

FOREIGN UNIVERSITIES IN QATAR: A CRITICAL REVIEW OF POLICY AND SUSTAINABILITY ISSUES

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Abstract

Qatar is transitioning toward knowledge society and aims at becoming a hub for international education. The Permanent Constitution and the Nation Vision 2030 of Qatar explicitly refer to the role of government in promoting sound education as making it the prime driver of human, social and economic development. The government has invested 3.5% of its GDP in education. Since 1998, Qatar has succeeded in contracting 11 International foreign universities to open branches in Qatar. These International Branch Campuses (IBCs) include Texas A&M University, Weill Cornell Medical College, Georgetown University, University College London and University of Calgary. The IBCs offer a range of specializations and degree programs such as medicine, engineering, foreign affairs, journalism, and tourism. Qatar spends more than US\$400 million annually on the six US branch campuses only excluding construction expenses. Hence, this study attempts to examine Qatar's policy on the IBCs and investigate its sustainability. The author focuses on discussing critical policy issues including English as language of instruction, mixed-gender education, and the 'glocalization' of the IBCs. Moreover, he addresses sustainability issues related to the IBCs such as the political will, diversification of the economy, and the contribution of the IBCs to Qatar's society. Ultimately, the author is enthusiastic that this library-based, theoretical and critical study would provoke more scholarly debates on Qatar's unique model of hosting foreign universities campuses.

Keywords: *Qatar, International Education, IBCs, Policy, Sustainability, Model*

Introduction

Despite its small geographical and population size, Qatar has emerged as a country renowned for its remarkable achievements in education, human development, business, media and politics. A few decades ago, the social, political and economic institutions of the State of Qatar were traditional and conservative. The country's economy was solely dependent on hydrocarbon resources and the government almost funds all projects from oil and gas revenues. However, a huge transition has taken place since the ratification of the Permanent Constitution in 2004 and the approval of the Vision 2030 in 2008. These two documents explicitly refer to the role of government in promoting sound education and making it the prime driver of human, social and economic development. Qatar is now transitioning toward knowledge society and aims at becoming a hub for international education, media, culture and business. Hence, the government has invested significant resources in education and is now earmarking 3.5% of its GDP to it. Since 1998, Qatar has worked on inviting prominent global higher education institutions from USA, Canada, UK, France and the Netherlands to open branches in Qatar. There are 11 International Branch Campuses currently operating in Qatar including Texas A&M University, Weill Cornell Medicine, Georgetown University, University College London and the University of Calgary. These IBCs offer a range of specializations and degree programs such as medicine, engineering, foreign affairs, journalism, and

tourism. Qatar spends more than \$400 million annually on these IBCs excluding construction expenses. A cursory review of the literature would suggest that there is lack of material on studying the status-quo and future of these IBCs in Qatar. Therefore, it is important to examine Qatar's pressing policy and sustainability issues regarding the IBCs. The discussion focuses on three major policy issues and three sustainability issues. The critical policy issues include English as language of instruction, mixed-gender education, and the 'glocalization' of the IBCs. The three core sustainability topics include the political will, the diversification of the economy, and the contribution of the IBCs to the socio-economic wellbeing of Qatar's present and future generations.

Reflecting on these issues, the author explains how the political will is in favor of the IBCs existence and future, analyze Qatar's endeavors to diversify the economy in order to secure the endurance of adequate funds for the IBCs to continue operating in Qatar. The author elucidates the contributions of the IBCs to the current and future job market in terms of feeding it with highly skilled workforce and leaders, and to the general advancement of the Qatari economy and society. This relates essentially to the *raison-d'être* of the IBCs in Qatar and their sustainability.

This library-based study is both descriptive and analytical, theoretical and critical study. It also applies some normative perspectives because the author uses the participant observation method to incorporate some insights from his work experience as he worked for more than five years with Hamad Bin Khalifa University, which is a member of Qatar Foundation that

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hosts most of the IBCs. The author has also participated, attended several events organized by these IBCs, and maintains good relations with their academic staff and students in Qatar. The significance of this study stems from the fact that it is relatively comprehensive in terms of the scale of topics covered; up-to-date in terms of data; and original in terms of referring to primary sources and references. It begins by providing an overview on Qatar history, geography, socio-political and economic setup. Then, it explains the education system and its key institutions including Qatar University, Qatar Foundation and the IBCs. The body of analysis provides a critical discussion of three major policy as well as three sustainability issues. The author concludes by highlighting the findings of this study including that the policy and sustainability issues are resolvable as far as the Qatari leaders, policy and decision makers are committed to the cause of IBCs and their positive role in the society and the government endeavors to diversify the economy and sustain the IBCs in many ways. This study deems successful, if it provokes more scholarly debates on Qatar's unique model of hosting foreign university branches.

1. Country Profile

Qatar is a relatively small peninsula located on the coast of the Arabian Gulf with a total area of approximately 11,627 sq. km. It shares a land border with the Kingdom of Saudi Arabia to the South and a maritime border with Bahrain, the United Arab Emirates and Iran. Qatar's capital city Doha, has emerged as a center for education, culture, media, and business. (Hukoomi n.d.; Al-Sharqawi 2013, 189)

Qatar is inhabited since 4000BC however the origin of the country's name is uncertain, but according to some references it dates back at least 2,000 years since the term "Catharrei" was used to describe the inhabitants of the peninsula by Pliny the Elder (1st century AD), and a "Catara" peninsula is depicted on a map by Ptolemy (2nd century AD). The Ottomans ruled Qatar for four consecutive centuries until 1915. Then, the country became a British protectorate from November 3, 1916 until it gained independence on September 3, 1971. The Al-Thani family has been prominent in Qatar society and ruled the country since 1868 AD. (Al-Sharqawi 2013, 196-198; Hamdan 2012, 111-113; Central Intelligence Agency n.d.)

Among prominent leaders of the State of Qatar Sheikh Khalifa bin Hamad Al-Thani ruled the country from 1972 to 1995. Some observers viewed him as the real founder of the State of Qatar for amending the Provisional Constitution, forming the first Council of Ministers, establishing the different government structures such as the Ministries, *Shura* (consultative) council, and the Audit Bureau. The Father Emir, HH Sheikh Hamad bin Khalifa Al-Thani ruled Qatar from 1995 to 2013. He is regarded as the father founder of modern Qatar for the reform and changes he introduced in almost all aspects of the Qataris life particularly

education, socio-economic, political, and media. HH Sheikh Hamad peacefully abdicated on June 25, 2013, and transferred power to his son, the current Emir HH Sheikh Tamim bin Hamad Al-Thani who became the ninth Emir since the beginning of the rule of Al-Thani. (Hamdan 2012, 111-126, 155; Weber 2014, 63)

Qatar society traditionally consists of nomadic Bedouin tribes, also Indian and Iranian trading families clustered in villages of Doha, Al-Wakra, Al-khor and Al-Zubara. Traditional Qataris dependent on pearl diving, fishing, farming, hunting, camel breeding, and trade. Their social and cultural values such as tolerance and generosity are rooted in the Islamic tradition. They are family-oriented people; consanguinity and arranged marriages are widely practiced; segregation of men and women in education and workplaces is enforced; and respect of kinship ties and the elderly is widely observed.

As of 31 March 2019, the total population of Qatar is about 2,76 million with a gender distribution of over 2 million males and about 0.7 million females. However, based on the latest United Nations estimates, as of April 15, 2019 Qatar's population is equivalent to 0.04% of the total world population making the country number 142 in the list of countries by population. The total population includes some 11.6% Qatari and 88.4% non-Qatari, whom are mainly male immigrant workers arriving in Qatar on work visas without their families. Population growth rate estimated at 2.27%. Qatar is a young society with the median age of population is 31.4 years - more than 25% are under 25 years old; over 70% are under 55 years old; only 1% are over 65 years; and life expectancy is 78.9 years. Over 99% of the population lives in Doha city and the suburbs on the eastern side of the peninsula with a considerable community clustered in Dukhan and Al-Khor villages. Arabic is the official language in Qatar, with English commonly used as the second language. Islam is the official religion of the State of Qatar and Islamic Law (Sharia) is the principal source of legislation. Qataris are generally conservative Sunni Muslims but there are other religious groups living in Qatar namely Christian, Hindu and Buddhist. (Ministry of Development Planning and Statistics n.d.; Central Intelligence Agency n.d.; Worldometers n.d.)

Qatar is one of the world's most dynamic and fastest growing economies. In the second quarter on 2018, its GDP stood at approximately US\$47 billion. With its US\$124,900 GDP per capita in 2017, Qatar ranks the wealthiest nation in the world. According to the official figures, the real GDP growth stood at 1.6% in 2017 and the IMF projects an overall 2.7% GDP growth for 2018. Qatar started exporting oil in 1949, and oil and gas revenues have huge positive impacts on the society particularly the living standards and welfare of Qataris. During 2017, the non-hydrocarbon and oil and gas sectors were the main drivers of GDP growth with a share of 67.3% or and 32.7% respectively. Revenue from oil and gas in 2017 stood at US\$36.35 billion and represented the main source of public

revenue with a share of 88.7%. Qatar's vigorous economy has enabled the country to boost its investments in general infrastructural development and mega projects in line with the Qatar National Vision 2030. A few examples include US\$45 billion for Lusail City, US\$25 billion for Doha Rail, \$11 billion for Doha International Airport, and US\$5.5 billion for new Doha Port. Backing Qatar's booming economy and society is the Qatar Sovereign Wealth Fund (SWF), which currently stands at US\$335 billion. (Ministry of Development Planning and Statistics n.d.; Qatar Central Bank 2017; IMF n.d.; Weber 2014, 64) Public spending has witnessed an increase in the pace of economic development to achieve the Qatar National Vision 2030. With this in mind, Qatar has earmarked 3.5% of its GDP for public spending on education. The youth literacy rate is above 98% of the total population and unemployment is 0.3%. (Hukoomi n.d.; Ministry of Development Planning and Statistics n.d.; Al-Sharqawi 2013, 189; World Economic Forum n.d.; Central Intelligence Agency n.d.)

2. The Education System

2.1. Historical development

Traditional education in Qatar before the 1950s was based on few schools and informal classes (*kuttab*) offering religious, Qur'an reading and reciting, and Arabic language lessons. Traditionally trained teachers usually conduct these classes at mosques or at home. However, some families have sent their children to pursue their traditional studies abroad mainly in Egypt and Lebanon. Qatar's modern education system has only been formalized in 1951 with the establishment of the Ministry of Ma'arif (education) by which the state has replaced the within-family education and became directly responsible and involved in supervising and developing education from all angles, in addition to allocating substantial budgets. The education system is guided by three principles; (1) protecting the heritage of the Muslim nation, (2) preserving the Arab-Islamic identity of the people, and (3) developing the education system and curricula through benefiting from the modern era achievements in technology and educational methods and techniques. The government built modern public schools and relevant infrastructures in the 1950s and 1960s. For instance, the first school for boys established in the school year 1952-1953, the first school for girls established in the academic year 1954-1955, adult and illiteracy education began in 1954. The first secondary school for boys began operating in 1961 and the first secondary school for girls started operating in 1965. The tertiary education system began with the establishment of the College of Education in 1973 with a vision to place education as a priority in the country's expansion. In its first year, the College enrolled 57 male and 93 female students. The primary, secondary and vocational education has remarkably expanded

throughout the years because of rapid demographic growth and the government support and spending on education infrastructure, employees and development. For instance, the government covers costs of schooling in public schools and provides textbooks, stationary, health services, electricity and water free of charge. The Supreme Education Council (SEC) founded in 2002 and the Emir of the State himself oversees it. SEC is the highest educational authority responsible for the education policy, planning, development and enforcement. It includes three executive departments that are the department of education, the department of evaluation, and the department of higher education. (Hamdan 2012, 199-207; Al-Sharqawi 2013, 203-206; Powell 2014, 258-259) In the quality of education systems' ranking "Qatar is the highest among the GCC countries." (Tripathi and Mukerji 2008, 157)

2.2. Qatar University (QU)

After the establishment of the Ministry of Education in 1951 and due to the country's rapid development and need to provide additional areas of specialization, Qatar University was founded in 1977 as the national institution of higher education in Qatar. The university currently offers a wide range of academic programs including five PhD programs, 20 Masters, 45 Bachelors, three Diplomas, in addition to 13 PhD and seven Masters programs that are available in 2019. The university is also the home of more than 15 research centers. QU currently boasts a population of over 20,000 students, and an alumni body of over 43,000. It also employs over 2,000 local and international highly experienced teaching and research faculty. Since 2003, the University embarked on an ambitious strategic reform plans to increase the efficiency of its administrative and academic processes, promote quality education and research, and effective services to meet the needs of the public. Qatar University has recently launched its five-year strategy (2018-2022) 'From Reform to Transformation'. This strategy is in line with Qatar National Vision 2030 and seeks to promote excellence in four key areas; education, research, institution, and engagement with a view of occupying an outstanding position in the map of excellent education providers at the international and regional levels. (Qatar University n.d.; Hamdan 2012, 207) Qatar University seeks to "promote the cultural and scientific development of the Qatari society while preserving its Arabic characteristics and maintaining its Islamic cultural heritage." (Powell 2014, 267) It strives to make an impact on a global scale and to this end Times Higher Education (THE) ranked Qatar University 401-500th in the World University Ranking and 3rd in Arab World Ranking. QU ranked seventh in QS Arab Region Universities Ranking (Qatar University n.d.). In 2017, Qatar University registered three patents within the top Patent Cooperation Treaty. (WIPO n.d.)

2.3. Qatar Foundation for Education, Science and Community Development (QF)

His Highness Sheikh Hamad Bin Khalifa Al-Thani, the Father Emir, and his wife Her Highness Sheikha Moza bint Nasser founded QF in August 1995. The *Sidra* tree (*Ziziphus spina-christi*) in the logo of QF symbolizes the essence of the vision and mission of the organization. It is a native tree, which grows in the wild and flourishes in the harsh and arid climate. Its deep roots regarded as a strong anchor, connecting contemporary learning and growth with the country's culture and heritage. Poets, scholars and travelers would traditionally gather in the shade of the *Sidra's* spreading branches to meet and talk. This aspect of the *Sidra's* role is reflected in QF's commitment to education and community development as well as being a naturally healthy and comfortable place at which to gather and exchange knowledge and opinions. The *Sidra's* fruit, flowers and leaves provide the ingredients for many traditional medicines, which reflects QF's science and research objectives. The branches of *Sidra* represent the diversity of QF today meanwhile the leaves, flowers and fruits equate to the individual lives that the tree nourishes, with the fruits going on to produce seeds that guarantee sustainability and a healthy future. The Foundation consists of about 50 entities and it is the largest non-profit organization in Qatar. Among its main objectives is to help shape the future of the Qataris through advancements in education, R&D, community development, make Qatar a vanguard for productive change in the region, and a role model for the broader international community. Through its wide range of activities and institutions, the Foundation promotes a culture of excellence and furthers its role in supporting an innovative and open society that aspires to nurture the future leaders of Qatar, develop sustainable human capacity, social, and economic prosperity for a knowledge-based society. QF's Education City is a 2,500-acre campus launched in 2003, and today it is the home of Hamad Bin Khalifa University (HBKU), eight of the eleventh IBCs such as Georgetown University, Texas A & M, Weil Cornell Medical College in addition to several research establishments such as Qatar Science and Technology Park (QSTP) and many world platforms for creative thinking, research and innovation such as the World Innovation Summit for Education (WISE) and the World Innovation Summit for Health (WISH). (Qatar Foundation n.d.; Al-Sharqawi 2013, 216-217; Hamdan 2012, 207; Powell 2014, 269) The QF "Education City's vision is about more than education, it is about establishing Qatar as a leader in innovation, education and research." (Stolarick and Kouchaji 2013, 232)

2.4. International Education

The Qatari government began investing in higher education more than 40 years ago. It has adopted a unique policy, which consists of two programs; (a) to sponsor Qatari students to study abroad, and (b) to contract prominent universities from around the world

to open branches in Qatar. The first program began since the 1970s, whereby the government had designed a scholarship scheme and provided generous scholarships for Qataris interested in studying undergraduate and graduate programs in four geographical regions which are: Qatar, Arab region and Australia, United Kingdom and Europe, and United States and Canada. To institutionalize this system, the government established the Higher Education Institute (HEI) under the Supreme Education Council (SEC) in March 2005. HEI's primary role is to manage the scholarship system including administering the previous (pre-HEI) scholarship programs, which consist of Emiri; Hamad bin Khalifa Al-Thani and Tamin bin Hamad, the National, and the employee scholarship programs in both undergraduate and graduate study options. The prime goal of this program is to broaden the intellectual and cultural horizon of the students and help them make educational and career choices based on their interests, abilities, and values as well as the needs of the Qatari labor market. Ultimately, the students acquire knowledge and skills at an international standard and bring them back to Qatar. (HEI n.d.; Stasz et al. 2007, 71-75)

After almost three decades of the launch of first scholarship program, and based on the principle that every Qatari should have equal premium higher education options within the country, the second program came into existence. Hence, the government has invested substantially in attracting the best international higher education institutions to open branches in Doha. The policy adopted by the government is that instead of finding one worldly renowned university to open various schools in the country, it is more useful to contract different institutions from around the world, which would each provide one specialty in which it had a particular strength. Therefore, in the period from 1998 to 2012, Qatar entered into agreements with 11 of the best higher educational institutions in the globe particularly from USA, Canada, UK, France and the Netherlands. Each institution has been selected for its ability to educate and train students in fields that will help Qatar grow and diversity as well as prepare students for employment and for global citizenship by emulation of global principles and norms adapted to local or national contexts of Qatar. The IBCs offer specializations and programs, that are accredited by the same bodies as their home universities, such as medicine and health sciences, engineering and applied sciences, IT and design, foreign affairs, journalism, and tourism and hospitality (see Table 1). Admission standards into the IBCs are high, English is the language of instruction, and the offices and classrooms are equipped with cutting-edge facilities. The general goal set by QF is that each of the IBCs is to have at least 50 percent of its undergraduate students Qatari citizens. QF Education City is an impressive academic hub that hosts eight out of the eleventh branch campuses including six American universities, a British and a French

university. In terms of finance, Qatar Foundation covers all expenses for the IBCs and guarantees them academic freedom. For instance, the Foundation spends more than US\$400 million to fund the operations of the six American institutions hosted in Education City excluding construction expenses. In return, the IBCs pledge to provide educational programs that are equal in quality to those in their mother campuses. They also agree not to establish similar programs elsewhere in the Middle East and consult the foundation about the choice of each branch's dean and vice deans. The IBCs basically share the same mission which essentially endeavors to achieve Qatar's National Vision 2030, help develop Qatar knowledge society, and produce global citizens. (Ministry of Education and Higher Education n.d.; Hamdan 2012, 123; Powell 2014, 259-270; Bollag n.d.; Havergal n.d.) It is worth mentioning that Mr. Omran Hamad Hamad Al-Kuwari, executive director of Qatar Foundation, indicated that each program offered by the IBCs has come for a reason and the government has no plans to increase the number of foreign campuses. (Bothwell n.d.)

3. Policy Issues

3.1. English as Medium of Instruction (EMI)

The IBCs use English as medium of instruction, research and communication. Their graduates are well known of their excellent command of English and the fields they study. These two factors enhance their competitive power in the job market. Obviously local employers and even abroad would easily consider recruiting them. However, the issue of foreign language such as English as medium of instruction is a bit contentious not only in the Qatari context but in the Arab region in general. Therefore it is important to address the language policy and ultimately come to a clear conclusion.

Arabic is the official language of Qatar and it has been used since long time as medium of instruction in both traditional and modern education. However, due to some social and economic factors, and the need for response to the globalized English as language of science, diplomacy and business. Also the low scores of Qatari students in international assessment tests such as PIRLS, TIMSS, and PISA. For example, in the year 2009 PISA tests, Qatari students scored 368 in Mathematics meanwhile the OECD average was 496, scored 379 in science whereas the OECD average was 501, and scored 372 in reading while the OECD average was 493 (Weber 2014, 71-72). Moreover, most of the Qatari employers showed concerns about the poor English and communication skills of Qatari graduates. Hence, in 2001 the government initiated the reform of the education system, and a part of it, was "the introduction of English as the medium of instruction (EMI) in K-12 mathematics and science classes." (Eslami, Seawright and Ribeirto 2016, 132) This policy instigated some tension, controversies, and

frustration among Qataris. The people responded differently to such policy as for instance some students, parents and members of the community showed their dissatisfaction and viewed it as a threat to their Arab-Islamic identity, cultural values, and heritage. Meanwhile, others, particularly students, have positive attitude toward English and consider it as extremely important to their future career and are effectively using it in campus and even outside.

However, in January 2012, the Supreme Education Council (SEC) changed the policy and decided to revert to Arabic as the language of instruction in both government schools and at Qatar University with either abandoning or lowering the English language requirements for some courses. Apparently, the two main reasons that prompted this decision are: first, the poor English language preparation of Qataris taught in Arabic government schools. Second, the fear that young Qataris lose competence in Arabic language writing and speaking, and lose their cultural heritage too. However, it is generally admitted among most contemporary scholarship that the general perception of Arabic and English in both country and university is gradually changing. Besides, there is a growing sense of acceptance of the fact that they are two key languages and English should not be viewed as a threat to Arabic and students' national identity. (Weber 2014, 72; Eslami, Seawright and Ribeirto 2016, 132-145; Powell 2014, 268; Stasz et al. 2007, 29) This conclusion is therefore in favor of the IBCs and support their current smooth running and future endurance.

3.2. Mix-gender Education

Gender is a controversial matter which involves complex questions of social, cultural, religious, economic and political nature. Arab and majority Muslim societies are obviously viewed by some Westerners as patriarchal and gender bias. This view point could be attribute to the bad treatment of women in some Arab and Muslim cultures and communities whether in the past or modern times. Most often, the problem with this is the difficulty in making distinction between the ideals and values of the Islamic faith and the Arab or Muslim cultures relating to gender issues. In some cases, cultural and lifestyle differences are not tolerated and this has been observed in both "developed societies" and "developing/underdeveloped societies" alike. For instance, some liberal communities and cultures view single-gender education as a sign of backwardness and injustice toward women. They also think it is not right and beneficial for teaching and learning and in the education setup in general. Meanwhile, developing communities could regard mixed-gender education as something not right, a source of some moral problems, and would affect the academic achievement of students as such education setup perhaps lay the ground for disruption and gender tension. Yet, the debate on the cost-benefit analysis on these issues is still going on. However, it is obvious that

“developed societies” and liberal values tend to exercise some kind of hegemony on other cultures and communities particularly through globalization mechanisms.

However, the issue of mixed-gender education in the Qatari context takes an interesting form that is worth highlighting. Despite the fact that the Qatari society is conservative, it recognizes the great value of the family institution and considers it as the nexus of the society. Men and women are socialized to complete each other roles with respect and courtesy. The Permanent Constitution as well as Qatar National Vision 2030 do not make any distinctions between males and females. All Qataris, whether men or women, enjoy fundamental rights to various services such as education and health, and are equally held accountable for their actions before the law. Despite the fact that gender segregation in educational institutions such as in government schools and universities, or in accessing some government services is widely observed in Qatar, the Qataris, residents and visitors cope with it as social reality without problems. Besides, mix-gender environment in education, workplaces and some services is available as an option. Within this context the IBCs provide education services in a mixed-gender environment enabling female student both Qataris and residents “to have an international education without traveling abroad.” (Stolarick and Kouchaji 2013, 241) However, according to a study, many Qataris interviewees believe it is essential to preserve the single-gender study environment option because “some women do not want to study in a mixed-gender environment and are therefore unlikely to pursue post-secondary education unless a single-gender option is available.” (Stasz, et al. 2007, 76) Yet, studying at local universities in single-gender environment is perhaps the perfect option for some female students and their families. This perhaps explains the fact that “the large majority of female students at Qatar University results from their higher probability of seeking higher educational opportunities close-to-home.” (Powell 2014, 269) The most important result of both single and mixed gender setups, is that female students have more options and flexibility to further up their post-secondary studies in Qatar whether in IBCs or local universities and that they have the opportunity to become better educated over time and earn respected university degrees.

3.3. ‘Glocalization’ of the IBCs

There are some concerns regarding the potential of marginalizing the national education system understood from the government excellent full support of the IBCs. Moreover, some people viewed that the IBCs could disturb the traditional Arab-Islamic values that are well observed in the society. They think that the IBCs provide Western model of education, which not only bring in high standards academic programs, but also values and culture. (Powell 2014, 269-270; Bollag n.d.) The leaders and policy makers in Qatar are aware

of the importance of both the global character of the IBCs system and programs, as well as the national educational and societal value systems. Therefore, they are exerting enormous efforts on various fronts to keep the global character and world standards of the IBCs, and at the same time indigenize it in the local social and cultural atmosphere. Stasz, et al., (2007) highlighted some of the gaps in the education business and emphasized on the need for the coordination and cooperation in all aspects and phases. It seems, the Qatari government and policy makers have seriously taken their input and thus endeavored to integrate the IBCs in the tertiary education system and support all types of planning, coordination and cooperation among the IBCs and across multiple organization including SEC, QF and QU in post-secondary education projects. While doing this, they did not overlook employers’ feedback because it is useful for understanding the labor market demand for educational services.

One of the striking examples of coordination and collaboration mechanisms is the cross-registering between IBCs in general and between the six American universities in the Education City in particular. Students who officially belong to one college can have access to six universities and have their courses cross credited. Bothwell (n.d.) reported that Mr. Omran Hamad Al-Kuwari, executive director of Qatar Foundation, explained that such collaborative approach creates a very unique innovative environment for students and it is indeed rare as some universities hardly accept cross-registering. Some IBCs went a step further in collaboration and improving the integration between them by offering joint courses and programs. For instance, VCU, TAMU and WCM in Qatar have co-designed a new course “happy society” launched in January 2018, and made open to any education city students in their junior year. (VCU-Q n.d.; TAMU-Q n.d.; WCM-Q n.d.; Bothwell n.d.) Further examples include strong collaboration between GU and NU in Qatar as they begun allowing students to study a major subject at one institution and a minor at the other. (GU-Q n.d.; Bothwell n.d.) Moreover, in the academic year 2018/2019, CMU is offering registration of joint programs, training and workshops in between Education City universities (Al-Sharq n.d), and NU is considering Master’s program in health communication in collaboration with HBKU, and launch a Master’s program in Sport Media and communication in collaboration with mother University in USA. (Abdurahman n.d) WCM went with its collaborative efforts beyond the Education City and IBCs to work in partnership with Qatar University in medical education, health care, and research in Qatar (International Universities n.d.). QF leaders have also realized that cooperation and coordination is vital in recruiting students and faculty. Therefore, the Foundation has adopted a marketing strategy to advertise Education City as a ‘whole value position’. (Bothwell n.d.)

4. Sustainability Issues

The huge financial and human resources investments in contracting the 11 IBCs and facilitating their smooth operations in Doha obviously face the challenge of sustainability. This particularly in view of some questions and concerns raised by some observers that “these investments have been oriented mainly to Western models without sustained reflection on and tackling all of the contextual conditions needed to implement and sustain them.” (Powell 2014, 266) Besides, there is an emphasis on the need for balanced policy approach, which integrates local and foreign institutions and supports the development of both of them. Therefore, it is important to highlight three important factors that would ensure the stability and endurance of the IBCs in Qatar.

4.1. Political will

The political leaders and the government of the State of Qatar have always been in favor of and highly committed to promoting education, science, research and innovation. They also have a clear vision and abundant resources to achieve their strategic goals. For instance, HH Sheikh Hamad bin Khalifa Al-Thani, who ruled Qatar from 1995 to 2013, is considered as the pioneer of building the knowledge society where education is the prime drive of all aspects of reform and development. He founded Qatar Foundation, which among its roles overseeing the IBCs. Moreover, during his rule, the Permanent Constitution was ratified and the National Vision 2030 was launched. The Permanent Constitution includes 150 articles that regulate all aspect of life in the country pertaining to rights and duties. There are numerous articles that explicitly refer to the right to education and emphasize on the role of the state in promoting sound education, fostering and encouraging scientific research, helping disseminate knowledge in addition to making general education compulsory and free of charge. For instance, Article 25 states that “Education is one of the basic pillars of social progress. The State shall ensure, foster and promote education.” (The Permanent Constitution of the State of Qatar 2004) Besides, Qatar National Vision 2030 has explicitly emphasized on education and knowledge production activities. (Qatar National Vision 2008) Her Highness Sheikha Moza bint Nasser, wife of HH Sheikh Hamad bin Khalifa, initiated the World Innovation Summit for Education (WISE) in 2009. WISE is an international, multi-sectorial platform for creative thinking, debate and purposeful action. Its community is a network of education stakeholders; from students to decision-makers, coming from about 200 countries that share ideas and collaborate to seek creative solutions to solve challenges facing education. While WISE leaders recognize that education is lacking innovative approaches in both policymaking and in the classroom, they envision education as the key to addressing the toughest challenges facing communities around the world today. Therefore, WISE is a response to the

necessity of revitalizing education and providing a global platform for the development of new ideas and solutions. It has become a global reference for innovative approaches to modern education. (WISE n.d.; Hamdan 2012, 199-206)

4.2. Diversification of the economy

Qatar discovered oil in the 1930s but began exporting it after World War II in 1949. It has been reported that Qatar oil reserves is expected to last for next 57 years and its natural gas reserve is expected to last for perhaps the next 100 years. They concluded that the revenue earned from hydrocarbon will not last forever. (Stolarick and Kouchaji 2013, 226) The leaders of Qatar became aware of the fact that oil and gas are depleted resources and their prices are fluctuating, and have sharply declined in recent years. The sharp decline of oil and gas prices has inflicted heavy losses of revenues and consequently crippled the government capability in funding projects and creating uncertainties for national planning since hydrocarbon wealth is the essential fuel of the economy. To this end, the government made considerable efforts to plan for diversification of the economy to reduce gradually the dependency on hydrocarbon resources and the dominance of oil and gas sectors. The non-hydrocarbon sectors include manufacturing, financial services and construction. For instance, the government founded Qatar Investment Authority (QIA) in 2005 to strengthen the country's economy by diversifying into new asset classes for long-term strategic investments that help complement the state's huge wealth in natural resources. The QIA is structured to operate at the very highest levels of global investing and adhere to the strictest financial and commercial disciplines. For example, Qatar Sovereign Wealth Fund (SWF) currently stands at US\$335 billion. (World Economic Forum, n.d.; Qatar Central Bank 2016) Moreover, an action plan has been put in place to develop the infrastructure by using the most advanced technology and production methods in the existing oil and gas fields, create new sources of renewable energy, and encourage recycling projects and systems. In addition to crude oil and natural gas production, the Qatari government has also introduced other industries such as ammonia, fertilizer, petrochemicals, steel reinforcing, aluminum production, and plastics. The hydrocarbon sector still constitutes one of the main sources of public revenue. For instance, In 2017, oil and gas returns stood at about US\$36.35 billion and represented the main source of public revenue with a share of 88.7%. However, the share of hydrocarbon in real GDP marginally declined to 48.2% in 2017 from 53.2% in 2014, while the share of non-hydrocarbon in real GDP increased from 46.8% in 2014 to 51.8% in 2017. (Ministry of Development Planning and Statistics n.d.; Qatar Central Bank 2016, 2017; IMF n.d.; Weber 2014, 62-69) Another aspect of economy diversification is to reduce the dominance of the public sector on the economy and engage the private sector and Small and

Medium Enterprises (SMEs). This would enable them to play an essential role together with the public sector in contributing to the economy and achieving sustainable development. (Ministry of Development Planning and Statistics n.d.; Secretariat for Development Planning 2008; Weber 2014, 68-69) Despite the fact that the dependence on the hydrocarbon sector is gradually reduced, the implementation of the long-term reforms to diversify the economy is moving toward a sustainable development system. This system would enable the government to ensure and preserve the right of present and future generations to benefit from their wealth recourses and finance existing and strategic projects particularly in education such as the IBCs.

4.3. Contribution of IBCs to the Qatari present and future wellbeing

The positive impacts of the IBCs on Qatar society and economy are extremely important in the survival and sustainability of these institutions. To develop an understanding of this matter within the limitations of this research, the author adopts the qualitative method because the quantitative method, which includes study techniques such as the questionnaire and interview, could be used in another study to measure the scale and scope of the IBCs on the Qatari economy and society. The huge financial and human resources investments in contracting the 11 IBCs and supporting them to continue operate in Qatar are basically meant for a strategic purpose which is to feed the country, the region and the world with highly qualified graduates ready for employment. It is very hard to size all the contributions of the IBCs to the present and future wellbeing of the Qataris. Nevertheless, some illustrative examples are discussed in the following paragraphs.

The IBCs have been present in Qatar for almost two decades whereby the eldest is 20 years-old and the youngest is about six years old (see Table 1). The most striking example of the positive impact of the IBCs on the Qatar society during these years, is the large number of graduates who presumably most of them are employed in various sectors of Qatar economy such as government services, engineering, business, media, design, tourism, and health. For example, there are some 6200 students who graduated from College of the North Atlantic with degrees in applied sciences (CNA-Q n.d.), 800 students graduated from Carnegie Mellon University with various degrees in computer science (CMU-Q n.d.), some 750 students graduated with engineering degrees from Texas A&M (TAMU-Q n.d.), about 680 students were awarded degrees in design from Virginia Commonwealth University (VCU-Q n.d.), more than 600 students obtained their degrees in tourism and hospitality from Stenden University (SU-Q n.d.), some 450 students earned their degrees in foreign affairs from Georgetown University (GU-Q n.d.), about 440 student graduated with different degrees in nursing and health sciences from

University of Calgary (UC-Q n.d.), and in May 2008, Weil Cornell Medical College graduated its first class of 15 doctors. (WCM-Q n.d.)

The IBCs did not only feed the local work force with thousands of qualified employees, but also play an active role in building capacities and contributing to the efforts toward establishing a modern knowledge society. For instance, Weber (2014) highlighted the significant role of Northwestern University in the growth of the media industry in Qatar including journalism, film and computer media, by offering journalism and communications program in QF Education City. The demand for the graduates from NU-Q is very high as many employers such as Al-Jazeera Media Network, Qatar News Agency, Ministry of Foreign Affairs, and the communication departments especially in the universities compete to recruit them. The University of Calgary is also playing a leading role in delivering world class health care in Qatar. It is assisting the Qatari government in its efforts to redefine health care in Qatar and the Gulf region. (International Universities n.d.) VCU-Q is deeply involved with emerging design companies in Qatar (Universities in Qatar n.d.). GU-Qatar houses a large library, which is open to public patrons. Furthermore, it conducts many public lectures and panel discussions addressing current issues in local, regional and world politics. (ibid.; Redden n.d.) Moreover, Bollag (n.d.) highlighted the impact of research published by Georgetown University faculty members over the past years about work conditions for foreign construction workers on helping the government lead the reforms. HEC Paris management programs are designed to meet the specific needs of high-potential professionals and executives already in senior management positions in Qatar. For example, since launch of the HEC Paris Executive Masters of Business Administration (EMBA) program in 2011, 500 students graduated, 75 percent of the them are Qatari off whom more than half were women. Moreover, in April 15, 2018 HEC held a Public Masterclass, titled 'Understanding Accounts and Financial Strategy in 60 Minutes' which is tailored to advance the financial strategic skills of the attendees. (HEC-Q n.d.; Redden n.d.; Qatar Tribune n.d.)

The cultural influence of the IBCs has also been noticed in the society. In addition to bringing their educational systems and world-class academic standards, the IBCs also brought their culture and values. All IBCs provide the same Western-style education as at their home campuses. For instance, classes are co-educational, and students are expected to have strong opinions and to voice them in-class and beyond. All IBCs students and alumni communicate in English so this language has become widely beyond campuses. This is perhaps what prompted one researcher to say: "the American culture and educational methods exert a strong cultural impact on the country as Education City graduates enter the work force." (Weber 2014, 63)

Conclusions

Qatar is a relatively new country, which has changed from a tribal community to contemporary state in a matter of few decades and has achieved prominent position in the world in human development and literacy. Qatar leaders, decision and policy makers recognize the strategic importance of education and its strong correlation with comprehensive development. The government spends generously on education as it earmarks 3.5% of the GDP to provide free education in primary and secondary levels and scholarships for tertiary studies in Qatar and abroad. Qatar's education system is sustained by the favorable government decision to engage and support prominent foreign universities to open their branches in Doha and become part of the education setup with internationally accredited programs. It is an endeavor to bringing world-class education to Qatar's doorsteps.

Qatar's model in dealing with the IBCs could be viewed as unique in a sense that almost all these branches belong to the top ten ranked universities in the world, they all use English as medium of instruction, and conduct their classes in a mix-gender environment. This model faced serious challenges and controversies particularly in relation to certain policies as well as raised some concerns on the sustainability of this project for Qatar present and future generations. This study addressed three important policy issues which are English as medium of instruction, mixed-gender education, and 'glocalization' of the IBCs into the national education system.

It has been stressed that the issue of the medium of instruction is controversial as Arabic is the official language in the country as well as in government educational institutions. There were ad-hoc debate on the rationale behind the introduction of English as medium of instruction. Despite the fact that the matter is quite sensitive as English was viewed as threat to the identity of the young Qataris and the future of Arabic language, the general trend is now going toward considering English and Arabic as necessary and complementary. Similarly, the issue of mixed-gender education is sensitive as many families and female students still want to study in a single-gender environment. But in the current Qatari context both single-gender and mixed-gender education are considered as rivaling options more than conflicting choices. Maintaining the global nature of the IBCs programs and academic standards and integrating them in the local tertiary education system which is rooted in the Arab-Islamic heritage and value system proven to be a challenging policy issue. The government in general and Qatar Foundation in particular endeavored

to sustain the process of 'glocalization' of the IBCs by favorable policies like the language and mixed-gender education policy and by encouraging cooperation and coordination mechanisms and activities such as courses cross-registering, joint programs, and activities. However, it is important to highlight that the collaboration and coordination mechanisms and efforts have gain momentum only in recent years and the challenge of relying on the expertise of the expats in teaching, research, and other education services need careful planning in the long run. This long-term planning should be supported by review and development of existing labor laws and policies to be well aligned to the nation educational goals. Besides, it is vital to provide more financial as well as performance incentives for the national tertiary education institutions to uplift their level to an adequate international standard. This balanced policy approach will ensure the sustainability of the 'glocalization' process.

The question of whether or not the engagement of the IBCs is sustainable is legitimate essentially in view of the substantial financial and human resource engagement in it, the instability of hydrocarbon revenues due to the sharp fall of oil and gas prices in the past two years, and the feasibility of the positive impact on the job market as well as on the economic and social wellbeing of the present and future generations. The political will of the Qatari leaders, government and policy makers was favorable to host and support the IBCs to operate and endure in Qatar. Therefore, the government decision to diversify the economy is a significant step in the right policy direction to avoid any potential risks that might affect the availability of adequate funds for the IBCs to continue operating and grow. The current situation of the proportion of the oil and gas and non-oil sectors shows that the hydrocarbon sector is still the main source of the public revenue and the non-hydrocarbon sector is growing in a slow motion. Besides, the IBCs have proven their significance by their enormous contribution to the Qatari economy and society quantitatively and qualitatively. Thousands of graduates from the IBCs have joined the workforce and the demand for their expertise is very high. Moreover, some of the IBCs have visible contribution to some projects, institutions, and the overall development of Qatar. Nevertheless, the IBCs have yet to make Qatar self-sufficient in professionals and their impact on the Qatari economy and society needs further investigation particularly by conducting field studies using quantitative research techniques such as the questionnaire and interviews to measure the scale of their contribution.

Table1. International University Branches in Qatar

Institution	Home Campus	Field	Established
University College London (UCL-Q)	UK	Museum Studies	2012
HEC Paris (HEC-Q)	France	Business	2012
Northwestern University (NU-Q)	USA	Journalism	2008
University of Calgary (UC-Q)	Canada	Nursing	2007
Georgetown University School of Foreign Service (GU-Q)	USA	Foreign Affairs	2005
Carnegie Mellon University (CMU-Q)	USA	Computer Science	2004
Texas A&M University (TAMU-Q)	USA	Engineering	2003
Weill Cornell Medicine (WCM-Q)	USA	Medicine	2001
College of the North Atlantic (CNA-Q)	Canada	Applied Sciences	2001
Stenden University (SU-Q)	The Netherlands	Tourism and Hospitality	2000
Virginia Commonwealth University (VCU-Q)	USA	Design	1998

Source: (Ministry of Education and Higher Education, n.d.; Powell 2014, 256).

References

- Abdurahman, Amro. 2018. "The Education City Universities prepare new programs for the new academic year." Retrieved January 4, 2019. <https://www.al-sharq.com/article/22/06/2018>
- Almeezan Qatar Legal Portal. n.d. "The Permanent Constitution of the State of Qatar." Accessed February 20, 2019. www.almeezan.qa/LocalPdfLaw.aspx?Target=2284&language=en
- Al-Sharqawi, Ahmad. 2013. *Estratijiyyat Al-Tanmiya fi Qatar (The Development Strategy in Qatar)*. Cairo: Al-Raya Center for Publishing and Information.
- Bollag, Burton. 2016. "Importing Higher Education: A Qatari Experiment." Retrieved February 8, 2019. <https://www.al-fanarmedia.org/2016/07/importing-higher-education-a-qatari-experiment/>
- Bothwell, Ellie. 2017. "Qatar Branch Campuses Create first joint programme." Retrieved January 12, 2019. <https://timeshighereducation.com/news/us-branch-campuses-qatar-create-first-joint-programme>
- Carnegie Mellon University Qatar, CMU-Q. n.d. Accessed December 9, 2018. <https://www.qatar.cmu.edu/about-us/>
- Central Intelligence Agency. n.d. "The World Factbook: Qatar." Accessed April 15, 2019. <https://www.cia.gov/library/publications/the-world-factbook/geos/qa.html>
- College of the North Atlantic Qatar, CNA-Q. n.d. Accessed December 17, 2018. <https://www.cna-qatar.com/newsroom/newsreleases/powerdthrough4>
- Cook, Jeremy. 2016. "Cultural Conflation: Encounters with the Global Education Paradigm." In *Learning Across Borders: Perspectives on International and Transnational Higher Education*, edited by Leslie Seawright and Amy Hodges, 165-180. UK: Cambridge Scholars Publishing.
- *Education in Qatar*. n.d. Accessed February 8, 2019. <http://lifeinqatar.com/pages/en/section/education.html>
- Eslami, Zohreh, Seawright, Leslie and Ribeirto, Angelica. 2016. "Attitudes Towards English as Lingua Franca." In *Learning Across Borders: Perspectives on International and Transnational Higher Education*, edited by Leslie Seawright and Amy Hodges, 132-148. UK: Cambridge Scholars Publishing.
- General Secretariat for Development Planning. 2008. *Qatar National Vision 2030*. Doha: General Secretariat for Development Planning.
- Georgetown University Qatar, GU-Q. n.d. Accessed December 12, 2018. <https://www.qatar.georgetown.edu/>
- Grob, Anne. 2016. "Crossing Borders to Build Bridges: Reading Indigenous Higher Education in a New Transnational Framework." In *Learning Across Borders: Perspectives on International and Transnational Higher Education*, edited by Leslie Seawright and Amy Hodges, 2-27. UK: Cambridge Scholars Publishing.
- Hamdan, Mohamed. 2012. *Judhur Qatar Al-Tarikhiya (Historical Roots of Qatar)*. Cairo: Al-Raya Center for Publishing and Information.
- Havergal, Chris. 2016. "Hosting US branch campuses' cost Qatar £280 million annually." Retrieved February 13, 2019. <https://www.timeshighereducation.com/news/hosting-us-branch-campuses-costs-qatar-ps280-million-annually>
- HEC Paris Qatar, HEC-Q. n.d. Accessed December 12, 2018. <https://www.qatar.exed.hec.edu/about>
- Helen Ziegler & Associates. 2018. "International Universities are Marketing Themselves at Home in Qatar." Retrieved January 18, 2019. <https://www.hziegler.com/articles/international-universities-in-qatar.html>

- Higher Education Institute Qatar. n.d. "Scholarship Programs." Accessed November 12, 2018. <http://www.sec.gov.qa/en/secinstitutes/highereducationinstitute/offices/pages/missionsandscholarships.aspx>
- Hukoomi, Qatar E-Government. n.d. "About Qatar." Accessed April 15, 2019. <http://portal.www.gov.qa/wps/portal/about-qatar>
- *International Monetary Fund*. n.d. "Qatar." Accessed November 12, 2018. <http://www.imf.org/en/Countries/QAT#countrydata>
- *Ministry of Development Planning and Statistics*. n.d. "Population." Accessed 15 April, 2019. <https://www.mdps.gov.qa/en/statistics1/StatisticsSite/pages/population.aspx>
- n.d. "Qatar in Figures 2017." Retrieved November 8, 2018. https://www.mdps.gov.qa/en/statistics/Statistical%20Releases/General/QIF/Qatar_in_Figures_32_2017_EN.pdf
- Ministry of Education and Higher Education. n.d. "List of Higher Education Institutions in the State of Qatar." Retrieved January 22, 2019. http://www.edu.gov.qa/En/structure/HigherEducation/Universities_doc_En/HigherEducationInstitutionsInTheStateOfQatar.pdf
- Northwestern University Qatar, NU-Q. n.d. Accessed December 12, 2018. <https://www.qatar.northwestern.edu/about/index.html>
- Powell, Justin J. W. 2014. "University Roots and Branches between 'Glocalization' and 'Mondialization': Qatar (Inter)national Universities." In *Education for a Knowledge Society in Arabian Gulf Countries*, edited by Alexander W. Wiseman, Naif H. Alromi and Saleh Alshumrani, 253-276. United Kingdom: Emerald Books.
- Qatar Central Bank. n.d. "Central Bank Report 2016." Retrieved December 22, 2018. http://www.qcb.gov.qa/English/Publications/ReportsAndStatements/AnnualReports/QCB%20Annual%20Report%202016_EN.pdf
- n.d. "Central Bank Report 2017." Retrieved December 22, 2018. <http://www.qcb.gov.qa/English/Publications/ReportsAndStatements/AnnualReports/Annual%20report%202017%20-EN.pdf>
- n.d. "Main Economic Indicators." Accessed December 24, 2018. <http://www.qcb.gov.qa/English/Publications/Statistics/Pages/EconomicIndicators.aspx>
- Qatar Tribune. 2018. "HEC Paris in Qatar Offers Public Masterclass." Retrieved December 24, 2018. <http://www.qatar-tribune.com/news-details/id/120042>
- Qatar University. n.d. Accessed December 9, 2018. <http://www.qu.edu.qa/about>
- Redden, Elizabeth. 2017. "Foreign branch campuses in Qatar monitor major diplomatic rift." Retrieved December 28, 2018. <https://www.insidehighered.com>
- Stasz, Kathleen, Eric R. Eide, Francisco Martorell, Louay Constant, Charles A. Goldman, Joy S. Moini, and Vazha Nadreishvili Salem. 2007. *Post-Secondary Education in Qatar: Employer Demand, Student Choice and Options for Policy*. Canada: RAND Corporation.
- Stenden University Qatar, SU-Q. n.d. Accessed December 17, 2018. <http://www.stenden.edu.qa/>
- Stolarick, Kevin and Kouchaji, Loulia. 2013. "Can Oil Create Creativity? A Look at Qatar and United Arab Emirates." In *Higher Education in the Global Age: Policy, Practice and Promise in Emerging Societies*, edited by Daniel Araya and Peter Marber, 226-245. New York and London: Routledge.
- Texas A&M University Qatar, TAMU-Q. n.d. Accessed December 8, 2018. <https://www.qatar.tamu.edu/about/>
- The University of Calgary Qatar, UC-Q. n.d. Accessed December 6, 2018. <http://www.ucalgary.edu.qa/>
- Tripathi, Purnendu and Mukerji, Siran. 2008. "Higher Education Mapping of GCC Countries: An analytical framework of strengths and opportunities." In *Higher Education in the Twenty-First Century: Issues and challenges*, edited by Abdullah Y. Al-Hawaj, Wajeeh Elali and E. H. Twizel, 149-161. London: CRC Press.
- University College London Qatar, UCL-Q. n.d. Accessed December 4, 2018. <https://www.ucl.ac.uk/qatar/discover>
- Virginia Commonwealth University Qatar, VCU-Q. n.d. Accessed December 4, 2018. <http://www.qatar.vcu.edu/at-a-glance>
- Weber, Alan S. 2014. "Education, Development and Sustainability in Qatar: A Case Study of Economic and Knowledge Transformation in the Arab Gulf." In *Education for a Knowledge Society in Arabian Gulf Countries*, edited by Alexander W. Wiseman, Naif H. Alromi, and Saleh Alshumrani, 59-82. United Kingdom: Emerald Books.
- Weill Cornell Medicine Qatar, WCM-Q. n.d. Retrieved January 24, 2019. <https://qatar-weill.cornell.edu/Portals/0/Fact%20Sheet%202017-18.pdf>
- World Economic Forum. n.d. "Human Capital Report 2016." Retrieved October 8, 2018. <http://reports.weforum.org/human-capital-report-2016/files/2016/06/QAT.pdf>
- n.d. "Qatar Investment Authority." Accessed November 8, 2018. <https://www.weforum.org/organizations/qatar-investment-authority>
- World Innovation Summit for Education. n.d. "Who we are" and "What we do." Accessed November 8, 2018. <https://www.wise-qatar.org/>
- World Intellectual Property Organization. n.d. "Qatar." Accessed April 15, 2019. http://www.wipo.int/ipstats/en/statistics/country_profile/profile.jsp?code=QA
- Worldometers. n.d. "Qatar Population." Accessed April 15, 2019. <http://www.worldometers.info/world-population/qatar-population/>