The Dubai Initiative
برنامج دبي

Student Research

Measuring Human Capital for Investment

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Belfer Center
for Science and International Affairs

Measuring Human Capital for Investment

Dubai Initiative – Student Research

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Master's in Public Policy 2010

Harvard Kennedy School

April 2010

Acknowledgments

I would like to thank the Dubai Initiative at the Harvard Kennedy School for granting me an award to support my research in Lebanon and Jordan in January, 2010, and Mr. Rami Khouri and the Issam Fares Institute at the American University of Beirut, for connecting me with many interesting people. I would also like to thank all of the people, both those mentioned in this report and others who are not, who made this research possible for me. For constant support in Beirut I especially thank Mr. and Mrs. Maurice and Grace Khoury, Mr. Khalid Mufti and Mrs. Huda Mufti for taking care of me in Amman, and Mr. and Mrs. Umayya and Lina Toukan for connecting me with many informative people in Amman.

This study was conducted as part of the Policy Analysis Exercise, a mandatory course requirement for graduating Master's in Public Policy students, for Ms. Ania Thiemann, Economist and Project Manager, MENA-OECD Investment Program Private Sector Development Division, Directorate for Financial and Enterprise Affairs, OECD with funding support from the Dubai Initiative, Belfer Center for Science and International Affairs, Harvard Kennedy School.

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Executive Summary

This report recommends changes to the Organization for Economic Cooperation and Development-Middle East and North Africa (OECD-MENA) Investment Program's human capital evaluation grid. The OECD-MENA Investment Program has asked that the revised grid have three characteristics. First, it should be able to capture the challenges facing education and employment systems in MENA. Second, it should include more qualitative indicators. Third, it should focus on policy areas where reform may increase the supply of high quality human capital in the next 3-5 years. To do this, the report answers four key questions:

1. What skills are demanded by investors in MENA?
2. What is the current and potential supply of human capital in MENA?
3. What drives performance in terms of program and policy design?
4. What are the critical conditions for strong human capital performance in MENA?

Based on a review of the relevant literature on education and development in MENA, international good practices, and interviews conducted with government and private sector representatives, as well as experts from international organizations in Lebanon and Jordan, this report finds:

- Soft skills and managerial abilities are in high demand. Technical skills that can be employed in growing sectors of the economy, such as tourism and healthcare, are also in demand.
- The high percentages of youth in MENA countries represent a large potential supply of human capital. A variety of institutional and cultural constraints related to education and employment systems pose obstacles to realizing this potential.
- Drivers of performance in program and policy design include: qualification systems, monitoring of schools, teacher training, and evaluation and consultation with a broad range of stakeholders in designing education systems. Governments should devote attention to quality engineering in education.
- In order to improve access to high quality human capital in MENA, governments should focus on efficiency of spending, strengthening transition systems and emphasizing soft skills.
- Recommended revisions to the grid are based on a synthesis of good practices for human capital development with the regional analysis undertaken in this report. They include the addition of eight new indicators and the modification of three others. Four of the original indicators remain unchanged. This modified grid builds on the thorough research and analysis that underlie the original, developed for use in Southeastern Europe.

SECTION I

Introduction, Background and Methodology

The Business Climate Development Survey (BCDS) carries out an analysis of the business climate in partner countries with a view towards enhancing policies to attract investment. The process is intended to help governments target their policies to improve the business environment, to increase investment and competitiveness, and to contribute to growth and employment. The OECD's primary client is the government with which it undertakes the BCDS process.

The first step in the BCDS process is an evaluation of all policy areas that impact the business climate - business operational environment, rule of law, and factor markets. The quality of human capital is evaluated as part of the factor markets policy area. This paper aims to revise the evaluation tool used to measure the quality of human capital in MENA. After completing the BCDS evaluation, the OECD will work with governments to set policy reform priorities and to support the implementation of these reforms.

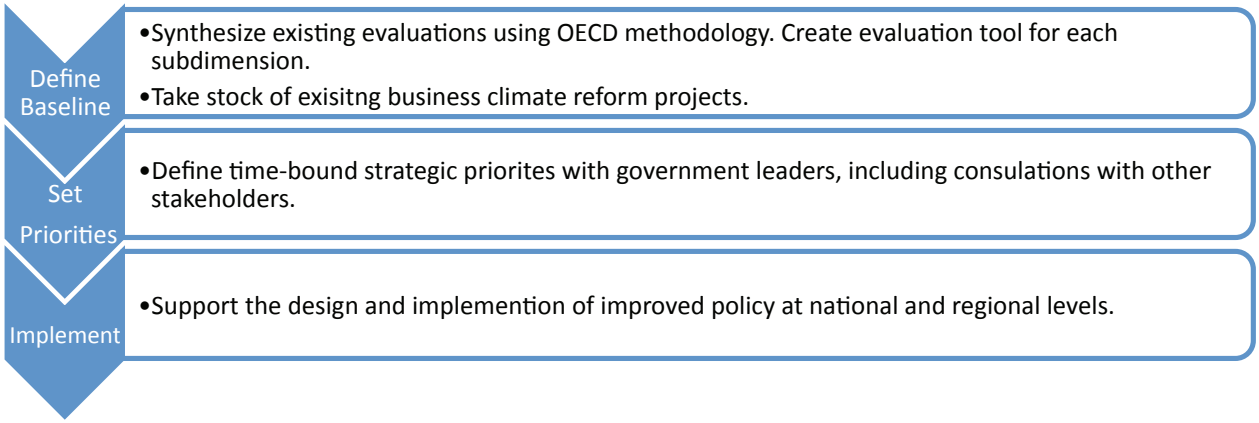

Figure 1. The BCDS Process from OECD

Rationale for Revising the Grid:

The original grid was developed in consultation with experts from the OECD, academics, civil servants, and policy makers in Southeastern Europe. It was designed specifically for use in gathering data for the *Investment Reform Index*, the OECD's flagship publication on Southeastern Europe. The OECD-MENA Investment Program adopted the grid for use in the BCDS process without making any changes.

OECD staff encountered some difficulties in using the original grid to evaluate the quality of human capital in MENA. A revised grid tailored to the region was commissioned. The OECD requested that the new grid include more qualitative indicators in order to capture a nuanced picture of human capital development policy in the region. The OECD further requested that the revised grid indicate medium-term policy changes that can be made to upgrade the quality of human capital in MENA in the next 3-5 years.

Criteria for Revised Grid:

- Be relevant to MENA: The revised grid should capture the broad range of policies and stages of development of education and training systems in all countries in the region. Indicators should measure progress in key areas where MENA countries are known to be weak. Indicators should be general enough to account for cross-country differences.
- Contain strong qualitative indicators: Quantitative data can provide a general picture of inputs and outcomes. However, investors are interested in a more analytical look at human capital development policy. The new grid will measure skills and characteristics of the labor force that are of primary interest to investors. Evaluation with the revised grid should identify potential sources of inefficiency in the education system.
- Indicate policy changes to impact medium-term supply of human capital: While many believe that improving human capital is a generational issue, there is some evidence that targeted schemes involving proper incentives can help upgrade the workforce in as little as 2-3 years. Since investors are primarily interested in access to skilled labor, the BCDS focuses on policy changes that will have short- and medium-term impacts on expanding the pool of qualified labor in the next 3-5 years. These changes should be complemented by long-term reforms to improve the education and employment systems in MENA and ensure the quality of new entrants into the labor market.

Definition of Terms:

Human capital: According to the World Bank, "human capital" refers to "… a broad range of knowledge, skills and capabilities needed for life and work, including those related to capability in successful living…" (World Bank 2007 WDR). The revised grid will measure human capital as one of several dimensions of the investment climate.

Qualification: OECD literature has defined "qualifications" as "a unit of recognized outcome of learning." (Behringer & Coles 2003). While this definition is broad, it is useful in the context of the recommendations of this report, where the mechanisms for signaling qualifications are likely to vary among countries. Here, qualifications may include certificates, diplomas, degrees, and licenses recognized by employers, governments, and education systems.

Methodology:

The recommended revisions are based on analysis from an extensive literature review and interviews with experts, educators, and policymakers in MENA (see references). Based on this information, the report answers two sets of questions to inform the revisions to the grid:

1. Regional Situation Analysis:
   - What skills are demanded by investors?
   - What is the current and potential supply of human capital?

2. Good Practice in Human Capital Development:
   - What drives performance in terms of programs and policy design?
   - What are the critical conditions for strong human capital performance in MENA?

SECTION II

Regional Situation Analysis

What Skills are demanded by Investors in MENA?

Investors seek a combination of general soft, or "employable", skills and specific technical skills in the workforce. Many employers assign increasing importance to general skills, especially among entry level employees and managers. The demand for technical skills depends on the specific industrial composition of a country. The appropriate balance of general and technical skills in a workforce will vary depending on national industrial policy and development priorities. The ability to learn and adapt to new economic realities, however, is becoming as important in MENA as in the rest of the world (ETF & WB 2000).

General Employable Skills:

A 2006 survey found that 92% of Arab businesses leaders believe that raising education levels within the workforce is the policy area that is most important to business development (Moutamarat 2006). Surveys of employers and international organizations show that, while technical skills remain important, there is increasing demand for "soft" skills and general capabilities that allow workers to adapt to changing business environments, technologies, and process designs. These skills include: communication, research, critical and analytical thinking, problem solving, flexibility, teamwork, and time management skills.

Interviews with employers and experts reveal that the ability to think critically, of the sort developed through a strong liberal arts education, is both desirable and generally perceived to be lacking in MENA. Managerial skills are also in high demand. Evidence from employers in the GCC demonstrates that managerial skills and experience are perceived to be lacking among nationals in most Gulf nations and that expatriates are often hired to fill such roles.

Box 1. Why Managerial Skills Matter: Evidence from the OECD

A recent study of firm organization emphasizes the importance of management practices in maximizing the productivity of human capital. Well-trained, highly educated employees are only as productive as their environment allows. Thus, firms should focus not only on increasing the level of skills in their employees, but on increasing the organizational capacity to utilize those skills. Firms should view human capital as one of many inputs into the production process. Thus, good human resource management involves learning to combine human capital with other complementary inputs in order to achieve maximum productivity. Promoting managerial capacity is essential to maximizing employee productivity.

Source: **Hansson 2009**

Employers of graduates from leading universities in the region rate highly the ability to apply knowledge in practice, a capacity to learn new skills and procedures, analytic and problem solving skills, co-operation and teamwork, the ability to organize work and manage time effectively, diligence, and positive work attitude. These skills are especially important for entry level employees (interview with Dr. Karma El-Hassan). Employers in MENA highlight concerns about weak teamwork and communication skills and lack of initiative and analytical skills (ETF & WB 2005).

Technical Skills:

In addition to the general capabilities described above, investors demand specific technical skills related to growing sectors of the economy. The cultivation of technical skills must be demand-driven and based on sound economic analysis of a country's economy and industrial policy. There is no substitute for such rigorous country analysis, but a look at current industries in MENA may offer a general indication of fields in which national technical expertise should be developed.

Given the wealth of oil and natural gas reserves in the Gulf States and Iraq, technical and engineering skills to develop and sustain the industry will remain in high demand. Investors interested in creating spin-off industries, including clean technology, will also demand engineering expertise. Efforts to develop human capital in MENA should build technical capacities in areas that respond to local needs and challenges including in science and environmental studies and healthcare (UNDP 2009). For example, Egypt, Iraq, and Lebanon may want to focus on continuing to develop local expertise in managing and maintaining their water resources and in accumulating local knowledge that is of value to investors.

The tourism and service industries are large in most MENA countries. These sectors are particularly important in Lebanon and Jordan, where they make up over 50% of GDP. Indeed, according to the International Labor Organization and the Arab Employment Forum, services now account for half of total employment in the Middle East. Knowledge of logistics, language skills, and basic business, management, administration, banking, and financial management are needed to support the service sector. Several sectors that are expanding in the Middle East and will offer future employment opportunities require majors presently not being offered by many qualified universities (e.g. hotel management, nursing and elderly care, and hospital administration). Health related fields, including medical tourism, are growing and are perceived to be potentially lucrative areas. This is especially true in the Levant, where there is a tradition of strong medical schools (interview with Dr. Jad Chaaban). Other areas of interest include Information and Communication Technology (ICT) and telecommunications. Jordan and Egypt have both taken steps to develop these industries.

Box 2. Banking in Lebanon: Sector-Specific Training

The Lebanese banking sector offers an example of demand-driven, sector-specific training provided entirely by the private sector. Banking is a strong employer in Lebanon. By the end of 2008 the number of active banks in Lebanon reached 64 and the number of employees in them reached 18,632. The Association of Banks in Lebanon (ABL) has been offering training for bank employees at all levels since 1991. ABL works with member banks to identify training needs and can also consult with banks as they develop their own in-house trainings, connecting them with professional trainers, and providing content. ABL publications include banking manuals and guides and a monthly bulletin which keeps bankers informed of the activities of the ABL Training Department.

Source: **http://www.abl.org.lb**

Employment data may also provide a sense of areas in which increased competencies will be demanded. For example, in Lebanon the education, retail, and health sector accounted for 49% of total local employment in 1999. In the professional services sector engineering (35%) and the banking sector (23%) constituted the highest number of professionals. In Saudi Arabia, the trade, manufacturing, and construction sectors are the largest employers, accounting for almost 70% of the labor force. Sectors experiencing the highest growth are health and social services, banking/finance/insurance, manufacturing, and hospitality. The education sector is also experiencing strong growth. In Dubai, manufacturing, finance, insurance, and hospitality have driven growth in employment since 1995.

What is the Current Supply of Human Capital?

Although there is limited workforce data, private studies by universities, NGOs, and employers can offer a broad picture of the supply of skills in MENA. As noted above, general skills like critical thinking, communication, and management are perceived to be lacking among the workforce. Furthermore, business leaders in the Arab world perceive the future supply of skilled labor to be a challenge for the region. 92% of Arab CEOs believe that the high demand for labor will be the primary driver of rising costs of skilled labor while 78% identify a shortage in skilled domestic labor as the main reason for rising costs of skilled labor (Arab Human Capital Challenge). However, enrollment statistics on areas of study among students and recent graduates from Lebanese universities show that many students are entering engineering, agriculture, science, and business related majors (interview with Dr. Karma El-Hassan).

Workforces in the Levant, Gulf, and North Africa are characterized by different skill compositions. National labor supply constraints are often overcome by migration within the region. For example, skilled workers from the Levant often find employment in the Gulf, where there are more opportunities and higher salaries. This difference is apparent in the responses to a recent survey of top regional business leaders. When asked if there is a sufficient supply of qualified national labor, only 38% of business leaders in MENA responded favorably. However, a closer look reveals that employers are generally more satisfied with the national labor force in the Levant, where 70% of employers said that they found a sufficient supply of qualified national labor.

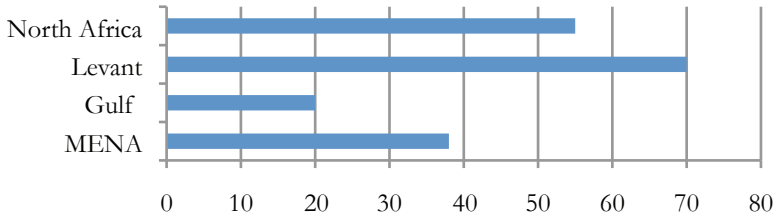

Figure 2. Percentage of Arab CEOs who agree there is a sufficient supply of qualified national labor. Extracted from the MBRF *Arab Human Capital Challenge*

What is the Potential Supply of Human Capital?

The Arab "youth bulge" represents a potential boom in human capital. Poor economic performance and high unemployment among youth and graduates, however, demonstrates that the current system for developing human capital is not sufficient. Institutional constraints, including the poor quality of the education system, are one reason

for this. Another is the low demand for certain education and training options, notably vocational education and training (VET), because of social stigma and attitudes towards blue-collar work.

The Youth Bulge:

It is often noted that young people between the ages of 15 and 29 make up more than 30% of the Arab population (Silatech 2009). This group, if properly prepared, represents a stock of potential human capital that can fuel economic growth and attract investment. Educational institutions must be equipped to prepare youth for productive engagement in their societies. The absence of significant economic growth in MENA and high levels of graduate unemployment signal that education and employment policies must be reviewed (ETF Turin 2000).

Institutional Constraints:

One obstacle to the development of employable skills among youth in MENA is the rigid education system (Salehi-Isfahani & Dhillon 2008). National tests screen students as they transition between levels of education. These tests play an immensely important role in determining a student's opportunities in the education system and therefore in his/her employment prospects. Other sources of rigidity include early streaming into vocational or general education, as in Egypt, and the lack of pathways connecting general and vocational tracks. In such an environment, student learning is focused on passing an examination, at the expense of exploration and learning in subjects that are not tested. Since national tests are not designed to assess the skills sought by private employers, even successful graduates of this system may have difficulty finding work if they are not rescued by public sector employment.

Sector	Institutional Features	Effects on Young People
Education	University admission policies Tracking mechanisms	Undermine value of vocational education Promote rote memorization over investment in skills
Labor	Employment protections	Protect older workers, making firms less likely to hire Contribute to informal employment of youth, who then have few opportunities for human capital development

Figure 3: Institutional Constraints on Skills Development adapted from Dhillon et. al. 2008, "Missed by the Boom Hurt by the Bust," page 16.

Attitudes:

In many Arab countries low skilled jobs are available, but they are filled by relatively inexpensive imported labor from Southeast Asia, Africa, or other parts of MENA. For example, construction jobs in Lebanon are often filled by Syrians, in Jordan by Egyptians. This is not because locals lack the basic skills necessary for employment but rather because they choose not to take these jobs, either for social reasons or because they remain hopeful that they will be employed in the public sector. Certification and training could help raise the status of construction jobs and other manual labor and offer opportunities for advancement within these fields.

Jordan offers a typical example of the general attitude towards vocational education and training in MENA. A 2009 paper published by the Economic and Social Council for Western Asia (ESCWA) finds that, with the expansion of private schools, tertiary enrollment among Jordanians is rapidly increasing. Indeed, it increased by 6 percentage points from 1991 to 2000 and by an additional 11 points between 2000 and 2004. This expansion in enrollment, driven by increased supply of private tertiary education, shows that Jordanians were choosing to pay for general tertiary education rather than taking advantage of state-subsidized vocational education (Tzannatos 2009 ESCWA). Indeed, 84% of students pursuing higher education in MENA do so in undergraduate universities while between 1% and 31%, depending on the country, enter tertiary vocational institutions (UNDP 2009). One way to overcome this aversion to vocational training is to tie programs to specific needs in the economy, ensuring the employability of graduates and the relevance of the skills they acquire.

SECTION III

Good Practice in Human Capital Development

What Drives Performance in terms of Programs and Policy Design?

Education and training systems are enormously complex. The OECD has published studies on many aspects of system and program design at all levels of education. This section discusses some of the key components of the education system. It is necessarily selective and focuses primarily on five areas that strongly impact quality and need appropriate policy interventions. These are: qualifications systems, school and system monitoring, teacher training and evaluation, a consultative process in policy design, and financing. Focus areas, critical for increasing access to human capital in MENA, include improving the quality and efficiency in the education system, and facilitating transitions from education and unemployment to productive engagement in the labor force.

Component	Characteristic
Qualification Systems	☐ Portable, credible skills ☐ Drivers of reform
Monitoring	☐ Accountability ☐ Efficiency
Teachers	☐ Training ☐ Evaluation
Consultative Process in Policy Design	☐ Private sector input ☐ Relevance of skills
Financing	☐ Linked to outcomes ☐ Mix public, private, and cost recovery

Figure 4: Essentials for Improved Human Capital Development in MENA

Qualification Systems:

National qualification systems (NQF) can be enormously helpful in identifying and organizing qualified workers in the labor market. One advantage of a widely accepted NQF is that it facilitates portability of credible qualifications, which may have positive spillover effects in the region. Establishing standardized qualifications leads to increased transparency in the education and labor markets. By identifying the knowledge and skills acquired by individuals, qualification systems may also motivate broader education and training

reform (ETF website). The process of establishing an NQF must be inclusive. Ultimately, an NQF will only be effective if it is recognized by a broad range of stakeholders, including employers, social partners, professional bodies, and sector councils (Behringer & Coles 2003).

When countries establish qualification frameworks, they should also consider the cost of assessment and accreditation, and accessibility of training. Furthermore, implications for skills not included in the qualification systems must be addressed. Partial qualification should be included as evidence of attaining certain learning outcomes for those who do not complete a full course of study (Behringer & Coles 2003).

School and System Monitoring:

The World Bank finds that the countries with the highest educational attainment in MENA also have the most developed monitoring and reward systems. Consistent monitoring of teachers, curricula, and programs is essential to ensuring quality. This is of particular importance in MENA, where quality is variable. For example, Egypt has high primary and secondary enrollment rates. However, it also has high repetition and dropout rates, indicating poor quality and inefficiency in the education system. (ETF & WB 2005). An OECD study based on data from the 2003 PISA evaluation finds that accountability, among other traits, is associated with higher levels of student achievement across countries (Wöbmann *et. al.* 2007). When students are held accountable for their learning through external exit exams, teachers for the quality of their work through regular monitoring of their lessons, and schools through assessment based comparison, the outcome in terms of PISA scores is equal to one and a half PISA grade-level equivalents.

Increased monitoring will also help increase efficiency in education. Monitoring should be integrated into all programs and policies so that data can be collected over time and can be used to adjust policies as they develop (Dhillon et. al. 2008). Characteristics of good monitoring should include:

- Clearly defined targets developed in consultation with all relevant stakeholders. This ensures the transparency and consistency that makes monitoring credible and effective (ETF & WB 2000).

- Quality assessment performed through testing, based on broad criteria to avoid creating incentives to focus narrowly on specific indicators (ETF & WB 2000).

Monitoring can be used to promote efficiency if it is tied to spending. Government auditing systems, of the sort used in MENA, measure expenditure by institution but do not connect expenditures with performance based standards (ETF & WB 2000). Better financial information could be measured against educational performance indicators in order to reduce inefficient spending. Even in MENA countries where there is some data on spending and education, it is not detailed enough to inform this kind of analysis (ETF & WB 2000).

Teacher Training and Evaluation:

Good quality teaching is an essential input into any successful education system. Research suggests that teacher quality is the primary driver of differences in student learning at school (McKinsey 2007). Teacher quality is an area in which there is great variability in MENA. Indeed, one author of the Arab Knowledge Report attributes Lebanon's poor performance on international measures of skills development to a low quality teaching workforce (interview Dr. Ramzi Salamé). Ensuring a high quality supply of teachers through effective teacher training and continued evaluation is essential to producing human capital of value to investors (Santiago 2002). Improving teaching quality will require a system for teacher development that includes training, practice, and feedback (OECD 2005). Characteristics of such a system are summarized in figure 5.

Teacher Profile	Clear and concise statement of expectations of what teachers are supposed to know and be able to do. Reflects student learning objectives
Induction Program for New Teachers	Well structured Well resourced
Initial Teacher Education	Includes sound basic training in subject matter, pedagogy related to subject matter, and general pedagogy. Develops skills for reflective practice and research on the job
Framework for **Life Long Learning**	Interconnection between initial teacher education, induction, and professional development.
Field Experience	Provides broad experience of what it means to be part of the teaching profession.

Figure 5: Developing Teachers' Knowledge and Skills from OECD 2005

There is broad agreement that teacher rewards should be tied to student performance. The teaching profession can be made more attractive through incentives, including increased salaries, enhanced career opportunities in teaching, increasing the status of the profession, and rigorous training and certification that ensure high quality teachers. Decentralization of decision making in school administration is also linked with higher teacher quality (Santiago 2002). Granting teachers and schools more autonomy in hiring decisions, for example, can help increase accountability in schools, leading to better outcomes.

Integrating ICT components into initial teacher training is another idea worth considering. Evidence shows that while individual teacher trainers may incorporate ICT into their curricula, it is not a widespread or institutionalized practice. This may have negative implications for the computer literacy of their students. Technological literacy is essential to many areas of employment and educators must be prepared to teach in this area. The OECD recommends action on both the policy and management levels, defining expectations in terms of teacher training in ICT and the provision of the necessary resources, including computers and mentoring, that enable teachers to meet these expectations (Enochsson & Rizza 2009).

Consultative Process in Policy Design:

Policy design should be as inclusive as possible. All stakeholders, especially employers and education experts, should be involved in discussions of all aspects of education policy making. Renewing the relevance of the general education system will require changing the attitudes of students towards what they learn and why. Indeed, Arab CEOs include involving the private sector in education policy as one of their primary recommendations for improving human capital in MENA (Arab Human Capital Challenge).

Box 3: A Public-Private Partnership for Skills Development in Jordan

A partnership between the Consolidated Contractors Company and the Morganti Group inc. (CCC/ Morganti), Al-Balqa' Applied University (BAU)/Al-Huson University College (AHUC), and the USAID Jordan Economic Development Program demonstrates the potential success of public-private partnerships for skills development. Those involved with the project attribute its success to (1) the screening of candidates, (2) attention to the interests of all stakeholders, especially in providing both long-term and short-term workforce skills development mechanisms, and (3) the active role of USAID in facilitating this partnership. The program targeted two-year associate degree holders for training as managers in piping production at CCC. Initially, none of the 80 applicants to the program were accepted by CCC for training. USAID intervened, training 25 potential candidates to prepare for CCC's program. After three months of preparation, those 25 candidates were accepted into the CCC training program. Participants of the program received $100 (JD 70) per month for eight months. 19 of the 25 participants completed the program, which will be developed into a two-year degree program. Graduates are meeting CCC's demand for piping managers, and universities are building capacity to better prepare future graduates for work in the construction sector.

Sources: **Interview with USAID Jordan Economic Development Program staff. Al-Wedyan 2009.**

Financing:

Most of the funding for VET training in the MENA region comes from direct budget allocations from government treasuries. The current system does not tie funding to performance outcomes and stifles competition from private trainers. Due to the prevalence of public funding and the role of government in setting national quality standards, there has historically been little competition among schools (Salehi-Isfahani & Dhillon 2008). There are three potential sources of funding for VET: direct budget allocations, student fees, and training levees on firms. A combination of funding from these sources and increased accountability by linking funding to outcomes will make a more efficient and relevant VET system.

	Egypt	**Jordan**	**Lebanon**	**Tunisia**
Direct Budget Allocations	92.7%	78.6%	90.1%	66.0%
Cost Recovery	3.7%	11.8%	9.9%	3.8%
Training Levy	3.7%	9.6%	0.0%	30.2%

Figure 6: Public funding dominates financing of VET from World Bank estimates (Egypt, 1998; Jordan, 2002; Lebanon 2002; Tunisia, 2001) as cited in ETF & WB 2005.

1. Direct budget allocations:

The main source of funding for public training institutions, direct budget allocations are awarded based on inputs to education, including numbers of teachers and students. Cost estimates are completed at the central administrative level and may not reflect the actual costs incurred by the training program. Generic per-unit cost estimates are often used for allocations to programs in different fields. Instead, public funding should be performance-based. Some degree of decentralization in the budgeting process would improve spending efficiency (ETF & WB 2005).

2. Student fees:

Cost recovery mechanisms, like student fees, are used to varying degrees in training programs in MENA. They are usually confined to registration, examination, and boarding fees. Fees are more likely to be charged in private training programs and the added coast makes them less attractive than subsidized public institutions. In order to minimize this effect, governments should consider targeting subsidies to trainees in the form of training vouchers or allowances. This will promote competition by facilitating greater choice for trainees. Students perform better in competitive school systems (Wöbmann *et. al.* 2007).

3. Training levies:

Training levies on firms take the form of payroll or profit-based taxes. Funds are either directed back to the treasury or earmarked to support training programs. Taxes on net profits may form an incentive for tax evasion (ETF & WB 2005). Payroll taxes increase the cost of labor. Subsidizing trainees and empowering them to choose the best training programs may be a good alternative that eases the financial burden of training on firms.

Diversifying funding sources, promoting competition, and increasing accountability in VET funding should raise the quality and relevance of VET in MENA (ETF & WB 2005).

What are the Critical Conditions for strong Human Capital Performance in MENA?

1. Efficiency of Spending:

In recent decades MENA countries have invested, on average, 5% of GDP and 20% of government expenditures on education. This is higher than other countries at similar income levels (World Bank 2008). Even in countries where public investment is lower, for example Lebanon, which spends an average of 3.5% of GDP or 9-13% of the total budget on education, high levels of private investment fill the gap. However, despite these high

investment levels in education, MENA countries score below average on international tests of educational attainment (Dhillon *et. al.* 2008). Investment in MENA should focus on engineering human capital outcomes by improving monitoring, teacher quality, and other dimensions of the education system discussed above. Spending on physical inputs like new schools and textbooks should be secondary to the goals of efficiency and quality. These quality engineering reforms are necessary to make the most of the substantial investments that many MENA countries have already made in increasing access to education (World Bank 2008).

2. Strong Transition Systems:

Strong transition systems may help alleviate the skill mismatch problem that causes high levels of unemployment among the educated. A "transition system" is defined by the OECD as "the social institutions and processes with which a society provides its members to make the transition from the education system to the employment system" (van der Velden & Wolbers 2008). Increasing opportunities to participate in apprenticeship programs, better career counseling in schools and universities, and subsidized training programs to facilitate skills acquisition for employment, are needed. Strengthening transition systems can help make the most of existing human capital by facilitating access to employment in MENA.

3. Emphasizing Soft Skills:

Given the demand for soft skills documented earlier in this report, it may be surprising that systems designed to foster those skills are not included in this discussion. This is because a clear consensus has not emerged on precisely how to teach or measure those skills. An OECD study on teaching "21st century skills" finds that, while the OECD countries surveyed include those skills in their guidelines for compulsory education, they are not specifically defined, and therefore not systematically taught or rigorously assessed. MENA countries can innovate in this area, particularly in the context of broad education reform (OECD 2009).

Box 4: Provision of Career Guidance in MENA

Countries in MENA are responding to the need for stronger transition systems between education and employment. On a policy level, Jordan has adopted a "National Strategy of Vocational Orientation," Egypt began preparing a framework for career guidance in 2007 and, with the support of CIDA, is introducing career guidance as part of active labor market measures. The West Bank and Gaza Strip began preparing a framework for career guidance in 2008. The Lebanese Ministry of Education and Higher Education has recently developed a National Education Strategy, in which career guidance is a priority.

Policy coordination between the education employment and labor sectors is viewed as essential. Morocco has regulated cooperation on this front and Egypt has created a "Voluntary National Task Force" on career guidance in 2007 to facilitate management of career guidance activities.

Despite this activity, the strong informal career guidance sector may be a barrier for institutionalized programs. Informal networks and guidance from parents, friends and peers is prevalent in MENA. In countries where there is a strong tradition of private tutoring, the culture of test-based employment prospects and importance of personal connections for employment tends to have a negative impact on the scope for career guidance.

***Source**:* Zelloth 2009.

SECTION IV

Recommendations for the New Human Capital Grid

This section synthesizes the good practices for human capital development described above with the regional analysis undertaken in this report to offer a comprehensive set of changes to the indicators used in the human capital grid.

It may be noted that the levels of evaluation are excluded here. Rationales for changes to the human capital grid will be abbreviated, referring to the findings above when necessary.

Quantitative Indicators: Investment in Education

Recommendation: Remove quantitative indicators from the grid and put them in an opening data sheet. This data should be used for context only because of problems with data availability and comprehensiveness.

Rationale: As demonstrated above, the salient issue in this region is quality rather than quantity of investment. Efficiency of education spending is a major issue in MENA so expenditure data, when available, is not a reliable indicator of quality of education or commitment to workforce skills development. Furthermore, the way spending is recorded in different countries in MENA makes cross country comparisons difficult. For example, there is no disaggregated information on spending per enrolled student in the Lebanese budget. In order to gauge public spending one must look for expenditures, not programs.

Data on private expenditures per family may not exist, and its absence may give an inaccurate snapshot of financial resources invested in education and obscure the size of the burden on families. Furthermore, while the state is the primary funder of early and general secondary education in most MENA countries, private schools are growing, so information on private expenditure on education is necessary to get a full picture of expenditures.

Quantitative Indicators: Education Outcomes

Recommendation: Retain the quantitative indicators of education outcomes included in the original grid. Include literacy rates. If the country has participated in the Program for International Student Assessment (PISA), Trends in International Mathematics and Science Study (TIMSS) or Progress in International Reading Literacy Study (PIRLS), then results should be included.

Rationale: Quantitative measures of educational attainment provide a rough, if imperfect, picture of the qualifications of the workforce. PISA, TIMSS, and PIRLS are three internationally recognized tests that can be useful in measuring and benchmarking education outcomes in the region. PISA scores are particularly relevant to the BCDS assessment because they reflect functional skills that students have acquired as they near the end of mandatory schooling. This makes PISA a good indicator of how well the compulsory education system prepares students to join the labor force. These assessments should be extended to cover all of MENA.

Sub-Dimension 2.1 – Workforce Skills Development Strategy

2.1.1 Workforce skills strategy: design and evidence

The aim of this indicator is to assess the inclusiveness of the process by which a country's workforce skills strategy is formulated.

Recommendation: This indicator should remain but should be assigned a low weight in the overall scoring of human capital.

Rationale: The presence of a workforce skills strategy may not be an accurate indicator of activity in this area. Political divisions and lack of inter-ministerial coordination are obstacles to creating cohesive government strategies in MENA. Indeed, the 2009 World Bank study "From Privilege to Competition" finds that, in most Arab countries, there is a lack of coordination between ministries in forming and pursuing a single economic strategy. In such an environment, it is unlikely that many countries will have workforce skills strategies. Even if a workforce skills strategy exists, political tensions and lack of capacity may hinder implementation.

2.1.2 The inclusiveness of strategy formulation

The aim of this indicator is to assess the inclusiveness of the process by which a country's workforce skills strategy is formulated.

Recommendation: Expand the group of stakeholders included in strategy formulation.

Rationale: This indicator is largely unchanged. It should make explicit that the stakeholders involved in strategy formulation should include government, the private sector, educators, social partners, and labor offices (if they exist). Government should play a facilitating/coordinating role.

There is often a large gap between the institutional inclusiveness of strategy formulation and the reality. There has been extensive reform to involve the private sector in development of curricula and training programs in some countries but it is difficult to measure the extent to which these reforms lead to any change. In the cases of Lebanon and Jordan, the biggest private sector players have developed their own extensive training systems, bypassing the public sector (see Box 2: Banking in Lebanon).

2.1.3 Data and monitoring system (new)

The purpose of this indicator is to measure the capacity to collect data and monitor the current and future supply of human capital in the country.

Recommendation: Add a new indicator to measure the capacity to collect data that should inform workforce skills development strategy. This indicator will measure the extent to which data collection is institutionalized and centralized and to what extent it informs policy decisions. Standards for monitoring at all levels of the education system should be developed with the involvement of a broad range of stakeholders to ensure relevance and transparency.

Rationale: The lack of mechanisms to collect and analyze data on labor market needs and on the availability of skilled workers in the population (information that is partially available in Labor Force Surveys in some countries) is an obstacle to improved education and training programs. Centralizing this information in one ministry or department would make it more accessible and visible, encouraging the development of data-driven policy formulation.

Sub-Dimension 2.2 – Inputs to Initial Education

2.2.1 Teacher recruitment and retention

This indicator aims to gauge the development and implementation of policies that affect teacher recruitment and retention.

Recommendation: Instead of focusing on the existence of strategies, this indicator should measure the presence of opportunities for professional development, quality of teacher working conditions, incentives to perform well, opportunities for promotion within the teaching sphere (not into administrative roles as is often the case), and the use of awards or other recognition for teachers who excel.

Rationale: As discussed, many sources identify teacher quality as a problem in MENA and the weak incentives for entry and excellence in the teaching profession as the cause of this problem. Research indicates that the quality of the workplace environment is important to teachers. "Teachers place a lot of emphasis on the quality of their relations with students and colleagues, on feeling supported by school leaders, on good working conditions, and on opportunities to develop their skills" (OECD 2005). According to the World Bank, the key requirements for teacher professionalization include: the establishment of teacher standards, a high level of initial training, a high level of professional development, and employment of research based evidence on best practices of teaching (World Bank 2007). For this reason, it is possible to score at level two if recruitment and reward structures are under review, and at level 3 if recruitment is broad and incentives enticing.

2.2.2 Development of the teacher workforce

The purpose of this indicator is to measure policy settings designed to promote development of the teaching workforce.

Recommendation: Include key components of a teacher workforce development strategy in earlier levels of assessment on the grid.

Rationale: Here again there is a strong focus on the existence of strategies. Evaluators should look for the existence of policies that encourage the development of the teaching workforce, even if they are independent of a unified strategy. These include the establishment of teacher standards, a measure of the level of initial training, exposure to best practices in teaching, and opportunities for teachers to renew pedagogical practices (ETF 2005). In the revised grid, countries can reach levels two or three, even in the absence of a strategy. If there is evidence of attention to teacher profiles, this can be taken as evidence that development of the teaching workforce is on the policy agenda. Research shows that countries benefit from clear and concise statements or profiles of what teachers are expected to know and be able to do. Teacher profiles should also reflect intended student learning objectives (OECD 2005). Further best practices in developing teachers' knowledge and skills are summarized in Figure 5 and included in higher levels of the grid.

2.2.3 Consultation in secondary curriculum development (new)

This indicator measures the inclusiveness of curriculum development, and the presence of public-private consultation in the curriculum development process.

Recommendation: Include a new indicator to measure the inclusiveness of curriculum development.

Rationale: Secondary school marks the end of compulsory education in many countries in MENA. It is important that multiple stakeholders, including the private sector, teachers, parents, and social partners, participate in the debate on elements of the curriculum designed to cultivate a broad set of skills. Levels of evaluation will take into account the seriousness of dialogue and degree of collaboration between government, the private sector, and other stakeholders.

2.2.4 Curriculum content (new)

The purpose of this indicator is to measure the content of primary and general secondary education. This includes hours of instruction per subject per week, and the emphasis on employable skills, such as writing, English, and soft skills.

Recommendation: Include a new indicator measuring the content of primary and general secondary education.

Rationale: The UNDP has found that hours of training per subject is an important indicator of quality of education. This indicator will measure hours per week of instruction on subjects that are important to cognitive development and future employability, including English language instruction, Arabic language instruction, writing, mathematics, and science. It will also measure opportunities to develop soft skills, research capabilities, communication skills, teamwork, problem solving abilities, etc. These have been identified by employers as important for successful employment (MBRF & UNDP 2009).

Both the hours of schooling per year and the hours of instruction per subject per week are measured. Hours of schooling per year are included because they are much lower than the international standard in some Arab countries (for example, only 1,000 hours/year of school compared to 1749 in Canada, and 1809 in the US; this means that in three years' time some Arab students have one whole year's worth of less education than their international peers).

2.2.5 Transitions (new)

This indicator aims to measure the degree of career guidance available to students in secondary or tertiary education.

Recommendation: Add a new indicator to measure the extent of career-related communication between students and the private sector as facilitated through institutionalized mechanisms, including mentorship and internship opportunities, guest lecturers, apprenticeship, and participation in career fairs.

Rationale: Employers surveyed in the United Arab Emirates, Saudi Arabia, Kuwait, Qatar, and Jordan recruited mostly through unsolicited applications, referrals from current employees, and advertisements in newspapers. More direct links with schools may facilitate recruitment and inform students of the preferences of private sector employees. This may also help motivate students by encouraging them to think ahead about their future employability. Career guidance can help ensure that students make the best choices for themselves in terms of education specialization, in addition to reducing drop-out rates and increasing efficiency of public investment in education. Career counseling should be available in public schools and career centers and should employ trained career counselors (Dhillon *et. al.* 2008).

Sub-Dimension 2.3 – Vocational Education and Training (Vet)

2.3.1 Development of the VET system

This indicator aims to gauge the extent of development and implementation of a country's system of vocational education and training. VET can include initial VET (at secondary, upper-secondary and higher levels) or continuing VET (such as in-service training). This grid is intended to refer to VET occurring at initial levels of education.

Recommendation: This indicator should remain unchanged.

Rationale: It is essential that VET modules are continuously monitored for relevance and updated to reflect the needs of the market. Note that in several MENA countries agriculture is excluded from VET policy and enrollment statistics.

2.3.2 Consultative process in the VET system

This composite indicator aims to gauge the extent of consultative processes relating to a country's system of vocational education and training.

Recommendation: This indicator should remain unchanged.

Rationale: Consultation with a broad variety of stakeholders is essential for maintaining the relevance of VET programs.

2.3.3 Funding for VET (new)

The purpose of this indicator is to identify the degree to which public subsidies are tied to performance, and the balance between public and private training institutions. It

should also identify the degree to which public funds are accessible to private institutions and the availability of other funding mechanisms.

Recommendation: Add a new indicator to measure accountability in the VET system. Mechanisms to encourage this accountability may include performance-based budget allocations, cost-recovery mechanisms, and funding for end-users of training services through competitive training funds (ETF 2005). It might also be useful to include some measure of the degree of autonomy of training providers from central ministries and agencies.

Rationale: This indicator gauges the extent to which funding for VET is public or private and how closely outcomes are tied to funding. VET should be funded by diverse sources, both public and private, in a way that is tied to outcomes in terms of employed graduates.

2.3.4 Certification of existing skills (new)

The aim of this indicator is to measure the ability of people with undocumented skills to obtain formal recognition of their skills, helping them to more efficiently gain employment.

Recommendation: Include a new indicator that measures the capacity to certify existing skills.

Rationale: Ideally, there is a uniform, institutionalized way for people to prove and obtain certification of all technical skills obtained through informal apprenticeships or other means besides a VET training program. These programs should be monitored to ensure that they are reducing barriers to formal employment. They should include opportunities for skills and technology upgrades.

Sub-Dimension 2.4 – Continuing Education and Training

2.4.1 Development of a work-related system of continuing education and training

This indicator aims to gauge the extent of development and implementation of a country's system of work-related continuing education and training (CET).

Recommendation: This indicator should remain unchanged.

Rationale: Continuing education and training will gain importance in light of the changing global economy and the increasing number of employees working in Small and Medium Enterprises (SMEs) that may not have the resources to offer in-house training to their employees.

2.4.2 Availability of, and participation in, work-related training (new)

This indicator aims to measure the availability of work-related training programs and the extent of participation in them.

Recommendation: This indicator should be modified to differentiate between government-led and private initiatives.

Rationale: Information about the extent of private sector activity in this area will give a more comprehensive view of the needs and the role of government in this area. It is also important to know if there is a broad government scheme to upgrade the workforce. Countries that attain a high score on this indicator should have strong private initiatives as well as government schemes.

Sub-Dimension 2.5 Structure of Education System

2.5.1 Horizontal mobility in education system (new)

The aim of this indicator is to measure the degree of flexibility for students to move between general secondary and VET tracks.

Recommendation: Add an indicator to measure the extent of integration of different tracks of the education system and the existence of pathways between VET and general education.

Rationale: The possibility for horizontal mobility is particularly important in MENA, where a two-tiered education system causes VET education to be viewed as inferior, and indeed students who perform poorly in school are forced onto this track. A more flexible system will allow students to move from general education to vocational tracks and vice versa. There should be clearly defined paths between vocation and general secondary education tracks leading into tertiary education. As general skills become more important, VET programs will increasingly need to offer general skills trainings. Moreover, as general and vocational secondary education become more similar, the ability to move between these tracks will become more important.

2.5.2 National examinations – content and purpose (new)

The purpose of this indicator is to measure the degree to which tests are used to measure educational attainment that is of value in the labor market rather than as screening devices for continued schooling.

Recommendation: Add an indicator that measures the relevance of national examinations and how well they capture the skills that would make students successful in higher education and/or in the workplace.

Rationale: MENA countries' reliance on tests in determining access to education, whether through streaming into different tracks or through screening admission to higher education, is an obstacle to human capital development in MENA. Tests like *Al Thanawiya* in Egypt and the *Tawjihi* in Jordan can be make-or-break affairs for students in these countries; in Jordan and Syria entrance to university depends on a single national test. This results in students spending much of their time and energy learning to pass the test rather than developing other skills that may be more useful in the labor market (Salehi-Isfahani & Dhillon 2008). If the contents of the examination reflect the real demands of the labor market, this will be a strong incentive to encourage the acquisition of skills demanded by the market, such as problem solving, writing, and critical thinking. Tests should move from memorization to evaluation of cognitive skills, problem solving, and readiness for life-long learning (Salehi-Isfahani & Dhillon 2008).

Notable Exclusions:

Primary education: Strong primary education is essential for long-term human capital development in any country. It is also an area that needs attention in the MENA region, where government spending on primary education is lower than on secondary and tertiary education (Salehi-Isfahani & Dhillon 2008) and only four Arab countries approach the saturation point (greater than 95%) on net primary school enrolment rates. Eight countries range between 80-94% and six fall below this. Only two countries (Bahrain and Tunisia) have attained the saturation point for female enrolment (MBRF & UNDP 2009). However, this metric focuses on vocational, secondary, and post-secondary education, as these are the aspects of human capital that might contribute to a positive business climate for investment in the short and medium term.

Equity issues: This metric does not focus on measures of access and equity. Since the BCDS is designed to measure access to human capital in the medium term, it necessarily focuses on quality of education and training rather than quantity. Basic access and equality concerns with education systems in MENA must be addressed, especially with regard to affordability of high quality education. However, these issues fall outside of the scope of the project.

Conclusion

The new grid places a heavier weight on issues that are related to quality engineering in education systems, including consultation between sectors, data collection and monitoring, and curriculum development. It also highlights challenges that are of particular relevance for MENA, including rigid education systems and poor quality teachers. Some indicators are modified to allow the grid to capture activity in a given area regardless of the presence of a strategy or overarching policy framework. All quantitative indicators are included in a separate chart. Country data on PISA, TIMSS, and PIRLS tests should be included if applicable. With these changes, the grid can be used to take a more analytical look at the quality of human capital in MENA.

New Indicators	2.1.3 Data and Monitoring
	2.2.3 Consultation in secondary curriculum development
	2.2.4 Curriculum content
	2.2.5 Transitions
	2.3.3 Funding for VET
	2.3.4 Certification of existing skills
	2.5.1 Horizontal mobility in education system
	2.5.2 National Examinations – content and purpose
Modified Indicators	2.2.1 Teacher recruitment and retention
	2.2.2 Development of the teacher workforce
	2.4.2 Availability of, and participation in, work-related training
Unchanged Indicators	2.1.2 The inclusiveness of strategy formulation
	2.2.2 Development of the VET system
	2.3.2 Consultative process in the VET system
	2.4.1 Development of a work-related system of continuing education and training

Figure 7: Summary of Indicators

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The Dubai School of Government (DSG) is a research and teaching institution focusing on public policy in the Arab world. Established in 2005 under the patronage of HH Sheikh Mohammed Bin Rashid Al Maktoum, Vice President and Prime Minister of the United Arab Emirates and Ruler of Dubai, in cooperation with the Harvard Kennedy School, DSG aims to promote good governance through enhancing the region's capacity for effective public policy.

Toward this goal, the Dubai School of Government also collaborates with regional and global institutions in its research and training programs. In addition, the School organizes policy forums and international conferences to facilitate the exchange of ideas and promote critical debate on public policy in the Arab world.

The School is committed to the creation of knowledge, the dissemination of best practice and the training of policy makers in the Arab world. To achieve this mission, the School is developing strong capabilities to support research and teaching programs including

- applied research in public policy and management;
- master's degrees in public policy and public administration;
- executive education for senior officials and executives; and,
- knowledge forums for scholars and policy makers.