 Favoritism in decisions of government officials	2	5.7	
1.08 Efficiency of government spending	1	6.2	
1.09 Burden of government regulation	2	5.4	
1.10 Efficiency of legal framework in settling disputes	5	5.7	
1.11 Efficiency of legal framework in challenging regulations	13	4.9	
1.12 Transparency of government policymaking	10	5.7	
1.13 Business costs of terrorism	7	6.2	
1.14 Business costs of crime and violence	4	6.3	
1.15 Organized crime	7	6.4	
1.16 Reliability of police services	5	6.5	
1.17 Ethical behavior of firms	6	6.0	
1.18 Strength of auditing and reporting standards	21	5.7	
1.19 Efficacy of corporate boards	22	5.7	
1.20 Protection of minority shareholders' interests	3	5.7	
1.21 Strength of investor protection 0-10 (best)	9	7.5	
2nd pillar: Infrastructure	5	6.3	
2.01 Quality of overall infrastructure	4	6.2	
2.02 Quality of roads	1	6.4	
2.03 Quality of railroad infrastructure	n/a	not assessed	
2.04 Quality of port infrastructure	4	6.2	
2.05 Quality of air transport infrastructure	3	6.6	
2.06 Available airline seat kilometers millions/week	4	6,054.1	
2.07 Quality of electricity supply	16	6.5	
2.08 Mobile-cellular telephone subscriptions /100 pop.	3	204.0	
2.09 Fixed-telephone lines /100 pop.	41	23.4	
3rd pillar: Macroeconomic environment	28	5.6	
3.01 Government budget balance % GDP	87	-3.9	
3.02 Gross national savings % GDP	22	30.5	
3.03 Inflation annual % change	1	1.8	
3.04 Government debt % GDP	9	19.3	
3.05 Country credit rating 0-100 (best)	29	73.8	
4th pillar: Health and primary education	33	6.3	
4.01 Malaria incidence cases/100,000 pop.	n/a	m.f.	
4.02 Business impact of malaria	n/a	6.4	
4.03 Tuberculosis incidence cases/100,000 pop.	1	1.6	
4.04 Business impact of tuberculosis	30	6.4	
4.05 HIV prevalence % adult pop.	n/a	n/a	
4.06 Business impact of HIV/AIDS	27	6.3	
4.07 Infant mortality deaths/1,000 live births	42	5.9	
4.08 Life expectancy years	41	77.5	
4.09 Quality of primary education	16	5.4	
4.10 Primary education enrollment rate net %	87	93.4	
5th pillar: Higher education and training	36	5.0	
5.01 Secondary education enrollment rate gross %	n/a	n/a	
5.02 Tertiary education enrollment rate gross %	94	22.0	
5.03 Quality of the education system	12	5.3	
5.04 Quality of math and science education	13	5.3	
5.05 Quality of management schools	15	5.5	
5.06 Internet access in schools	13	5.8	
5.07 Local availability of specialized training services	24	5.4	
5.08 Extent of staff training	15	5.2	

Index Component	Rank/137	Value	Trend
6th pillar: Goods market efficiency	3	5.6	
6.01 Intensity of local competition	19	5.6	
6.02 Extent of market dominance	10	5.0	
6.03 Effectiveness of anti-monopoly policy	20	4.8	
6.04 Effect of taxation on incentives to invest	1	6.1	
6.05 Total tax rate % profits	7	15.9	
6.06 No. of procedures to start a business	18	4	
6.07 Time to start a business days	47	8.2	
6.08 Agricultural policy costs	3	5.2	
6.09 Prevalence of non-tariff barriers	5	5.6	
6.10 Trade tariffs % duty	57	4.0	
6.11 Prevalence of foreign ownership	12	5.6	
6.12 Business impact of rules on FDI	17	5.5	
6.13 Burden of customs procedures	4	6.0	
6.14 Imports % GDP	14	82.7	
6.15 Degree of customer orientation	6	5.8	
6.16 Buyer sophistication	6	4.9	
7th pillar: Labor market efficiency	11	5.2	
7.01 Cooperation in labor-employer relations	9	5.6	
7.02 Flexibility of wage determination	8	6.0	
7.03 Hiring and firing practices	4	5.5	
7.04 Redundancy costs weeks of salary	9	4.3	
7.05 Effect of taxation on incentives to work	3	6.1	
7.06 Pay and productivity	4	5.3	
7.07 Reliance on professional management	18	5.6	
7.08 Country capacity to retain talent	2	5.8	
7.09 Country capacity to attract talent	2	6.1	
7.10 Female participation in the labor force ratio to men	121	0.46	
8th pillar: Financial market development	24	4.8	
8.01 Availability of financial services	12	5.4	
8.02 Affordability of financial services	20	4.9	
8.03 Financing through local equity market	18	5.0	
8.04 Ease of access to loans	9	5.2	
8.05 Venture capital availability	7	4.6	
8.06 Soundness of banks	20	5.8	
8.07 Regulation of securities exchanges	13	5.8	
8.08 Legal rights index 0-10 (best)	106	2	
9th pillar: Technological readiness	24	5.8	
9.01 Availability of latest technologies	13	6.1	
9.02 Firm-level technology absorption	10	5.7	
9.03 FDI and technology transfer	4	5.6	
9.04 Internet users % pop.	11	90.6	
9.05 Fixed-broadband Internet subscriptions /100 pop.	60	13.3	
9.06 Internet bandwidth kb/s/user	36	133.7	
9.07 Mobile-broadband subscriptions /100 pop.	2	156.7	
10th pillar: Market size	29	4.9	
10.01 Domestic market size index	34	4.6	
10.02 Foreign market size index	18	5.9	
10.03 GDP (PPP) PPP $ billions	32	668.9	
10.04 Exports % GDP	14	88.4	
11th pillar: Business sophistication	13	5.3	
11.01 Local supplier quantity	13	5.1	
11.02 Local supplier quality	24	5.2	
11.03 State of cluster development	3	5.4	
11.04 Nature of competitive advantage	21	5.1	
11.05 Value chain breadth	12	5.3	
11.06 Control of international distribution	12	5.1	
11.07 Production process sophistication	23	5.2	
11.08 Extent of marketing	5	5.6	
11.09 Willingness to delegate authority	20	5.3	
12th pillar: Innovation	25	4.6	
12.01 Capacity for innovation	15	5.4	
12.02 Quality of scientific research institutions	30	4.9	
12.03 Company spending on R&D	22	4.5	
12.04 University-industry collaboration in R&D	25	4.5	
12.05 Gov't procurement of advanced technology products	1	5.5	
12.06 Availability of scientists and engineers	3	5.4	
12.07 PCT patents applications/million pop.	43	9.4	

Note: Values are on a 1-to-7 scale unless indicated otherwise. Trend lines depict evolution in values since the 2012-2013 edition (or earliest edition available). For detailed definitions, sources, and periods, consult the interactive Economy Profiles and Rankings at http://gcr.weforum.org/

About the Authors

Ali AbuKumail

Ali AbuKumail joined the World Bank as a Private Sector Specialist in 2012. During his World Bank career, he has developed, led, and supported projects and activities in Kuwait, Saudi Arabia, Oman, the United Arab Emirates, Bahrain, Palestine, Tunisia, Libya, and Jordan. His projects have focused on the development of small- and medium-sized enterprises, entrepreneurship ecosystems, economic diversification, trail-based adventure tourism, and business environment reforms. Prior to joining the World Bank in Washington DC, he was seconded by the World Bank to work as a Private Sector Development Adviser to the Quartet Representative, Tony Blair, from 2009 to 2011. In this capacity, he led policy dialogue and provided advice on private-sector development issues in Palestine. He advised the Quartet Representative on potential interventions to support the trade, industry, banking, and infrastructure sectors. Before that, Mr AbuKumail was a Trade Development Manager at the Palestine Trade Center (PalTrade) from 2004 to 2009, where he managed the development and implementation of strategies to enhance the capacity of Palestinian exporters, with a focus on the furniture and garment sectors. Between 2001 and 2004, he worked in several technical positions at DAI, focused on the development of the Palestinian furniture sector, specifically on the provision of firm-level technical assistance to SMEs. Mr AbuKumail holds a Master in Public Administration (MPA) from the Harvard Kennedy School of Government and a Bachelor of Science in Architectural Engineering (BSc) from the Islamic University.

Faleh M. F. E. Alrashidi

Faleh M. F. E. Alrashidi is a Financial Sector Specialist in the Finance, Competitiveness and Innovation Global Practice at the World Bank. His work focuses on capital markets and investment instruments development mainly in the MENA region. Currently he is working on the issuance of sovereign Sukuk as part of diversification strategies in the MENA region. He also works on building capacity and infrastructure for some countries affected by fragility, conflict, and violence (FCV) in the region, and is very experienced in various types of mutual funds. Previously, he worked for the College of Business Studies in Kuwait as an Assistant Professor of Finance. He holds a PhD in Finance from Durham University, United Kingdom, and an MBA from Case Western Reserve University in Cleveland, Ohio, United States.

Khaleda Atta

Khaleda Atta is a Senior Specialist with the Finance, Competitiveness and Innovation Global Practice at the World Bank. Her work currently focuses on spatial growth, value chains, and firm-level data analysis. Currently she is leading key research work for GCC countries in the MENA region and provides technical support to other regional World Bank operational teams in Africa. Prior to this, she worked in the South Asia region of the World Bank on trade facilitation and customs programs, and on private-sector development while leading lending operations for the World Bank Trade & Competitiveness Global Practice. Before joining the World Bank Group, she served for several years as Commercial Attaché to the United States for the government of Afghanistan and previous to that worked in the private sector in the United States. She holds a Master in Economics from Johns Hopkins University and a Master in International Policy Studies with a focus on Trade and Development from the Monterey Institute of International Studies, both in the United States.

Attilio Di Battista

Attilio Di Battista is Practice Lead on Trade and Competitiveness research at the World Economic Forum. He works on the improvement of competitiveness, trade, and digital policies in a number of countries, particularly in the Middle East, North Africa, and South Asia. He is co-author of several reports at the World Economic Forum, including *The Global Competitiveness Report.* Within the Global Alliance for Trade Facilitation, he works on the development of a number of projects aiming to improve trade facilitation through innovative practices and data analytics. Prior to joining the Forum, he worked at the International Trade Centre (UNCTAD/WTO) on export strategy, policy, and trade competitiveness analysis. He has a Bachelor's degree in International and Diplomatic Sciences from Università degli Studi di Trieste in Gorizia, Italy, and a Master in International Economics from the Graduate Institute of International and Development Studies in Geneva, Switzerland.

Margareta Drzeniek Hanouz

Margareta Drzeniek Hanouz is Head of the System Initiative on the Future of Economic Progress at the World Economic Forum, where she leads the work related to Competitiveness and Global Risks. In this capacity, she is lead author of *The Global Competitiveness Report* and *The Global Risks Report,* two flagship publications of the World Economic Forum. Previously she oversaw the economic modeling for some of the Forum's scenario projects and was charged with developing the economics section of the program for the World Economic Forum's Annual Meeting in Davos. Before joining the Forum, Dr Drzeniek Hanouz worked for several years with the International Trade Centre in Geneva, where she was in charge of relations with Central and Eastern European countries. Her areas of expertise include national competitiveness, private-sector development, international trade, economics of the MENA and CIS regions, and risks and resilience. Dr Drzeniek Hanouz received a Diploma in Economics from the University of Münster and holds a PhD in International Economics from the University of Bochum, both in Germany.

Barak D. Hoffman

Barak D. Hoffman is a Consultant in the Finance, Competitiveness and Innovation Global Practice at the World Bank. His work focuses on the political economy of development. Prior to joining the World Bank, he was the Director of the Center for Democracy and Civil Society at Georgetown University. He also has worked as an Economist at the United States Agency for International Development, the United States Department of the Treasury, and the United States Federal Reserve Bank, and was a Research Fellow at Stanford University's Center on Democracy, Development, and the Rule of Law. He holds a PhD in Political Science from the University of California, San Diego, United States.

Jean Michel N. Marchat

Jean Michel N. Marchat is a Lead Economist in the Finance, Competitiveness and Innovation Global Practice at the World Bank. His work focuses on growth, trade, and firm data analysis. In his current capacity, he is leading key research work (investment climate reports, trade policy analytics, and country development strategies), assists World Bank teams in the design of lending operations, and provides policy advice to several countries in West Africa and the Middle East. Prior to this, he worked in the MENA and Africa regions of the World Bank on trade facilitation and export development programs, and on SME development while leading major analytical work on regional integration and the investment climate. Before joining the World Bank Group, in the early 2000s, he worked for several years in Kazakhstan as an advisor for Macroeconomics, Forecasting and Trade in the Ministry of Economy. He holds a PhD in Economics and a Master in Development Economics from CERDI in France. He also attended executive education at the Harvard Kennedy School.

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World Economic Forum
91-93 route de la Capite
CH-1223 Cologny/Geneva
Switzerland

Tel +41 (0) 22 869 1212
Fax +41 (0) 22 786 2744

contact@weforum.org
www.weforum.org