



Knowledge Economy, Job Creation, and Government Policies in MENA: *Towards New Development Strategies*

November 12-13, 2011 – Villa Valmer, Marseille

WORKSHOP SUMMARY

The main challenge in the MENA region today is to create more, better paid, decent, and higher quality jobs. A key way for MENA countries to meet this challenge is to invest more in knowledge and innovation related areas and to develop competitive, high productivity, and sustainable economic activities—that is, to make a move to a knowledge economy (KE). The CMI's work on the *Knowledge Economy for Growth and Employment in the MENA Region* aims to inform key policymakers and interested stakeholders from the region on the importance of using a KE approach as a key element in any government's long-term strategy to foster growth and create employment. One of the main outcomes of this work is the development of a report on this topic.

On November 12-13, 2011 the CMI organized a workshop on *Knowledge Economy, Job Creation and Government Policies* to discuss this important challenge with stakeholders from the region, in partnership with the MENA region of the World Bank, the World Bank Institute (WBI), the Islamic Educational, Scientific and Cultural Organization (ISESCO), and the European investment Bank (EIB). This event brought together some fifty participants, including policy makers from MENA countries: Egypt, Jordan, Lebanon, Morocco and Tunisia; experts from regional and international organizations, such as the Islamic Development Bank (IDB), the Arab Labour Organization (ALO), the United Nations Development Program (UNDP), the European Bank for Reconstruction and Development (EBRD), Forum Euroméditerranéen des Instituts de Sciences Économiques (FEMISE); and representatives from the private sector and the civil society in MENA.

At the workshop, participants shared their experiences on the development of KE strategies as well as on policies related to education, innovation, and ICTs. They discussed ways to create more and better jobs in the region through investments in various knowledge-related domains, and underlined the need for further policy reforms for the successful implementation of knowledge-based development strategies in the region.

The two day workshop was structured along the following themes:

1. *Knowledge Economy, Growth, and Employment;*
2. *Country Experiences on the Knowledge Economy;*
3. *Education and Employment Challenges;*
4. *Innovation and Employment Opportunities;*
5. *Knowledge Society in the Arab Region: Perspectives from the Arab Knowledge Report;*
6. *Reforms for the Knowledge Economy in MENA;*
7. *Knowledge Economy and Regional Integration; and*
8. *Next Steps.*

Welcome

Mats Karlsson, Director, CMI welcomed participants and linked the goals of increasing productivity in all sectors of economic activity with the attainment of higher levels of economic growth. He stressed the importance of having such cross-cutting debates to share good practices among stakeholders in order to build an active community of practice on KE related reform policies. This also builds of the value added of the CMI as a knowledge platform for the region.

Maha Merazak, Program Specialist, Science Directorate, ISESCO spoke on behalf of the Director General and thanked the CMI for this initiative, noting that this event was taking place at a critical time in which the issue of creating jobs for youth is a priority for the region. This workshop marks an important first step in the partnership between ISESCO and the CMI, in the context of the MOU that was recently signed by both organizations in October 2011.

Jacques van der Meer, Senior Economist, EIB mentioned the importance of moving towards a knowledge economy for growth and employment. Making an effective transition to the KE is a critical challenge and opportunity for MENA countries in the years to come, particularly given the current youth bulge and the need for creating productive jobs.

1. Knowledge Economy, Growth, and Employment

Strengthening the four KE “pillars” (innovation, education, ICTs, and the overall economic and institutional regime) is key for economic growth and job creation. *Carl Dahlman, Professor, Georgetown University* opened the workshop by highlighting the new global context that is marked by turbulence and change. At the same time, there is increasing global integration and interdependence through trade, finance, communications, and the environment. Despite some progress, the MENA region is still underperforming in knowledge-intensive sectors with low and even decreasing shares in manufacturing and service sectors compared to the rest of the world. Countries of the region need to develop their capabilities to acquire, use, and create knowledge to increase their economic potential and to take part in the global innovation system. They need to improve capacity of their economies to restructure and to take advantage of new opportunities. For this they need to strengthen their economic and institutional regime, including governance and foster entrepreneurship.

Evidence-based results prove that the links between knowledge and employment are positive when they are based on product innovation and efficient competitive markets. According to *Ndiame Diop, Lead Economist, MENA Region of the World Bank*, empirical analyses indicate a positive impact of product innovation on employment. Process innovation is labor-saving, but there are possible offsetting effects. Process innovation in one sector may promote sectors that produce machineries (if the latter are not imported); it may lead to decline in prices and boost demand and employment (if markets are competitive); and it may promote labor-intensity choices in production due to reduced cost of labor (if labor unions allow such decline). Competitiveness and aggregate demand effects (trade and investment) are more likely to help in reality than the above “compensating” effects. As regards impact on skilled versus unskilled workers, innovation and the KE lead to higher demand for skilled labor. The impact on existing versus new workers depends on whether technology is embodied or disembodied in new jobs or new capital. Policymakers should anticipate these changes by strengthening links between knowledge-intensive and other sectors and by enhancing employment opportunities for displaced/unskilled workers.

The MENA region has a real opportunity to create jobs through the move to a knowledge-based economy. Using the Knowledge Economy Index (www.worldbank.org/kam), *Derek Chen, Economist at the World Bank Institute* highlighted that from 1995 to 2000, a unit increase in KEI led to 0.18 percentage point increase in annual growth for the MENA region; from 2000 to 2005, a unit increase in KEI led to a 0.59 percentage point increase in annual growth. Knowledge-growth effects have therefore increased since 2000. He pointed that although the employment elasticity to economic growth is decreasing in most MENA countries, employment elasticity to knowledge is increasing. Global integration policies are crucial for knowledge-driven growth, which calls for the development of human capital through quality education, proactive policies to facilitate the “spread” of potential benefits of investments in knowledge, and the putting in place of a host of complementary policies, as related to the business environment, access to finance, competition, and the like.

MENA countries need to develop plans to shape their KE pillars and to better integrate and coordinate between them for greater growth. *Jean-Louis Reiffers, President of the Scientific Council of the FEMISE* highlighted the lack of strategy and monitoring systems for the creation of a knowledge-based model in MENA, using the low spillover impacts of technoparks in the region as an example. Using the recently updated Knowledge Assessment Methodology 2011, *Kurt Larsen, Senior Education Specialist and Marjo Koivisto, Consultant, World Bank Institute* showed that a number of MENA countries are not on track towards the KE, with some experiencing deterioration in their KE index between 2000 and 2011. Educational systems are not meeting the needs of the economy in MENA countries—all resource-low countries in MENA, except for Tunisia, have not improved their performance on the education sub-index since 2000. They also emphasized the need to overcome the low input/low output approach in funding innovation in the region by providing incentives to innovate and by engaging the private sector to create more and better value jobs.

There is a need to approach **KE strategies in a broad framework** including institutional reforms on the four KE pillars, innovation-based diversification, and work on economic and trade integration. This seems particularly important in the perspective of growth and job creation, as proposed by *Jean-Eric Aubert, Senior Consultant, CMI*.

2. Country Experiences on the Knowledge Economy

Experiences from MENA countries show the need for clear and shared KE vision with quick wins. **Despite macroeconomic progress, Egypt still faces many challenges in implementing a knowledge-based economy strategy, as pointed out by Mona El-Baradei, Senior Advisor to the Egyptian National Competitiveness Council.** Total factor productivity growth in Egypt increased from negative during the 1980’s to 0.2 percent between 2005 and 2008. Statistics also show an increasing number of scientists and engineers. However, these positive results have not had a concrete socio-economic impact due to the low effectiveness of “trickle down elements” (as for example, through infrastructure, technoparks, clusters, government services, and the like). But the Egyptian economy has several promising niches that it can build on, such as on renewable energy, ICTs, and agribusiness. She underlined the importance of designing a national science, technology and innovation strategy and of creating monitoring and evaluation tools to track innovative performance in all sectors of economic activity. But above all, what Egypt needs most is to reform its education system at all levels. She stressed that stability, which Egypt currently lacks, is a prerequisite for any kind of progress for the move to the KE.

With consistent achievements in the move to a KE, Jordan is ready to take advantage of regional opportunities and to extend its markets. To do so, *Nabeel Al Fayoumi, Vice President of the Royal Scientific Society in Jordan*, underlined that at the national level, reforms are needed in the economic and legislative area. He stressed the creation of a “native intellectual properties rights” structure to be adapted to Jordan’s

needs. Although Jordan has a somewhat limited market, it enjoys a competitive advantage in a number of sectors, notably in ICTs that it should continue to build on. At the regional level, he suggested the creation of a regional institution for the KE with national contact points to link champions across the region who can demonstrate change. *Laith Al-Qasem, Chief of Party at the USAID Jordan Economic Program*, added that in Jordan, it is important to promote knowledge in low-skill intensive sectors as well.

Progress in education in Tunisia did little to alleviate youth unemployment. The necessity of enhancing the relevance and quality of education was noted by *Jeel Ezzine, Director General at the Ministry of Higher Education and Scientific Research in Tunisia*. He especially underlined the issue of autonomy of universities. Ways to develop the skills needed for the KE include increasing the time allocated to English and imparting entrepreneurial and ICT skills. The Tunisian education and innovation systems need to be more integrated and pulled by market demand. In the same perspective, *Mourad Ezzine, Education Sector Manager, MENA region of the World Bank* highlighted that only 16 percent of the potential services market in the Tunisian offshoring sector has been seized, indicating a real window of opportunity to move forward in this domain.

Similarly, Morocco has taken several notable sectoral KE measures to increase productivity but employment remains a challenge, especially for women and skilled youth. *Mohamed Chafiki, Director of Studies and Financial Forecast at the Moroccan Ministry of Finance and Privatization* stated that the country needs to institutionalize an innovation policy that addresses territorial and local needs and capabilities, including with appropriate R&D structures. The skilled Moroccan Diaspora has an important role to play in today's knowledge economy. Public-private collaboration should be encouraged, particularly in R&D, and national enterprises should be encouraged to allocate a part of their revenues to R&D activities. He stressed that knowledge-based development strategies in Mediterranean countries should be designed in close cooperation with Northern countries in an inclusive manner, as these strategies will also serve the growth objectives of the latter.

3. Education and Employment

Education reforms in the region should respond to the pressing needs of the market to have a better skilled workforce. According to a recent study on Education for Employment (e4e) done by the Islamic Development Bank with the IFC, and presented by *Abdullahi Abdi, Education Specialist, IDB*, the economic cost of youth unemployment in the Arab region represents more than two percent of annual GDP, not adding social costs. There is a relatively low level of private sector engagement in post-secondary education in MENA. An average of 15-20 percent of total enrolled students take part in vocational education and training (VET) as compared with 65-75 percent in Malaysia and Brazil. This is an opportunity for private sector investment and for their active involvement in curricula development, such as is being done by the Al-Araby Group's VET institutes in Egypt. The government has an important role to introduce and expand such mechanisms, as for example, the labor training fund supported by the government of Saudi Arabia.

Generally speaking, the quality of learning in MENA is still far from international standards. *Mourad Ezzine* highlighted that none of the Arab countries that participated in TIMSS 2007 had an average score above the international mean scores in mathematics. The main priorities for any educational reform are to invest in human capital from early stages (early childhood development), to allocate smartly the resources among all participants in the educational system, and to reduce within-country education inequalities (invest early, invest smartly and invest for all).

Overcoming the widely present skills mismatch in the region requires creating intermediary agencies. Intermediary agencies for employment have a major role in reducing unemployment rates, as demonstrated by *Mohamed Ayoub Hassoun, the Regional Director for ANAPEC (National Agency for the Promotion of Employment and Skills)* in Rabat. He explained the role of ANAPEC in offering training and assistance for professional insertion to increase the employability of job seekers and to encourage

entrepreneurship. In five years, the agency has supported the creation of 4,000 enterprises and the insertion of more than 250,000 job seekers in the labor market in Morocco.

Promoting greater intra-regional labor mobility was suggested by *Tamer Taha, Research Analyst, CMI* by building on country complementarities, as for example, between the deficit of domestic skills in the Gulf countries and a surplus in Maghreb and Mashreq countries. He showed that the skills mismatch in the Arab countries is due to the low quantity of jobs created based on a “knowledge-weak competitiveness” economic structure, and due to the low quality of skills offered by the educational system that do not match market needs.

4. Innovation and Employment Opportunities

To stimulate employment, innovation policies are essential as a complement to further institutional reforms and efforts on international integration, underlined *Jean-Eric Aubert*. However, the positive impact of innovation policies on employment is more likely to be reached in the long term. Most Arab countries have bound their innovation policies to the development of projects (as for example, infrastructure, technologies, sectors...); there is now a need to support the overall innovation climate in these countries, to fight obstacles to innovation, and to empower inter-ministerial coordination bodies. This links to the importance of designing niche-specific policies that ensure their development and create linkages with local industries, like the sector and spatial plans designed in Morocco since the mid 2000's. This approach might lead, with micro-level fine tuning, to major macro-level impacts.

The region is endowed with many opportunities and niches that could potentially boost employment.

Ismail Radwan, Lead Economist, Africa Finance and Private Sector Unit at the World Bank showed that what worked 1,000 years ago during the Arab golden age is now needed in the MENA region: free borders, rule of law, peace and tolerance, prioritizing public education and health. *Pierre Strauss, Economist* in the same unit, identified four niche sectors for MENA countries: medical tourism (for example, even though Jordan is ranked 5th worldwide in this type of tourism, about half of the 410,000 foreign patients that went to Singapore were from the Middle East); green energy; creative industries; and tourism. *Gilles Pipien, Senior Environmental Specialist at the CMI, World Bank* seconded the analysis regarding green growth and added that employment benefits are not only possible in the long term, but can also be reached in the short and medium term. For example, as regards energy efficiency in buildings, Plan Bleu estimates the potential of creating 2 million jobs in the Mediterranean by 2030 (using similar parameters of a GIZ study in Morocco).

Role of the private sector and Diaspora in creating new jobs. *Fadi Daou, CEO of MultiLane Inc., Lebanon* shared his experience on how the Diaspora can contribute to the local economy. After many years spent in the United States, he established his firm in 2006 in his home country, Lebanon, where he dealt with the myriad challenges faced in getting his business to take off. As he did not find the needed skills in the labor market, he went beyond government policy and organized a training program with the University of Lebanon based on the needs of his enterprise and created jobs as his firm hired half the graduates! He mentioned the Indian IT model that is inspiring on the job creation angle. He proposed the establishment of a “virtual free trade zone” for the ICT sector in the MENA region to encourage intra-regional e-trade.

Simon Bell, Sector Manager, Finance and Private Sector Development, MENA region of the World Bank stressed the need to **focus on the financing of innovation, and on innovation at the “Bottom of the Pyramid”** that would hold great potential for countries such as Egypt, Morocco and Lebanon to have more inclusive growth. Participation of the private sector is key throughout this process. He advised countries to already develop responses to new global turbulence that may be on the horizon, such as the possibility of a second financial crisis. In terms of the development of the report, he encouraged the team to think of

“action plans for the KE” and to infuse the work/report with best practices, examples, lessons learnt from countries all over the world where innovation is playing a key role in growth and job creation.

5. Knowledge Society in the Arab Region: Perspectives of the Arab Knowledge Report

Subsequent to the Arab Spring, societies in the region are looking for the “how to” of reforms rather than “the who.” According to *Ghaith Fariz, Director and Coordinator of the Arab Knowledge Report*, published by the UNDP and Mohammed Bin Rashid Al Maktoum Foundation, the Arab Spring has opened up many opportunities that can give forward momentum to the course of development and innovation efforts aimed at building a knowledge society. More importantly than the ability of governments to act, he noted the importance of a strong enabling environment that offers incentives to induce willingness to act. A knowledge economy cannot flourish without having a trust-based and open society, he added. However, freedom is not enough, and the fact is that the MENA region has not been able to create the needed critical mass of qualified human capital. The Arab Knowledge Report 2010/2011 that will be launched in early 2012 will provide the intellectual and practical foundations to prepare the future generation of Arab citizens, based on three core components: skills, values, and empowerment.

6. Reforms for the Knowledge Economy in MENA

Identifying priority areas for reform should be associated with short-term gains and an ultimate vision.

From a political economy of reforms lens, *Zeine Ould Zeidane, Former Prime Minister of Mauritania and Senior Advisor, CMI* pointed out that the region has not been able to achieve substantive economic convergence compared to other regions. It is therefore essential for MENA countries to move towards a KE model for growth and jobs that includes higher productivity, human capital accumulation, and increased competitiveness. Credibility, openness, and engagement of the society are significantly important to drive these changes, but the Arab world is lagging in these aspects. He highlighted an example: books translated to Arabic per capita represent 0.8 percent of the ones translated to Greek. Clear and transparent political leadership, a strongly engaged private sector, a vibrant civil society, and a supportive international community is needed for implementation of reforms for the KE. This also includes reforming the trade and FDI framework so that they become channels of knowledge inflows. He concluded that regional institutions also need reform to be more strategic and forward looking.

Lessons learned from the transition in Central and Eastern Europe show that such transitions will not be successful unless a broad popular support surrounds the process.

Pavel Dvorak, Economist, EBRD, highlighted that sequencing of reforms is difficult but unavoidable. “Big Bang” is an illusion; it is rather more important to build constituencies for reform through easy early “wins”. “Half-way” reforms (for example, partial liberalization) create vested interest in rent-seeking and increase resistance to further reforms. Thus, appropriate sequencing of reforms can avoid reform fatigue (a well targeted social safety net can buffer cuts in subsidies, financial supervision can mitigate risks of capital account liberalization). In addition, in order to avoid being “stuck-in-transition,” there is a need to have an external anchor, like the role played by the EU and the *Acquis Communautaires*. The role of the state needs to be redefined as it is critical to support nascent markets and enforce laws and regulation.

Reform of innovation institutions is necessary to unleash the opportunities they could offer for MENA.

Yevgeny Kuznetsov, Senior Economist, World Bank highlighted the importance of backward and forward linkages of innovation to induce employment by taking the example of the Indian IT cluster that absorbs less than 1 percent of the total labor force but has attracted large FDI. He also backed the idea of micro-reforms, as illustrated by the newly established International University of Rabat that is operating in a generally inefficient higher education system, and, which if successful, could be scaled up. MENA countries should establish “bridge institutions,” such as technopoles, incubators and science parks, technology, innovation and export processing zones, skilled diaspora networks (as for example, Maroc Entrepreneurs),

and venture capital networks that identify areas of opportunities, such as finding non-traditional sources of employment to nourish role models of high value added employment.

7. Knowledge Economy and Regional Integration

Maha Merazak, Program Specialist, ISESCO presented an **overview of the role played by scientific research and science parks in economic and social development in the Maghreb region**. She highlighted the need for creating a stronger framework for the governance of technopoles at a regional level which would encourage public/private partnerships and better coordination between Arab countries.

Jacques van der Meer, Senior Economist, EIB explained that the EIB's contribution to the CMI's knowledge economy report will include work on **tacit and codified knowledge, and the effectiveness of transfer and absorption of this knowledge in the Arab countries**, as through FDI and technology transfer mechanisms.

Nicolas Peridy, Professor, University of Toulon-Var, France presented **scenarios aimed to simulate the effects of deep integration between the EU and its Mediterranean partner countries (MPC) (vertical integration) and across the MPCs themselves (horizontal integration)**. The presentation provided simulations of trade creation with shallow and deep integration. Mediterranean countries should work to complete their integration processes and capture the remaining available trade gains. He underlined policy implications, such as increased cooperation in industrial policies and FDI as well as in extending financial cooperation between the EU and MPCs through specific loans.

8. Key messages

The concluding session was chaired by *Mats Karlsson, Director, CMI*. He stressed that **a good indicator of the success of this work would be the feeding into government reform processes that are ongoing in Egypt, Morocco and Tunisia**, who have all recently had elections, as reflected in their new policy formulations and economic orientations. During the workshop, participants had engaged in frank discussions and had encouraged the team to undertake work that is relevant to the current country situations and develop a practical report with an actionable agenda so that it could help interested countries take action and design development strategies using knowledge and innovation as drivers of growth and job creation. *Latifa Belarbi and Sophie Muller, CMI* presented a few key ideas raised during the workshop. The floor was then open for discussion. Some reflections included the following:

Importance of integration

- Integration is important at various levels: at the regional level between EU and MPCs, between MENA countries themselves; and between MENA countries and the rest of the world;
- Fostering greater knowledge flows within the Euro-MENA region is key, including through the creation of a regional knowledge economy institution;
- Strengthening labor mobility is critical to take advantage of economic complementarities within MENA and between MENA and Europe.

KE-related reforms and priorities

- Widen the focus of MENA countries to opportunities at the global level; use the best tools available to increase the engagement between countries in different KE fields;
- Develop an integrated KE strategy with a stronger governance structure, coordinate better across the KE pillars, and involve multiple stakeholders to build consensus for reform, including from private sector and civil society; Build trust and broad support based on the recent changes and the current context in the region;
- Adopt a gradual approach starting with micro-level reforms and “small wins”;
- Engage the private sector more actively—they move much faster, add value, and create jobs;

- Develop a transparent competition environment to attract the FDI and encourage the Diaspora to contribute to the local economy;
- Reform the educational system for higher quality of learning and better match between skills and labor market needs—this will help to create a critical mass of human capital needed for the KE;
- Use tools such as benchmarking of university governance undertaken by the CMI to inject more transparency in the education system;
- Identify concretely the mismatch of skills, as for example, in the offshoring sector in Tunisia—through the KE lens (constraints on the economic and institutional regime, education, ICT infrastructure side) and work with stakeholders to get action on the ground;
- Unleash the creativity of youth and communicate and involve them in this process;
- Identify and encourage innovation champions to act as change agents;
- Encourage MENA countries to establish “bridge institutions” such as technopoles, export processing zones, venture capital networks...;
- Focus on how to finance innovation and anticipate what might happen during the current context (financial crisis, changes in the region);
- Identify a strategy and steps for a better use of innovation by an adapted matrix to measure innovation, which would help to identify the level of intervention appropriate for each country;
- Identify existing sectors or niches that can be internationally competitive and where employment to growth elasticity is high;
- Work together to build the capacity of regional institutions to anchor and disseminate knowledge.

9. Conclusions, time line and next steps

Anuja Utz, Deputy Director and Program Leader, CMI presented the process and timeline for the development of the report on *Knowledge Economy for Growth and Employment in MENA*.

- The team engaged on this work will continue working with participants and with experts through the e-KE Community page on the CMI website (<http://community.cmimarseille.org/wgke/>) and through VCs on specific topics.
- This KE page will bring together workshop presentations/related content and is a vehicle for interaction (blogs and the like) with a view to creating a vibrant KE community of practice.
- A detailed storyline of the report has been developed. Based on the participants’ inputs and workshop outcomes, a revised outline of the report will be circulated by December 2011.
- This work will also connect to CMI’s Deauville Partnership report on Trade and Foreign Direct Investment that is currently under preparation.
- A draft KE report will be prepared by Spring 2012. A regional workshop will be organized (late Spring 2012) to share and discuss the findings of this draft report with stakeholders from government, private sector and civil society in MENA, in partnership with ISESCO, EIB, and other interested partners, as for example, EBRD (Transition to Transition initiative).
- The report will then be revised, edited and finalized in order to be ready for dissemination by the end of 2012 when it will be launched at a High level KE Forum.
- Looking forward, this workshop has provided an important opportunity and laid the ground for the CMI to start work on the development of concrete action plans to move towards implementation in countries that demand such work, again in partnership with interested institutions.