Center for Mellemøststudier

News Analysis September 2016

Challenges to implementing 'Knowledge based economies' in the Gulf region

Martin Hvidt

News

The rulers of the Arabian Gulf States are facing hard times as a result of the current low oil prices. Despite four decades of political emphasis on economic diversification, these states continue to be heavily dependent on the revenues originating from the sales of oil and gas. The current collapse of oil prices has spurred new life into the diversification effort, but now in the form of an emphasis on transforming their countries into 'Knowledge economies.'

Summary

The article points out that the Gulf States, due to their ample economic resources, have never been forced to invent or to innovate, but have been able to base their development on learning, imitation or, most prominently, on importing technologies, know-how and manpower already available globally. This has created a type of economy which is strongly dependent on import and thus on incomes from oil and gas. The recent emphasis among the gulf leaders to transform into "Knowledge economies" is an effort to diversify the economies and to create jobs with a high knowledge content for the local populations. The article argues that due to the current state of affairs in relation to innovation and the educational system, the transformation to a Knowledge Economy will be difficult and long.

Key Words

Knowledge Economy, Gulf States, Economic Reforms, privatization

About the Author

Martin Hvidt is Associate Professor at the Centre for Contemporary Middle East Studies at the University of Southern Denmark. He has recently returned to the center following three years employment at Zayed University, Dubai.

Note

This article is a revised version of the article: Hvidt, Martin (2015): The State and the Knowledge Economy in the Gulf: Structural and Motivational Challenges, *The Muslim World* (Vol. 105, No. 1, p 24-45).

Analysis:

The states of the Arabian Peninsula have undergone marked changes since oil was first discovered a half a century ago and its exploitation secured ample resources to finance a rapid development process in the region. This developmental process has not only been speedy, it has also been qualitatively different from the pattern observed in Europe, for example, where agriculture as the economic foundation of societies was succeeded first by industrialization, then by the so called "information society", and finally by the present "knowledge economy". The Gulf countries are in essence attempting to leapfrog directly from a pearling/fishing/trading economy into a knowledge economy. The Gulf States are classified as "late-late" or, as suggested by Hvidt (2014:34), as "late-late-late" industrializers. As pointed out by Amsden (1989:4), the first industrializer was Great Britain, who developed through invention. The second wave, e.g., Germany, Japan, USSR, US developed through innovation, while the current "backward" countries base their development on imitating already developed countries. The Gulf States have not — so far — been forced to invent or to innovate, but have been able to base their development on learning or imitation; that is, by using their favorable financial situation to import technologies, know-how and manpower already available elsewhere.

The decision makers in the Gulf region have clearly stated their aim to transform their economies into so-called "knowledge economies." Among other virtues, these transformations are expected to increase the level of knowledge and entrepreneurship among their national populations, so that they can successfully tap into foreign knowledge and adapt and create new knowledge for their countries' own specific needs.

Underlying this is the fact that changes have to be initiated because the current economic model in the Gulf—the distributive model—has run out of steam, and it has left the economies in the region under significant stress. This was true already before the current drastic decline in oil prices commencing in 2014, but has become even more pronounced since then. Currently, the incomes from oil and gas are hardly sufficient to finance the extensive and exceedingly generous welfare systems the Gulf States have been building since the early 1970s. The demographic realities of fast growing populations and increased dependency burdens are the main reasons for this. Equally important is the fact that the distributive model has fallen short in creating sufficient jobs for the national populations, both in quantity and in quality.

The response to these sets of interrelated problems has been two broad types of policies. The first aims to reduce the costs to the government budgets; that is, by reducing transfers and pensions, by implementing fees for certain services (water and electricity), or by reducing subsidies, etc. With UAE as the frontrunner, the GCC States have all removed all or most of their subsidies on fuel, and in Kuwait, the Emir has warned his

citizens that if serious reductions in subsidies, pensions, and so on are not undertaken, then Kuwait is expected to encounter an accumulated budget deficit of US$1.46 trillion over the next twenty years.

The second type of policy aims to increase state income, and concurrently income for the individual citizen. One way this has been pursued has been to call for a diversification of economies away from dependence on oil and gas, that is, to create genuine productive sectors. As a part of this strategy the governments have embarked on the long-term journey of transforming their societies into knowledge economies. Both strategies entail a return to a more prominent role played by the private sector in the economy.

The aim for a knowledge economy seems to fit well with the fundamentals of the region. Besides Saudi Arabia, the GCC countries are made up of small states with tiny native populations. As such, a development strategy which aims to create sizeable numbers of industrial jobs with low or medium knowledge content would not be optimal, because the workforce would largely have to be imported. But, aiming for fewer jobs with higher knowledge content, and a better pay targeted at the regions' own population, seems logical.

It is however no easy task for a state to transform into a knowledge economy, because a successful knowledge economy rests on an intricate relationship between entrepreneurship, motivation, enabling economic and institutional regimes, and so forth. As such, establishing a knowledge economy entails much more than just having a well-educated population; it is about a special mindset dominating such societies — a mindset that focuses on building and winning opportunities, on visions, and on creating a vibrant home base for globally competitive business. As Stiglitz (1999:6ff) articulates, successfully establishing a knowledge economy requires a broader change in culture which focuses on citizens' participation (in economic activities), ownership of processes and active learning so that motivation, aspirations and entrepreneurship will become an intrinsic ethos of the individual.

Defining the Knowledge Economy

Despite the fact that the concept "knowledge economy" has been widely used over the last two or three decades, it remains vaguely defined. In this paper I will adopt the definition of a knowledge economy provided by The Work Foundation initiative in Great Britain:

Economic success is increasingly based on the effective utilization of intangible assets such as knowledge, skills, and innovative potential as the key resource for competitive advantage. The term "Knowledge Economy" is used to describe this emerging economic structure.

As pointed out by Brinkley and others, this definition captures two important features of the knowledge economy. Firstly, the shift towards a knowledge-based economy affects all sectors in a society - low- and high-tech, knowledge-intensive and less knowledge-intensive, large and small, public and private. Secondly, the knowledge economy is to be understood as a transition. It is part of a long-term process that will go on for decades if not centuries. Furthermore, this definition highlights the core rationale behind the transformation to a knowledge economy; namely to increase the competiveness of a given country. In this framework, "knowledge" is not an end in itself or a tool of empowerment in a Freireian sense, it is rather a concept that is closely linked to the neoliberal economic paradigm within which states or cities worldwide compete for business and growth.

The neoliberal origin of the concept is furthermore visible in the drivers, enablers and accelerators behind the growth of the knowledge economy. The key driver is the increasing demand for high-value-added services and goods from the rising middle class worldwide and elaborate state service provision systems. The enablers are powerful and cheap computers and the "general purpose" ICT technologies, coupled with mass higher education. The accelerators on both the demand and supply side are globalization, creating competitive markets of scale, diversity and facilitation of the flow of ideas, concepts, technologies, capital and people.

How do We Quantify the Knowledge Economy?

Probably the most widely used quantification of knowledge economy is the so-called knowledge Assessment Methodology developed by the World Bank. In this, the World Bank has singled out what is commonly understood as the four pillars of the knowledge economy:

- Economic Incentive and Institutional Regime
- Innovation and Technological Adoption
- Education and Training
- Information and Communication Technologies (ICT) infrastructure

The four pillars are interlinked, and adequate performance on each is considered a prerequisite for achieving a successful knowledge economy. As such, the ability to build a knowledge economy does not only imply good technological infrastructure and a well-educated population, it also entails establishing a "knowledge-conducive" economic regime (by which is meant an economy with transparent rules and regulations,, free of distortions, with an effective, accountable and corruption-free government, an effective legal system, freedom of speech, the protection of property rights, etc.) and the creation of an innovation system which can produce, use and adopt knowledge to manufacture/produce new goods, new processes and new knowledge.

The basic claim of the World Bank Knowledge Economy framework is that sustained investments in education, innovation, information and communication technologies, alongside an environment conducive to economic and institutional growth, will lead to increases in the use and creation of knowledge in economic production and consequently result in sustained economic growth.

Challenges Related to the Pillars of Education and Innovation in the Gulf

While recognizing that a successful knowledge economy necessitates good performance on all four pillars, the analysis in the remaining part of the paper will focus on the two pillars on which the Gulf States have their weakest performance, namely education and innovation. While the Gulf countries generally score on par with Europe on the parameters of Economic Incentive and Institutional Regime and Innovation and Technological Adoption they score significantly lower in relation to Innovation and Education. Why is that?

The three *Arab Knowledge Reports*, which were written mainly by Arab scholars and published in 2010, 2011 and 2015 provide a dismal picture of the educational system and research and innovative capacity in the Arab world, and of the link between education and economies.

Among the highlighted problems are low levels of funding for research, a general lack of a research focus at the universities in the region (allocation of high teaching loads and very limited research time for university faculty as compared to the West), a lack of emphasis on social science-based research, and a lack of academic freedom. Furthermore, neither the teaching nor the research is integrated with the cycle of production, and a significant mismatch between the qualifications of the candidates and the demand by the labor market can be observed. Moreover, the reports point out that

research in general takes place within public sector institutions, which results in a lack of incentive-driven research opportunities in the region. In terms of funding levels, the *Arab Knowledge Report* 2014 (p. 106) points out that the MENA region used a meager 0.5 percent of its combined GDP on research in 2009, well below the world average of 2.13%. In 2012 UAE used 0.49%, Oman 0.13% and Kuwait only 0.09%. As a comparison Japan used 3.4 percent of GDP on research (R&D), US 2.8 percent, China 1.98 percent and EU 1.96 percent.

The reports furthermore point out that the university system in the gulf countries suffer from weak performance in the primary and secondary schools. Or as stated in the Arab Knowledge Report 2014 (p. 193) "despite the progress achieved in many Arab states, particularly in the Gulf, most studies find that the quality of outputs, especially in the pre-university education cycle, still falls below the sought level."

The findings in these three reports are seconded by a 2008 World Bank report, somewhat dated, however still relevant, entitled *The Road not Traveled: Education Reform in the Middle East and North Africa*. This report highlights the fact that most of the school systems in the region have been built with the aim of rapidly spreading education to all corners of each country; as such, they have placed little emphasis so far on providing incentives for teachers to perform at their best. In short, quantity has been prioritized over quality.

The report furthermore points to a unique feature of the tertiary education system in the MENA region; namely, that it had largely been established before the productive sectors or the state institutions showed a demand for graduates. This has instituted a supply-oriented educational system with very limited emphasis on designing study programs with a focus on achieving actual and useable labor market skills. The lack of demand for actual skills impacts the student's choice of study, leading to a situation where more than 50 percent of the students are enrolled in humanistic studies, and relatively few within natural or technical sciences. Such factors contribute to weaken the link between the education sector and the labor market.

Finally, the report points out that in general there is a very weak relationship between education and economic growth in the MENA countries; the primary reason being that most graduates (nationals) obtain employment in the public sector. This allocation of human capital weakens the contribution of investments in education to economic growth.

Conclusion

In conclusion, the cited reports document a host of structural problems within and around the educational system, which minimizes research outputs, lowers the quality of the teaching, and lessens the usefulness of the provided education to society. As such, it is questionable how well such a university system prepares its graduates to play an active role in a future Knowledge economy.

While official announcements and actual policies in both the UAE and in the other Gulf countries currently emphasize improvements in their educational systems, it is a task which can be accomplished neither quickly nor easily. As such, while the transformation to a Knowledge Economy might seem the logical answer to the current economic downturn, the positive benefits of this transformation to the economies can only be achieved in the long term. So for the foreseeable future the Gulf countries must rely on import of technology and man-power in order to keep their economies going.

Selected references

Amsden, A (1989): *Asia's Next Giant: South Korea and Late Industrialization* (New York: Oxford University Press).

Brinkley et al. (2012): *Kuwait and the Knowledge Economy: A report prepared for KFAS*, The Work Foundation and the Kuwait Programme on Development, Goverance and Globalisation in the Gulf States, Research Paper no. 22 (London: London School of Economics and Political Science).

Hvidt, Martin (2014): "The role of 'lavish construction schemes' in 'late-late-late' developing societies. The case of the Arab Gulf States," in *Under Construction. Logics of Urbanism in the Gulf Region*, eds. S. Wipple,et al. (Surrey: Ashgate)

Hvidt, Martin (2015): The State and the Knowledge Economy in the Gulf: Structural and Motivational Challenges, The Muslim World (Vol. 105, No. 1, p 24-45, 2015).

Stiglitz, J. E. (1999): *Public Policy of a Knowledge Economy* (London: Department for Trade and Industry and Center for Economic Policy Research.

UNDP (2010): *Arab Knowledge Report 2009: Towards Productive Intercommunication for Knowledge.* (Dubai: Mohammed Bin Rashid Al Maktoum Foundation and the United Nations Development Programme).

UNDP (2010): *Arab Knowledge Report 2010/2011: Preparing Future Generations for the Knowledge Society.* (Dubai: Mohammed Bin Rashid Al Maktoum Foundation and the United Nations Development Programme).

UNDP (2015): *Arab Knowledge Report 2014: Youth and Localisation of Knowledge,* Dubai: Mohammed Bin Rashid Al Maktoum Foundation and the United Nations Development Programme).

World Bank (2008): *The Road not Traveled: Education reform in the Middle East and North Africa*, MENA Development Report (Washington D.C.: The World Bank, 2008).