Sovereign Data: The Development and Marketing of Bahrain's Digital Domain

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The Arab Gulf States Institute in Washington (AGSIW), launched in 2015, is an independent, nonprofit institution dedicated to providing expert research and analysis of the social, economic, and political dimensions of the Gulf Arab states and key neighboring countries and how they affect domestic and foreign policy. AGSIW focuses on issues ranging from politics and security to economics, trade, and business; from social dynamics to civil society and culture. Through programs, publications, and scholarly exchanges the institute seeks to encourage thoughtful debate and inform the U.S. foreign-policy, business, and academic communities regarding this critical geostrategic region.

About the Author

Robert Mogielnicki is a resident scholar at the Arab Gulf States Institute in Washington. An expert in the political economy of the Middle East and North Africa, he previously served as a senior analyst with the Siwa Group and head of public relations and marketing for Oxford Strategic Consulting, a United Kingdom/Gulf Cooperation Council-focused research consultancy. Prior to his consulting career, he worked as a journalist covering political and economic developments in post-revolutionary Egypt and Tunisia. His work and commentary on the region have appeared in Axios, Forbes Middle East, Al Jazeera's Inside Story, MEED, Al Bawaba, The National (UAE), Gulf Daily News, Tunisia Live, Egypt Oil and Gas Magazine, and Egypt Daily News.

Mogielnicki received his PhD from the University of Oxford's Magdalen College, where he conducted research in conjunction with the Oriental Institute and Middle East Centre. Drawing on extensive fieldwork in the United Arab Emirates, Oman, Qatar, Bahrain, and Kuwait, his dissertation examines the political economy of free zones in Gulf Arab countries. He earned his MA in modern Middle Eastern studies from St Antony's College, University of Oxford, and completed a master's thesis on labor policy formulation and implementation in the emirates of Abu Dhabi and Dubai. He received his BA from Georgetown University as a double major in Arabic and government, graduating magna cum laude and Phi Beta Kappa.

Executive Summary

Bahrain is a small country with big digital growth ambitions. Enabling better data access, management, and utilization is an important economic differentiator for Bahrain. In April 2017, Bahrain's government published a Cloud First Policy to modernize government information and communications technology, by using cloud computing services. The government introduced a Personal Data Protection Law in July to better align Bahrain's data protection frameworks with global best practices. The Bahraini government passed another law concerning the provision of cloud computing services to foreign parties through Legislative Decree No. 56 of 2018, establishing a legal framework for hosting external content on Bahraini data centers.

Bahrain's aspirations to become a regional data-hosting hub have met with some early successes. In 2019, Amazon Web Services opened a Middle East "region" in Bahrain, which entailed the deployment of AWS data centers and linking them to the company's global network. Bahrain's economic policy officials also see high-growth potential in partnerships with Chinese firms. For example, Huawei and China Telecom are involved in rolling out controversial 5G mobile network infrastructure across Bahrain.

Some U.S. officials fear that Chinese technologies could be leveraged for cyberespionage purposes. The Bahraini government has thus far mitigated security concerns by balancing the involvement of U.S., European, and Asian technology partners in the development of its digital domain. Challenges surrounding cyberspace and data issues in the Gulf region, however, are set to intensify. The economic shocks caused by the coronavirus outbreak and oil price rout have increased fiscal pressure on Gulf Arab governments, which will look for cheap, advanced technologies and digital applications to provide services to citizens and protect their economies.

Introduction

Cyberspace is a complex and contested arena, and Gulf states are pursuing ambitious digital transformation agendas to create more sustainable economies and provide better public services. However, regional governments also employ emerging technologies to monitor their citizenry and residents. The imposition of a boycott on Qatar by Saudi Arabia, the United Arab Emirates, Bahrain, and Egypt in 2017 provoked tit-for-tat disinformation campaigns among Gulf Cooperation Council member states. Gulf Arab government agencies, state-owned entities, and critical infrastructure are targets for cyberattacks by malicious actors. Moreover, the growing involvement of Huawei and other Chinese technology firms in Gulf economies has complicated regional relations with the United States.

The resulting digital domain in the Gulf is characterized by fragmentation and polarization. Bahrain offers a useful case study for examining how these dynamics in cyberspace unfold across the Gulf region. Employing a political economy-focused analytical lens, this paper argues that the Bahraini government seeks to demonstrate responsible state behavior in cyberspace by closely aligning its digital domain with commercial development initiatives. The resulting economic-oriented approach to cyberspace has helped Bahraini officials sign large-scale commercial agreements with multinational firms and attract foreign direct investment flows.

However, this government-led strategy requires a continual demarcation and renegotiation of the various boundaries of cyberspace, ensuring a continued contestation over technology and politics in the country for the foreseeable future.

The paper begins with a contextualization of the country case study and an in-depth description of the key components of the country's developing digital domain. It then illustrates how the country's government markets its digital capabilities and regulations to external actors, expressing alignment with established norms and a propensity for responsible state behavior in cyberspace. Last, the paper highlights the political ramifications of Bahrain's commercial initiatives involving cyberspace and offers recommendations for the government to strengthen adherence to norms and encourage responsible behavior.

Contextualizing Bahrain's Digital Doman

Bahrain is a small country with big digital growth ambitions. The total population is approximately 1.7 million people, and expatriates comprise a slight majority of total residents.[1] Youth constitute approximately 35% of the population. The country exhibits high internet and mobile penetration rates: As of January, internet penetration in Bahrain stood at 99%, the number of mobile connections equated to 131% of the total population, and there were about 1.4 million social media users.[2]

Enabling this connectivity is a Bahraini telecommunications sector that is described as "robust and progressive," but only contributes around 4% to the country's gross domestic product.[3] Total investments in the sector exceeded $2 billion between 2009 and 2019,[4] while the country's GDP in 2019 reached $37.9 billion.[5] In October, Bahrain's leading telecommunications operator announced that 5G coverage was available to 95% of the country's population.[6]

Bahrain presides over less wealth than many of its Gulf regional counterparts, given smaller proven hydrocarbon reserves. The gross national income per capita in Qatar and the UAE reached $94,840 and $68,780 respectively in 2018, whereas Bahrain's was $44,720.[7] Nevertheless, Bahrain's oil and gas exports comprise between 75% and 85% of all public sector revenue.[8] Understanding the need to diversify away from hydrocarbon revenue, the government is pursuing various initiatives to promote growth in non-oil sectors.

1 Total population figures taken from the Population Division of the United Nations; Bahrain: Population Estimates by Nationality," Gulf Labor Markets, Migration, and Population Programme, accessed August 25, 2020.

2 Simon Kemp, "Digital 2020: Bahrain," *DATAREPORTAL*, February 17, 2020.

3 "Bahrain - Telecoms, Mobile and Broadband - Statistics and Analyses," *Research and Markets*, October 2020.

4 "Bahrain Invests $2 Billion in 10 Years in Telecommunications," *News of Bahrain*, December 3, 2020.

5 "Bahrain," *The World Bank*, accessed December 1, 2020.

6 "Batelco Announces Successful 5G Network Activation in Bahrain," *TradeArabia*, October 3, 2020.

7 "Qatar: Country Profile," World Bank World Development Indicators database, accessed September 10, 2020.

8 International Monetary Fund, Economic Diversification in Oil-Exporting Arab Countries (Manama: IMF, April 2016); Eckart Woertz, "Bahrain's Economy: Oil Prices, Economic Diversification, Saudi Support, and Political Uncertainties," *Barcelona Centre for International Affairs*, February 2018.

Among the most important segments of Bahrain's non-oil economy is its mature banking and finance sector. This sector developed largely alongside the regional recycling of revenue from hydrocarbon exports and affiliated capital accumulation throughout the 20th century. Bahrain's economic policymakers sought to build upon this banking and finance expertise by becoming a "global leader in Islamic finance," and influencing the concepts, rules, and standards within the industry.[9] A primary objective behind digital transformation agendas in the country is to future-proof existing segments of its non-oil economy and foster the development of new, advanced industries, though much work remains to be done in this domain.

The Bahrain Economic Development Board, an investment promotion agency that works with both the government and private investors, is charged with maintaining an attractive investment climate in the country. The agency highlights various digital initiatives with commercial applications as part of these efforts. For example, it promoted Bahrain's enactment of the Model Law on Electronic Transferable Records – as well as an Electronic Communications and Transactions Law – that was developed by the United Nations Commission on International Trade Law.[10] In terms of its sectoral

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focus, the Economic Development Board concentrates on manufacturing, information and communications technology, tourism, logistics and transportation, and financial services. Crown Prince Salman bin Hamad al-Khalifa is the agency's chairman – a reflection of the entity's importance within the upper echelons of the ruling family and government.

Financial technology is a key focus area of the economic policy being advanced by the Economic Development Board. The government launched Bahrain Fintech Bay in February 2018 as part of efforts to foster an entrepreneurial ecosystem for financial technologies and help transform the financial services industry in the country. Founding partners for the venture include Investcorp, Batelco, and the National Bank of Bahrain – reflecting a strong confluence of local private and government interests. Bahrain Fintech Bay's corporate sponsors include CISCO, VISA, and MasterCard. According to Bahrain Fintech Bay's 2020 manifesto:

> Bahrain's FinTech ecosystem is underpinned by Bahrain's established position as a financial services hub with the presence of around 400 financial institutions in the country, the national drive for financial inclusion, a highly progressive and liberalized ICT infrastructure, a growing entrepreneurial community, and increased collaboration between the financial services industry and FinTechs.[11]

The country's information and communications technology infrastructure is described as "progressive" and "liberalized" – terminology that resonates with entrepreneurs and multinational enterprises. Startup founders and entrepreneurs consider Bahrain a good testing ground for new platforms and applications, given the well-connected nature of the small country and its proximity to larger markets in the Middle East and North Africa. Costs

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9 "Bahrain Islamic Banking & Finance," Bahrain Economic Development Board, accessed September 11, 2020.

10 "Bahrain Creates History as First Nation To Enact UNCITRAL Model Law on Electronic Transferable Records," Bahrain Economic Development Board, January 16, 2019.

11 "Manifesto 2020," Bahrain Fintech Bay, accessed September 15, 2020.

relating to ICT metrics in Bahrain, such as cross-border internet connectivity, are among the lowest in the region.[12] In October, the Central Bank of Bahrain launched FinHub 973. The digital fintech lab's mission is to better link financial institutions in Bahrain with international fintech companies.[13]

The experience of the neighboring UAE government, which has strongly promoted innovation-led economic growth strategies, demonstrates the strong demand from local and foreign businesspeople for better access to public data. In September, as a response to this demand, the Abu Dhabi government launched an open data platform as part of efforts to create a "Data-Driven Government."[14] The Dubai Data Strategy likewise aims to better utilize the emirate's data resources and make them accessible to both governmental and nongovernmental actors. A collective view that data must be shared and available to be effective is gaining traction across the region.[15] Some commentators in Oman even suggested that the sultanate could serve as a data backup hub for future cyberbreaches in the region.[16]

The Local Development of Data in Bahrain

The increasing availability of data and its employment as a commodity in Bahrain forced the country's policymakers to grapple with data sovereignty issues across the various spheres of a fragmented digital domain. Enabling better data access, management, and utilization – at least for commercial purposes – became an important economic differentiator for Bahrain, especially when compared with its Gulf neighbors. In April 2017, Bahrain's government published a Cloud First Policy to modernize government ICT by using cloud computing services. The policy aims to reduce costs, increase security, increase productivity, and develop citizen services.

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Urgent fiscal concerns were closely linked to the development and implementation of Bahrain's cloud policy. A collapse in oil prices in late 2014 and early 2015 strained government budgets across the Gulf region. Bahrain's fiscal deficit in 2014, at a weighty 7.2% of GDP, spiked by 60% in 2015 and did not decrease significantly until 2019, when it dropped to 4.7% of GDP. The ensuing period of austerity encouraged the government to explore ways of delivering services in a streamlined, cost-effective manner. In September 2017, Bahrain's Information and eGovernment Authority began transferring the government systems of the Ministry of Education, Bahrain Institute of Public Administration, and Ministry of Justice and Islamic Affairs over to the cloud.[17] The Bahraini government estimated that government spending on IT-related services would fall by 90% by mid-2020, owing to the increasing utilization of

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12 "Cost of Doing Business in the GCC – Information, Communications and Technology," *KPMG*, May 2018.

13 "Central Bank of Bahrain Launches 'FinHub,'" *Finextra*, October 23, 2020.

14 "Abu Dhabi Data Strategy," Government of Abu Dhabi, accessed September 12, 2020.

15 "Data First: The City's Data Challenge," Smart Dubai, accessed September 4, 2020.

16 These views appeared in Omani daily newspapers following the Gulf-Iranian tensions of mid-2019 and the attacks on Saudi oil installations at Abqaiq and Khurais but disappeared thereafter.

17 "Bahrain Implements 'Cloud First' Policy," *Trade Arabia*, September 26, 2017.

cloud technologies. Bahraini officials also attributed the speedy rollout of a value-added tax, a controversial non-oil revenue generating mechanism implemented in 2019, to the added capabilities provided by the cloud.[18]

The cloud-first policy resonated with multinational firms offering cloud-based technology solutions. In August 2019, Mumtalakat, Bahrain's sovereign wealth fund, migrated its cloud services to new Amazon Web Services data centers that had been set up in the country. Mumtalakat officials claimed that running software domestically halved the fund's technology operation costs.[19] The University of Bahrain is likewise in the process of moving its IT infrastructure over to the AWS cloud. Teresa Carlson, vice president of the worldwide public sector at AWS, mentioned the cloud-first policy as one of the justifications for setting up their regional headquarters:

> I met the Crown Prince; we talked about digital innovation and the economy here, and he immediately got that they needed to go through a digital transformation. They are not a country that has a lot of oil; they are a smaller country, and they are a working-class country that is looking for [sustainability] … I think he saw the opportunity that this could help them jump-start the economy and they could … be a hub for innovation. So they created the right policies around cloud-first; they created the right telecommunications policy; they were one of the first to deregulate. They had good pricing for utilities; they were friendly toward businesses; and they had a culture that we felt could fit well with us, as well as our partner community.[20]

Carlson noted that Bahrain's telecommunications and data industries are deregulated, suggesting greater opportunities for private firms in a domain traditionally reserved exclusively for government actors and government-related entities. Carlson also mentioned the business-friendly nature of Bahrain – a key motto used by the Economic Development Board.

The Personal Data Protection Law, which the Economic Development Board describes as a key enabler of the country's digital economy, applies to the management of personal data in both Bahrain and extraterritorial locations. It was introduced in July 2018; however, the law did not come into force until August 2019. The affiliated authority, tasked with inspections and investigations, has been slow to materialize. The Ministry of Justice temporarily assumed the roles and responsibilities of the nascent authority. The law ultimately seeks to regulate the processing and transferring of data in the country. According to a Bahrain-based law firm:

> Prior to the implementation of the PDPL, there was no single codified data protection law in force in Bahrain. Scattered provisions were instead isolated in different laws covering certain aspects of confidentiality and privacy, making the PDPL a much-needed development to bring the country's legislation more in line with the General Data Protection Regulation.[21]

18 Alkesh Sharma, "Bahrain Government's Cloud Move 'Will Cut IT Costs by Up to 90%,'" *The National*, September 25, 2019.

19 Karl Flinders, "First Government Organization in Bahrain Migrates to Amazon Web Service," *Computer Weekly*, August 19, 2019.

20 Bev Bellile, "How Bahrain Implements 'Cloud-First' Culture, Starting With AWS Training," *SiliconANGLE*, October 3, 2018.

21 "Bahrain's New Data Protection Law," *Zu'bi & Partners*, accessed September 1, 2020.

One of the key objectives behind the Personal Data Protection Law is to align Bahrain's data protection frameworks with global best practices. The law is "heavily modelled on European Union data protection legislation,"[22] but there are some important distinctions. The Personal Data Protection Law contains criminal penalties for certain violations, whereas data protection laws in the United States and Europe usually apply civil penalties under similar circumstances.[23] Alignment with global frameworks and norms likewise helps to attract international interest in other areas of the country's digital domain. While the ostensible objective behind this law is to strengthen data protection locally, it simultaneously introduces constraints to the free flow of information globally.

The Bahraini government passed another law concerning the provision of cloud computing services to foreign parties through Legislative Decree No. 56 of 2018. This decision established a legal framework for hosting external content on Bahraini data centers. Consumers using Bahrain's designated data embassies can store information in Bahraini data centers but continue to operate within the governance frameworks of the domestic data protection laws from their home country. "The data stored in data centres by overseas consumers of cloud services in the Kingdom of Bahrain will be subject to the domestic law in the 'Foreign State' where the relevant consumer resides (or is incorporated in cases of legal persons) and so will be subject to the jurisdiction of that Foreign State's courts, and other competent authorities," explains Al Tamimi & Co.[24]

Free zones in the Gulf are crucial facilitators of foreign direct investment into the region because they offer preferential business environments through various exemptions and loose regulations.

This blurred form of sovereignty partially resembles the detached legal sovereignty of Gulf free zones, which operate under distinct legal frameworks, as is the case with the Dubai International Financial Centre. Free zones in the Gulf are crucial facilitators of foreign direct investment into the region because they offer preferential business environments through various exemptions and loose regulations. Other regional initiatives involve the provision of commercialized data to global clientele. For example, the Dubai Virtual Commercial License permits freelancers, businesses, and investors form across the globe to engage in business in Dubai without the requirement of a legal residence in the emirate.[25] Dubai's 50-year charter envisions a fully operational virtual commercial city capable of hosting 100,000 firms. These types of initiatives expand international business opportunities beyond the physical confines of traditional business processes.

22 "Bahrain Personal Data Protection Law: Core Principles," *PwC*, accessed September 6, 2020.

23 Natasha Kohne, Mazen Baddar, and Diana Schaffner, "Bahrain's New Data Protection Law Now in Force," *Mondaq*, August 23, 2019.

24 Andrew Fawcett, "Diplomatic Immunity for Data: Bahrain's Data Embassy Law," *Al Tamimi & Co*, March 2020.

25 Yousra Zaki, "Explained: How Can I Get a Dubai Virtual Commercial License," *Gulf News*, October 1, 2019.

Internationalizing Bahraini Data: A Balancing Act

Bahrain's aspirations to become a regional data-hosting hub have met with some early successes. After years of discussions, AWS opened a Middle East "region" in Bahrain in 2019.[26] The process entailed the deployment of AWS data centers and linking them to the AWS global network. This investment decision by a high-profile multinational firm and cloud pioneer raised the commercial reputation and visibility of the small Gulf country. AWS customers in the Middle East include government entities, sovereign wealth funds, startups, and even local airline companies.

AWS has also partnered with regional academic institutions to expand the local availability of skills in cloud-based technologies. The University of Bahrain, the country's largest public university, and AWS partnered to offer a 1-year cloud computing course.[27] The university planned to launch a 4-year cloud computing bachelor's degree in the fall semester of 2020, although the coronavirus outbreak may have delayed this initiative. At the onset of the pandemic, Bahrain's Ministry of Education collaborated with AWS to power an online learning portal for students across the country, enabling a smooth continuation of many educational services.[28]

While AWS is a valuable component of Bahrain's marketing efforts related to its digital initiatives, the country's economic policy officials also see high-growth potential in partnerships with Chinese firms. According to the Economic Development Board:

> As China continues to build the Digital Silk Road and support the development of technology leaders, Bahrain represents a natural partner that can nurture the ingenuity of these visionaries and serve as a gateway to a region of 50 million people with a combined spending power of $1.5 trillion.[29]

This statement not only aligns Bahrain's development trajectory with China's Digital Silk Road but also positions the country as a gateway to the larger Gulf Arab market. Bahrain is a member state of the GCC, which theoretically provides access to an integrated regional market. In practice, however, there are barriers to economic integration among GCC member states impeding trade flows of traditional commodities – not to mention digital services and data. Moreover, an economic boycott of Qatar imposed by Saudi Arabia, the UAE, Bahrain, and Egypt has further fragmented the GCC.

Bahrain's government has established a number of economic partnerships with Chinese technology firms. Huawei is involved in rolling out 5G mobile network infrastructure in Bahrain. Stc Bahrain – formerly known as VIVA Bahrain and a subsidiary of Saudi telecommunications company Stc – employs Huawei technologies and equipment in its 5G network. "We know that by working with Huawei we can push the boundaries and provide our customers with the best services that the 5G network have to offer," said the company's chief executive

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26 "AWS Launches Region in the Middle East," *Business Wire*, July 30, 2019.

27 John Benny, "Bahrain, Amazon Offer Cloud Degree To Address Regional Tech Skills Gap," *CIO*, September 22, 2019.

28 Sarah Faisal, "Bahrain's Ministry of Education Collaborates With Amazon Web Services," *Startup MGZN*, March 10, 2020.

29 "Innovation Flows to Bahrain Through the Digital Silk Road," *Bahrain Economic Development Board*, January 14, 2019.

officer, Nezar Banabeela.[30] Stc Bahrain likewise partnered with China Telecom to offer global connectivity services. "This new collaboration with stc Bahrain further allows China Telecom to strengthen its service capabilities in the Middle East and North Africa region," according to Changhai Liu, managing director of China Telecom Africa and Middle East Limited.[31] Huawei manages a national talent development program with Tamkeen, the public authority charged with promoting the country's private sector. These quieter commercial agreements and partnerships with controversial Chinese firms nevertheless are a source of foreign policy polarization between Bahraini and U.S. officials.

The U.S. Navy's Fifth Fleet is headquartered in Bahrain, and consequently some U.S. officials fear that Chinese technologies could be leveraged for cyberespionage purposes. Bahrain's engagement with cyberspace therefore involves navigating blurred boundaries between the national and international as well as civilian and military components of the digital domain. These risks led U.S. officials to raise concerns with Bahraini counterparts about using Huawei's technology and equipment. Cautionary rhetoric from U.S. officials did not rise to the level of forcing Bahrain to choose between U.S. and Chinese suppliers but rather highlighted the potential for vulnerabilities within Bahrain's telecommunications networks and digital infrastructure. In reference to Huawei's technology and equipment, Kamal bin Ahmed Mohammed, Bahrain's minister of telecommunications, said, "We have no concern at this stage as long as this technology is meeting our standards."[32]

> *Cautionary rhetoric from U.S. officials did not rise to the level of forcing Bahrain to choose between U.S. and Chinese suppliers but rather highlighted the potential for vulnerabilities within Bahrain's telecommunications networks and digital infrastructure.*

For the time being, the Bahraini government appears to have mitigated security concerns by balancing the involvement of U.S., European, and Asian technology partners in the development of its digital domain. Batelco, a government-related entity and a leading telecommunications company in Bahrain, partnered with Sweden-based Ericsson for the rollout of its 5G network. Neighboring Gulf Arab states have taken a similar approach, often arguing that Chinese telecommunications equipment and other technologies are more cost-effective than those of U.S. and European suppliers. Yet the long-term success of such a balancing approach is unclear. The United Kingdom reversed its initial decision to permit Huawei equipment in its 5G network, and now the government has informed all of the country's mobile providers to remove Huawei equipment from their networks by 2027.

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30 Gary Maidment, "On the Road to 5G for All With stc Bahrain," *Huawei Technologies*, March 23, 2020.

31 "Stc Bahrain Partners With China Telecom Global for Global Connectivity Services," *stc*, accessed September 25, 2020.

32 "Bahrain Plans To Use Chinese Mobile Tech Despite U.S. Warning Against Espionage," *Haaretz*, March 26, 2019.

Conclusion: Bahrain's Future Digital Path

Worries about overlapping boundaries in cyberspace will continue to fuel a multilayered contestation over technology and politics in Bahrain. The Bahraini government largely couches the country's engagement in cyberspace and various digital domains within the context of commercial development initiatives. Bahrain has made progress in establishing a comparative advantage in narrow, differentiating fields related to the digital economy and cyberspace. The country's fintech and data hosting initiatives are good examples. Given the small size of the country and its economy, excelling in one or two innovative commercial initiatives can have a major economic impact.

Gulf Arab states like Bahrain cannot preserve the traditional form of their economies indefinitely, but they can influence how their new digital future will unfold.

Bahrain's Gulf Arab neighbors are also aggressively pushing ahead with digital transformation processes and cyberspace-related initiatives: The associated successes and failures offer important lessons for Bahraini policymakers, but there is a lack of academic and practitioner studies on the development of digital domains in Gulf Arab states. The Bahraini government should help to encourage more research in these areas. Key laws in Bahrain concerning the management of cyberspace and data have only recently emerged – in most cases since 2018. The top-down nature of decision making in Bahrain means that new laws and regulations can be established quickly. However, the prerequisite working groups and specialized entities must be in place to undertake background and feasibility studies as well as to prepare for effective implementation.

While Bahrain's economics-driven approach to cyberspace makes for a convincing business proposition, it risks glossing over the very real forms of contestation occurring within other domains of cyberspace. Governments, militaries, multinational firms, citizens, residents, and foreign allies have overlapping as well as conflicting interests in cyberspace. It is crucial to highlight emerging conflicts to better understand how they can be resolved through regulation, collaboration, or other forms of policy planning.

A balanced, prioritized approach to tackling local, regional, and international issues relating to cyberspace is needed. While Bahraini policymakers have control over national policies and regulations, adhering to regional and international norms is essential for maintaining relations with key allies and attracting international firms. Bahrain is a relatively small national actor in cyberspace, but it can help to shape agendas regarding narrow, specific issues such as data hosting or government adoption of cloud-based technology solutions.

Challenges surrounding cyberspace and data issues in the Gulf region are set to intensify. The economic shocks caused by the coronavirus outbreak and oil price rout have increased fiscal pressure on Gulf Arab governments, which will look for cheap, advanced technologies and digital applications to provide services to citizens and protect their economies. Gulf Arab states like Bahrain cannot preserve the traditional form of their economies indefinitely, but they can influence how their new digital future will unfold.