



**Big Spending, Small Returns:
The Paradox of Human Resource
Development in the Middle East**

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Abstract

The Arab countries spend more public resources on education than any region in the world, but the outcome in terms of human resource development is one of the poorest, especially relative to their income level. This paper explores four possible hypotheses to explain this paradox: (i) social indicators in the oil exporters are catching up with sharp increases in wealth; (ii) spending in the social sectors is inefficient; (iii) market distortions do not reward appropriate human capital accumulation; and (iv) underinvestment in females has lowered returns to social expenditures.

ملخص

تتفق الدول العربية على التعليم بما يفوق الإنفاق في أى إقليم آخر، ولكن العائد متمثلاً في تنمية الموارد البشرية، يعد واحداً من أقل العوائد في هذا المضمار، خاصة إذا ما نسب إلى مستوى الدخل. وتختار هذه الورقة أربع فرضيات في محاولة لتفسير هذه المعضلة: الفرضية الأولى – أن المؤشرات الاجتماعية في الأقطار المصدرة للبتروول تلاحق الزيادات الكبيرة في الثروة؛ الفرضية الثانية – أن الإنفاق على قطاعات الخدمات الاجتماعية يتميز بعدم الكفاءة؛ الفرضية الثالثة – أن تشوهات السوق لا تسمح بالتراكم في رأس المال البشرى على النحو المطلوب؛ الفرضية الرابعة – أن ضالة نصيب الإناث من الإستثمارات يؤدي إلى إنخفاض العائد الاجتماعى.

1. The Paradox

Although the Arab countries spend more public resources on education than any region in the world, the outcome in terms of human resource development is one of the poorest, especially relative to their income level. In 1990, the Arab countries spent 5.2 percent of GDP on education, while industrial countries spent 4.9 percent, and the developing country average was 3.9 percent. Among the Arab countries, the biggest spenders are Kuwait, Saudi Arabia, Tunisia, Jordan, Egypt, Morocco. Similarly high levels of expenditure on health have also generated low social returns, and the expected gains in labor productivity from such social investments have failed to materialize. What are the explanations for this paradox?

This paper surveys the stylized facts of human resource development in the Middle East and then explores four possible explanations for the apparent paradox between public expenditure and human resource performance. Is the problem one of inappropriate macroeconomic policies that thwart the efficient use of human capital? Are social indicators in countries of the region simply catching up with incomes that rose relatively rapidly, especially in the oil economies? Have these countries made bad investment decisions in the human resource sector? And to what extent has the relative neglect of female education reduced the social returns to public spending? The final section of the paper draws some preliminary conclusions and identifies areas of future research.

2. The Stylized Facts in the Middle East

There is growing consensus about the positive linkages between health and educational services to a variety of indicators of human development.¹ In particular, investments in education are associated with improvements in health (since nutritional knowledge improves and the use of health services increases), fertility (as age of first marriage rises, desired family size falls and the ability to regulate fertility is enhanced), productivity (as human capital is accumulated and results in higher wages and externalities for other workers), and citizenship (as education socializes children for their roles in society). Similarly, investments in health are associated with improvements in fertility (as child survival increases) and productivity (with reductions in work days lost due to illness). Although these "virtuous circle" effects are

¹ See R. Cassen (1992), "Human Resources in Economic Development: Past and Future", Institute of Development Studies Silver Jubilee Paper 5, University of Sussex, England. N. Birdsall (1994), "Government, Population and Poverty: A Win-Win Tale," in R. Cassen et al, *Population and Development: Old Debates, New Conclusions*, Washington, D.C.: Overseas Development Council.

important, basic education is the point of entry for any human resources strategy, since it is the source of the most important externalities for health, fertility decline, higher productivity, and greater social returns to other investments such as family planning.²

The predominant characteristic of human resource development in the Middle East is that of significant improvements over time, but poor performance relative to potential. Not only have the educational outcomes, in terms of completion rates and literacy, failed to materialize, but neither have many of the externalities associated with such high levels of educational expenditure been realized. Progress over time and relative to per capita income for a variety of human development indicators is considered in turn.

3. Life Expectancy

For many Middle Eastern countries, life expectancy has increased dramatically during the past 25 years. On average, a Middle Eastern child born in 1990 could expect to live 13 years longer than his parents. Life expectancy varies widely across countries, however, ranging from a low of 48 years for a Yemeni male to a high of 76 years for a Kuwaiti female (table 1). Overall, the region added 13 years to female life expectancy and 12 years to male life expectancy between 1965-90, which was substantial compared to Africa, and to Latin America (where life expectancy was already high in 1960), but was below the 15-year gains achieved in East and South Asia. Large increases in life expectancy were especially important in the oil economies over this period, with gains of 22 years in Oman, 16 years in Saudi Arabia, and 15 years in the UAE and Algeria.

Despite this improvement, life expectancy remains low relative to the region's income. Figure 1 depicts the relationship between life expectancy and per capita income in developing countries and highlights the position of Middle East/North African (MENA) countries. Almost all countries in the region, and particularly the oil economies (Saudi Arabia, Oman, Iran and Algeria), do relatively poorly on life expectancy. Countries that are normally considered "high performers" in the region, such as Tunisia and Jordan, are only average by international standards.

² R. Cassen (1992) op cit.

4. Infant Mortality

Improvements in infant mortality in the region have been dramatic, more than halving over the last 25 years (from 151 deaths per 1000 live births in 1965 to 61 per 1000 in 1991). Relative to other regions, MENA countries achieved the sharpest decline in infant mortality, particularly in the oil economies (table 2). Nevertheless, the oil economies continue to have rates of infant mortality well above the average for their per capita income level (figure 2); over half the countries in the region have infant mortality rates over 50 per 1000 live births. The situation is particularly severe in the lowest income countries in the region, where infant mortality is as high as 102 in Sudan and 169 in Afghanistan.

5. Fertility

Population growth in the region is among the highest in the world, superseded only by that in Sub-Saharan Africa. Crude birth rates have declined in every country in the region (except Yemen), resulting in a regional average decline of 17.5 percent. Simultaneously, crude death rates have declined dramatically by an average of 50 percent; this difference in the rates of decline of births and deaths has been the driving force behind accelerating population growth in the region. For example, in Oman, the 12 percent decline in crude birth rates was overshadowed by the 75 percent decline in crude death rates, resulting in an increase in population growth from 3.6 percent in 1965-80 to 4.7 percent in 1980-90 (table 3). Thus the key to the population problem is the slow decline in total fertility, which, at 5.7 percent, is extremely high. As with other social indicators, MENA countries do poorly relative to their per capita incomes (figure 3). Fertility in all high income MENA countries is at least twice the average for all high income countries; and for middle income countries, only Lebanon, Tunisia, and Turkey even come close to the average of 3.4.

6. Primary and Secondary Enrollment

Primary enrollment has improved markedly from 62 percent in 1965 to over 90 percent in 1989, but there are important differences at the country level. Overall, primary enrollment in MENA is 98 percent, but there are some important exceptions: Saudi Arabia (only 77 percent), Yemen (76 percent), and Morocco (66 percent). Syria, Tunisia, Turkey, Iran, UAE, Kuwait, Bahrain, and Qatar have all achieved universal primary education (table 4). Relative to per capita incomes, this same pattern exists (figure 4). Although female enrollment has

Social Indicators and Purchasing Power Parity Estimates of Per Capita GNP in Selected Developing Countries

Figure 1. Relationship between Life Expectancy at Birth and PPP Estimates of Per Capita Income

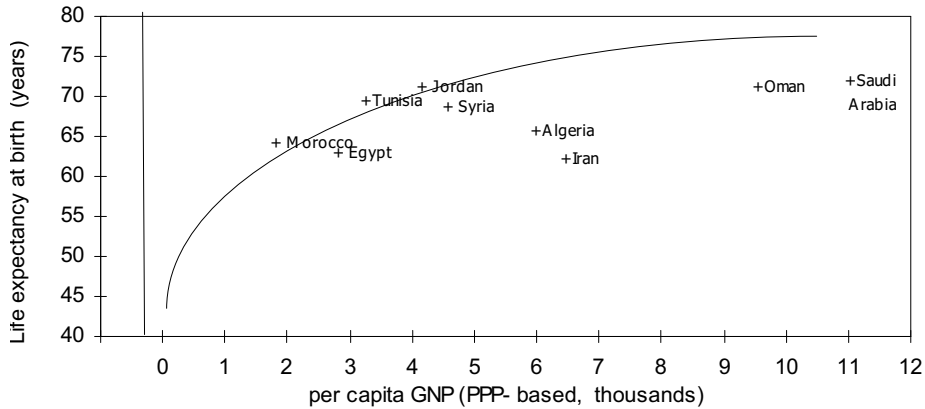


Figure 2. Relationship between Infant Mortality and PPP Estimates of Per Capita Income

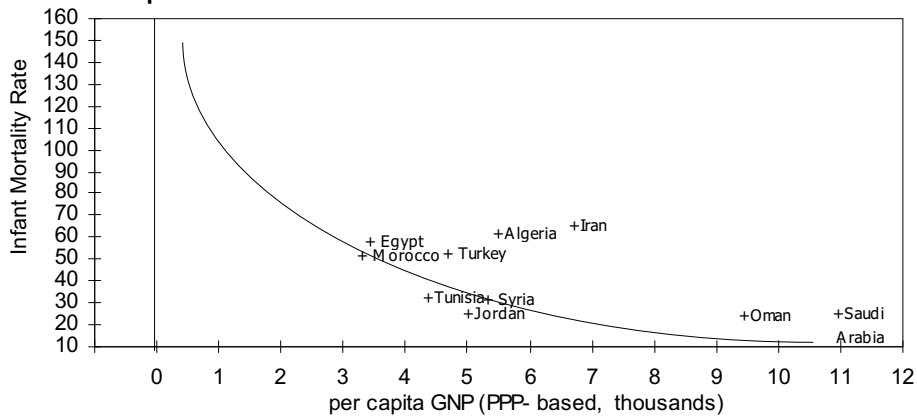
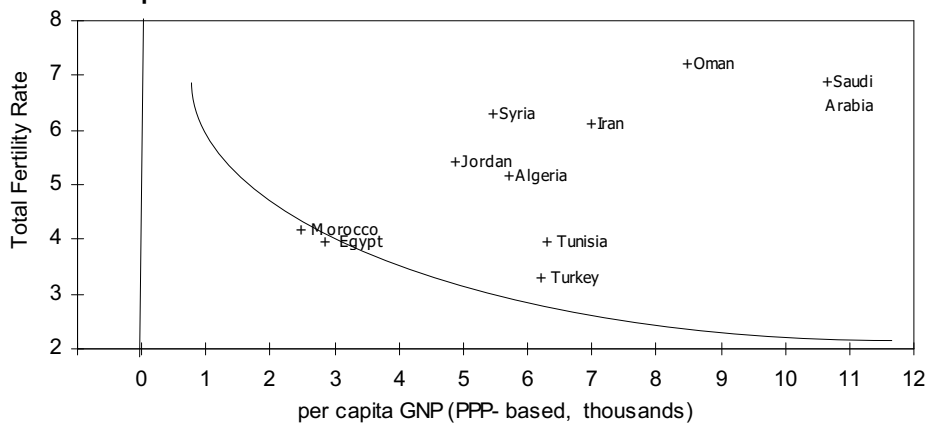


Figure 3. Relationship between Total Fertility and PPP Estimates of Per Capita Income



Source : Author's regression estimates based on World Bank data.

doubled since 1965 (from 43 percent to 89 percent), the gender gap in MENA remains large, especially relative to East Asia and Latin America. Relative to per capita incomes, Saudi Arabia, Oman, Morocco and Algeria have done the worst in terms of female enrollment, while Tunisia and Turkey (both countries where there was a high-level commitment to educating girls) have done exceptionally well (figure 5). The pattern for secondary enrollment is similar to that for primary education, with a tripling of enrollment rates over 25 years, but a lag relative to countries at similar levels of income (table 5 and figure 6).

7. Literacy

Literacy levels among adults have improved from 34 percent in 1970 to 53 percent in 1990, with particular progress made in the oil-exporting countries (table 6). Despite this, there are only a few countries (Qatar, Lebanon, Jordan, Turkey, Israel) where more than three-quarters of adults can read and write. Illiteracy is primarily concentrated among women. In most countries in the region, the majority of women cannot read or write, and in all countries in the region female literacy rates are below average for their level of per capita income (figure 7). The problem is particularly severe in the poorer countries in the region, although even in high-income countries like Saudi Arabia, literacy rates are low.

8. Expenditure on Human Resources

The stylized facts surveyed above reveal that there are significant inadequacies in human resource development in the MENA region. Is it a function of insufficient resources devoted to building human capital or is it one of distorted incentives? Table 7 provides data on public expenditures on education and health in the MENA countries. As mentioned previously, aggregate education expenditures as a share of GDP are greater in the MENA region than in any other region of the world (including the industrial countries). Oil economies such as Libya and Saudi Arabia spend over 10 percent of GDP on education, while countries such as Morocco, Turkey, Syria, and the UAE spend less than 3 percent of GDP. Health expenditures too are relatively high (exceeded only by those in Latin America), especially in countries such as Saudi Arabia, Libya, Kuwait and Jordan.

In general, allocations devoted to education and health have increased between 1960-86. For example, Saudi Arabia increased public spending on education threefold and on health almost sevenfold. Libya followed a similar pattern, while countries such as Jordan, Egypt,

Education and Purchasing Power Parity Estimates of Per Capita GNP in Selected Developing Countries

Figure 4. Relationship between Primary Education Enrollment and PPP Estimates of Per Capita Income

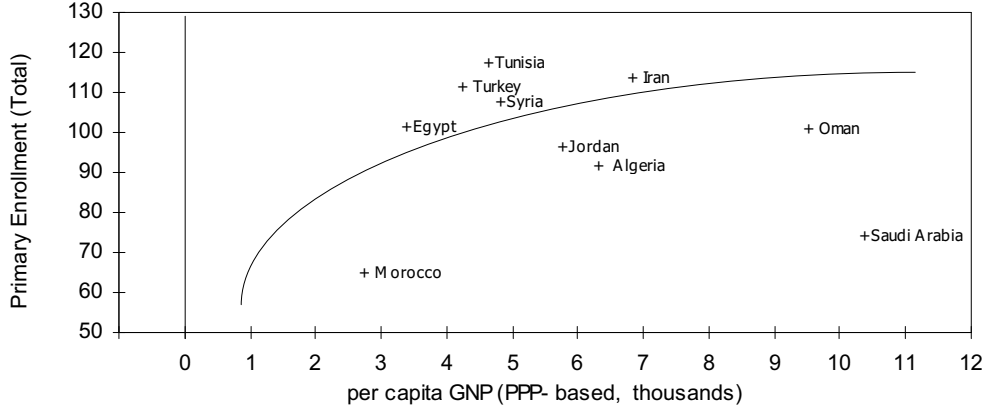


Figure 5. Relationship between Female Primary Education Enrollment and PPP Estimates of Per Capita Income

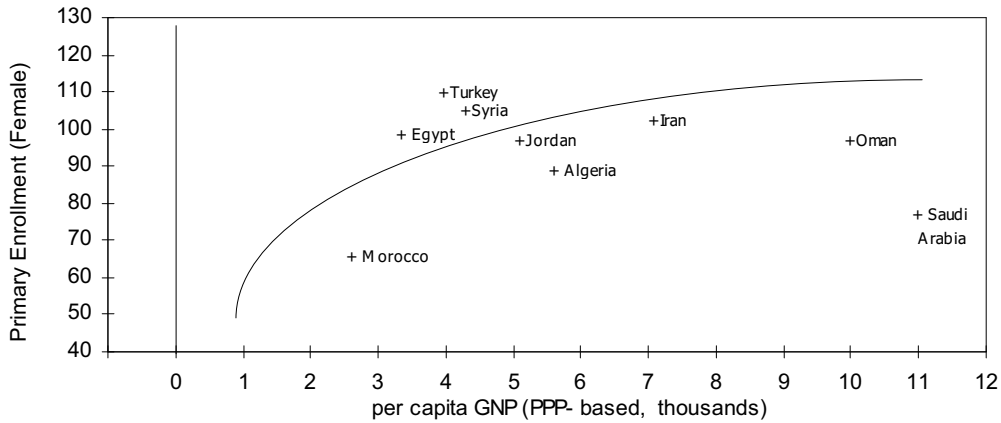
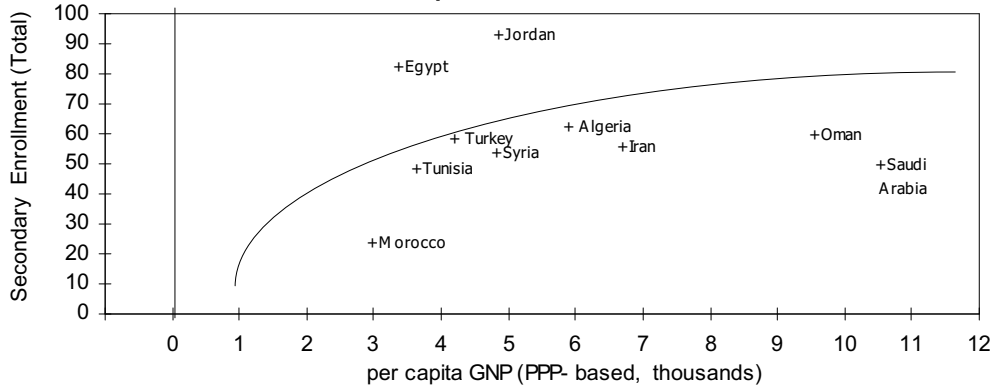
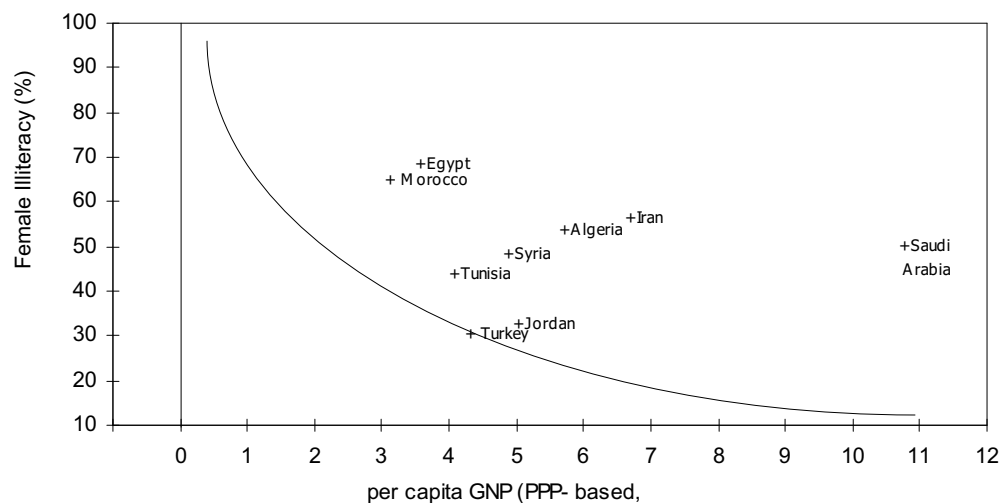


Figure 6. Relationship between Total Secondary Education Enrollment and PPP Estimates of GNP Per Capita



Source: Author's regression estimate based on World Bank data.

Figure 7. Relationship between Female Illiteracy and PPP Estimates of Per Capita Income



Source: Author's regression estimates based on World Bank data.

Tunisia, and Algeria also experienced increased allocations to health and education. Unfortunately, data on private expenditures on education and health are not readily available, although they would provide a more comprehensive view on total resources devoted to human capital formation.

Clearly, at an aggregate level, the problem of human resource development in the region is not one of insufficient resources. Thus, any analysis of why human resource development has been poor in the region must consider the incentive regime, institutional issues, and urban, class and gender biases that result in poor service delivery. There is particular urgency because over the next quarter century, the number of people below the age of fifteen will double—meaning more pressure on educational systems, health expenditures, and labor markets to create jobs. To date, the response in most countries to these pressures to increase the capacity of the social sectors has been to accommodate increased quantity with reduced quality. What are the reasons why resources are being wasted in this sector so crucial for the economic development of the Middle East and North Africa?

9. Four Hypotheses to Explain the Paradox

Catching Up. To some extent, the poor performance on social indicators, especially in the oil economies, reflects the fact that human capital accumulation is still catching up with sharp increases in wealth. This partly explains why the oil economies consistently underperform relative to their per capita income levels in the figures above. The "catching up" explanation

is also consistent with the fact that illiteracy is largely a problem of adult illiteracy, particularly among women. In several of the oil economies with high rates of illiteracy, there is universal primary enrollment, implying that while there remains a "stock" of illiterate adults, the future "flow" of students is likely to be literate.

However, there are two reasons why the "catching up" argument is unsatisfactory. First, the major oil producers had relatively high incomes even before the oil boom of the 1970s, which did little to change their income rank among developing countries.³ Second, considerable time has elapsed, while other countries have achieved "breakthroughs" in rapid improvement in social indicators at a pace that exceeds that in the oil economies. So while "catching up" is part of the story, it is by no means a complete explanation.

Spending Badly. As in many countries, there is little relation between public spending on education and coverage in the MENA region, implying that there are substantial inefficiencies in delivery systems, especially in some of the poorest countries. There are strong biases in favor of tertiary education, and against service delivery in rural areas and against females. Because basic education is the crucial point of entry for any human resource strategy, the focus will be on the composition of spending in the education sector, although a similar analysis for the health sector in MENA countries would be helpful. The data for educational expenditures available from the UNESCO database are presented in table 8 for different levels of education. The disaggregation of expenditure indicates that primary and secondary schools get very similar budgetary allocations, despite the much lower enrollment rates in secondary school. The composition of government spending is, like in most countries, dominated by wages, especially at the primary level. While it is very difficult to measure the efficiency of education spending (see Lockeed and Hanushek 1994 for a discussion), the preliminary evidence from MENA countries indicates that there may be substantial inefficiencies that merit further analysis.

The differences in social rates of return to different types of education investments also reflect differences in costs. The calculations of expenditure per student in table 8 are even more revealing, with secondary school costing about twice as much as primary school per student, while tertiary education was between 12 (in Morocco) and 18 times (in Algeria) the cost per pupil in primary school. There is also considerable variation in unit costs of primary

³ Caldwell (1986).

education among countries in the region (see table 9). While all countries need a cadre of highly educated people, educating them abroad is often more cost effective than covering the fixed costs of having higher education facilities at home.

Significant urban and class biases in access to education are evident in most countries in the region. For example, in Morocco, enrollment rates vary substantially by class and by urban or rural residence. Children from the upper income group are twice as likely to be enrolled as children from low income families. The enrollment rate is 90 percent in urban areas as compared to 48 percent in rural areas; rural boys (64 percent) outnumber rural girls (32 percent). Completion rates for rural primary school students is 60 percent as compared to 87 percent for urban students; in rural areas it is 63 percent for boys and 56 percent for girls.⁴

Opportunities for private provision of education for the better off (which enable more public expenditure on the truly needy) are not being exploited. Governments in the region have been slow to play a catalytic role in the education sector by disseminating information about private provider performance, setting up a transparent regulatory framework for private sector activity, and creating student finance and insurance schemes.

While most countries in MENA have so far failed at reallocating public resources away from higher education in favor of the poor, some countries have been more successful at dealing with a politically difficult reform. Between 1980 and 1990, the share of recurrent higher education costs funded from tuition charges rose from 23 percent to 43 percent in Korea, from zero to 21 percent in Vietnam, from 13 percent to 25 percent in Mexico, and from 8 percent to 16 percent in Costa Rica.⁵ When combined with targeted scholarships and loan programs, greater cost recovery in higher education need not discriminate against the poor. In Jordan, spending on primary and secondary education has gradually increased while transfers to universities have declined substantially as there has been greater reliance on tuition charges, donations and other nongovernmental sources of finance.⁶

There are similarly important lessons from other parts of the world about the types of policies that result in "breakthroughs" on social development. In places like Sri Lanka, Kerala, and Costa Rica, the most rapid gains in reducing mortality could be attributed to: (1) the provision of health services which were widely available and efficient, especially around the

⁴ Khandker et al (1993) cited in Chowdury (1993).

⁵ World Bank (1994).

⁶ World Bank (1993).

time of birth, providing immunization and nutritional floors through subsidized and supplementary food, with a particular focus on women and children; and (2) education which created demand for health services and taught parents about nutrition, hygiene and treatment during illness.

Market Distortions that do not Reward Appropriate Human Capital Accumulation. Perhaps the most important explanation for the paradox in human resource development in MENA countries are the extensive distortions which create incentives for the wrong kinds of service delivery, reduce the social returns to investments in human capital, and undermine the externalities associated with the accumulation of skills. Middle Eastern economies do not produce enough jobs for skilled people because they are highly protected (and therefore tend to produce low-skill jobs producing relatively simple products in protected sectors) and create incentives that favor capital over labor (such as interest rate subsidies, restrictive labor practices, high payroll taxes, etc.). This is evident from the characteristics of the unemployed in the region; unemployment rates are far higher for university, secondary and intermediate school graduates than for those with only primary education.⁷

Moreover, the government's pervasive role in labor markets has contributed to substantial distortions. Public sector employment in Arab countries always exceeds 15 percent of the labor force, and reaches 30 percent in Egypt, 45 percent in Jordan, 44 percent in Bahrain, 54 percent in Saudi Arabia, 56 percent in Algeria, and 88 percent in Kuwait.⁸ The role of government is direct (by providing jobs) and indirect (by affecting expectations about wages, benefits, and conditions of employment throughout the labor market). Given government's important role in labor markets, it is not surprising that an average of 59 percent of the unemployed in the region are first-time job-seekers, many of whom are waiting for employment in the government on public sector terms (unlikely to exist in the private sector).⁹

Neglecting Women. Investments in female education have enormous private and social payoffs. The best correlate of both infant mortality and life expectancy in 99 developing

⁷ Shaban, Assaad, and Al-Qudsi (1994).

⁸ Shaban, Assaad, Al-Qudsi (1994).

⁹ Shaban, Assaad, and Al-Qudsi (1994).

countries is the 1960 female primary enrollment rate.¹⁰ One additional year of education reduces female fertility by 5-10 percent. Women with primary education marry 2-3 years later than those with no education, resulting in a tendency for smaller families. Women with primary education are 1.5-2 times more likely to practice family planning. An additional year of schooling for 1000 women will prevent two maternal deaths. And the economic returns (in terms of ages) to education are high—Psacharopolous estimates that overall returns to education for women is 12.4 percent while that for men is 11.1 percent. The returns to secondary education are particularly high.¹¹

Given this international evidence, the MENA region's poor performance on social indicators must partly be attributed to the low levels of female education. What are the reasons behind such low enrollment of girls in school? On the supply side, there is sometimes rationing of places, long distances to be traveled, and rigid hours which do not accommodate girls' other household responsibilities. On the demand side, increasing labor market opportunities for women increase the private returns to educating girls, which would tend to increase female enrollment. Also, better childcare options and improved child health (for younger siblings) would reduce the opportunity cost of older girls' time at home. There is now sufficient international experience (including in the Middle East) on alleviating the barriers to female education (for example, through scholarships for girls, creating single-sex schools, and hiring more female teachers) for progress to be rapid where governments are committed to change.¹²

In addition to female education, Caldwell (1986) has argued that "female autonomy" is the key to rapid gains in human development. Why is "female autonomy" so important? When girls are more likely to stay in school and have roles outside the household, mothers are more likely to take action about sick children, travel to health centers, wait in queues of mixed sex, argue with male physicians in the interests of their children, and follow up adequately on treatment. Moreover, with increased autonomy, women can treat their daughters more equitably in terms of feeding, medical services and schooling.

Conclusions

¹⁰ Caldwell (1986), p. 179.

¹¹ Estimates were as follows: for primary school: men (20.1%), women (12.8%); for secondary school: men (13.9%), women (18.4%); for higher education: men (13.4%), women (12.7%). Psacharopolous, G. (1993), "Returns to Investment in Education: A Global Update". Working Paper 1067, World Bank, Washington, D.C.

¹² See Chowdury (1994) for a discussion of the barriers to female education and how various projects have addressed them.

Population growth means that pressures on social sectors will increase—the percent of the population in MENA aged 0-14 is expected to decrease from 43 percent to 32 percent by the year 2025, with total population increasing from 244 million to 552 million over the same period. But the actual number of people aged 0-14 will almost double (from 105 million to 177 million). This will mean greater pressure on educational systems, health expenditures, and on labor markets to create jobs. To date, the response to these pressures to increase the capacity of the social sectors has been to reduce quality. That option is not tenable in the future if countries in the MENA region hope to compete in a world market that increasingly rewards skills and knowledge.

The conclusions from the above survey of the MENA experience are both positive and negative. The good news is that countries in the region have made considerable absolute progress in human development in recent decades. The bad news is that their performance relative to other parts of the world remains poor and substantial gaps persist. Breakthroughs are possible, based on international experience, with intensive health and educational programs targeting the most needy. But breakthroughs take considerable effort, and governments have to be willing to commit massive resources to deprived groups. The good news is that the issue is not necessarily one of more money—for example, it would take less than 0.5 percent of GDP to close the gender gap in education in MENA countries. However, the bad news is that spending well may be much harder than spending more, since improving spending implies taking privileges away from advantaged groups who have benefited from the inefficient spending of the past.

This survey of the issues also highlights a number of areas where further research is needed. We need better measures of the efficiency of social spending and better data on the labor productivity gains that result from such expenditure. The institutional obstacles that thwart responsive delivery systems in the social sectors need to be better understood. Is it that public institutions in the social sectors have been captured by interest groups (doctors, teachers, etc.) or replaced because of their ineffectiveness (by the private sector or religious organizations) or that there are other reasons why they are out of synch with what the market and consumers demand? The question of how to increase female enrollment has been well studied—but why are the lessons from that work not yet implemented in MENA countries? It seems that many of the answers to the paradox of human resource development in the Middle East and North Africa lie in further work that marries human resource economics with areas such as institutional economics, public choice, rent-seeking and political economy trade-offs.

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