

Knowledge economies still elusive in Islamic world

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ADDRESSING THE GAP: Structural change, not fads and symbolism, is required.

LAST month, a special report by The Economist magazine announced the dawn of the third industrial revolution, built on the idea of individualised production powered by 3D printers and nano devices that create objects atom by atom.

It talked of a not-so-distant age when the global centre of gravity of production -- which in the 1970s moved to developing countries like China, Malaysia, Taiwan -- will revert to the developed world, in order to be nearest to the 'brains'.

For the developing world in general, and the Islamic World in particular, this could mean the loss of a significant economic opportunity. Thus, it is all the more important, even if the more difficult, for Islamic countries to create a knowledge economy before they are bypassed.

In 2003, the United Nations Development Programme issued a second edition of its Arab Human Development Report (AHDR), which looked at developments in freedom, knowledge and women's empowerment, deficits identified in the 2002 first edition of the report.

Almost a decade on, progress towards these goals has been uneven. There are notable and highly visible achievements, such as Education City in Doha, the creation of elite and large universities in Saudi Arabia, and Qatar setting itself an ambitious target -- which it is largely following through on -- of increasing spending on research and development to 2.8 per cent of its gross domestic product (GDP).

But the picture is mixed, as reflected in a 2008 report from the Brookings Institution. This noted that Arab countries spent on average five per cent of their GDP on education between 1965 to 2003 -- higher than the three per cent average for Asia and Latin America -- but questioned the effectiveness of this spend.

For despite the investment in education, Arab countries still lag a representative set of Latin American or Asian countries in academic achievement. The report also found a mixed record on a range of governance measures, such as accountability, corruption and rule of law.

Speaking at a conference in 2009, Shamshad Akhtar, regional vice president of the World Bank for the Middle East and North Africa, acknowledged that there had been progress in areas such as broadening education and increasing the use of information and communication technology.

But she added that at the same time, "other regions have made even more rapid progress in these same areas, so that the region is further behind comparators and competitors today on the knowledge economy index than it was".

In recent years, much of the focus has been on trying to establish universities to provide better access to tertiary education. But though necessary, tertiary education alone will not be sufficient to create a knowledge-based economy.

One reason for the slow progress is confusion about what the term "knowledge economy" or "knowledge-based economy" actually means.

The World Bank has described the knowledge economy as one in which "organisations and people acquire, create, disseminate, and use knowledge more effectively for greater economic and social development".

However, clarity ends there. The framework put forward by the bank has four dimensions: economic and institutional regime; educated and skilled workforce; efficient innovation system; and information and communications technologies. To assess the status of each dimension, it identifies 148 structural and qualitative variables.

We need a better definition of what knowledge is, and how it can be used, to produce a more accurate index of the knowledge economy in developing countries. For instance, a farmer working in Egypt or Pakistan uses knowledge of land management transferred through generations. Yet this knowledge is hardly captured in modern indices of the knowledge economy.

Although traditional knowledge serves the farmer well, greater access to new science-based information could help if weather patterns or soil quality change due to climate change, for example.

But these intricate details and complex facets of the creation, dissemination, and use of knowledge are difficult to capture and quantify. They receive short shrift when policymakers follow the latest fads in development, such as creating world class universities.

The Islamic World needs to move away from fads and symbolic moves, and make a sustained effort to bring about structural change and introduce new incentives (such as those that will attract better quality teachers) for producing, obtaining and using knowledge in society.

As Rima Khalaf Hunaidi of UNDP rightly notes in the 2003 Arab development report, "There is ... a pressing need for deep-seated reform in the organisational, social and political context of knowledge."

This reform must begin with education at the primary level. In most Islamic countries, the curriculum is too rigid to allow creative thinking, critical inquiry, and free flow of ideas. Students are mostly spoon-fed by an authoritarian figure -- the teacher -- and discouraged from questioning.

Addressing this gap will require experimenting -- fairly rapidly -- with approaches and ideas, to discover what works. Two noteworthy, albeit nascent, experiments to induce creative thinking and critical inquiry at an early age through robotics-based learning tools are happening at National University of Sciences and Technology and a private after-school programme at Robotics Lab in Pakistan.

Only when the Islamic World can produce free-thinking citizens will there be any hope of the emergence of a meaningful knowledge society.