

Chapter 2

Qatar in a Nutshell

Abstract Qatar—one of the countries in the Gulf region—has developed a vision to transform its society into a knowledge-based society and is already in the process of implementing its plans. We introduce Qatar and its national vision as well as some peculiarities of the country. Basic aspects like Qatar’s geography, climate, demography, language, culture, religion, politics, economy, public health and education are summarized.

Keywords Qatar · Knowledge society · Qatar National Vision 2030
Geography · Climate · Demography · Language · Culture · Religion
Politics · Rentier state · Rentier mentality · Economy · Kafāla
Public health · Education · Tradition · Modernity

2.1 Qatar as a Post-oil Knowledge-Based State?

In terms of Qatar’s National Vision 2030, the security of the peoples’ standard of living is to the fore, but the government realized that this cannot be the main and only goal of a country. With the focus on its values, Qatar has to balance some further challenges: modernizing traditions while ensuring their preservation, serving the needs of this and future generations, managing the country’s growth and expansion, controlling the targeted size and the quality of the expatriate labor, going a path of development that is compatible to it, managing the economic growth and the social development and protecting the environment. To resolve these challenges and to fulfill the transformation of Qatar into an advanced country until 2030, the government outlines and promotes four pillars that the Vision rests on. On those pillars, the government has to work collectively with the Qatari people:

- **Human Development**
Development of all its people to enable them to sustain a prosperous society.
- **Social Development**
Development of a just and caring society based on high moral standards, and capable of playing a significant role in the global partnership for development.

- **Economic Development**

Development of a competitive and diversified economy capable of meeting the needs of, and securing a high standard of living for, all its people for the present and for the future.

- **Environmental Development**

Management of the environment such that there is harmony between economic growth, social development and environmental protection (GSDP, 2008, p. 11).

The General Secretariat for Development Planning (GSDP) will coordinate the tasks carried out by the implementation of these pillars. The National Vision becomes hence the framework of Qatar National Development Strategy (QNDS) 2011–2016. All plans of the strategy will be put into practice in cooperation with stakeholders, the private sector as well as ministries and government agencies, but can only be achieved with the support of the whole nation. The strategy's aim is

to transform Qatar into an advanced country, sustaining its development and providing a high standard of living for all its people – for generations to come. It foresees a vibrant and prosperous Qatar with economic and social justice for all. It envisages all Qataris working together in pursuing these aspirations, with strong Islamic and family values guiding their collective energies (GSDP, 2011, p. 2).

To achieve this transformation, QNDS tries to put the Vision's plans into action, presents new initiatives and builds on what currently exists. It provides new impetus for those projects, policies and institutions that are brought into being by support of the National Vision. For the Qatar National Development Strategy main goals are to build a knowledge economy as well as to foster educating and training Qataris in order to their active participation in the knowledge society (GSDP, 2011, p. 122).

Guided by both—Qatar's National Vision and Qatar's National Development Strategy—Qatar Foundation (QF), a non-profit organization that supports the development of the knowledge economy by establishing many different programs and cutting-edge facilities in education, research and community development, published the Qatar Foundation Strategic Plan 2013–2030. Therewith, the organization translates the national needs—formulated in the four pillars of the National Vision—into five strategic objectives and adds one objective that they want to achieve internally as the organization itself to support QF's core mission activities:

1. Develop Human Capital
2. Drive Innovation to Advance Economic Diversification
3. Contribute Towards National Priorities
4. Foster a Progressive and Engaged Society Appreciative of its Heritage
5. Promote Productive Change Regionally and Internationally
6. Enhance Internal Capabilities, Sustainability and Synergy through Shared Services (QF, 2013, p. 1).

Characterized as a living document, the Strategic Plan will be reviewed and updated periodically. The core of all these initiatives is “to invest in the country's people as



Fig. 2.1 A big shell is reminiscent of the previous pearl diving era

they are the foundation of Qatar’s future knowledge-based economy (KBE)” (QF, 2013, p. 2).

One of the states situated on the Arabian Peninsula is the state of Qatar—a sovereign and independent nation, ruled by His Highness Sheikh Tamim bin Hamad bin Khalifa Al Thani (Hukoomi, 2016a). Before its complete independence in 1971, Qatar was a poor British protectorate that was solely known for its pearl fishery (Commins, 2012; CIA, 2016; Fig. 2.1).

Made rich by large reserves of oil and gas, the country is more than capable to react to the thread of ending resources. Qatar has developed a plan to diversify its economy manifested in the Qatar National Vision 2030. The goal is to transform Qatar into a pioneering state with a knowledge-based and extremely competitive economy while maintaining its strong cultural and traditional values. Results are already visible in the progress that the country has made in economic, social and political fields (GSDP, 2008). What had been a small village in the past, was transformed into “a vibrant emerging regional urban centre with more than 1.7 million inhabitants” (Salama & Wiedmann, 2013, p. 61) during the second half of the last century. Before this transformation life in Doha, the capital city of Qatar, took place on the market, the port as well as in and around the mosques. Nowadays, we can find a spacious area with a new international airport, the artificial island The Pearl, the reconstructed market Souq Waqif (Fig. 2.2), the West Bay area (Fig. 2.3), the cultural village Katara where Arabic art and cultural facilities are promoted (Fig. 2.4), the 250 hectare large Aspire Zone that acts as the region’s sports and shopping center and the also newly-built knowledge-intensive area Education City (Salama & Wiedmann, 2013) and Qatar University.

Furthermore, the prospect of Doha hosting the FIFA World Cup in 2022 has led to changes within the country. In respect of this spectacle, Qatar invests heavily in



Fig. 2.2 Souq Waqif



Fig. 2.3 Skyline of Doha's West Bay



Fig. 2.4 Katara cultural village

world-class infrastructure and in the improvement of its education and healthcare systems (CIA, 2016). By hosting this renowned sports event, Qatar has successfully managed to attract global interest and awareness as well as the marketing of Qatar as a brand. It is safe to say that Doha became “an important emerging regional and global capital in the Middle East” (Salama & Wiedmann, 2013, p. xxi) that attracts attention not only to the oil and gas sector, but also to culture and sports, tourism, politics and policy initiation.

2.2 Geography and Climate

Qatar is a small state on the Arabian Peninsula that borders on the Gulf (563 km long coastline) and on Saudi Arabia in the south (87 km long border). Its location in the center of the Gulf region and near the major petroleum deposits is strategically good. With 11,586 square kilometers, the country is almost twice the size of the U.S. state Delaware and just a little smaller than the U.S. state Connecticut. Qatar’s capital Doha is situated on the east coast of the country. On the whole, the terrain is almost flat and the desert is barren (CIA, 2016; Fig. 2.5).

The climate can be described as arid—winters are mild and very pleasant, summers are in contrast very hot and humid (CIA, 2016). The mean monthly temperature varies between 17 °C in January and 36 °C in July. In the summer, temperatures above 40 degrees are not uncommon. If it rains (which happens infrequently and mostly in winter months), the rain falls in brief showers (QTA, 2015). Haze, dust- and sandstorms are common occurrences (CIA, 2016).



Fig. 2.5 Qatar’s location in the Gulf region. *Source* Google Maps

There are only few renewable natural water resources in Qatar, which are used mostly for agriculture and private consumption (Mohtar, 2016). Qatar’s freshwater deficit is addressed by desalinated sea water. Desalination plants have high energy demand. However, “Qatar’s domestic water use is among the highest in the world” (Mohtar, 2016, p. 297).

2.3 Demography and Language

The total population of Qatar amounts to 2,559,267 in April 2016 (MDPS, 2016a). The State is home to people from all over the world resulting in the occurrence of many different ethnic groups. Over the years, Qatari nationals became a minority in their own country with just 12 percent of the total population (Snoj, 2013). In line with this, while the official language of Qatar is Arabic, English is the primary language used for communication in the country (QSA, 2009).

Is there trust between the different groups living in Qatar? The mean values for general trust are lowest for Qatari (0.20) and white-collar Arab expats (0.23). “White-collar immigrants from Asia and migrant laborers—who are predominantly from nations outside of the Middle East—display much higher levels of generalized trust” (Diob et al., 2017, p. 193). Mean values of trust for white-collar Asians is 0.49 and for migrant workers it is 0.46. For Qatari, women are more trusting than men. The high values for trust of expats (outside of Middle East) are in line with the observation that some foreigners in Qatar “develop emotional connections to the states where they reside” (Koch, 2016, p. 52). When it comes to cyberbullying behavior among young people in Qatar (Foody, Samara, El Asam, Morsi, & Khattab, 2017), Onsor, Alameer, Almonabih, Alqahtani, and Tweem (2012) found

that local children were more likely to be active bullies (21.1% in contrast to 17.4% for expat children) and non-nationals were more likely to be victims of bullying (39.9 vs. 33.1%).

Our examples of general trust and of cyberbullying exhibit that there are differences between the groups of inhabitants living in Qatar. The social coexistence of the groups, mainly (1) Qatari, (2) foreign white-collar expats, and (3) migrant workers, seems not to be easy and comfortable (Gardner et al., 2013; Nagy, 2006; Mohammad & Sidaway, 2016).

2.4 Culture and Religion

According to the constitution (Art. 1), Qatar's "religion is Islam and Shari'a law shall be a main source of its legislations". Key point in that formulation is that Shari'a is *a* source, and not the *one* source (Tok, Alkhatir, & Pal, 2016, p. 8). Moslem religion is a source of the state of Qatar, but not the only one.

The National Vision of Qatar "seeks to achieve development progress, yet at the same time it aims to preserve national culture" (GSDP, 2008, p. 35). The traditional Muslim country Qatar presents itself as a society whose daily life is divided into two parts—on the one hand the life of the women and on the other hand the life of the men. Mostly everything takes place separately: classes are gender-segregated at Qatar University, men and women pray in different rooms, bride and groom celebrate their wedding parties apart from each other. As it seems for Qataris it is perfectly normal—for Westerners it is elusive (Lundsgaard Ottsen & Berntsen, 2013). Qatar is therefore characterized as a very traditional country with a clear majority of 77.5 percent being Muslims. In addition, 8.5 percent of the population are Christians and the remaining 14.0 percent are Hindus or of other Indian Religions (CIA, 2016). As representatives for the Arabian culture, living and preferences, Doha will run four impressive museums in the future that present a huge artistic range "[f]rom traditional Islamic craft and historical objects to contemporary art" (Qatar Museums, 2016, 1st paragraph). The Museum of Islamic Art (MIA) provides a complete overview of Islamic art (Fig. 2.6), the Arab Museum of Modern Art is particularly intended for the local community that is interested in the creativity of today's Arab world. In the foreseeable future the National Museum and the 3-2-1 Qatar Olympic and Sports Museum will make a big contribution to the country's cultural landscape. They will open to give visitors the chance to delve into Qatar's history, cultural heritage, further development projects and sporting spirit (Qatar Museums, 2016a). The current Emir's sister Sheikha Al Mayassa bint Hamad Al Thani chairs Qatar Museums (QM), which manages Qatar's art collections and museums.

The Katara Cultural Village—or more often known just as Katara—is a further cultural highlight in the north of Doha directly by the sea. The ninety-nine hectare big area is the most frequently visited urban space in Qatar. It is designed "to simulate a traditional, real or imagined, Qatari village with covered alleyways and



Fig. 2.6 Museum of Islamic Art

narrow pedestrian streets” (Salama, Khalfani, & Al-Maimani, 2013, p. 50) and houses among others different theatres, art galleries, souks, cafes and restaurants (Fig. 2.7).

Highlights are the amphitheater and the public access to the beach—but only accessible by paying admission money—that invite to stay (Wiedmann & Salama, 2013; Fig. 2.8).

“However, the village itself is designated for an exclusive clientele and patronage as it is gated; visitors are generally screened before being admitted” (Salama, Khalfani, & Al-Maimani, 2013, p. 50). Cultural or public space has become commercialized over time so that the use is not achievable for every one of every social class (Wiedmann & Salama, 2013).

Furthermore, the redesign of the old Souq Waqif illustrates the Arabian culture in a nice mixture of modern and traditional national elements in the old city center



Fig. 2.7 Traditional Qatari buildings in Katara



Fig. 2.8 Amphitheater in Katara cultural village



Fig. 2.9 Traditional goods at Souq Waqif

of Doha (Fig. 2.9). With the help of traditional construction techniques, the market is rebuilt as similar to the original as possible, in contrast to the new souk located directly by the sea. Surrounded by many shops, restaurants and cafes, the recreated shopping and meeting place is “a unique experiment to combine cultural heritage, tourist attraction, public realm and leisure space with the still remaining function as traditional market place” (Wiedmann, Mirincheva, & Salama, 2013, p. 30).

2.5 Politics

Qatar is a monarchy, which is ruled by the tribally based elite Al Thani family, originating from the Ma’adid clan of the Banu Tamim tribe (Gause, 1994) and whose governmental system is based on the separation of powers (Hukoomi, 2016b). The Emir is the Head of State of Qatar (Hukoomi, 2016a). In 2013, the former Emir Sheikh Hamad bin Khalifa Al Thani, who “has embarked on an ambitious program of modernizing the country” (Kamrava, 2009, p. 401), passed the power to his son Sheikh Tamim bin Hamad bin Khalifa Al Thani. This was the first time in Qatar’s history that a leader voluntarily retired from the position of Emir. The change in political leaders did not alter the structure of high-level decision making, but “what has differed since the 2011–2013 period is the larger regional and international contexts within which Qatari domestic and international policies are formulated, executed, and, importantly, perceived” (Kamrava, 2015, p. xii). Together with the legal heir the Emir constitutes the executive authority of Qatar. The legislative authority is vested in the Advisory Council and the judicial authority in courts of law. Set under the authority of the Emir, the Defense Council

supervises the armed forces (Hukoomi, 2016b). A new permanent Constitution became effective on June 8, 2014 (Hukoomi, 2016c). As determined by this Constitution, the Council of Ministers supports the executive authority. It consists of the Prime Minister and six supreme councils. The Prime Minister is the head of the Council of Ministers and is appointed by the Emir just like all other ministers (Hukoomi, 2016b). Taking a deeper look at the monarchy one might find resemblances to the way companies are operated. The oil industry, which is owned by the government, is responsible for the power possessed by the state. Consequently, the decisions on how to spend oil revenues and who will profit from it and by how much is up to the rulers of Qatar. Thus, with oil and gas becoming the driving force of economy, the corporate identity and power of the ruling family of Qatar grows. Citizens are employed by the political elite and receive financial benefits from them. Because of that the citizens are tied to the rulers and are compelled to approve of the way of governance if they aim at success (Gause, 1994).

In terms of foreign and security politics, Qatar pursues the strategy of partnership with the United States of America. The U.S. run two large military bases in Qatar, namely Al Udeid air base and As Sayliyah base housing the army (Kamrava, 2015, p. 89). Al Udeid (near Doha) is the largest U.S. base in the Middle East accommodating about 10,000 troops.

Referring to Ulrichsen (2014), Qatar played an important role during the time of the Arab Spring. Qatar's Al Jazeera shaped the emerging narratives of the protest and mobilized Arab support for the protest movements. "At a time of great regional uncertainty, Qatar presented a compelling image as an outpost of stability and prosperity, even as the protests reached neighboring Gulf Cooperation Council (GCC) states" (Ulrichsen, 2014, p. 2).

2.6 Rentier State and Rentier Mentality

Due to the gas-based prosperity, there is no need for taxation in Qatar. Most of the government's revenues come from the international economy and the state does not have to collect any further money from its citizens. States with this character, where governments are the most powerful players in the local economy, are called "rentier states".

In a rentier state, "only few are engaged in the generation of this rent (wealth), the majority being only involved in the distribution and utilization of it" (Beblawi, 1987, p. 51). The principal recipient of the external rent is the state's government, which in turn distributes the rent to its citizens in the GCC states (but not, for instance, in Venezuela). This leads to a specific mentality of the citizens in the Arab oil-producing countries: the "rentier mentality". In a rentier state, there is a break in the work—reward causation. "Reward—income or wealth—is not related to work and risk bearing, rather to chance or situation", Beblawi (1987, p. 52) emphasizes. There are some implications of this rentier mentality.

- It is problematic to motivate the privileged citizens to work hard (as money comes anyway);
- if (non-privileged) expatriates take up employment in the rentier state, they have to do it under ward of a privileged citizen (leading to the *kafāla* system; Beblawi, 1987, p. 56); and
- the privileged citizens tend to minimize the number of privileged people (leading to massive problems for expatriates to acquire citizenship in the rentier state).

There is no doubt that Qatar nowadays is indeed a rentier state.

Here, one question is far more important than that of taxation: How to spend and distribute the “rent” revenues received by the gas business? This question can be answered as follows: by providing generous benefits to the citizens in the form of free education, healthcare, housing, consumer goods and services. “All this amounts to an absence of poor Qataris” (Kamrava, 2015, p. 112). This results in the contentment of the people and gives governments the freedom to exercise their power because there is nearly no opposition of the citizens. Citizens adopt the rentier mentality as they appreciate the benefits and also the jobs they receive from the state and do not press for political participation (Gause, 1994; Reiche, 2010). “Qatar’s ruling elite, with their immense access to external rents and a small citizen population, has been better placed than many of their neighbors to engage extensively in distributional politics” (Babar, 2014, p. 409).

2.7 Economy

Qatar’s pre-oil economy was dominated by the pearl industry; however, in the 1930s, demand for pearls collapsed due to the introduction of cultured pearls (Ulrichsen, 2016, p. 23). Production of oil in the Gulf area began in 1933 in Bahrain; in 1939, oil reserves in Qatar were discovered. Qatar’s economy can be characterized as “state capitalism” (Ulrichsen, 2016, p. 68), as nearly all important oil and gas producing companies (as, for instance, Qatargas and Qatar Petroleum) as well as other non-oil/gas-based firms as Qatar Airways (transportation), Industries Qatar (heavy industry), Qatari Diar (real estate) or Ooredoo (telecommunication) are entirely state-owned (Ulrichsen, 2016, p. 71).

The oil and natural gas sector of Qatar is responsible for over 50 percent of the Gross Domestic Product (GDP) in 2016 (The Heritage Foundation, 2016). The country’s reserves of gas are the third largest in the world (CIA, 2016) and in 2007, the arising businesses made Qatar even to the top liquefied natural gas (LNG) exporter of the world (Alraouf, 2012). Sourcing from Qatar’s big North Field near Ras Laffan, Qatar Petroleum (Alfadala & El-Halwagi, 2017) runs 5 LNG production plants, each with a capacity of 7.8 million tons annually. Qatar Petroleum’s 56 ships bring the produced LNG from Ras Laffan Port to the target markets (Esen & Oral, 2016). “A significant portion of the LNG shipped by Qatar is

re-gasified in receiving countries where Qatar either co-owns terminals (Italy, UK and USA) or leases terminal capacity on a long-term basis (Belgium)” (Ibrahim & Harrigan, 2012, p. 9). Qatar’s exports are dominated by gas and oil: in 2015, gas exports count for 64.8% of all exports, oil exports for further 13.6% and other petrochemical products for 4.4% (GTAI, 2016, p. 3). Main export countries include Japan (20.8% of all exports), South Korea (17.3%) and India (11.9%) (GTAI, 2016, p. 4). The huge gas reserves are the main economic strength of Qatar; however, they are also its major weakness, as Qatar is dependent on gas exports and the international gas prizes (Wright, 2017). “Most risks” of Qatar’s economic future “are grounded in international oil-price movements”, Qatar’s Ministry of Development Planning and Statistics states (MDPS, 2015a, p. 2).

Due to its oil and gas resources, Qatar is not only the country with one of the world’s highest per capita income, but also the country with the lowest unemployment rate. However, the oil prices have started to decrease remarkably leaving Qatar no choice but to diversify its economy (CIA, 2016). Consequently, the country’s investment in non-energy sectors is gaining ground (Hukoomi, 2016a). The Ministry of Development Planning and Statistics “sees steady expansion in the non-oil and gas sector, with double-digit growth in 2015, but this will taper in 2016 and 2017 as investment and construction activity begins to plateau, and as population growth eventually slows” (MDPS, 2015b, p. iii). As stated in the country’s National Vision 2030, Qatar aims at a

diversified economy that gradually reduces its dependence on hydrocarbon industries, enhances the role of the private sector and maintains its competitiveness through:

- Expansion of industries and services with competitive advantages derived from hydrocarbon industries
- Design and development of economic activities in which Qatar can specialize, including the technical and human requirements of these activities
- A knowledge-based economy characterized by innovation; entrepreneurship; excellence in education; a world-class infrastructural backbone; the efficient delivery of public services; and transparent and accountable government (GSDP, 2008, p. 29).

To strengthen this “post-carbon economy”, Qatar established the Qatar Science and Technology Park (QSTP), a Free Zone (QSTP, 2016c), to attract “companies and institutes from around the world to develop and commercialize their technology in Qatar, and [to] help [...] entrepreneurs launch technology businesses” (QSTP, 2016a, 1st paragraph). Free zones or free trade zones are an essential tool to attract international companies, entrepreneurs and investors. They establish businesses in the country, which grants benefits like partially or fully abolished taxation, the provision of modern and high-class infrastructure, the reduction of bureaucratic demands and more relaxed labor legislation (Salama & Wiedmann, 2013). Among other things, companies and institutes of Qatar Science and Technology Park benefit from tax exemption and duty-free import of needed goods and services (QSTP, 2016b). Qatar’s plan to create a dynamic, competitive and more diversified economy is also manifested in its National Vision 2030, where the economic development is one of the four pillars of the vision (GSDP, 2008). Many companies



Fig. 2.10 Qatar Petroleum headquarters in the West Bay area

in Qatar, especially the powerful ones, strive to support this vision. One of them is Qatar Petroleum (QP), a state-owned public corporation which is responsible for all phases of the oil and gas industry (QP, 2015; Fig. 2.10). Its revenue in 2014 was about 169 billion QR (46 billion U.S. dollar) and its net income amounted to 113 billion QR (31 billion U.S. dollar) (QP, 2014).

Qatar Airways also contributes to the vision by shaping Doha as a key aviation hub—regional as well as global (Qatar Airways, 2016b). The airline is one of the most renowned airlines across the globe while growing faster than any other airline in the world. More than 40,000 professionals serve in this business. Just as in 2011 and 2012, Qatar Airways has been rewarded with the title “Airline of the year” by Skytrax in 2015 (Qatar Airways, 2016a). Qatar’s path to a knowledge society is also supported by the global communications company Ooredoo. Its headquarters are based in Qatar, but it operates networks not only in the Middle East, but in North Africa, Southeast Asia and Subcontinent as well (Ooredoo, 2015). The TV news channel Al Jazeera, which employs journalists from more than 60 countries, has its headquarters in Qatar, too. Today, the channel is received by 220 million households in more than 100 countries (Hossili, 2013). Last but not least, Qatar owns some successful banks, like Qatar National Bank which is the biggest bank in Qatar and Qatar’s leading Islamic Bank Qatar Islamic Bank, both with the ambition to expand their international presences (Qatar Islamic Bank, 2016; Qatar National Bank, 2016).

Due to the small population that lacks the necessary skills to drive Qatar's economic growth, the country's development depends largely on foreign workers (Moini, Bikson, Neu, & DeSisto, 2009). "The import of talent spans the full labor market" (Powell, 2014, p. 258). Those expatriate workers are controlled by the country's sponsor system called *kafāla* (Diop, Johnston, & Le, 2015). "The *kafāla* links individual guest workers to a particular job and, more importantly, to a particular citizen-sponsor or corporate entity (a *kafeel*)" (Gardner, 2010, p. 203). Entering one of the GCC states in the function of a guest worker is only possible through the *kafāla*. The guest worker signs a contract to work in the GCC for usually two years (Gardner, 2010). Till 2016, they were not allowed to change their employee; however, they may leave the country for holiday. Labor unions are banned.

Qatar-based firms are linked to companies all over the world. Salama, Wiedmann, Thierstein and Al Ghatam (2016) studied city connectivity from the office networks of multi-location advanced producer services and of high-tech firms. High-tech companies operate in the industries of chemistry and pharmacy, machinery, electronics, computer hardware, etc., while advanced producer services can be found in banking and finance, advertising and media, information and communication services, etc. (Salama et al. 2016, p. 287). The intra-firm connectivity of Qatar-based advanced producer services is greatest with New York, followed by London, Hong Kong, Tokyo, Paris and Singapore. However, the connectivity of high-tech companies is dominated by firms in Singapore, followed by companies in Moscow, Paris, Sao Paulo, Buenos Aires and Shanghai. "In contrast to Advanced Producer Service sector, High-Tech seems to be networked much more with Asian locations while North-American locations play no role" (Salama et al., 2016, p. 289).

Due to the increasing dependence on foreign workers, the government introduced a plan to counteract this phenomenon. The so-called "Qatarization", a concept that requires that a certain percentage of Qataris have to be employed in private-sector companies, was introduced by the Qatari Labor Law of 1962 and mentioned again in 2004 (Zakhidov, 2015). This strategy was implemented by the country to bring Qataris into professional and managerial jobs especially in the private sector which are currently occupied by expatriate workers. The government focusses strongly on the private sector because only a really few percent of all employed nationals work for the truly private sector (Moini et al., 2009; Powell, 2014).

2.8 Public Health

With the discovery of natural resources and the wealth that resulted from it, Qatar embraced the opportunity to provide social services, like healthcare (Ali, Gjebrea, Sifton, Alkuwari, & Atun, 2016), to its citizens free of charge, which were more or less neglected by the government before (Gause, 1994). In 2013, health

expenditures amounted to 2.2 percent of the country's GDP. Especially the new Emir prioritizes the expansion of Qatar's healthcare system and makes sure to establish high-class infrastructures in this regard (CIA, 2016). The improvement of healthcare in the country is also declared as a long term goal in Qatar's National Vision 2030. The idea of GSDP (2008, p. 17) is to establish a

comprehensive world-class healthcare system whose services are accessible to the whole population, including:

- Effective and affordable services in accordance with the principle of partnership in bearing the costs of health care
- Coverage of preventive and curative health care, both physical and mental, taking into account the differing needs of men, women and children
- High quality research directed at improving the effectiveness and quality of healthcare

An integrated system of health care offering high-quality services through public and private institutions operating under the direction of a national health policy that sets and monitors standards for social, economic, administrative and technical aspects of health care.

A skilled national workforce capable of providing high quality health services.

Continued commitment by the state to provide sufficient funds for maintaining the health of Qatar's population in accordance with the principle of partnership in bearing the costs of health care.

Additionally, Sheikha Moza bint Nasser Al Missned, wife of the former Emir, launched Qatar's National Health Strategy 2011–2016 in 2011 to support this vision and to move Qatar towards the achievement of these objectives (SCH, 2013).

Hamad Medical Corporation (HMC) is not only Qatar's main provider of secondary and tertiary healthcare, but also one of the leading hospital providers in the Middle East. It already manages eight hospitals and plans an expansion in the form of four additional hospitals to support Qatar's plan for the future (Hamad Medical Corporation, 2016). All in all, in 2015 there are 15 hospitals with about 3000 beds in Qatar.

Also Sidra Medical and Research Center, which is a hospital for women and children, shall support Qatar's vision in terms of healthcare (Fig. 2.11). For this purpose, they seek to collaborate with Weill-Cornell Medicine, Hamad Medical Corporation and Qatar Biobank. The medical center is a member of the Qatar Foundation for Education, Science and Community Development. On May 1, 2016 it has opened its first Outpatient Clinic and is planning to introduce further clinics and services as the year progresses (Sidra, 2016).

The Orthopaedic and Sports Medicine Hospital Aspetar located in Qatar is the first hospital in the Gulf region that provides medical treatment for sports-related injuries. Some of the best practitioners and researchers in the field of sports medicine are employed in the ultra-modern facility located at the Aspire Zone (Aspetar, 2015).



Fig. 2.11 Sidra Medical and Research Center. *Photo* Tamara Heck (2016, personal communication)

2.9 Education

According to the National Vision 2030, one of the most important developments in Qatar is that of a

world-class educational system that equips citizens to achieve their aspirations and to meet the needs of Qatar’s society, including:

- Educational curricula and training programs responding to the current and future needs of the labor market
- High quality educational and training opportunities appropriate to each individual’s aspirations and abilities
- Accessible educational programs for life-long learning (GSDP, 2008, p. 16)

To advance the education system in Qatar, an Emiri Decree established the Qatar Foundation for Education, Science and Community Development in 1995. Under the leadership of Sheikha Moza the private, non-profit organization has set itself to improve the quality of life in Qatar and the surrounding region by providing world-class educational opportunities. This vision is realized in a new higher education campus located in the northwest of Doha called Education City, which is, according to Khodr and Reiche (2012, p. 149), “a city in-the-city”. Based on the model of the branch campus concept, the 2500 acres big area accommodates

world-class universities that “offer their most prestigious programmes to Qatar as fully-fledged partners of Qatar Foundation” (Salama & Wiedmann, 2013, p. 55). These foreign universities that offer their programs to Qatar’s students are mostly from the UK, the United States and France and include, according to Crist (2015): Virginia Commonwealth University (Art and Design), Weill Cornell Medical College (Healthcare), Northwestern University (Communication, Journalism), HEC Paris (Business and Management), and University College London (Librarianship and Museum Practice). The world’s most expensive national education project is the first step of Doha’s plan to become an important knowledge center with a knowledge-based economy (Figs. 2.12 and 2.13). Since 2016, Sheikha Moza’s daughter and sister of the current Emir Sheikha Hind bint Hamad Al-Thani is CEO and vice-chairperson of Qatar Foundation.

Already well before its establishment in 1973, Qatar University (QU)—the “country’s national and major institution of higher education” (QU, 2016, 1st paragraph)—was founded. “[A]cross all Arab countries and especially the Arab Gulf region, higher education, indeed education generally, has been extended substantially in the past 2 decades” (Donn & Al Manthri, 2010, p. 97). In 2003, the RAND-Qatar Policy Institute (RQPI) was engaged to support the reform to strengthen Qatar University (Fig. 2.14) to adhere to the needs of the younger generations responsible for Qatar’s future in connection with the establishment of a knowledge society (Moini et al., 2009).

Nowadays, the university has reached substantial international attention and is frequently mentioned in the international media. According to Times Higher Education, Qatar University is the most international university in the world. This is the result of the 2015–2016 ranking of 800 universities considered altogether. The



Fig. 2.12 Carnegie Mellon University in Qatar as an example for the prestigious architecture in Education City

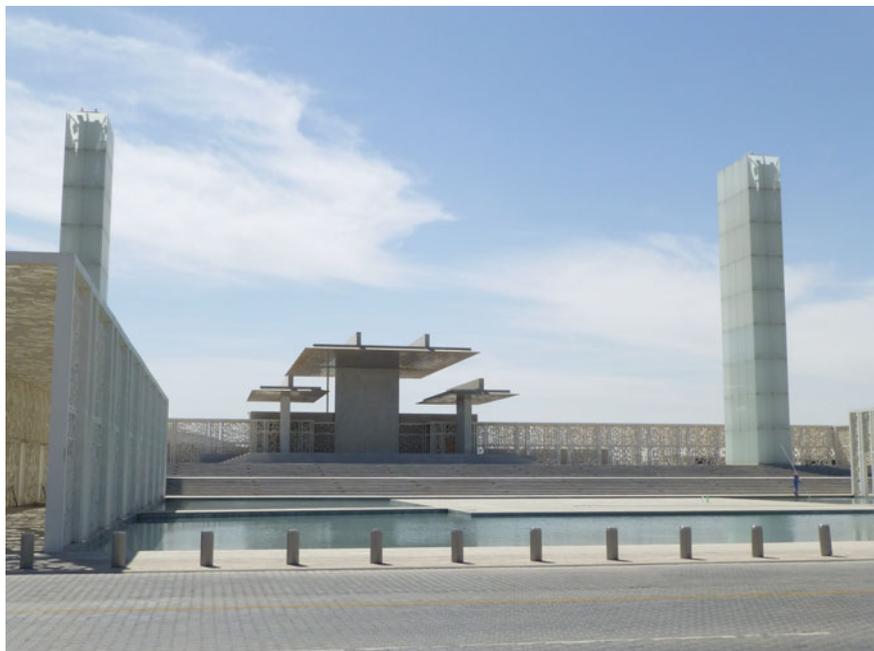


Fig. 2.13 Ceremonial court in Education City



Fig. 2.14 Qatar University

indicator used for this ranking is the international outlook indicator of the Times Higher Education World University Rankings 2015–2016. This indicator includes the proportion of international staff and students and of research papers published with at least one international co-author. The overall ranking examined, beside the international outlook indicator, four further indicators: teaching, research, citations and industry income. It is striking that while Qatar University comes first in the International University Ranking, it ends up on one of the last ranks (601-800) in the overall ranking of 800 universities (Bothwell, 2016). Different colleges from Islamic studies via engineering through to medicine and pharmacy, a central library, an information technology center, as well as sports and recreational facilities are offered at Qatar University (Salama & Wiedmann, 2013; QU, 2016d).

Due to low scores in the Trends in International Mathematics and Science Study (TIMSS) and the Program for International Assessment (PISA), Qatar tasks the RAND Corporation, a non-profit organization, to rate the K-12 education system and build a new strategy from the bottom (Ellili-Cherif, Romanowski, & Nasser, 2012). The project started in 2002 and is called Education for a New Era (EFNE), an education that makes it possible to build “a world-class system that would meet the country’s changing needs” (Brewer et al., 2007, p. xvii). Before that, there was no clear idea of how to provide quality education, the performance was low, school buildings were in poor conditions, classrooms were overcrowded and teachers were badly paid and had little training opportunities. Nowadays, the case has changed: The organization “has created immense opportunities for international educational consulting with numerous organizations flooding Qatar to offer their “expertise” in a variety of educational areas” (Ellili-Cherif et al., 2012, p. 471). Teachers are registered and have to acquire a license now, so that the Supreme Education Council (SEC) is able to manage, monitor and assess the teachers and their practice. Furthermore, all government schools were transformed into independent schools that can act autonomously now, the “curriculum standards that address both academic and non-academic dimensions of learning” were established and also the teaching strategies were changed “to be more student-centered, using modern information and communication technology, and conducting scientific research” (SEC, 2011, p. 7). The plans are supposed to be implemented until 2016. Time will tell how successful the results were until now, are today and will be in the future and to what extent education has accomplished its specific tasks of “ending illiteracy, diversification of hydrocarbon-based economies, and preservation of cultural integrity” (Weber, 2011, p. 2589). Said states for Qatar in 2016, that students’ “science achievement on the TIMMS and PISA tests is significantly below the international average despite the progress achieved following education reforms and implementation of new curriculum standards” (Said, 2016, p. 2254). While 500 is the average international score, students at schools in Qatar perform in TIMMS in 2011 with 394 points (grade 4) and 419 points (2011). This is below the international average, but there is indeed progress, as grade 4 students had in 2007 only 294 points and grade 8 students 319 points (Said, 2016, p. 2258). The PISA achievements of students in Qatar are similar to the TIMMS results. In 2012, 15-year old students reached 384 points (again, 500 is the international average);

however, there is a clear improvement in contrast to 2006 (349 points) and more or less the same result as in 2009 (379) (Said, 2016, p. 2259).

Besides different public, school, academic, special and governmental libraries the indeed most important one is the new Qatar National Library (QNL) that is located in Education City (QNL, 2016b). Likewise, under the head of Qatar Foundation and therefore of Sheikha Moza, the library takes on the three tasks of being a “National Library, University and Research Library, and a Metropolitan Public Library of the digital age” (QNL, 2016a, 2nd paragraph). Today 1.2 million printed books, 500,000 ebooks, full-text databases, periodicals and newspapers, as well as special collections are offered. Everybody living in Qatar with a valid Qatari ID or residence permit already has access to a vast amount of online resources (QNL, 2016a). With the establishment of this project, Qatar made a further attempt to become a knowledge society, as

the number of information centers is one of the indicators of a country’s preparedness to support a knowledge-based economy. More information centers collecting data means more information and knowledge can reside in more places and thus more people can access them (Wand, 2016, p. 164).

2.10 Tradition Versus Modernity

With the decision of the political leaders to establish a knowledge society while maintaining local culture and traditions (GSDP, 2008), the state of Qatar has become a showplace of many different facets. The main location of this dichotomy is the capital city Doha: “Many parts of the city resemble a surreal and incongruent mixture of Hong Kong, on the one hand and Tucson, Arizona, on the other” (Kamrava, 2015, pp. 5–6). While giant skyscrapers with glittering facades and other high-end, ultramodern buildings have been raised on the one side, other parts are kept traditional or are rebuilt by imitating the old, original style. The West Bay of Doha, located at the corniche, can be described as a futuristic neighborhood illuminated by millions of lights at nighttime and constantly under construction to become even more imposing (Fig. 2.15).

Right at the other side of the corniche, the old, traditional Souq Waqif is situated (Fig. 2.16), which is an Arabian marketplace where, especially in the evening, many people—mostly dressed in their national costumes—meet, socialize and purchase the offered goods.

However, this is not the only visual contrast in the country as there are further modern, but also traditional places in the interior. The Aspire area is a sports complex in Qatar which houses, among sports facilities, modern buildings including Villaggio—a large shopping mall with entertainment facilities, like an ice rink and an amusement park. Additionally, the artificial island called The Pearl is a highly attractive state-of-the-art complex of stores, cafes and apartments for Qatar’s residents right by the sea (Fig. 2.17).



Fig. 2.15 Doha West Bay by night



Fig. 2.16 Birds, cats and dogs are for sale in the narrow alleys of Souq Waqif



Fig. 2.17 The artificial Island The Pearl

Admittedly, the sudden wealth has incrementally changed the city space by constructing skyscrapers, high-rise buildings and mansions—one more impressive than the other. However, at the same time parts of the poor, nomadic lifestyle that characterized the life of nationals before the oil boom have been maintained: Tents decorate the desert that serve as hideouts for Qataris during the weekends and a traditional animal market where sheep, goats and even camels are sold still exists in the country (Fig. 2.18).

These differences are, however, not only restricted to the cityscape as Qatar's people can also be described as divided in multiple ways. On the one hand, they are divided by their way of thinking as cultural attitudes are slowly changing in Qatar (Al-Kitbi, 2010). Some of the residents, among them Sheikha Al Mayassa Hamad bin Khalifa Al Thani, strive to adapt modern views and embrace and try new ways, while others strictly stick to the local culture and religion and do not accept anything new if they feel that it offends religious sensibilities. On the other hand, they are divided by their status in the country. In Qatar, there are three different groups of workers that need to be distinguished: Qataris, foreign talents and low-skilled foreign workers. Qataris who often lack education and skills traditionally work mainly in the easier and well-paid public sector, while well-educated expats nowadays fill professional and managerial positions in private companies and low-skilled expats perform poorly paid jobs in the construction and service sectors (Hertog, 2011; Moini et al., 2009). Especially with the prospect of hosting the FIFA



Fig. 2.18 Qatar animal market

World Cup in 2022, unskilled workers are needed for project-related work (Fig. 2.19) and thereby face conditions of modern slavery (Dorsey, 2015).

For Al-Ammari and Romanowski (2016, p. 1537) “globalization and modernization have benefitted Qatar. These benefits include a massive educational reform, access to world-class education (...), an increase in living standards, improved transportation, financial opportunities and changes in society and lifestyles”. The Qatari family lives between the poles of the nuclear family, the tribe, the house-keeping personnel and the cultural changes (Kassem & Al-Muftah, 2016). The changes in culture affect polygamy; there is a decline since fewer women are willing to become second wife and first wives prefer divorce to accepting a second wife (Al-Ammari & Romanowski, 2016, p. 1537). About three quarter of Qatari respondents to Al-Ammari’s and Romanowski’s survey agree, that it is better for a man to have only one wife. However, 7.9% of Qatari men have two wives, and further 0.7% are married with more than two women (2015; MDPS, 2016b, p. 12). The age of the first marriage is on average 23.8 years (women) and 26.3 years (men) (2015; MSPS, 2016b, p. 9). The marriage rate per 1000 Qatari population (15 years+) is 22.2 for females and 24.1 for males (2015; MDPS, 2016b, p. 6). Marriages are mainly arranged (62.3%) especially by parents and other relatives, but also by introducing the partner (20.2%) and by choice of the spouses themselves (17.5%). For most of the Qatari, the authority of the father should be respected under any circumstances (Al-Ammari & Romanowski, 2016, p. 1549). Due to the



Fig. 2.19 The stadiums for the FIFA World Cup 2022 (here in the Aspire Zone) are still under construction

wealth of the nation, household work is not popular among Qatari. Nearly 80% of Qatari households employ at least one domestic worker; about 6% have 5 or more employees for housekeeping (Al-Ammari & Romanowski, 2016, p. 1550).

One cannot overlook consanguinity (especially, marriage of first cousins) in Qatar. Consanguinity is a common marriage pattern within the Arab world; however, it could be a risk factor for health problems. Sandridge, Takeddin, Al-Kaabi, and Frances (2010) asked Qatari born between 1946 and 1991 on their relations to their spouses, for themselves and for their parents. 22% of the parent generation lived in a consanguineous relation and further 15% married a member of the same tribe. For the generation of the children, the values changed in favor of consanguinity. 35% of the respondents were married to a close relative and 9% to a member of the same tribe (Sandridge et al., 2010, p. 65). Two reasons dominate the justification of consanguinity. Those who married a close relative see benefits that (1) the bride or groom is already familiar to the partner and (2) that consanguinity promotes stability, traditions and continuity of culture and way of life (Sandridge et al., 2010, p. 68).

Prospectively, Qatar has to face the challenge “of aligning Arabian Gulf expectations, traditions, and norms with those of knowledge economies” (Wiseman, Alromi, & Alshumrani, 2014, p. 2).

We now have an overview of how Qatar is positioned in terms of economic activities, health conditions and the education system. To what extent do these and of course many other factors influence the development status of the country? In this context, we additionally want to introduce the concepts of knowledge economy and of knowledge-based development, followed by explanations of the country's strides towards these concepts in the subsequent chapters of this book.

References

- Al-Ammari, B., & Romanowski, M. H. (2016). The impact of globalisation on society and culture in Qatar. *Pertanika Journal of Social Science and Humanities*, 24(4), 1535–1556.
- Alfadala, H. E., & El-Halwagi, M. M. (2017). Qatar's chemical industry: Monetizing natural gas. *Chemical Engineering Progress*, 113(2), 38–41.
- Ali, F. M. H., Gjbrea, O., Sifton, C., Alkuwari, A., & Atun, R. (2016). Health policy making in a transformative state. In M. E. Tok, L. R. M. Alkhater, & L. A. Pal (Eds.), *Policy-making in a transformative state. The case of Qatar* (pp. 179–212). London, UK: Palgrave Macmillan.
- Al-Kitbi, E. (2010). Where do GCC women stand in the development process? In C. Koch & L. Stenberg (Eds.), *The EU and the GCC: Challenges and prospects under the Swedish EU presidency* (pp. 95–103). Dubai, AE: Gulf Research Center.
- Alraouf, A. A. (2012). Dohaization: Constructing a new urbanity brand amid Gulf and Middle Eastern cities. Retrieved from www.analchemistryofarchitecture.blogspot.com.
- Aspetar. (2015). *About Aspetar*. Retrieved from www.aspetar.com.
- Babar, Z. R. (2014). The cost of belonging: Citizenship construction in the state of Qatar. *Middle East Journal*, 68(3), 403–420.
- Beblawi, H. (1987). The rentier state in the Arab World. In H. Beblawi & G. Luciani (Eds.), *Nation, state and integration in the Arab world. Vol. 2: The Rentier State* (pp. 49–62). London, UK: Croom Helm, New York, NY: Methuen.
- Bothwell, E. (2016, January 14). The world's most international universities 2016. *Times Higher Education*. Retrieved from www.timeshighereducation.com.
- Brewer, D. J., Zellman, G. L., Ryan, G., Goldman, C. A., Stasz, C., & Constant, L. (2007). *Education for a New Era: Design and implementation of K–12 education reform in Qatar*. Santa Monica, CA: RAND Corporation.
- CIA. (2016). *The World Factbook Qatar*. Retrieved from www.cia.gov.
- Commins, D. (2012). *The Gulf states: A modern history*. London, UK: I.B. Tauris & Co Ltd.
- Crist, J. T. (2015). Innovation in a small state: Qatar and the IBC cluster model of higher education. *The Muslim World*, 105(1), 93–115.
- Diob, A., Jardina, A. E., Tessler, M., & Wittrock, J. (2017). Antecedents of trust among citizens and non-citizens in Qatar. *Journal of International Migration and Integration*, 18(1), 183–202.
- Diob, A., Johnston, T., & Le, K. T. (2015). Reform of the *kafāla* system: A survey experiment from Qatar. *Journal of Arabian Studies. Arabia, the Gulf, and the Red Sea*, 5(2), 116–137.
- Donn, G., & Al Manthri, Y. (2010). *Globalisation and higher education in the Arab Gulf states*. Oxford, UK: Symposium Books Ltd.
- Dorsey, J. M. (2015). How Qatar is its own worst enemy. *The International Journal of the History of Sports*, 32(3), 422–439.
- Ellili-Cherif, M., Romanowski, M. H., & Nasser, R. (2012). All that glitters is not gold: Challenges of teacher and school leader licensure licensing system in Qatar. *International Journal of Educational Development*, 32, 471–481.
- Esen, V., & Oral, B. (2016). Natural gas reserve/production ratio in Russia, Iran, Qatar and Turkmenistan: A political and economic perspective. *Energy Policy*, 93, 101–109.

- Foody, M., Samara, M., El Asam, A., Morsi, H., & Khattab, A. (2017). A review of cyberbullying legislation in Qatar: Considerations for policy makers and educators. *International Journal of Law and Psychiatry*, 50, 45–51.
- Gardner, A. M. (2010). Engulfed: Indian guest workers, Bahraini citizens and the structural violence of the kafala system. In N. De Genova & N. Peutz (Eds.), *The deportation regime: Sovereignty, space, and the freedom of movement* (pp. 197–223). Durham, NC: Duke University Press.
- Gardner, A. M., Pessoa, S., Diop, A., Al-Ghanim, K., Trung, K. L., & Harkness, L. (2013). A portrait of low-income migrants in contemporary Qatar. *Journal of Arabian Studies. Arabia, the Gulf, and the Red Sea*, 3(1), 1–17.
- Gause, F. G. (1994). *Oil monarchies: Domestic and security challenges in the Arab Gulf states*. New York, NY: Council on Foreign Relations.
- GSDP. (2008). *Qatar National Vision 2030*. Doha, QA: General Secretariat for Development Planning.
- GSDP. (2011). *Qatar national development strategy 2011–2016*. Doha, QA: General Secretariat for Development and Planning.
- GTAI. (2016). *Katar. Wirtschaftsdaten kompakt*. Bonn, Germany: Germany Trade & Invest.
- Hamad Medical Corporation. (2016). *Our organization*. Retrieved from www.hamad.qa.
- Hertog, S. (2011, May 31). The cost of counter-revolution in the GCC. *Foreign Policy*. Retrieved from www.foreignpolicy.com.
- Hossili, P. (2013, December 18). Hello, this is Al Jazeera. Retrieved from www.hossli.com.
- Hukoomi. (2016a). *About Qatar*. Retrieved from www.gov.qa.
- Hukoomi. (2016b). *Government and legislatives*. Retrieved from www.gov.qa.
- Hukoomi. (2016c). *The constitution*. Retrieved from www.gov.qa.
- Ibrahim, I., & Harrigan, F. (2012). Qatar's economy: Past, present and future. *QScience Connect* 2012, 9 (24 pp.).
- Kamrava, M. (2009). Royal factionalism and political liberalization in Qatar. *Middle East Journal*, 63(3), 401–420.
- Kamrava, M. (2015). *Qatar: Small state, big politics*. Ithaca, NY: Cornell University Press.
- Kassem, L. M., & Al-Muftah, E. (2016). The Qatari family at the intersection of policies. In M. E. Tok, L. R. M. Alkhater, & L. A. Pal (Eds.), *Policy-making in a transformative state. The case of Qatar* (pp. 213–239). London, UK: Palgrave Macmillan.
- Khodr, H., & Reiche, D. (2012). The specialised cities of the Gulf cooperation council: A case study of a distinct type of policy innovation and diffusion. *Digest of Middle East Studies*, 21(1), 149–177.
- Koch, N. (2016). Is nationalism just for nationals? Civic nationalism for non citizens and celebrating National Day in Qatar and the UAE. *Political Geography*, 54, 43–53.
- Lundsgaard Ottsen, C. L., & Berntsen, D. (2013). The cultural life script of Qatar and across cultures: Effects of gender and religion. *Memory*, 22(4), 390–407.
- MDPS. (2015a). *Qatar economic outlook 2015–2017*. Doha, QA: Ministry of Development Planning and Statistics.
- MDPS. (2015b). *Qatar economic outlook 2015–2017 Update*. Doha, QA: Ministry of Development Planning and Statistics.
- MDPS. (2016a). *Monthly figures on total population*. Doha, QA: Ministry of Development Planning and Statistics.
- MDPS. (2016b). *Marriage & divorce in the State of Qatar, 2015*. Doha, QA: Ministry of Development Planning and Statistics.
- Mohammad, R., & Sidaway, J. D. (2016). Shards and stages. Migrant lives, power, and space viewed from Doha, Qatar. *Annals of the American Association of Geographers*, 106(6), 1397–1417.
- Mohtar, R. H. (2016). Integrated water, energy, and food governance: A Qatari perspective. In M. E. Tok, L. R. M. Alkhater, & L. A. Pal (Eds.), *Policy-making in a transformative state. The case of Qatar* (pp. 295–397). London, UK: Palgrave Macmillan.

- Moini, J. S., Bikson, T. K., Neu, C. R., & DeSisto, L. (2009). *The reform of Qatar University*. Santa Monica, CA: RAND Corporation.
- Nagy, S. (2006). Making room for migrants, making sense of difference: Spatial and ideological expressions of social diversity in urban Qatar. *Urban Studies*, 43(1), 119–137.
- Onsor, A., Alameer, A., Almonabih, H., Alqahtani, B., & Tweem, O. (2012). *Bullying amongst students: Characteristics, reasons and consequences*. Doha, QA: Al Aween Social Rehabilitation Center.
- Ooredoo. (2015). *Annual report 2015*. Doha, QA: Ooredoo.
- Powell, J. J. (2014). University roots and branches between “Glocalisation” and “Mondialisation”: Qatar’s (Inter)national Universities. In A. W. Wiseman, N. H. Alromi, & S. Alshumrani (Eds.), *Education for a knowledge society in Arabian Gulf countries* (pp. 253–276). Bingley, UK: Emerald.
- Qatar Airways. (2016a). *Group chief executive’s message*. Retrieved from www.qatarairways.com.
- Qatar Airways. (2016b). *The Qatar airways story*. Doha, QA: Qatar Airways.
- Qatar Islamic Bank. (2016). *Our profile*. Retrieved from www.qib.com.qa.
- Qatar Museums. (2016). *Museums & galleries*. Retrieved from www.qm.org.qa.
- Qatar National Bank. (2016). *About QNB Group*. Retrieved from www.qnb.com.
- QF. (2013). *Qatar foundation strategic plan 2013–2023*. Doha, QA: Qatar Foundation.
- QNL. (2016a). *About the library*. Retrieved from www.qnl.qa.
- QNL. (2016b). *The directory of libraries in Qatar*. Retrieved from www.qnl.qa.
- QP. (2014). *1974–2014 40 years of excellence: Annual report 2014*. Doha, QA: Qatar Petroleum.
- QP. (2015). *Qatar petroleum: Committed to excellence*. Retrieved from www.qp.com.qa.
- QSA. (2009). *General information about Qatar*. Retrieved from www.qsa.gov.qa.
- QSTP. (2016a). *About us*. Retrieved from www.qstp.org.qa.
- QSTP. (2016b). *Facilities and services*. Retrieved from www.qstp.org.qa.
- QSTP. (2016c). *Free zone*. Retrieved from www.qstp.org.qa.
- QTA. (2015). *National profile—introduction to our country*. Retrieved from www.qatartourism.gov.qa.
- QU. (2016). *Qatar University*. Retrieved from www.qu.edu.qa.
- Reiche, D. (2010). Energy policies of Gulf Cooperation Council (GCC) countries: Possibilities and limitations of ecological modernization in rentier states. *Energy Policy*, 38, 2395–2403.
- Said, Z. (2016). Science education reform in Qatar: Progress and challenges. *Eurasia Journal of Mathematics, Science & Technology Education*, 12(8), 2253–2265.
- Salama, A. M., Khalfani, F., & Al-Maimani, A. (2013). Experiential assessment of urban open spaces in Doha. *Open House International*, 38(4), 47–57.
- Salama, A. M., & Wiedmann, F. (2013). *Demystifying Doha*. Farnham, UK: Ashgate.
- Salama, A. M., Wiedmann, F., Thierstein, A., & Al Ghatam, W. (2016). Knowledge economy as an initiator of sustainable urbanism in emerging metropolises: The case of Doha, Qatar. *ArchNet—International Journal of Architectural Research*, 10(1), 274–324.
- Sandridge, A. L., Takeddin, J., Al-Kaabi, E., & Frances, Y. (2010). Consanguinity in Qatar: Knowledge, attitude and practice in a population born between 1946 and 1991. *Journal of Biosocial Science*, 42(1), 59–82.
- SCH. (2013). *National Health strategy 2011–2016: Caring for the future*. Doha, QA: Supreme Council of Health.
- SEC. (2011). *Education and training sector strategy 2011–2016 executive summary*. Doha, QA: Supreme Education Council.
- Sidra. (2016). *Sidra Medical and Research Center*. Retrieved from www.sidra.org.
- Snoj, J. (2013, December 13). Population of Qatar by nationality. *BQ magazine*. Retrieved from www.bq-magazine.com.
- The Heritage Foundation. (2016). *Qatar*. Retrieved from www.heritage.org.
- Tok, M. E., Alkhater, L. R. M., & Pal, L. A. (2016). Policy-making in a transformative state: The case of Qatar. In M. E. Tok, L. R. M. Alkhater, & L. A. Pal (Eds.), *Policy-making in a transformative state. The case of Qatar* (pp. 1–35). London, UK: Palgrave Macmillan.

- Ulrichsen, K. C. (2014). *Qatar and the Arab spring. Policy drivers and regional implications*. Washington, DC: Carnegie Endowment for International Peace.
- Ulrichsen, K. C. (2016). *The Gulf states in international political economy*. Basingstoke, UK: Palgrave Macmillan.
- Wand, P. A. (2016). Correlating information centers to emerging knowledge-based economies. In A. Click, S. Ahmed, J. Hill, & J. Martin (Eds.), *Library and information science in the Middle East and North Africa* (pp. 156–172). Berlin, DE: De Gruyter.
- Weber, A. S. (2011). The role of education in knowledge economies in developing countries. *Procedia-Social and Behavioral Sciences*, 15, 2589–2594.
- Wiedmann, F., Mirincheva, V., & Salama, A. M. (2013). Urban reconfiguration and revitalisation: Public mega projects in Doha's historic centre. *Open House International*, 38(4), 27–36.
- Wiedmann, F., & Salama, A. M. (2013). From pre-oil settlement to post-oil hub: The urban transformation of Doha. *International Journal of Architectural Research*, 7(2), 146–159.
- Wiseman, A. W., Alromi, N. H., & Alshumrani, S. (2014). Challenges to creating an Arabian Gulf knowledge economy. In A. W. Wiseman, N. H. Alromi, & S. Alshumrani (Eds.), *Education for a knowledge society in Arabian Gulf countries* (pp. 1–33). Bingley, UK: Emerald.
- Wright, S. (2017). Qatar's LNG: Impact of changing East-Asian market. *Middle East Policy*, 24(1), 154–165.
- Zakhidov, D. (2015). K-12 education in Qatar. In K. C. Ulrichsen & A. Marnicio (Eds.), *The 2015 Doha conference: Findings from the student-led public diplomacy program* (pp. 9–13). Doha, QA: Rice University's Baker Institute for Public Policy.



<http://www.springer.com/978-3-319-71194-2>

Transitioning Towards a Knowledge Society

Qatar as a Case Study

Gremm, J.; Barth, J.; Fietkiewicz, K.J.; Stock, W.G.

2018, XVII, 244 p. 77 illus., 74 illus. in color., Hardcover

ISBN: 978-3-319-71194-2