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NURTURING A KNOWLEDGE  
ECONOMY IN QATAR

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## NURTURING A KNOWLEDGE ECONOMY IN QATAR

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Knowledge, as it is applied in entrepreneurship, research, and product design, is one of the key sources of sustained growth in the global economy.<sup>1</sup> The advancement of a knowledge economy<sup>2</sup> is a central feature of developed and developing countries alike. Innovation, along with rising investment in “intangible” assets, such as research and development (R&D) and information and communication technologies, has become ever more important as a driver of growth.<sup>3</sup> This paper will explore whether Qatar – a country highly dependent on its oil and gas revenues – can innovate, diversify, and ultimately reach its aim of creating a knowledge economy.

### BACKGROUND

Qatar has experienced remarkable economic growth in recent decades and is presently the richest country in the world as measured by GDP per capita, projecting long-term average growth of 9 percent beyond 2014.<sup>4</sup> The government has invested considerably in measures to improve and enrich the lives of its citizens.

With its strong public sector base and ambitions for economic growth and diversification, Qatar is well positioned to move toward a knowledge economy. However, it will likely require additional policies and programs to get there. A knowledge economy and new industries will need to be developed as the education and skill levels of young Qataris increase. As the labor market develops and requires more highly skilled workers, it will be crucial that the education system be able to meet those demands, in terms of the type and quality of instruction offered. Furthermore, Qatar’s private sector needs to grow in order to provide more opportunities for entrepreneurship and innovation.<sup>5</sup>

### CREATING AN INNOVATION ECOSYSTEM

While there is no single definition of an “innovation ecosystem,” most descriptions reflect the flow of technology and information among individuals, enterprises, universities, and government institutions. Establishing such an ecosystem requires measures that improve performance in R&D, education, entrepreneurial activity, and knowledge flows, which, when combined, allow an idea to be translated into an actual entrepreneurial venture. Singapore provides an example of successful government-led expansion of entrepreneurship. Government strategies over the past few decades have focused on creating a national innovation system to drive future economic growth. These policies have emphasized the importance of developing the country’s infrastructure and human capital by attracting international expertise to support local innovation.

Singapore’s economic development has taken place in four phases. First came the industrial phase (from 1965 to the mid 1970s) of high dependence on technology transfer from foreign multinationals. Secondly, local technology development took place from the mid 1970s to late 1980s through learning from multi-national organizations, establishing the Singapore Science Park for technological advancement and increasing support to local industries. Following that came an expansion of R&D from the late 1980s to the late 1990s through the establishment of local institutions to support innovation, such as the Ministry of Communications and Information Technology and the National Science and Technology Board, which offer institutional support for R&D as well as entrepreneurial ventures. Finally, the fourth phase, from the 1990s onward, saw a shift toward technology entrepreneurship, characterized by an emphasis on supporting high tech start-ups and a move toward technology-based industries.<sup>6</sup>

While the development of a national innovation system in Singapore took place over several decades, in Qatar, critical progress has been made within the last 10 years. Nonetheless, similarities do exist between the two countries. Qatar too has invested in establishing key institutions, such as Enterprise Qatar and Qatar Science and Technology Park. These institutions, similar to Singapore's Science Park and National Science and Technology Board, work to bolster local industries while providing infrastructure support and financial incentives as well as facilitating knowledge transfer between R&D and local businesses. Because Singapore's reforms were implemented over decades, the country has been able to learn valuable lessons through trial and error, and individuals and businesses have adopted a culture of innovation over time. As the national innovation system developed, businesses and institutions learned how to benefit from the support of policy initiatives. Because it is establishing similar institutions at an accelerated rate, however, Qatar may need to do more to ensure that its population, small and medium-sized enterprise (SME) sector, and public institutions are able to gain access to and benefit from the support offered by new organizations.

## BUILDING BUSINESSES IN QATAR

In its National Vision 2030, the Qatari government has outlined key strategic goals, including the creation of a diversified economy in which the private sector, and SMEs in particular, play a pivotal role in increasing innovation and entrepreneurship in the country.<sup>7</sup> Promoting innovative business ideas by providing access to training, development, and funding is vital to the growth of the SME sector in any economy. It is particularly important in Qatar, however, as businesses continue to face obstacles when entering the market. Qatar is currently ranked 50th out of 183 economies in ease of doing business, according to the World Bank's *Doing Business 2011*, after placing 39th in 2010.<sup>8</sup> World Bank research also shows that bank lending to SMEs accounts for only 0.5 percent of the total loans made in Qatar, making it nearly impossible for the sector to grow.<sup>9</sup> The average share of SME lending in

the GCC is only 2 percent, while the share in the non-GCC countries of the Middle East is 13 percent. This low level of bank lending suggests that considerable changes to the financial infrastructure are now needed in Qatar. Examples would be direct policy intervention to subsidize lending, improve transparency, increase competition between banks, and improve the collateral system. Such changes would grant individuals and businesses access to financial support, which can then help them convert their innovative ideas into viable business ventures.<sup>10</sup>

In 2008, Enterprise Qatar, an umbrella organization within the Ministry of Business and Trade, was established with the aim of developing the SME sector. Enterprise Qatar is designed to promote and support SMEs to be competitive and productive through three key programs:

- 1) Providing financial and support incentives, including training and development support for entrepreneurs and existing SMEs in how to run businesses;
- 2) Assisting SMEs in gaining access to financial products, such as seed capital funding, grants, and guaranteeing loans; and
- 3) Offering specialized business support services for SMEs to develop networks and industry associations, and to incubate new projects to help them start up and then "spin-off" to become viable businesses.

Enterprise Qatar thus far has earmarked \$549 million to help foster an environment of diverse and dynamic entrepreneurs for future broad-based and sustainable growth.

In most economies, funding for SMEs does not come from the government alone but from the private sector or public-private organizations in the form of equity funds and venture capital. In Qatar, more needs to be done to encourage the private sector to invest in SMEs and introduce funding options for businesses. New Zealand faced a similar obstacle, and, in an effort to strengthen the private sector, the government established the New Zealand Venture Investment Fund, a private equity fund that

provides venture capital and seed funding to local businesses.<sup>11</sup> Such an initiative, which helps spur private sector expansion with public funding, could be applied to the Qatari context.

Silatech – established to expand employment and business opportunities for MENA youth – is another institution providing direct support for SMEs in Qatar. A recent Silatech study found that 24 percent of young Qataris were planning to start a business in the next 12 months, yet less than half (49 percent) believed it would be easy to obtain a loan to do so. Only 36 percent thought the government made the required paperwork and permits “easy” for prospective businesses.<sup>12</sup>

The establishment of institutions like Enterprise Qatar, Silatech, and QSTP represents progress toward a knowledge economy, and no doubt helps explain Qatar’s rapid upward movement on the Global Competitiveness Index (GCI), the leading measure of sustained economic growth.<sup>13</sup> For 2010-11, Qatar was ranked 17<sup>th</sup> in the GCI index compared to 22<sup>nd</sup> in 2009-10. Qatar is now just below China, France, and Australia. Singapore has maintained its ranking at number 3 for the past several years.<sup>14</sup>

While Qatar appears to be making progress, the process of creating a successful knowledge economy can be difficult to monitor and implement, as innovation becomes integrated in the web of global markets. Countries, especially small ones like Qatar, must be attentive to the diversity of the international landscape of innovation, particularly the knowledge emerging from leading markets around the world, and put in place joint ventures, foreign acquisitions, and human capital policies which link knowledge with local needs.

## EDUCATION FOR A KNOWLEDGE ECONOMY

The introduction of reforms to boost entrepreneurship, innovation, and administrative efficiency can directly support business creation. However, as ev-

idenced by Singapore’s experience, R&D needs to be expanded locally while also attracting and benefiting from international R&D. Qatar appears to have taken such lessons to heart.

The youth bulge in Qatar – as in the rest of the Middle East – will place greater demands on education and labor market systems. The Arab Human Development Report estimates that Arab countries will need to create 51 million new jobs by 2020 to employ the growing young population. Qatar now has the lowest unemployment rate in the GCC at 0.5 percent.<sup>15</sup> Due to the youth bulge, however, Qatar must ensure that young people have market-relevant skills. This will require not only expansion of education options at the university level but also in elementary and secondary education.

Education in Qatar has been rapidly transformed through the increased choice of courses and universities. The establishment of Qatar Foundation in 1995 and Education City in 2002 – which includes several campuses of prominent U.S. universities – demonstrates the nation’s commitment to increasing human capital levels through education and scientific research.<sup>16</sup> Despite the expansion of higher education, however, there remains a great deal to be done. The OECD Pisa rankings, the universally recognized measure of education performance in countries, rank countries by student performance in reading, mathematics, and science. While the average score of an OECD country is 493 points across all three areas, Qatar scores fifth from the bottom with an average score of 372, below Albania and Kazakhstan.<sup>17</sup>

Delivering market-relevant education is a challenge reflected across the Middle East, where a mismatch exists between the education offered and skills needed by the labor market.<sup>18</sup> Students are still largely learning by rote rather than being encouraged to think creatively in a more flexible learning environment.<sup>19</sup>

Science and technology are deemed key components for a knowledge economy. These subjects help teach cognitive problem-solving and analytical skills that are essential for the needs of Qatar’s

economy.<sup>20</sup> Furthermore, by offering a wider range of courses, particularly those that strengthen vocational skills, schools and universities can equip students for a variety of careers critical to the development of a knowledge economy.

Qatar Science and Technology Park (QSTP) is a recent educational and technical development in Qatar. Similar to the Singapore Science Park, QSTP is a hub designed to attract entrepreneurs from the international community to develop and commercialize their technologies in Qatar. It promotes collaboration between universities and companies by providing technological and commercial support for small companies, as well as to large corporations, such as Exxon Mobil, Microsoft, and Shell. QSTP provides financial support for new technology innovations through programs such as the “Proof of Concept Fund.” This program offers support to entrepreneurs, access to networks, and associations for entrepreneurs to establish new technologies.<sup>21</sup>

The support provided by Enterprise Qatar and QSTP is accessible to nationals and expatriates alike. For a knowledge economy to be sustainable, a transfer of knowledge and skills must take place between experts and new entrepreneurs. Qatar hopes that a larger number of these new entrepreneurs will be nationals and has therefore implemented a policy of “Qatarization” to increase the employment levels of Qataris across all sectors. The Qatar 2010 Census shows that 88 percent of employed Qatari nationals work in the public and semi-public sectors.<sup>22</sup> For the nationalization policy to be effective, the skill levels of Qataris need to be improved. There are currently no incentives for organizations to implement this policy or to transfer knowledge to Qataris if they do not already have the required skills. In other Gulf nations like Kuwait, facing similar challenges, the Ministry of Education implemented the Offset Programme for international experts to share their expertise with Kuwaiti students in universities.<sup>23</sup> Such policies of providing business support to Qataris and expatriates, while also boosting Qatari representation in the nation’s economy, need to be better aligned.

Creating a knowledge-based economy also re-

quires that advanced technical degrees are offered in institutions of higher education. When nationals are encouraged to study in these areas, human capital levels can be raised, encouraging nationals to work in a diversified economy rather than limiting themselves to public sector positions.

Schools and universities have a clear role to play in helping create a culture of innovation by nurturing the expertise valued in a vibrant private sector. To this end, they should promote innovation and entrepreneurship, with other public institutions providing initial start-up phase protection and the infrastructure to absorb risks. Even this practice, however, has its limits. As one academic official at Virginia Commonwealth University (VCU) explained, “We do not yet have an innovation ecosystem in Qatar, so our students cannot be expected to do everything from business start-up to delivery. We can help incubate real projects and help develop a creative industry within the university and then encourage students and alumni to follow it through as a viable business after they graduate.”<sup>24</sup>

Through effective public institutions, along with the expertise of the service providers from Enterprise Qatar and QSTP, education and innovation can successfully be combined and delivered. Indeed, Enterprise Qatar identifies one of its goals as reaching out to universities to increase awareness of their new business support services. Because innovation requires risk-taking, it is important to recognize the possible barriers that exist in Qatar, as many nationals prefer the greater security, clear financial benefits, and stability offered by public sector employment.

Rather than allowing for a vibrant SME sector to emerge organically, the government needs to generate a “security net,” and in some cases procure business services, to encourage Qataris to consider alternatives to the public sector. One example of such a government-sponsored effort at innovation occurred when the government approached VCU to design the uniforms for the Qatari Army. While the project was publicly funded, VCU assigned students to design the products and deliver outputs as if they were a fully operational business. This

endeavor demonstrates that government procurement can produce innovative products and support growth in the knowledge economy while also absorbing project risks.<sup>25</sup>

### MOVING FORWARD: SUPPORTING A GROWING ECONOMY

The 2022 World Cup in Qatar and the \$65 billion earmarked for infrastructure development present an excellent opportunity for the government to support local innovation and business.<sup>26</sup> While universities do not readily have the capacity to deliver large-scale projects, they can promote risk-taking behavior and motivate students to create business opportunities that can be “spun off” after graduation. As one senior expert at QSTP stated: “We need to ensure Qatari people feel they will not lose anything from venturing into a new enterprise or in developing innovative ideas. We need to inspire them to take risks based on the possible rewards to be gained and to understand that there is value through learning lessons even when projects that do not always succeed.”<sup>27</sup>

Because projects like the 2022 World Cup will require large-scale economic developments in the country, the onus must not be on public institutions alone to support and promote the knowledge economy. Rather, the private sector and international organizations also have an important role to play in developing Qatar’s knowledge economy. In most advanced economies, the private sector, through business confederations and lobbying groups, ensures that government and policy-makers are informed of market conditions that hinder enterprise creation and growth. In Qatar, organizations need to highlight these barriers, particularly regulatory burdens and the level of bank lending to businesses, and identify areas of best practice through which they can be overcome.

Currently, the Qatar Chamber of Commerce and Industry (QCCI) is the primary representative organization for the country’s private sector. Its membership is made up of Qatari citizens and Qatari-owned

companies engaged in commercial, industrial, or agricultural business in Qatar.<sup>28</sup> The QCCI’s role is to organize, represent, and defend the interests of its members in the private sector to help support and develop the Qatari economy. One recent proactive measure by the QCCI involved the establishment of a private sector panel to ensure that local companies are awarded government projects for the 2022 World Cup. The QCCI also provides government departments with recommendations on labor force and logistical matters, such as customs and transport, which affect the regulatory environment for businesses.

The Qatari Businessmen Association (QBA) is another private sector body that provides its members with consulting services and business research, in addition to organizing discussion platforms for shared dialogue on business development.<sup>29</sup> The QBA’s objective is to represent business interests at all levels of government with the aim of promoting diverse investment, entrepreneurship, and corporate development in Qatar.<sup>30</sup> With 39 total members, the QBA wields some influence in Qatar, yet it remains to be seen how much lobbying power it has with the government. Organizations like the QCCI and QBA provide a critical link between businesses and the government and can help ensure that barriers to the establishment of new enterprises are removed.

International organizations can also contribute to economic diversification. The World Bank, through its Education for Knowledge Economy program, plays a leading role in helping countries develop their education programs to help generate workforces compatible with a knowledge economy.<sup>31</sup> In addition, the World Bank organizes knowledge economy workshops that provide support and guidance to countries to help advise on economic prosperity. In fact, one such workshop in the Middle East, attended by several countries in the region, including Qatar, led to the adoption of the Tunis Declaration. This document details the importance of creating knowledge economies in the Middle East and forming regional networks of experts to share experiences and expertise.<sup>32</sup>

Greater entrepreneurship and innovation not only further internal growth but can also help build stronger economic links between countries. The Obama Administration, for example, committed in June 2009 to establishing “a new corps of business volunteers to partner with counterparts in Muslim-majority countries.”<sup>33</sup> In fact, President Obama hosted a Summit on Entrepreneurship in an effort to expand ties with entrepreneurs and business leaders in the region. Such partnerships can help serve the interests of communities and countries around the world by facilitating greater domestic economic growth and development.<sup>34</sup>

## POLICY RECOMMENDATIONS

To succeed in delivering on the commitment to develop a knowledge economy, the Qatari government must build up a vibrant and effective private sector. This can be achieved by building on ongoing infrastructural developments and creating an innovation ecosystem to promote research, support, as well as to finance risk-taking and business ventures. The Qatari government, however, should also be aided by the private sector and international organizations.

To this end, the recommendations in this paper fall to the Qatari government, the Qatari private sector, and international organizations.

*Recommendations for the Qatari government and public institutions:*

- **Looking to the Small Business Innovation Research program in the United States as a model, the Qatari government should help to generate demand for research that is then transformed into viable businesses through public procurement initiatives.** The Small Business Innovation Research program allocates 2.5 percent of the total research budgets of all federal agencies with budgets over \$100 million to contracts or grants for small businesses. The Qatari government could set a similar target of funds from research budgets to be allocated to small businesses.

- **Prizes should be granted for business ventures and innovations.** The National Business Plan “Al Fikra” competition offers a useful model for incentivizing entrepreneurial ideas. The competition allows undergraduate and graduate students, as well as professionals, to present business plans to a consortium of higher education institutions and business development groups, who then help convert the best ideas into viable businesses by providing advice and funding.<sup>35</sup> Public institutions, such as the Ministry of Business and Trade, Enterprise Qatar, and the Ministry of Higher Education should now take similar action. In so doing, risk-taking behavior will be encouraged and entrepreneurs rewarded early on in the innovation process, encouraging them to continue taking risks. Additionally, national prizes would add to the prestige associated with innovation and business development and therefore grant greater cultural acceptance. The National Business Plan competition, launched in 2011, is the first of its kind to seek to reward innovative ideas, rather than only final products. Such projects should be emulated.
- **Enterprise Qatar should provide financial incentives for Qatar’s equity funds and venture capital entities to invest in and provide financial support for SMEs.** This will increase small and fledgling businesses’ access to funding, through private or public-private equity funds, enabling entrepreneurs to advance their projects and ideas.

*Recommendations to Qatari schools and universities:*

- **Schools and universities in Qatar can help foster a culture of business development and risk-taking by ensuring that these skills are taught as an integral part of the educational curriculum.** This, in turn, will encourage more students to become involved in business and eventually contribute to the transfer of knowledge. By adding such classes, a new generation of Qataris will be more likely to venture into the private sector, thus contributing to the develop-

ment of a knowledge economy.

- **Universities should expand the incubation role currently offered by QSTP for technology innovation, through which students can gain access to the support of Enterprise Qatar, Silatech, as well as QSTP.** In this way, a stronger link can be forged between education and business creation. Business incubation by universities will help subsidize risk-taking, thereby reducing risk aversion. It will also help foster an environment in which universities and students are willing to adopt new ways of learning through a combination of research, education, and business creation. Universities should therefore provide institutional support to young people with viable business ideas by absorbing the initial start-up costs and risks as well as providing infrastructure support. By doing so, institutions of higher education can enable real projects to be designed and implemented by students, within universities, in their early stages.
- **Qatar's education system, from the primary school to university level, needs to support and meet the requirements of its economy to ensure immediate and long-term stability and growth.** A comprehensive reform program of how schools and universities in Qatar can meet the government's objectives for a knowledge economy, as outlined in the National Development Strategy and Qatar National Vision 2030, should be undertaken. Courses emphasizing cognitive problem-solving, creative thinking, and vocational and technical skills should be emphasized.

*Recommendations for the private sector in Qatar:*

- **Qatar's private sector can aid in the development of the knowledge economy by improving access to finance.** The QCCI and QBA should lobby financial institutions in Qatar to increase bank lending for local enterprises from the current 0.5 percent to the current non-GCC level of 13 percent, and the World Bank target rate of 21 percent for SMEs.
- **The QCCI and QBA, working in conjunction with Enterprise Qatar and similar organizations, should draw up a new regulatory framework to increase transparency and banking competitiveness in financial lending to SMEs.** In this way, subsidized bank lending can be effectively monitored and evaluated to ensure that it facilitates the establishment of new businesses and new growth for existing ones.

*Recommendations for international organizations:*

- **Drawing from the Tunis Declaration, the World Bank, through its Education for Knowledge Economy program, can provide Qatar with direct support, guidance, and expertise to advise on improving the Qatari education system.** The Bank and similar organizations can also help ensure that networks of innovation and knowledge economy experts are made known and available to Qatar. This support will help Qatar further advance its knowledge economy by increasing the skills levels of the workforce, guiding local businesses, and ensuring positive movement toward meeting the World Bank target of 21 percent bank lending for SMEs.



## NOTES

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- <sup>25</sup> Ibid.
- <sup>26</sup> Qatar National Vision and General Secretariat for Development Planning, *Qatar National Development Strategy 2011-2016: Towards Qatar National Vision 2030*, March 2011, <[http://www2.gsdp.gov.qa/www1\\_docs/NDS\\_EN.pdf](http://www2.gsdp.gov.qa/www1_docs/NDS_EN.pdf)>
- <sup>27</sup> Author’s interview with VCU official, October 2010.

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<sup>28</sup> Until its first elections in 1998, the board of directors of QCCI was appointed by the government. Sheikh Khalifa Bin Jassem Bin Muhammad Al Thani is currently president of the body. For a full list of members, please see <[http://www.qatarchamber.com/member\\_en.aspx](http://www.qatarchamber.com/member_en.aspx)>

<sup>29</sup> Qatari Businessmen Association, "About QBA," <<http://www.qataribusinessmen.org/Support/aboutqba.htm>>

<sup>30</sup> QBA membership includes Qatari businesspersons and think-tanks. The QBA is governed by its chosen Board of Members who set policy on behalf of its members. For a complete list of members please refer to the QBA website at <<http://www.qataribusinessmen.org/Support/MEMBER.htm>>

<sup>31</sup> The World Bank, "Education for the Knowledge Economy," 2009, <<http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTEDUCATION/0..contentMDK:20161496~menuPK:540092~pagePK:148956~piPK:216618~theSitePK:282386.00.html>>

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<sup>35</sup> "Enterprise Qatar to conduct Al Fikra contest," *The Peninsula*, March 7 2011, <<http://www.thepeninsulaqatar.com/qatar/144925-enterprise-qatar-to-conduct-al-fikra-contest.html>>

## ABOUT THE BROOKINGS DOHA CENTER

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Research and programming are guided by the Brookings Doha Center International Advisory Council chaired by H.E. Sheikh Hamad bin Jassim bin Jabr Al Thani and co-chaired by Brookings President Strobe Talbott. Salman Shaikh, an expert on the Middle East peace process as well as state-building efforts and dialogue in the region, serves as the Director of the center.

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