

Contacts

Abu Dhabi

Dr. Raed Kombargi Partner +971-2-699-2400 raed.kombargi @strategyand.ae.pwc.com

Beirut

Dr. Yahya Anouti Partner +961-1-985-655 yahya.anouti @strategyand.ae.pwc.com

Bahjat El-Darwiche Partner +961-1-985-655 bahjat.eldarwiche @strategyand.ae.pwc.com

Dubai

Stephen Anderson Clients and Markets Leader +971-4-304-3100 stephen.x.anderson @pwc.com

Dima Sayess Partner +971-4-436-3000 dima.sayess @strategyand.ae.pwc.com

ABOUT THE AUTHORS

Stephen Anderson is the Clients and Markets Leader at PwC in the Middle East, and a member of the PwC Middle East Executive Board. Based in Dubai, he is a specialist in advisory services to sovereign wealth funds, global financial services institutions, government, infrastructure programs, and private equity investors advising at board and CEO level on strategic, mergers and acquisitions, financing, program delivery, and organizational transformation programs.

Dr. Yahya Anouti is a partner with Strategy& Middle East, part of the PwC network. Based in Beirut, he is a member of the energy, chemicals, and utilities practice in the Middle East. He specializes in resource-based sustainable development and energy-related strategies and he supports governments, national oil companies, international oil companies, and utility companies across Asia, Africa, Europe, the Middle East, and the United States.

Bahjat El-Darwiche is a partner with Strategy& Middle East. Based in Beirut, he is the leader of the technology, media, and telecommunications practice for Europe, the Middle East, and Africa. He has over 25 years of industry and consulting experience in the areas of sectoral strategies and policymaking, sectoral development and regulatory management, governance and operating models, and growth and investment strategies.

Dr. Raed Kombargi is a partner with Strategy& Middle East. Based in Abu Dhabi, he leads the energy, chemicals, and utilities practice in the Middle East. He focuses on strategy development, concession agreements, commercial joint venture setup, cost reduction, operational excellence, capability development, and operating model assignments in the energy sector.

Dima Sayess is a partner with Strategy& Middle East and the director of the Ideation Center, the leading think tank for Strategy& Middle East. Based in Dubai, she has more than 15 years of experience in public-sector consulting in the region, and formerly served as a strategic development advisor for the strategy management and governance sector at Dubai's Executive Council.

Melissa Rizk and Manuel Martín Lozano also contributed to this report.

The Ideation Center

The Ideation Center is the leading think tank for Strategy& Middle East, part of the PwC network. We aim to promote sustainable growth in the region by helping leaders across sectors translate socioeconomic trends into actions and better business decisions. Combining innovative research, analysis, and dialogue with hands-on expertise from the professional community in the private and public sectors, the Ideation Center delivers impactful ideas through our publications, website, and forums. The end result is one that inspires, enriches, and rewards. The Ideation Center upholds Strategy&'s mission to develop practical strategies and turn ideas into action. At the Ideation Center, we enjoy the full support of all practices in the Middle East. Together we bring unsurpassed commitment to the goal of advancing the interests of the Middle East region. Find out more by visiting www.ideationcenter.com.

EXECUTIVE SUMMARY

The COVID-19 pandemic has accelerated and amplified the economic, social, and environmental challenges facing the Gulf Cooperation Council (GCC) countries.¹ Pre-pandemic, these countries had initiated significant reforms that allowed them to respond in a more resilient, dynamic, and digital manner. Now, the GCC governments have an opportunity to elevate their economic, institutional, and societal goals and accelerate the speed and scale of regional transformation.

These aspirations will require understanding and resolving five growing tensions and their underlying trends. The tensions — economic and social asymmetry, technological disruption, the impact of aging populations, the polarization of the global order, and the changing nature of institutional trust — are wide-ranging and interconnected.

To mitigate the challenges and achieve an aspirational vision for the region's future, GCC countries would need to adopt a holistic and integrated transformation agenda. This agenda introduces new economic growth models that put *local* first. It encompasses a human-centric approach to well-being that puts *citizens* first. Moreover, it seeks to bolster institutional agility and accountability to put *innovation* first.

THE COVID-19 PANDEMIC: AN ACCELERATOR OF GCC TENSIONS AND THE NECESSITY FOR TRANSFORMATION

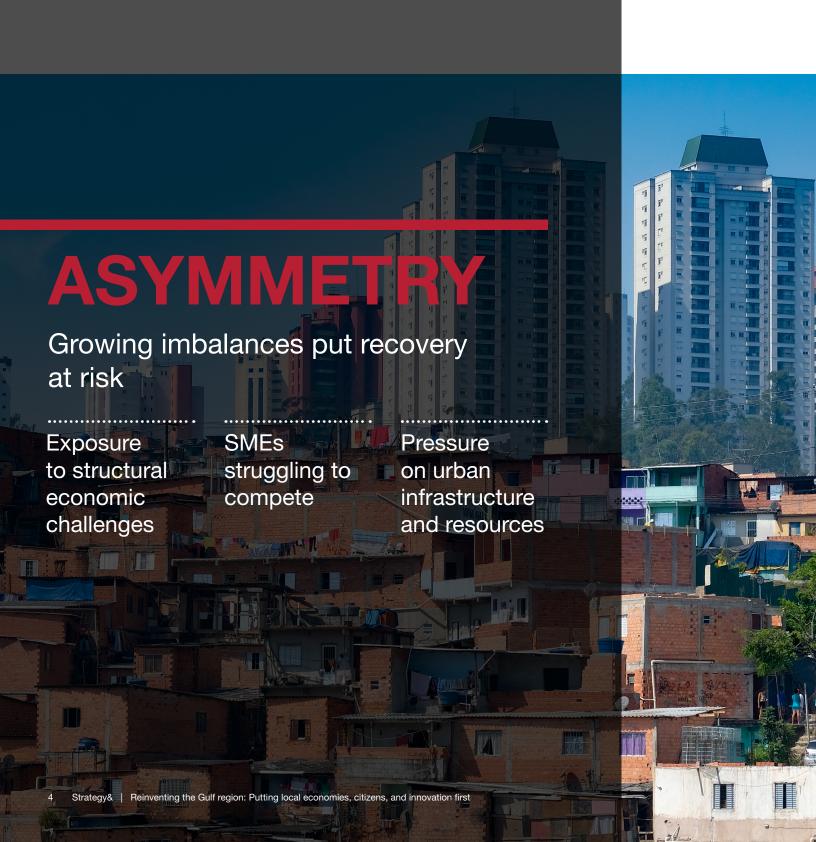
Before the COVID-19 pandemic, the GCC countries faced economic, social, and environmental challenges. The pandemic accelerated and amplified many of these, but with challenges come valuable transformation opportunities. As the pandemic is brought under control, GCC governments can seize these opportunities by resolving five growing tensions and their underlying trends: economic and social asymmetry; technological disruption; the impact of aging populations; the polarization of the global order; and the changing nature of institutional trust (see *Exhibit 1*).

EXHIBIT 1

GCC governments should adapt to resolve five growing tensions and their underlying trends

A	D	A	P	Т
ASYMMETRY	DISRUPTION	AGE	POLARIZATION	TRUST
Exposure to structural economic challenges	The need for speed in Industry 4.0	Youth bulge and employment challenges	Jockeying among superpowers	Citizen-centric, platform government
SMEs struggling to compete	Dominance of major tech players	Aging populations and the looming pension crisis	"Slowbalization" and localization	Transition to sustainable, low-carbon future
Pressure on urban infrastructure and resources	Technology-enabled, new ways of living, working, and consuming	Shift to preventive and personalized healthcare	Global and regional integration challenges	Integrated safety and security management

Source: Strategy&



ASYMMETRY: GROWING IMBALANCES PUT RECOVERY AT RISK

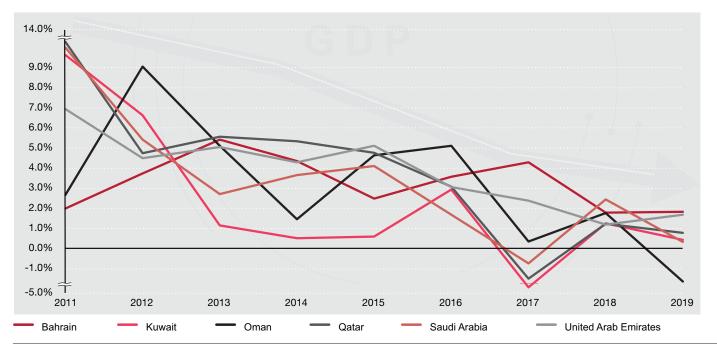
The COVID-19 pandemic has exposed and exacerbated structural asymmetries within the GCC. Differing levels of preparedness, response, and resilience among these countries will likely lead to uneven recoveries. The ability of large companies to withstand disruption increased their lead over small and medium-sized enterprises (SMEs). The infrastructure and resources of cities are bearing a disproportionate burden compared to remote areas.

Exposure to structural economic challenges

The dual shock of the pandemic and low oil prices put significant strain on the GCC economies. The GCC's real GDP growth rates were already slowing by close to a third before the pandemic (see *Exhibit 2*). For 2020, the region was expected to report a contraction in real GDP of 5.7 percent,² with aggregate fiscal deficits reaching 9.2 percent of GDP, a precipitous rise from only 2 percent in 2019.³ If these trends continue unchecked, then by 2034, the GCC countries' aggregate net financial wealth, currently at US\$ 2 trillion, could turn negative.⁴

EXHIBIT 2
The real GDP growth rate in the GCC is in decline

GCC countries GDP growth rates (%, 2011–2019)



Source: World Bank, World Development Indicators

The region is likely to experience a partial recovery in 2021. GCC growth is projected to be only 1.7 percent in 2021 and 2.7 percent in 2022, compared to a global average of 4 percent in 2021 and 3.8 percent in 2022.⁵

The GCC's economic outlook is hindered by structural challenges stemming from high expenditures, limited diversification, and rising pressure on exchange rates. GCC governments have a large and growing wage bill, because they continue to play a protective role as employers of first choice for nationals. Additionally, they are burdened with costly education, healthcare, housing subsidies, and utilities, which sometimes foster significant production inefficiencies.

Despite ongoing diversification efforts, the GCC's revenue structure remains concentrated in oil and thus is volatile. Fiscal breakeven oil prices surpass \$60 per barrel throughout the region (with the exception of Qatar). The regional economy is also hampered by a narrow tax base, restrictive trade policies, a dearth of innovation, and limited investment in research and development (R&D). Moreover, although the GCC countries have successfully maintained an exchange rate pegged to the U.S. dollar, monetary policy pressures are likely to increase in the absence of fiscal correction measures.

Still, the GCC is home to some of the world's largest sovereign wealth funds — four of the top 10 are located in the GCC, with the largest, the Abu Dhabi Investment Authority, holding \$579.6 billion in assets. Post-pandemic, these funds can act as a source of capital and drive investments (as they did in the global financial crisis of 2008/09) and economic transformation.

SMEs struggling to compete

The COVID-19 pandemic exacerbated the obstacles that hamper SME growth and expansion in the GCC. While large companies were better equipped to weather the storm, thanks to their access to capital, diversified offerings, and geographies, SMEs struggled.

Although all GCC governments offered stimulus packages, the needs of SMEs were not fully addressed. For instance, 77 percent of SMEs in the United Arab Emirates (UAE) are greatly concerned about their ability to withstand the impact of the pandemic on their businesses. Much of this concern relates to the systemic barriers SMEs in the GCC must overcome, including limited access to credit and funding platforms, rigid financial and bankruptcy laws, and a lack of SME-friendly regulations.

Pressure on urban infrastructure and resources

The combined impact of the pandemic, the shift to remote work, and rising awareness of vulnerability to future hazards disproportionally affect the GCC's cities, thereby placing additional restraints on economic growth. The GCC's urban population grew very quickly between 1980 and 2016. Saudi Arabia recorded a 27 percent increase; Oman a 73 percent increase. In 2016, the urbanization level in the GCC countries exceeded 82.5 percent, and reached 99 percent in Qatar and Kuwait.⁹

The GCC's cities are centers of economic growth, development, and innovation, but they also have greater exposure to natural and human hazards. The coastal cities are particularly vulnerable to extreme weather events and rising sea levels spawned by climate change.

Managing the infrastructure and logistics needs of cities is a major challenge. GCC cities have to provide essential services and resources, including food, housing, and water at large scale.

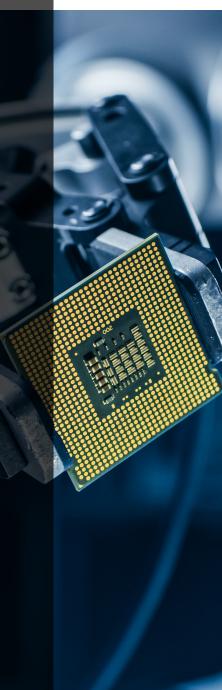
Some GCC governments are acting to meet the high levels of demand. Dubai's 2040 urban plan includes the creation of five new urban centers, a 25 percent increase in education and healthcare facilities, and the development of a diverse set of affordable housing options. To increase home ownership, Saudi Arabia raised the loan-to-value rate on mortgages from 85 percent to 90 percent, and offered help with down payments, loan guarantees, and interest reductions. Still, much work remains to ensure that GCC cities can drive sustainable economic growth and promote citizens' resilience and well-being.



The speed, scale, and pervasive nature of technology

The need for speed in Industry 4.0 Dominance of major tech players

Technologyenabled, new ways of living, working, and consuming



DISRUPTION: THE SPEED, SCALE, AND PERVASIVE NATURE OF TECHNOLOGY

The pandemic highlighted the central role that technologies — such as artificial intelligence (Al), blockchain, robotics, 4D printing, genetic engineering, and energy innovation — will play in the GCC's future. It bolstered the need for Industry 4.0 (advanced, connected manufacturing), enhanced the positions of the world's major tech players in the GCC, and accelerated the impact of technology on how citizens live, work, and consume.

The need for speed in Industry 4.0

Industry 4.0 promises to enable greater productivity, diversification, innovation, and supply chain resilience in the GCC. It could boost productivity across industries, including agriculture, chemicals, logistics, machinery and equipment, and metals, and open the door to newly emerging industries, such as additive manufacturing, agricultural technology (agritech), and medical technology (medtech).

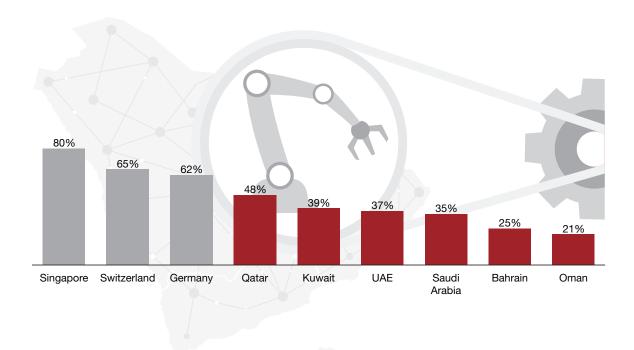
Some GCC countries are already pursuing this promise. The UAE launched its Fourth Industrial Revolution Strategy (4IR) in 2017 and established a Centre for 4IR in 2018 in an effort to become a global hub for Industry 4.0.¹² It also is applying Industry 4.0 to improve food security. Recently, the Abu Dhabi Investment Office invested more than \$100 million in agritech companies to reduce import dependency.¹³

As encouraging as these efforts are, there are a number of obstacles to the speedy adoption of Industry 4.0 in the GCC. There is limited access to the talent and financing needed to support digital transformation, and the widespread availability of low-cost labor can create the illusion that transformation can be avoided. These obstacles manifest in a lower share of high-tech value added in the region's manufacturing sector and negatively impact its overall digital readiness (see *Exhibit 3*).

EXHIBIT 3

The manufacturing sector in the GCC countries is lagging behind in high-tech value added

Share of mid- and high-tech value added out of manufacturing value added (%, 2018)



Source: World Bank, United Nations Industrial Development Organization, Competitive Industrial Performance database

In addition, Industry 4.0 adoption can be a two-edged sword. More than 90 percent of citizens in Kuwait, 83 percent in the UAE, 80 percent in Saudi Arabia, and 66 percent in Bahrain are employed in sectors at high risk of disruption by new technologies¹⁴ — meaning that technology could eliminate many jobs, and unemployment rates could grow apace. To mitigate this impact, GCC governments can invest in workforce education and training, and in lifelong learning.

Dominance of major tech players

The COVID-19 pandemic accelerated the growth of the global tech giants, including Alphabet, Amazon, Apple, Facebook, and Netflix in the U.S. and Alibaba, Baidu, Tencent, and Xiaomi in China. The former group's share of the S&P 500's market capitalization nearly doubled between 2016 and 2021, from 9.5 percent to 18.1 percent, and the average market capitalization of the latter grew from \$1 trillion in 2018 to \$1.7 trillion in 2021. Moreover, these companies are playing a significant role in addressing pandemic challenges related to business and supply chain continuity across the GCC. Amazon.ae, for instance, is increasing its presence in the region, extending its reach to Bahrain, Kuwait, and Oman.¹⁵

As their regional presence continues to grow, major global tech companies are likely to seek strategic partnerships with GCC governments in such areas as big data, law enforcement, and procurement. They also could support efforts to enhance the resilience and digitization of SMEs.

However, this trend raises the specter of big tech players dominating various GCC value chains, economic sectors, and markets, thereby leaving consumers with few alternatives. Furthermore, their unprecedented access to customer data and their ability to extract valuable information about customers' needs and demands from their huge databases pose privacy and security risks.

Technology-enabled, new ways of living, working, and consuming

Although the GCC will experience a gradual resumption of travel, in-office work, and physical shopping as the pandemic wanes, some of the changes that were enabled by technology are likely to stick. Digital workplaces and meeting platforms, for example, could reduce the need for commuting and business travel, and potentially could slow trends such as urbanization.

Public- and private-sector employers in the GCC are already exploring the long-term potential of work-from-home models. In December 2020, the government of Dubai adopted a remote working model that could bolster workforce inclusion among women and people of determination (the official term for those with special needs). 16 For all the benefits, however, these new ways of working also could lead to negative outcomes, such as hindering the development of local capabilities through the expanded use of foreign knowledge workers.

The GCC experienced a surge in gig work during the pandemic, creating new opportunities for workers, but also bringing new uncertainties regarding income and job security. For instance, enrollment at Ureed.com, a digital freelance marketplace, doubled in June 2020.¹⁷ This trend is likely to persist given the regional expansion of the sharing economy sector, especially in Saudi Arabia and the UAE, which host more than 80 percent of the diverse set of GCC-based players, including Sawerly, Beehive, Mr. Usta, and Washmen.¹⁸

The pandemic also accelerated the adoption of education technology. A number of education technology platforms, such as Coded Minds, Noon Academy, and SchoolVoice, aimed at adult and childhood learning have appeared. GCC governments are partnering with tech experts to develop Arabic language educational solutions and platforms, such as madrasa.org in the UAE.19

The COVID-19 lockdowns fundamentally altered retailing with a dramatic increase in e-commerce that will inevitably result in store closures. Across the GCC, the pre-pandemic penetration of digital shopping was low compared to benchmarks, with online sales accounting for only 4 percent of retail sales (versus 28 percent in China).²⁰ During the pandemic, however, online shopping boomed. In Saudi Arabia, Carrefour's online grocery purchases increased by 800 percent,²¹ and retailer Bin Dawood recorded a 400 percent increase in app downloads and a 200 percent increase in online sales in a mere 10 days in March 2020.²²

The pandemic and its effect on online shopping could expedite the ongoing shift in mobility patterns. It enhanced the viability of contactless delivery via drones and autonomous vehicles. However, it is proving difficult for regulation to keep pace, despite the use of regulatory sandboxes²³ that provide testing grounds for innovative technologies, services, and business models.



Demographic pressure in the GCC continues to build

Youth bulge and employment challenges

Aging populations and the looming pension crisis

Shift to preventive and personalized healthcare

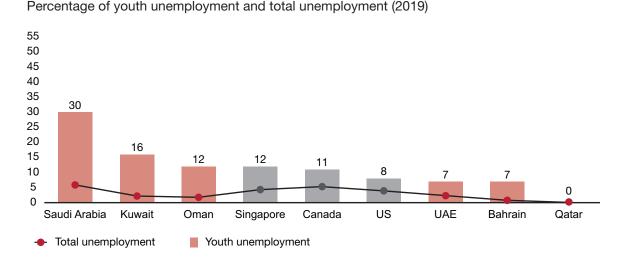
AGE: DEMOGRAPHIC PRESSURE IN THE GCC CONTINUES TO **BUILD**

Population growth and shifting demographics will continue to create and exacerbate tensions across the GCC in coming years. Over the past 40 years, the GCC's population has grown by a factor of 4.4 (compared to a global average of 1.7).²⁴ By 2020, the population was expected to have reached 57.7million.²⁵ Demographic compositions are also shifting: countries with younger populations are facing higher unemployment rates, and countries with older populations are facing increasing and unsustainable pension and healthcare costs.

Youth bulge and employment challenges

Young people (ages 15 to 29) constitute 24 percent of the GCC population, a demographic bulge that could be transformed into a huge source of economic growth, if the current challenges are addressed. At present, youth inactivity and unemployment constitute a significant challenge.²⁶ The unemployment rate for GCC youths between the ages of 15 and 24 is an estimated 12 percent and more than double that in Saudi Arabia, figures that are significantly higher than the total unemployment levels (see Exhibit 4).²⁷ Youth unemployment in the GCC also has a gender dimension, with female youth unemployment rates that are three times higher than male youth unemployment rates.²⁸

EXHIBIT 4 Kuwait, Oman, and Saudi Arabia have disproportionately high levels of youth unemployment



Source: World Bank, World Development Indicators

GCC countries have been undertaking initiatives to enhance job opportunities for nationals in the private sector and most have nationalization policies in place. For instance, Saudi Arabia has set fees and visa restrictions on expatriate dependents and launched female employment quotas and childcare programs. However, the challenges extend beyond overreliance on expatriate labor and lack of female participation in the workforce. Youth unemployment in the region is rooted in a labor-market skill mismatch that stems from a poor alignment of demand with education curricula, low levels of economic diversification, and excessive public-sector employment of nationals. Indeed, in the GCC, the central government wage bill exceeds 10 percent of GDP (compared to a global average of 5.4 percent).²⁹ Moreover, the pandemic's pressure on entrepreneurship and SMEs, which tend to generate jobs for young people, will exacerbate youth unemployment.

Aging populations and the looming pension crisis

The GCC's population structure will skew older over the coming decades due to the aging of the young people who make up the current youth bulge, decreasing fertility rates, lower mortality rates, and increased life expectancy due to enhanced healthcare services. Saudi Arabia, for instance, expects the percentage of its population above age 60 to grow from 6 percent in 2017 to 23 percent in 2050. In the UAE, the percentage is expected to grow from 2 percent to 19 percent.³⁰

The aging population puts growing pressure on GCC governments to secure elderly care, healthcare access and insurance, housing, and social protection. Already, there are 1.6 million GCC citizens older than 65 who are at risk of facing health and non-health complications due to the COVID-19 pandemic; especially those who lack proper health and social support.³¹

Although pension schemes vary among GCC countries, most entail higher public spending and cover a smaller population than international benchmarks. GCC pensions are typically defined benefit plans that are financed on a pay-as-you-go model. They are more generous than most other countries, offering over 70 percent of previous salary compared to 59 percent in the OECD: On average, pension accrual rates in the GCC amount to around 3 percent, compared to less than 1.5 percent in Europe (see *Exhibit 5*).³²

Shift to preventive and personalized healthcare

GCC countries mounted a strong medical response to the pandemic, with the UAE reaching the second-highest vaccination rate in the world.³³ However, there are unrealized opportunities to further address structural healthcare challenges in the region.

In 2019, before the outbreak, most GCC countries experienced healthcare cost increases that surpassed the 9.6 percent global average, including a 24.3 percent increase in Oman, 12.2 percent in the UAE, and 11 percent in Qatar.³⁴ The GCC also faces other healthcare challenges, including a lower availability of medical practitioners, hospital beds, and medical supplies compared to advanced economies.³⁵

To address these issues, GCC healthcare can undergo a digital transformation. The COVID-19 pandemic showed how digital solutions can protect healthcare workers and slow the spread of infection, while simultaneously improving the effectiveness, efficiency, and reach of healthcare.

Beyond the COVID-19 pandemic, emerging technologies that support data-driven and predictive medicine, genomics, and telemedicine could enhance the efficiency and quality of healthcare systems. Some GCC countries are making progress in this regard. In telemedicine, for instance, the UAE has virtual hospitals and virtual service offerings. Qatar and Saudi Arabia also have launched telemedicine initiatives.³⁶

EXHIBIT 5

Pension accrual rates in the GCC are significantly higher than in European countries

Pension accrual rates (% of total earnings)



Source: "Social Security Programs Throughout the World: Asia and the Pacific, 2018," International Social Security Association, 2019 (https://www.ssa. gov/policy/docs/progdesc/ssptw/2018-2019/asia/ssptw18asia.pdf)



Beyond the COVID-19 pandemic, emerging technologies that support data-driven and predictive medicine, genomics, and telemedicine could enhance the efficiency and quality of healthcare systems.

POLARIZATION

The global consensus breaks down as nationalism rises

Jockeying among superpowers

"Slowbalization" and localization

Global and regional integration challenges

POLARIZATION: THE GLOBAL CONSENSUS BREAKS DOWN AS NATIONALISM RISES

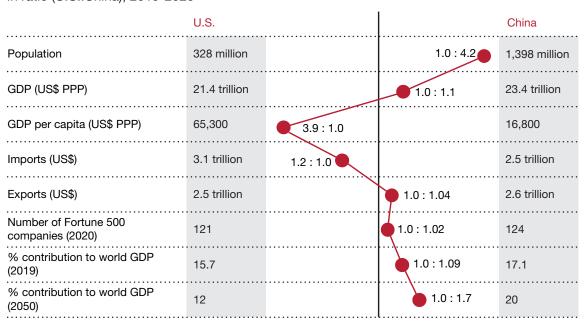
The COVID-19 pandemic could mark a decisive transition from globalization toward a less integrated global order. Thus far, the lack of a coordinated global response to the pandemic suggests that national agendas will continue to focus on strategic and economic sovereignty. Although globalization is not dead, it is likely to be reshaped in a number of ways that will affect the GCC.

Jockeying among superpowers

Over the past decade, the global center of economic activity began to shift toward Asia which is forecast to account for more than half of the global GDP by 2050 — and particularly China (see Exhibit 6). The pandemic is likely to accelerate this shift. The latest economic growth rate projections for 2021 show China experiencing a higher bounce back than Western countries (8.1 percent in China versus 5.1 percent in the U.S. and 4.2 percent in Europe).37

EXHIBIT 6 China has become the main contributor to the global economy

U.S.-China comparison on key indicators In ratio (U.S.:China), 2019-2020



Note: PPP = purchasing power parity.

Source: World Bank, World Development Indicators; John Hawksworth, Hannah Audino and Rob Clarry, "The World in 2050: The long view: how will the global economic order change by 2050?" PwC 2017

China is already the top trading partner across the GCC, accounting for slightly more than 15 percent of the region's imports. In return, the GCC provides 32 percent of China's oil and gas imports.³⁸ The near-term boom in trade between China and the GCC is being driven by Chinese investments in the energy sector, focusing mainly on Saudi Arabia and the UAE.³⁹ The outlook is less clear in the medium to long term because China is working toward greater self-reliance for its energy needs, with massive domestic investments in renewables and nuclear energy.⁴⁰

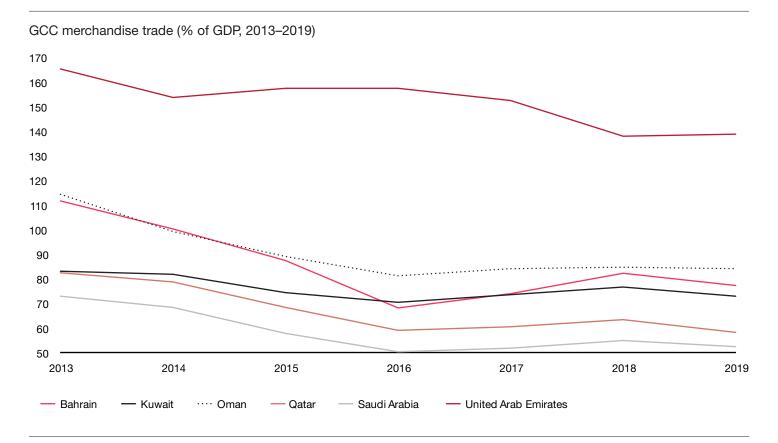
"Slowbalization" and localization

After decades of economic globalization, a shift toward regional and local economic activity is under way, resulting in "slowbalization" and localization. Global trade growth has flattened at around 2 percent since the 2008 financial crisis.⁴¹ This trend dramatically accelerated during the COVID-19 pandemic: World trade declined by 9.2 percent in 2020⁴²; and global foreign direct investment (FDI) declined by 42 percent.⁴³

The GCC countries remain net importers, but the region experienced a reduction in merchandise trade relative to GDP between 2013 and 2019 (see *Exhibit 7*). Its exports were reduced by \$59 billion in 2020 as a consequence of the pandemic.⁴⁴ The region is also among the destinations with the lowest FDI globally: at \$21 billion in FDI in 2019, it receives only 1.3 percent of global FDI.⁴⁵ The impact of the pandemic on FDI in the GCC was expected to result in a decline in inflows of around \$3 billion in 2020.⁴⁶

EXHIBIT 7

Merchandise trade in the GCC was falling before the pandemic



Source: World Bank, World Trade Organization

The pandemic had a harsh effect on GCC tourism. In 2019, the GCC's travel and tourism market accounted for 9.6 percent of regional GDP, up from 9 percent in 2018.⁴⁷ In 2020, travel ground to a halt and the sector's losses were estimated at \$60 billion in the GCC, a 55 percent decline.⁴⁸

Global and regional integration challenges

The COVID-19 pandemic contributed to the ongoing disruption of global governance. For example, the U.S. government's decision to cut funding to the World Health Organization (WHO), although eventually reversed, hampered the global pandemic response. In the long term, this trend will likely prompt countries to pursue more nationalist and protectionist policies, diminishing bilateral and multilateral cooperation. It also could prompt the emergence and strengthening of alternative centers of power at the regional or local levels, especially if cities can become engines of growth and production and take the lead in redesigning and restarting economies.

In the GCC, the pandemic highlighted the opportunity for improved intra-regional economic integration. Intra-regional trade is low, even though exports to other GCC countries accounted for 23 percent of total exports (excluding re-exports) in 2018, up from 17 percent in 2013.49

The obstacles to GCC intra-regional trade include high tariffs, complex customs and border control procedures, limited trade agreements, and a lack of regional goods and services. It costs, on average, \$442 and 53 hours to comply with border requirements for exporting — three times more expensive and four times longer than the average in high-income economies.⁵⁰

Toward this end, some GCC companies are renegotiating existing contracts and working to shorten supply chains and find alternative suppliers. Foreign investments from GCC countries are also being considered to secure alternative supply sources. For example, Qatar, Saudi Arabia, and the UAE have launched several initiatives in the agriculture sector to improve food security.51

TRUST

Institutional expectations are on the rise

Citizen-centric, platform government

Transition to sustainable, low-carbon future

Integrated safety and security management

TRUST: INSTITUTIONAL EXPECTATIONS ARE ON THE RISE

The COVID-19 pandemic has put public service resilience and agility, and consequently trust in governments, to the test. GCC governments have worked hard to earn the trust of their citizens throughout the pandemic, especially with their strong medical response.

In the years ahead, trust in government will continue to be tested — by societal trends, technological disruption, the increasing threat of climate change, and as-yet-unimaginable crises. To weather these potential challenges, retain and further enhance the confidence and trust of the populace, GCC governments can innovate to transform service delivery, address environmental sustainability, and continue to ensure the safety and security of their citizens.

Citizen-centric, platform government

The GCC governments are planning to digitize service delivery. They are creating e-government platforms and adopting mobile technologies to offer their citizens more personalized experiences that reduce the burdens imposed by red tape and inefficient processes. That said, these countries are at different stages of e-government development and all are lagging behind benchmarks in implementation (see Exhibit 8).52

The UAE's e-government initiative is the most advanced in the GCC. It has a digital transformation strategy, a blockchain strategy, and a global blockchain council. Bahrain has drafted a dedicated digital transformation strategy, too. Similarly, Kuwait and Saudi Arabia have integrated digital development targets into their national visions.

To take digitization a step further, some GCC countries have plans to transition to platform governments, which means integrating and centralizing public-service delivery and wholeof-government coordination. The UAE is moving toward a service factory model.⁵³ and Saudi Arabia is taking this route with Taqat, an integrated national labor-services platform.⁵⁴

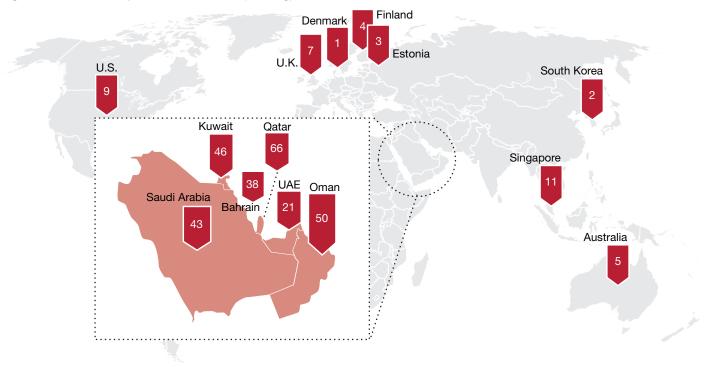
Within this context, the GCC's central banks have been exploring the possibility of launching digital currencies. For instance, Project Aber is a joint collaboration between the Saudi Central Bank and the Central Bank of the UAE aimed at testing the deployment of a central bank digital currency.55

In seeking to further boost the trust and confidence of their citizens, some GCC governments are considering how they can more holistically measure — and assume greater accountability for — the well-being of their citizens. For instance, the UAE has launched a national program for happiness and developed well-being tools that are incorporated in public policies.⁵⁶ As a result, the UAE is poised to join the top 20 countries globally in terms of happiness.

EXHIBIT 8

GCC countries are working toward e-government, but lag behind internationally





Source: UN E-Government Knowledgebase (https://publicadministration.un.org/egovkb/Data-Center)

Transition to sustainable, low-carbon future

Before the pandemic, the need to transition to a low-carbon future was looming over the GCC countries' agendas. Since then, there has been much debate regarding the proper path to decarbonization and energy diversification, but the need remains unchanged.

As the GCC's private sector is working to kick-start oil and gas production and its associated businesses post-pandemic, the "green transition" can remain a policy priority over the medium term (see Exhibit 9).

With an increased focus on the transition away from fossil fuels and into renewables, hydrogen, and electrification, the GCC is in the fortunate position of once again having abundant natural resources. This time it is solar power, with the potential to create more large-scale solar parks like the Sweihan project in Abu Dhabi, which was the largest in the world when it opened in 2019.⁵⁷

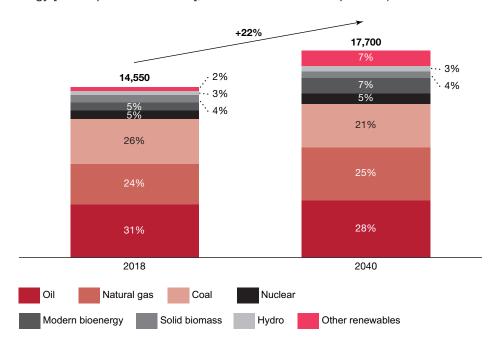
The UAE's Energy Strategy 2050 and Saudi Arabia's Vision 2030 feature ambitious targets for adding renewable and clean energy to their energy mix. For example, the UAE is investing more than \$163 billion to use clean energy for one-half of its energy mix by 2050.⁵⁸

The deteriorating air quality in the GCC underscores the importance of this shift in its energy mix. Air pollution in the region now causes 9.5 percent of deaths, compared to 8.75 percent globally. Between 1990 and 2017, such deaths rose in all GCC countries, with a roughly 60 percent increase in Kuwait and Saudi Arabia, while they declined globally by 13 percent. Unsurprisingly, CO₂ emissions per capita in the GCC is among the highest in the world, reaching 38.7 tons in Qatar in 2017, compared to a global average of 4.73 tons.

In the future, environmental, social, and governance (ESG) sustainability will become an increasingly important factor in the development and maintenance of institutional trust. In response, GCC governments can make ESG a cornerstone of their decision-making processes.

EXHIBIT 9
Renewables will become a larger part of the energy mix

Change in global energy mix (by technology [stated policies scenario], millions of tons of oil equivalent)



Source: IEA (2019), World Energy Outlook 2019, IEA, Paris (https://www.iea.org/reports/world-energy-outlook-2019)

Integrated safety and security management

Before the pandemic, GCC governments were increasingly relying on technology to ensure the safety and security of their citizens. Abu Dhabi and Dubai now rank among the top 20 cities globally in terms of surveillance camera density. They are also among the world's safest cities.

This trend accelerated during the COVID-19 pandemic. The GCC countries deployed cyber, medical, and physical surveillance on a massive scale to contain the outbreak. They have been tapping into different sets of data ranging from mobile devices, mobility, health, and social media to track people's movements in the pandemic.

Cybersecurity, too, has become an urgent priority in the pandemic. Public- and private-sector work and services in the GCC moved online raising the risk of exposure, and unsurprisingly, cybercrime and foreign cyberattacks increased.

The GCC countries had developed cybercrime legislation, national cybersecurity strategies, and dedicated cybersecurity organizations before the pandemic, ⁶¹ and Oman, Qatar, and Saudi Arabia rank high on the ITU Global Cybersecurity Index. ⁶² Nevertheless, cybersecurity is a constant concern and there continues to be room for improvement. Data protection could be enhanced. For instance, only 30 to 35 percent of companies in the UAE meet European data protection standards. ⁶³

THE WAY FORWARD: AN AMBITIOUS AGENDA FOR GCC GOVERNMENTS

To respond to the five tensions and their underlying trends, GCC governments can adapt — envisioning an aspirational future and finding ways to creatively bring that vision to life. In particular, the GCC countries have the opportunity to undergo transformation in three principal areas (see *Exhibit 10*):

- · Redefine economic growth models to put local first
- Adopt holistic, citizen-centric approaches to well-being to put citizens first
- Rethink institutions to put innovation first

EXHIBIT 10

GCC governments could adopt a holistic transformation agenda that hinges on three focus areas

Principal focus areas



Define a new path to economic diversification

Establish domestic value chains

Foster private sector competitiveness

Redesign the regional integration model

INNOVATION FIRST

Exploit the power of digital to offer personalized, predictive, and proactive service delivery

Transition to participatory and agile governance

Strengthen fiscal resilience

Adopt an integrated sustainability agenda





CITIZENS FIRST

Design new social contracts

Boost labor market flexicurity and productivity

Improve quality of life

Source: Strategy&

Redefine economic growth models: Local first

The GCC countries can diversify to create sustainable economic growth. To achieve this, GCC governments can retain economic value by boosting local demand and minimizing leakages, shifting investments to innovative sectors that feature high economic multipliers, and capitalizing on their existing competitive advantages. Moreover, they could localize their supply chains in critical sectors, such as agritech and pharmaceuticals, foster private-sector competitiveness by building local capabilities, and redesign the GCC's regional integration model.

Define a new path to economic diversification

The GCC countries can adopt an economic model that ensures sustainable growth by boosting competitiveness, productivity, and market and product sophistication. This model can foster export promotion, catalyze innovation, and create an industrial development engine by:

- Developing internationally competitive, high-value-added industries that enable GCC countries to retain value by exploiting local demand and minimizing the loss of economic value. This effort could encompass critical industrial sectors, such as food and beverages, pharmaceuticals, advanced manufacturing, security, and defense.
- Building the foundations needed to support the development of new capabilities and competitive advantages in emerging sectors such as med-tech and space technology.
- Becoming a destination of choice in global tourism by embarking on systematic journeys to redefine compelling visions and offerings that target more visitors and enhance the region's market positioning.64
- Accelerating growth through innovation and adopting Industry 4.0 in sectors such as chemicals, equipment, machinery, and metals.
- Capitalizing on the region's endowment of natural resources to develop competitive advantages in innovative clean power sources, such as green hydrogen, and accelerating the transition to a circular economy.
- Becoming a "test-bed" for the latest innovations in areas such as hypermobility in transport⁶⁵ and construction/building materials 4.0, to open the door to massive projects and other long-term, high-value strategic opportunities.
- Investing in research, development, and innovation (RDI) in a manner that catalyzes private investment, supports mission-oriented ventures in line with national priorities, and facilitates the successful transition of those ventures from lab to market to localized value. To this end, GCC governments could design funding mechanisms and help create networks of sectorspecific innovation accelerators, such as the British Catapult Centers.66

Establish domestic value chains

GCC countries should foster the ability to produce goods, such as food, pharmaceuticals, and medical supplies, which are essential to national security. In doing so, they can bolster economic resilience, become a hub for innovative technologies, and create the factories of the future. The GCC countries can establish agile and resilient domestic value chains by:

- Enacting a policy and regulatory framework that encourages domestic production and sourcing, including incentives in the form of tariff waivers, infrastructure, land acquisition, power supply, and subsidies.
- Setting up agritech and pharmaceutical clusters, and promoting joint R&D, prototyping, and testing between leading R&D centers and GCC universities.
- Deploying Industry 4.0 to enable the implementation of cyber-physical systems⁶⁷ and advanced data analytics.
- Accelerating external investments in digital infrastructure and technologies through sovereign wealth and venture capital funds.
- Acquiring and partnering with private-sector firms to serve as anchors for new R&D labs and manufacturing plants in the GCC.

Foster private-sector competitiveness

To gain competitive advantage and create high-value-adding jobs and sustained economic growth, GCC countries can build the foundation needed for a strong and productive private sector. They can address structural inefficiencies in their markets and promote competitiveness and efficiency by:

- Accelerating private-sector pandemic recovery through wage and rent subsidies, cash transfers, open grants for specific high-potential startups, tax/fee exemptions, and digitization support programs.
- Improving the regulatory environment to lower barriers to competition, provide an open and level playing field for SMEs, and ensure antitrust enforcement.
- Enacting policies that facilitate SME access to a more diverse set of funding sources, such as peer-to-peer lending, informal equity, and wealthy "angel" investors, and support the development of formal venture capital markets. These policies can be coupled with the establishment of matching funds and SME guarantee funds to catalyze startups and scale-ups that address national priorities.
- Establishing special jurisdictions to attract international companies, entrepreneurs, and investors in key industries.

Redesign the regional integration model

GCC countries can enhance regional trade integration to capture economies of scale, support private-sector growth, and boost FDI and trade by:

- Developing trade integration frameworks that facilitate competitive regional value chains and integrating them with global value chains.
- Abolishing customs duties when possible and reducing non-tariff barriers.
- Creating more-integrated labor markets that facilitate labor market movement through mutual recognition of qualifications, and jointly developing and improving the skills of public servants.
- Developing integrated resilience models that track potential hazards and deliver faster and more regionally aligned responses.

Adopt holistic, citizen-centric approaches to well-being: Citizens first

The GCC countries can redesign their social contracts to create sustainable, inclusive, and empowering safety nets for their citizens. They can focus on raising the productivity of the region's people and building labor markets that provide flexibility and security (flexicurity), and attractive private-sector opportunities.

Design new social contracts

GCC countries can revamp their social contracts to reduce intergenerational dependencies and reliance on the state and empower citizens to become more self-sufficient and active contributors economically and socially. They can secure the basic needs of citizens and transition from repairing social ills to proactively addressing root causes by:

- Providing social safety nets that link basic income, unemployment benefits, and universal health coverage to training, skills improvement, and reskilling, lifelong learning programs, and active employment search.
- Improving the productivity of citizens through investments in early childhood development, skills-based education systems, and lifelong learning opportunities.
- Investing in digital health solutions that offer a holistic view of patients' physical and mental well-being and enable the early diagnosis of disease through the targeted use of proactive and preventive care.
- When possible, delivering social services in partnership with the private sector and using new financing schemes, such as social impact investments, that generate both financial and social returns.68
- Transitioning from defined benefit pension systems to hybrid systems that include mandatory and voluntary components, and extending the retirement age and years of service to encourage labor force participation and reduce public expenditure.

Boost labor market flexicurity and productivity

The GCC countries can remove labor market rigidities to help achieve economic diversification and private-sector competitiveness. They can create flexible, agile, open, and forward-looking labor markets that better match supply and demand and foster productivity by:

- Devising an integrated portfolio of interventions that combines active and protective labor policies to bring more of the workforce into the private sector. These interventions can include incentives, regulations, and training and be aimed at underemployed population segments, such as women and youth.
- Creating a unified labor market that reduces disparities between nationals and expatriates, harmonizes labor laws, bolsters labor mobility, and unifies minimum wages.
- Recalibrating public- and private-sector value propositions (i.e., salary, working hours, standards, job security, and social perception) to attract nationals to the private sector.
- Enabling flexible labor contracts and instituting targeted safety nets to attract and retain talent and facilitate labor market mobility and flexicurity.

Improve quality of life

GCC countries can scale up the implementation of smart cities to deliver human-centric⁶⁹ services that enhance the well-being of citizens. They can fully transform urban centers into smart cities by:

- Investing in integrated, proactive, and robust urban planning and smart residential, educational, healthcare, and cultural infrastructure.
- Developing sustainable urban green spaces, flexible-use built environments, and mixeduse zoning.
- Advancing smart mobility to manage public transport and ease and mitigate traffic congestion.
- Utilizing big and open data, foresight, and smart surveillance to predict natural and human-caused hazards, enable proactive public safety and policing, and anticipate and address the needs of the population and region.
- Adopting holistic well-being as a measure of national progress, beyond GDP, and integrating it in the design and evaluation of public policies and services.

Rethink institutions: Innovation first

The GCC countries can continue to strengthen institutional innovation. They can leverage the power of digital technologies to start offering personalized services, foster citizen engagement, bolster confidence in the fiscal resilience of governments, and adopt an integrated sustainability agenda.

Exploit the power of digital to offer personalized, predictive, and proactive service delivery The GCC governments could further take advantage of the power of digital technologies to offer personalized, predictive, and proactive service delivery by:

- Developing comprehensive digital strategies and infrastructure.
- Redesigning customer journeys through fully integrated and digitized government services to ensure seamless and frictionless delivery, featuring unique digital IDs and virtual concierge services.
- Utilizing the power of big and open data to support evidence-based decision making and real-time information.
- Using emerging technologies and cloud computing to transform their whole government operations (i.e., cloud-based procurement and talent management, machine-readable regulations).
- Offering personalized service delivery across various sectors, including education, employment, healthcare, and elderly care.
- Advancing cybersecurity, data privacy, and reliability.

Transition to participatory and agile governance

The GCC governments can shift from being service providers to being enablers. They can transition to participatory and open governance structures that engender accountability, cooperative efforts, shared responsibility, and trust by:

- Instituting agile and on-demand organizational structures to reduce government inefficiencies and red tape.
- Launching urban design labs and online engagement platforms that enable citizens, privatesector companies, and academia to co-design, test, and develop public policies and services.
- Implementing participatory budgeting that gives citizens a voice in spending decisions, prioritizes public spending, and channels resources to the areas of most need.
- Developing smart, inclusive, and anticipatory regulations and regulatory sandboxes that enable innovation, experimentation, and the testing of new technologies and products prior to roll-out.
- Adopting blended finance that uses joint public and private funding to bolster development impact and provide investors the opportunity to deliver government projects in return for pay-for-success contracts.
- Adopting a results-driven culture using impact evaluation tools such as citizen sensing and sentiment analysis, cost-benefit analysis, and Randomized Controlled Trials (RCTs) to assess policies and services.
- Providing access to information, enabling public scrutiny and assessment, and boosting accountability to demonstrate a commitment to open government.

Strengthen fiscal resilience

GCC countries can strengthen fiscal resilience; bolster their ability to anticipate, adapt, and respond to potential crises; and better manage financial risks by:

- Implementing medium-term expenditure frameworks that reduce the procyclicality of fiscal policies and spending increases during economic expansion.
- Rationalizing the social and public wage bill, reforming subsidy schemes, and increasing the
 efficiency of capital expenditures to create fiscal space and reduce primary expenditures.
- Implementing taxes and fees that have minimal negative consequence on business activity, investment, and job creation to expand the revenue base.
- Exploring the divestment of non-strategic state-owned enterprises and government-related entities that could operate efficiently and achieve their objectives under private management.

Adopt an integrated sustainability agenda

The GCC could become a leader in global sustainability. In grasping this opportunity and adopting an integrated and comprehensive approach, GGC governments could unlock more than \$2 trillion in economic growth and create more than 1 million jobs by 2030⁷⁰ through:

- Making sustainability an integral part of all sector strategies across government agencies and initiatives.
- Integrating circular economies into urban plans, and incorporating innovative technologies such as modular construction, 3D printing, zero-waste water desalination, and clean and lean transportation systems.
- Nudging the region's citizens toward sustainable practices, such as low-energy and waterefficient fittings and usage, reductions in food waste, and the sorting and recycling of trash.
- Encouraging the region's companies to make ESG a cornerstone in their decisionmaking processes.
- Establishing transparent, standardized, and comprehensive measurement and reporting systems to assess and report the performance of sustainability initiatives.

CONCLUSION

The COVID-19 pandemic has accelerated and exacerbated existing tensions in the GCC, including economic and social asymmetry, technological disruption, an aging population, polarization of the global order, and the changing nature of institutional trust. The challenges and opportunities ahead have not fundamentally changed, but their urgency has increased. Now is the time to foster a more comprehensive understanding of the region's tensions and their underlying trends, and to craft and pursue cohesive policies and reforms capable of resolving them. The region's future depends on the steps it takes today in pursuit of growth through local-first economies; the well-being of citizens; and more digital, participatory, resilient, and sustainable institutions that engender innovation.

ENDNOTES

- The GCC countries are Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates.
- Rabah Arezki, et al., "Trading Together: Reviving Middle East and North Africa Regional Integration in the Post-Covid Era," Middle East and North Africa Economic Update, World Bank, October 2020 (https://tinyurl.com/da2usay).
- 3. IMF, "Economic prospects and policy challenges for the GCC countries,"

 December 10, 2020 (https://tinyurl.com/pke3bt8z).
- Tokhir N. Mirzoev, et al., "The Future of Oil and Fiscal Sustainability in the GCC Region," International Monetary Fund, Feb. 6, 2020 (https://tinyurl.com/ an6h5we4).
- 5. World Bank, "Global Economic Prospects 2021," January 2021 (https://tinyurl.com/5btwkbuv).
- Alex Kimani, "Gulf Nations Are Desperate for Higher Oil Prices," OilPrice.com, September 27, 2020 (https://oilprice. com/Energy/Oil-Prices/Gulf-Nations-Are-Desperate-For-Higher-Oil-Prices.html).
- "Largest sovereign wealth funds worldwide as of February 2021, by assets under management," Statista, February 3, 2021 (https://www.statista.com/statistics/276617/ sovereign-wealth-funds-worldwidebasedon- assets-under-management/).

- "PwC's COVID-19 CFO Pulse Survey," PwC, April 14, 2020 (https://tinyurl.com/ ydp7xrrz).
- Hannah Ritchie and Max Roser, "Urbanization," Our World in Data, November 2019 (https://ourworldindata. org/ urbanization).
- 10. "Dubai 2040: Everything you need to know about the Urban Master Plan," *The National*, March 13, 2021 (https://www.thenationalnews.com/uae/dubai-2040-everything-you-need-to-know-about-theurban-master-plan-1.1183432).
- M. Malik and T. Nagesh, "GCC Fiscal Reforms and Labor Market Policies," in G. Luciani G and T. Moerenhout (eds), When Can Oil Economies Be Deemed Sustainable? The Political Economy of the Middle East, (Palgrave Macmillan, 2021). (https://doi.org/10.1007/978-981-15-5728-6_10).
- 12. UAE, "The UAE Strategy for the Fourth Industrial Revolution" (https://tinyurl.com/9jkkpd3f).
- May El Habachi, "How agritech can help farming during the pandemic," SME10X. com, August 3, 2020 (https://tinyurl.com/ eect6t28).
- "How will the mobilisation of AI impact jobs in the GCC?" *Gulf Business*, September 25, 2018 (https://gulfbusiness.com/willmobilisation-ai-impact-jobs-gcc/).

- 15. David Ndichu, "Bahrain, Kuwait and Oman shoppers can now buy on Amazon.ae," Gulf Business, October 7, 2020 (https:// gulfbusiness.com/bahrain-kuwait-andoman-shoppers-can-now-buy-onamazon-ae/).
- 16. "New work from home rules approved by Crown Prince of Dubai welcomed," Arabian Business, December 12, 2020 (https://www.arabianbusiness.com/ politics-economics/455790-new-workfrom-home-rules-approved-by-the-crownprince-of-dubai-welcomed).
- 17. Nadine Fahmy, "Can freelancing in MENA finally experience its boom post-pandemic?" Magnitt, August 25, 2020 (https://magnitt.com/news/canfreelancing-in-mena-finally-experience-itsboom-post-pandemic-52130).
- 18. Samer Bohsali, Sevag Papazian, Rawia Abdel Samad, Robert Vaughan, and Melissa Rizk, "Embracing sharing: Managing the disruption of the sharing economy in the GCC," Strategy&, 2017 (https://www.strategyand.pwc.com/m1/ en/ideation-center/ic-research/2017/ embracing-sharing-managing-thedisruption-of-the-sharing-economy-in-theqcc.html).
- 19. Shailesh Dash, "EdTech in the era of a pandemic - the GCC perspective," Khaleej Times, June 13, 2020 (https:// www.khaleejtimes.com/business/local/ edtech-in-the-era-of-a-pandemic---thegcc-perspective).
- 20. Ulrich Koegler, Maha Raad, and Susie Almasi, "How GCC e-commerce can lay the foundations for sustainable growth," Gulf Business, May 2020 (https:// www.strategyand.pwc.com/m1/en/ articles/2020/how-gcc-e-commerce-canlay-the-foundation.html).
- 21. Jumana Khamis, "How the coronavirus pandemic is reshaping GCC e-commerce." Arab News, August 12, 2020 (https://www. arabnews.com/node/1693806/businesseconomy).

- 22. Ulrich Koegler, Maha Raad, and Susie Almasi, "How GCC e-commerce can lay the foundations for sustainable growth," Gulf Business, May 2020 (https:// www.strategyand.pwc.com/m1/en/ articles/2020/how-gcc-e-commerce-canlay-the-foundation.html).
- 23. A regulatory sandbox is a framework set by the regulator to test innovative products, services, or business models in a more lenient yet controlled environment.
- 24. World Bank, "Population, total Qatar, Saudi Arabia, Oman, United Arab Emirates, Kuwait, Bahrain, World" (https:// data.worldbank.org/indicator/SP.POP. TOTL?end=2019&locations=QA-SA-OM-AE-KW-BH-1W&start=1970&view=chart).
- 25. United Nations, "UN projects world population to reach 8.5 billion by 2030, driven by growth in developing countries" (https://www.un.org/ sustainabledevelopment/blog/2015/07/ un-projects-world-population-to-reach-8-5-billion-by-2030-driven-by-growth-indeveloping-countries/).
- 26. Our estimate is based on population distribution statistics for the GCC countries from Statista and government websites.
- 27. World Bank, "Unemployment, youth total (% of total labor force ages 15-24) (national estimate)" (https://data.worldbank.org/ indicator/SL.UEM.1524.NE.ZS).
- 28. World Bank, "Unemployment, youth female (% of female labor force ages 15-24) (modeled ILO estimate)" (https://data. worldbank.org/indicator/SL.UEM.1524. FE.ZS); World Bank, "Unemployment, youth male (% of male labor force ages 15-24) (modeled ILO estimate)" (https://data.worldbank.org/indicator/ SL.UEM.1524.MA.ZS).

- Masood Ahmed, Dominique Guillaume, and Davide Furceri, "Youth Unemployment in the MENA Region: Determinants and Challenges," International Monetary Fund, June 2012 (https://www.imf. org/external/np/vc/2012/061312. htm?id=186569); "Economic Prospects and Policy Challenges for the GCC Countries," International Monetary Fund, October 25, 2020 (https://www. imf.org/en/Publications/Policy-Papers/ Issues/2020/12/08/Economic-Prospectsand-Policy-Challenges-for-the-GCC-Countries-49942).
- "World Population Ageing," United Nations, 2017 (https://www.un.org/en/development/ desa/population/publications/pdf/ageing/ WPA2017_Highlights.pdf).
- 31. Please note additional detail was added following publication. For details on at risk populations, see United Nations, "The Impact of COVID-19 on the Arab Region," July 2020 (https://tinyurl.com/uh97avdp); Country Statistics Summary: Population Statistics in the Cooperation Council, GCC-STAT 2019 (Arabic) (https://tinyurl.com/3mj39rmd).
- 32. "Social Security Programs Throughout the World: Asia and the Pacific, 2018," International Social Security Association, 2019 (https://www.ssa.gov/policy/docs/progdesc/ssptw/2018-2019/asia/ssptw18asia.pdf).
- 33. Natasha Turak, "The UAE is on track to have half its population vaccinated by the end of March," CNBC, January 18, 2021 (https://www.cnbc.com/2021/01/18/uae-on-track-to-vaccinate-half-its-population-by-end-of-march-.html).
- 34. "Medical Trends Around the World," Marsh & McLennan, 2019 (https://www.mmc.com/content/dam/mmc-web/insights/publications/2019/jun/MMB_Medical_Trends_Survery_Final.pdf).

- 35. United Nations, "The Impact of COVID-19 on the Arab Region," July 2020 (https://www.un.org/sites/un2.un.org/files/sg_policy_brief_covid-19_and_arab_states_english_version_july_2020.pdf).
- 36. "Saudi Telehealth Network," Saudi Arabi National Health Information Center, 2021 (https://nhic.gov.sa/en/Initiatives/Pages/communicationmedicine.aspx); "HMC telemedicine service received 197,000 calls in 2020," *The Peninsula*, Jan. 26, 2021 (https://thepeninsulaqatar.com/article/26/01/2021/HMC-telemedicine-service-received-197,000-calls-in-2020).
- 37. International Monetary Fund, "World Economic Outlook Update," January 2021 (https://www.imf.org/en/Publications/ WEO/Issues/2021/01/26/2021-world-economic-outlook-update).
- 38. Abdel Aziz Aluwaisheg, "How to expand the China-GCC strategic partnership," *Arab News*, Dec. 30, 2020 (https://www.arabnews.com/node/1785041).
- 39. Oxford Business Group, "Investment strengthens ties between China and the GCC," in "The Report, Kuwait 2019" (https://oxfordbusinessgroup.com/analysis/looking-east-enhanced-cooperation-and-investment-across-range-sectors-strengthening-ties-0).
- 40. Dominic Chiu, "The East Is Green: China's Global Leadership in Renewable Energy," New Perspectives in Foreign Policy, Center for Strategic and International Studies, Summer 2017 (https://www.csis.org/east-green-chinas-global-leadership-renewable-energy); "Nuclear Power in China," World Nuclear Association, January 2021 (https://www.world-nuclear.org/information-library/country-profiles/countries-a-f/china-nuclear-power.aspx).

- 41. "World Trade Summary 2018 Data, World exports, imports, tariff by year," World Bank WITS (https://wits.worldbank.org/ Country/Profile/en/Country/WLD/Year/ LTST/Summary).
- 42. "Trade shows signs of rebound from COVID-19, recovery still uncertain," World Trade Organization, October 2020 (https:// www.wto.org/english/news_e/pres20_e/ pr862_e.htm).
- 43. "Global foreign direct investment fell by 42% in 2020, outlook remains weak,", UNCTAD, January 24, 2021 (https://tinyurl. com/d2mkxeew).
- 44. "Exports of goods and services, 2000-2021" IMF website (https://data.imf.org/ regular.aspx?key=60214255).
- 45. "Foreign direct investment, net inflows," World Bank website (https://data. worldbank.org/indicator/BX.KLT.DINV. CD.WD).
- 46. "Economic Prospects and Policy Challenges for the GCC Countries," International Monetary Fund, October 25, 2020 (https://www.imf. org/en/Publications/Policy-Papers/ Issues/2020/12/08/Economic-Prospectsand-Policy-Challenges-for-the-GCC-Countries-49942).
- 47. "GCC Economic Performance and Outlook 2020," GCC-STAT, 2020 (https://gccstat. org/images/gccstat/docman/publications/ GCC Economic Performance and Outlook 2020.pdf).
- 48. "Gulf tourism losses due to coronavirus could reach \$60bn," Arabian Business, January 9, 2021 (https:// www.arabianbusiness.com/travelhospitality/456789-gulf-tourism-lossesdue-to-coronavirus-could-reach-60bn).

- 49. UN Comtrade Database (https://comtrade. un.org/data/).
- 50. "MENA: Trade and Regional Integration are Critical to Economic Recovery in the Post-Covid Era," World Bank, Oct. 19, 2020 (https://www.worldbank.org/en/ news/press-release/2020/10/19/menatrade-and-regional-integration-are-criticalto-economic-recovery-in-the-post-covidera).
- 51. "Middle East brief: post-Covid-19 supply chains," The Economist Intelligence Unit, September 11, 2020 (https://www.eiu. com/n/middle-east-post-covid-19-supplychains/).
- 52. UN, "E-Government Survey 2020" (https:// tinyurl.com/m76efpnp).
- 53. "Transforming Government Services in the UAE." Oxford Saïd for the World Government Summit, February 2017 (https://tinyurl.com/56yrzvuk).
- 54. "Labor and Employment," Saudi Arabia website (https://www.my.gov.sa/wps/ portal/snp/aboutksa/employment/).
- 55. "SAMA AND CBUAE Issue Report on Results on Joint Digital Currency Project "ABER," SAMA, November 11, 2020 (https://www.sama.gov.sa/en-US/News/ Pages/news-630.aspx).
- 56. "Why Ministers for Happiness, Tolerance, Youth and the Future?" UAE website (https://uaecabinet.ae/en/details/news/ why-ministers-for-happiness-toleranceyouth-and-the-future).

- 57. "World's largest solar project, with power enough for 90,000 people, switched on in Abu Dhabi," *Gulf Business*, June 29, 2019, (https://gulfnews.com/uae/worldslargest-solar-project-with-power-enoughfor-90000-people-switched-on-in-abudhabi-1.1561799168033).
- 58. "United Arab Emirates Country Commercial Guide," U.S. Department of Commerce International Trade Association website (https://www.trade.gov/ knowledge-product/united-arab-emiratesrenewable-energy).
- Hannah Ritchie and Max Roser, "Air Pollution," Our World in Data, November 2019 (https://ourworldindata.org/airpollution).
- Hannah Ritchie and Max Roser, "CO₂ emissions," Our World in Data, n.d. (https://ourworldindata.org/co2-emissions).
- 61. Joyce Hakmeh and James Shires, "Is the GCC Cyber Resilient?" Chatham House, March 9, 2020 (https://www.chathamhouse.org/2020/03/gcc-cyberresilient-0/state-cybersecurity-gcc-overview).
- 62. "Global Cybersecurity Index 2018," ITU, 2019 (https://www.itu.int/dms_pub/itu-d/opb/str/D-STR-GCI.01-2018-PDF-E.pdf).
- 63. Joyce Hakmeh and James Shires, "Is the GCC Cyber Resilient?" Chatham House, March 9, 2020 (https://www.chathamhouse.org/2020/03/gcc-cyberresilient-0/state-cybersecurity-gcc-overview).
- 64. Karim Abdallah, Marwan Bejjani, Dima Sayess, Vivek Madan, and Melissa Rizk, "Destination Middle East: Boosting the region's position in global tourism," Strategy& Middle East Ideation Center, 2020 (https://www.strategyand.pwc.com/ m1/en/ideation-center/research/2020/ how-governments-can-launch-a-thrivingtourism-sector/destination-middle-east. pdf).

- 65. Hypermobility in transport increases the speed, reach, and frequency of modes of transport, enabling more frequent trips over longer distances.
- 66. "Our Catapult Centers," Catapult Network (https://catapult.org.uk/about-us/our-centres/).
- 67. "Cyber-Physical Systems," UC Berkeley Ptolemy Project (https://ptolemy.berkeley. edu/projects/cps/).
- 68. Fadi Adra, Marc-Albert Hamalian, Dima Sayess, and Melissa Rizk, "The social investment paradigm: From protective to proactive states," Strategy& Middle East Ideation Center, 2021 (https://www. strategyand.pwc.com/m1/en/ideationcenter/ic-research/2021/the-socialinvestment-paradigm.html).
- 69. Human-centric design: An approach to problem solving that involves the human perspectives, needs, desires, and abilities across the full design process.
- Shihab Elborai, Salim Ghazaly, and Yahya Anouti, "The business case for environmental sustainability in the GCC," Strategy& Middle East, October 2020 (https://www.strategyand.pwc.com/m1/ en/articles/2020/the-business-case-forenvironmental-sustainability-in-the-gcc. html).

Strategy&

Strategy& is a global strategy consulting business uniquely positioned to help deliver your best future: one that is built on differentiation from the inside out and tailored exactly to you. As part of PwC, every day we're building the winning systems that are at the heart of growth. We combine our powerful foresight with this tangible know-how, technology, and scale to help you create a better, more transformative strategy from day one.

As the only at-scale strategy business that's part of a global professional services network, we embed our strategy capabilities with frontline teams across PwC to show you where you need to go, the choices you'll need to make to get there, and how to get it right.

The result is an authentic strategy process powerful enough to capture possibility, while pragmatic enough to ensure effective delivery. It's the strategy that gets an organization through the changes of today and drives results that redefine tomorrow. It's the strategy that turns vision into reality. It's strategy, made real.

Read the latest Ideation Center insights



Connect with Strategy& Middle East



twitter.com/strategyandme



linkedin.com/company/strategyandme



strategyand.pwc.com/me

Connect with Strategy&



twitter.com/strategyand



linkedin.com/company/strategyand



youtube.com/user/strategyand



© 2021 PwC. All rights reserved. PwC refers to the PwC network and/or one or more of its member firms, each of which is a separate legal entity. Please see www.pwc.com/structure for further details. Mentions of Strategy& refer to the global team of practical strategists that is integrated within the PwC network of firms. For more about Strategy&, see www.strategyand.pwc.com. No reproduction is permitted in whole or part without written permission of PwC. Disclaimer: This content is for general purposes only, and should not be used as a substitute for consultation with professional advisors.